SINCLAIR COLLEGE

2026-2027 CATALOG

Academic Programs & Policies

Accreditation and State Authorization

Accreditation

Sinclair is accredited by The Higher Learning Commission, 230 South LaSalle Street, Suite 7-500, Chicago, Illinois 60604-1411, (800) 621-7440, (312) 263-0456, FAX (312) 263-7462, email: info@hlcommission.org. Sinclair is also a member of the Ohio Association of Community Colleges. Programs of study are approved by the Ohio Department of Higher Education. Sinclair is authorized to grant associate degrees in arts, sciences, applied science, individualized and technical study as well as specific bachelor's degrees.

To review a list of the associations, agencies, and/or governmental bodies that accredit, approve, or license the college's programs, check www.sinclair.edu/accrediting-agencies

The official documents for the associations, agencies, and/or governmental bodies that accredit, approve, or license the school and its programs are housed in the office of the Provost, Building 7, Room 7330. In order to receive a copy for review, go to this office. For additional and specific details regarding program accreditations, approvals or licensures, see the individual program descriptions in this catalog. Sinclair Community College, 444 West Third Street, Dayton, Ohio 45402-1460.

State Authorization

State Authorization regulations determined by the Department of Education dictate the educational activities Sinclair Community College is permitted to offer outside of Ohio. Sinclair must comply with each state's requirements regarding legal authorization for participation in internships, clinical placements, or co-ops and the delivery of online degrees, programs, and courses.

Students impacted include:

- Students located outside of Ohio and are interested in taking online courses at Sinclair
- Students who plan to participate in a Sinclair approved field placement outside of Ohio
- Students who physically relocate to any other state or territory during their enrollment at Sinclair

Sinclair Community College is a member of the State Authorization Reciprocity Agreement (SARA) which provides authorization to offer certain activities in other SARA member states.

More information about SARA authorized states and out of state grievance procedures is available to students and can be found at Sinclair's State Authorization page.

Campus Security Report

Campus Security Report (Campus Security Act of 1990)

The federal Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act requires Sinclair Community College provide an annual security report to include statistics for the previous three years concerning reported crimes that occurred on campus; in certain off-campus buildings owned or controlled by Sinclair Community College; and on public property within, or immediately adjacent to and accessible from the campus. The report also includes institutional policies concerning campus security, such as policies concerning alcohol and drug use, crime prevention, emergency response and evacuation procedures, the reporting of crimes, sexual assault, a statement of the enforcement authority of campus security personnel, and other matters. The public may obtain a copy of the report by contacting the Sinclair Department of Public Safety at **(937) 512-2700 or** www.sinclair.edu/police.

You may also review the report (and reports for previous years) at www.sinclair.edu/services/conduct-safety/public-safety/annual-safety-reports/

How to Begin

- Degree/Certificate Seeking Students
- Non-Degree Seeking Student

Degree/Certificate Seeking Students
Ready to get started at Sinclair? Follow the steps below to find out how to begin your degree or certificate. All steps can be completed at any Sinclair location! For more information, visit **www.sinclair.edu/getstarted**

Apply for Admission
Complete your application at **www.sinclair.edu/applynow**

Apply for Financial Aid
File the Free Application for Federal Student Aid (FAFSA) at **studentaid.gov** *Use Sinclair's school code: 003119*

Visit Campus or Connect with an Admissions Counselor
Learn more about the exceptional programs offered at Sinclair, discover your next steps to enrollment, and explore campus during a tour. Schedule your visit at **www.sinclair.edu/visit**

Check your Sinclair Email
Visit **my.sinclair.edu** to check your email often. This is where you will receive important updates about registration and financial aid.

Determine your Course Placement
Speak with an Admissions Counselor or Enrollment Specialist to make sure you get started in the right math and English courses. They will help you determine if you need to take a placement test.

Meet with an Academic Advisor
Meet with your Academic Advisor to develop your academic plan (MAP). This is also a great time to discuss prior learning assessment options (e.g., CLEP, AP, portfolio-based). Visit **www.sinclair.edu/advising** to learn more.

Complete How to Succeed in eLearn
Learn how to navigate Sinclair's learning management system, eLearn, which is used in many of our classes. Completing How to Succeed in eLearn is required before you can register for classes. Learn more or get started by visiting **www.sinclair.edu/hts**

Register for Classes
Register for classes at **my.sinclair.edu**

Attend New Student Orientation
Learn more about orientation at **www.sinclair.edu/orientation**

Pay your Tuition and Fees
Make your payment at **my.sinclair.edu** or learn more about payment options at **www.sinclair.edu/bursar**

Buy your Books Online
Order your books at **sinclair.ecampus.com**
Questions? Contact Admissions at admissions@sinclair.edu or (937) 512-3675

Non-Degree Seeking Student
Ready to take classes at Sinclair? Follow the steps below to find out how to register for classes for the first time. All steps can be completed at any Sinclair location! For more information, visit **www.sinclair.edu/getstarted**

Apply for Admission
Complete your application at **www.sinclair.edu/applynow**

Check your Sinclair Email
Visit **my.sinclair.edu** to check your email often. This is where you will receive important updates about registration.

Select your Courses
Visit the Registration Portal at **regportal.sinclair.edu** to select the courses you plan to take.
If the Sinclair course(s) you plan to take does not have perquisite course requirements and course registration for your desired term is available, you can register for your classes.
If the Sinclair course(s) you plan to take requires prerequisite course work complete the following steps:

1. Revisit your Application Portal at **www.sinclair.edu/apply**
2. Upload a copy of the Course Selection Form found at **www.sinclair.edu/visiting**
3. Upload documentation that indicates you meet the required prerequisites, be sure these documents include your name and the name of the college/university where the credit was earned. Typical documentation types include:
    1. Unofficial Transcripts
    2. Degree Audit Reports
    3. Advising Reports

Other documents may be used for course placement in math and English if you have not previously earned college credit. If you graduated high school in the last three years you can upload a copy of your final high school transcript. You can also send a copy of an ACT or SAT score report if the test was taken in the last two years to help determine placement.

Complete How to Succeed in eLearn
Learn how to navigate Sinclair's learning management system, eLearn, which is used in many of our classes. Completing How to Succeed in eLearn is required before you can register for classes. Learn more or get started by visiting **www.sinclair.edu/hts**

Register for Classes
Register for classes at **regportal.sinclair.edu**

Pay your Tuition and Fees
Make your payment at **my.sinclair.edu**

Buy your Books Online
Order your books at **sinclair.ecampus.com**

Wright Path/UD Academy

Wright Path Program Between Sinclair Community College and Wright State University
The Wright Path Program formalizes the partnership between Wright State University and Sinclair Community College and provides a seamless student transfer between the institutions. The objective is to facilitate student entry or reentry into a bachelor's degree program at Wright State University.
Goals of the Wright Path Program include:

- Eliminating barriers for students in attaining their educational goals
- Expanding housing options for all Sinclair Community College students.
- Providing accurate and current academic transfer pathways.
- Improving academic program articulation
- Using resources at both institutions efficiently and effectively

Wright Path students who are using federal financial aid for housing charges contracted with Wright State University must complete an authorization form before federal financial aid can cover those charges.
For more information, visit **www.sinclair.edu/wrightpath** or contact Academic Advising: **academicadvising@sinclair.edu** or (937) 512-3700.

UD Sinclair Academy Between Sinclair Community College and the University of Dayton
Maximize your future by beginning your studies at Sinclair Community College and graduating with a degree from the University of Dayton (UD). The UD Sinclair Academy provides substantial UD benefits for Academy students while at Sinclair, as well as increased levels of merit- and need-based scholarships at UD. The result is a far more integrated 2+2 model and a more accessible UD undergraduate degree.
As incoming first-year students at Sinclair, academy students will have access to:

- A University student ID card and email
- More than 240 student clubs
- Recreation facilities including complimentary RecPlex membership
- Athletic events, including basketball games
- Development of a University of Dayton co-curricular transcript and online e-portfolio
- Student Success coaching from UD during your transition
- Peer mentoring through the Office of Multicultural Affairs
- Speaking with your UD academic advisor for assigned major

For more information, visit: **www.udayton.edu/academy** or contact Academic Advising: **academicadvising@sinclair.edu** or (937) 512-3700.

Financial Aid & Scholarships

Apply for Financial Aid
Completing and submitting the Free Application for Federal Student Aid (FAFSA) is free and gives you access to the largest source of financial aid for school. You must submit your FAFSA application on time to be considered for federal student aid. Federal financial aid offers are determined using the information provided on the FAFSA. Some scholarships and state grants may also require that the FAFSA be completed.

The FAFSA is available on the Federal Student Aid website, StudentAid.gov. There are many helpful resources and articles on this website to assist you.
The financial aid process can take approximately four to six weeks to complete, depending on individual circumstances and the student's response to Sinclair's request for verification documents. Please plan accordingly.

When Should I Apply?
Apply as early as possible each year, being mindful of which academic year you are applying for. The FAFSA is typically available on October 1 for the following academic year. May 1 is the annual priority date established by Sinclair.
For example, students should complete the 2026-27 FAFSA for Fall 2026, Spring 2027, and Summer 2027 semesters. To meet the priority deadline, students should apply by May 1, 2026.
If students submit the FAFSA after the priority date, they may be required to pay up front for tuition and books. If students receive a financial aid offer after they have paid tuition, and meet all eligibility requirements, Sinclair can arrange for students to be reimbursed up to the amount of the offer that is disbursed to the students' accounts.

How Do I Apply?
Complete the Free Application for Federal Student Aid (FAFSA) each year by visiting StudentAid.gov. Students submitting a FAFSA for the first time or who last applied before May 2015 must create a StudentAid.gov account.
FAFSA may require documentation from the student, students' parents, and/or students' spouses, depending on your circumstances. To determine what contributors will need to provide information, you may first determine if you are considered an independent student or a dependent student. See the below sections for what documents may be needed.

Am I an Independent or Dependent Student?
Your answers to questions on the FAFSA form determine whether you are considered a dependent or independent student. If you answer yes to one or more of the following questions, you are independent. If you answer no to all the following questions, you are dependent.

- Were you born before January 1, 2003?
- As of today, are you married? (answer No if you are separated)
- For 2026-2027, will you be working on a master's or doctorate degree?
- Are you currently serving on active duty in the U.S. armed forces for purposes other than training?
- Are you a veteran of the U.S. armed forces?
- Do you have children or other people who live with you (other than spouse) for whom you provide more than 50% support now and between July 1, 2026, and June 30, 2027?
- At any time since you turned 13, were you an orphan?
- At any time since you turned 13, were you a ward of the court?
- At any time since you turned 13, were you in foster care?
- Are you a legally emancipated minor as determined by a court in your state of residence?
- Are you in legal guardianship (not custody) with someone other than your parent as determined by a court in your state of residence?
- At any time on or after July 1, 2025, were you unaccompanied and either (1) homeless or (2) self-supporting and at risk of being homeless?

If an unusual circumstance prevents a Dependent Student from providing contributor information for a parent/stepparent, the student can be considered provisionally independent. To complete this process and move to fully independent, the student must complete the Unusual Circumstance Appeal Form available through the FA Online Forms Portal. A financial aid administrator will make a documented determination of independence after reviewing the unusual circumstance documentation submitted.

What Do I Need to Apply?
The following documents are needed from FAFSA Contributors to complete the 2026-2027 FAFSA:
Independent Students:

- Student/Spouse (if married as of today) 2024 IRS Form 1040, including all schedules
- Student/Spouse (if married as of today) 2024 W2s
- Student/Spouse (if married as of today) 2024 Child Support received
- Spouse social security number, birth date, marital status, and date of status
- Spouse StudentAid.gov username and password if the tax return was filed separate from student

Dependent Students:

- Student's 2024 IRS Form 1040, including all schedules
- Student's 2024 W2(s)
- Student's social security number, driver's license/state ID number
- Student's StudentAid.gov username and password (if FAFSA previously completed)
- Parent(s)/Stepparent 2024 IRS Form 1040, including all schedules
- Parent(s)/Stepparent 2024 W2s
- Parent(s)/Stepparent 2024 Child Support received
- Parent(s)/Stepparent social security number(s), birth date(s), marital status, and date of status
- Parent(s)/Stepparent StudentAid.gov username and password (if FAFSA previously completed)

Both parent/stepparents will need to have StudentAid.gov usernames and passwords if they filed separate tax returns. This is true even if the parents are not married but living together
For guidelines to help dependent students determine whose information should be reported, please use this guide: Who Is My Parent When I Fill Out the FAFSA Form?

What if I Need Help Applying?
There are many resources available to best assist you with the FAFSA. The FAFSA application is available online in both English and Spanish. FAFSA translation services are available for other languages by calling 1-833-610-2590 and select 7 for any language other than English or Spanish.
The StudentAid.gov website has a Help Center available which includes many videos, FAQs and helpful articles to answer questions you may have throughout the process. The Federal Student Aid Information Center is available via phone, live chat and email on the StudentAid.gov website, under the Contact Us tab.
Sinclair offers many forms of assistance for your financial aid process. You can schedule a FAFSA Open Lab, to have a Financial Aid Administrator assist you through the application process. To schedule your workshop time, please visit this link: FAFSA Open Lab Dates

Scholarship Applications
Some scholarships will require additional applications. Scholarship applications are available online at **www.sinclair.edu/scholarships**. The dates for these applications are as follows:

- **Fall Term** scholarship applications are available from **June 1 to June 30**
- **Spring Term** scholarship applications are available from **November 1 to November 30**
- **Summer Term** scholarship applications are available from **March 1 to March 31**

Communication with Financial Aid & Scholarships Office
The Financial Aid & Scholarships office at Sinclair helps students meet their educational expenses. Sinclair will make every effort to help students meet the difference between college costs and the amount the family is able to pay. All aid offers are made on a non-discriminatory basis.

1. The Financial Aid & Scholarships office communicates with students about their FAFSA application status through their Sinclair.edu student email account. When the student's financial aid offer has been determined, an aid offer notification will be sent via email. Students should check their sinclair.edu email and *Financial Aid Portal* information regularly.
2. Questions? For information, call, write, or personally visit the office:
    - Call Sinclair's Welcome Center: (937) 512-3000 or (800) 315-3000
    - Email welcomecenter@sinclair.edu. All email messa ges sent to welcomecenter@sinclair.edu must be sen t from a student's Sinclair.edu email account.
    - Send a letter to: Financial Aid & Scholarships, Sinclair Community College, 444 West Third Street, Dayton, Ohio 45402-1460.
    - Visit the Dayton Campus Welcome Center, Building 10, First Floor, to speak with a Welcome Center representative or schedule an appointment on the Sinclair webpage.
    - Students can also visit a Sinclair regional location for assistance.

Note: No information regarding student's financial aid records will be provided to anyone but the student without the student's written permission. See a financial aid representative at any campus location to complete the Authorization for the Release of Student Information (FERPA Release).

Federal Financial Aid

NAME OF AID	TYPE OF AID	COLLEGE EXPENSES COVERED	ANNUAL LIMITS	SPECIAL REQUIREMENTS
Federal Pell Grant	Grant	Tuition; fees; books; educational expenses	Maximum of $7,395 award amount based on need and determined using SAI (Student Aid Index)	Student may not have a bachelor's or advanced degree *Subject to lifetime limits
Federal Supplemental Educational Opportunity Grant (FSEOG)	Grant	Tuition; fees; books; educational expenses	Limits based on availability of funds	Student may not have a bachelor's or advanced degree Have exceptional need. Must qualify for the Federal Pell Grant.
Federal Work Study	Work	Educational expenses	Award amount based on need and determined by Sinclair Financial Aid after reviewing other aid student received Students will receive these funds as paychecks according to hours worked bimonthly.	Enroll in at least 6 credit hours required for active program Have unmet financial need
Federal Direct Subsidized and Unsubsidized Loans	Loan	Tuition; fees; books; educational expenses	1st year Dependent: $5,500 - No more than $3,500 may be in subsidized loans; 2nd year Dependent limit $6,500 with no more than $4,500 in subsidized; 3rd and 4th year Dependent limit for students in a Bachelor's program $7,500 with no more than $5,500 in subsidized 1st year Independent: $9,500 - No more than $3,500 may be in subsidized loans; 2nd year Independent limit $10,500 with no more than $4,500 in subsidized; 3rd and 4th year Independent limit for students in a Bachelors program - $11,500 with no more than $5,500 in subsidized Actual award amounts based on Cost of Attendance and subsidized portions determined by SAI (Student Aid Index)	Enroll in at least 6 credit hours required for active program Must complete online entrance counseling and Loan Agreement (MPN) **Subject to lifetime limits

			All students are awarded to Dependent student loan limits. Students who are eligible for Independent loan amounts can request additional loan amounts if Cost of Attendance allows.	
***Federal Parent PLUS Loan (Dependent Students Only)	Loan	Tuition; fees; books; educational expenses	Parents may borrow up to $20,000 per Dependent student *Parents (and/or their Dependent students) who have borrowed in 2025/2026 may borrow up to the student's Cost of Attendance.	Enroll in at least 6 credit hours required for active program Must complete online parent loan application and Parent Loan Agreement (PMPN)

** A student can receive the Pell Grant only up to 12 full time semesters or the equivalent.*
*** Lifetime Direct Loan Limits:* **Dependent** - *$31,000 with no more than $23,000 in subsidized;* **Independent** - *$57,500 with no more than $23,000 in subsidized.*
**** Dependent students whose parents are unable to obtain a PLUS Loan due to denied credit decision may be eligible for additional Federal Direct Unsubsidized Loans. Parents may also choose to obtain a credit worthy endorser. Special loan counseling is required for qualifying PLUS loan applicants who have adverse credit history as defined by the regulations.*
Educational expenses include books, supplies, equipment, dependent childcare expenses, transportation, and computer rental/purchase.
All students using federal aid are subject to federal aid guidelines. The most up to date policies are available at: **www.sinclair.edu/services/welcome-center/finaid**
All federal loans must be repaid. Repayment begins six (6) months after a student's enrollment drops below six (6) credit hours, including students attending part-time, graduating, and withdrawing. Additional information regarding loan repayment and required exit counseling is available at: **www.sinclair.edu/services/welcome-center/finaid**
Important Note: Federal Aid received at another institution may affect the amount of aid a student is eligible for at Sinclair, and it is the responsibility of the student to only accept aid for which he or she is eligible with regard to annual limits. Students should contact the Financial Aid & Scholarships office with any questions concerning aid amounts and eligibility.

Financial Aid Add/Drop Census Date Policy-Dropping, Adding, or Withdrawing from Courses
Typically, the initial calculation of Federal Pell Grants are prepared based on anticipated full-time enrollment each term. Sinclair recalculates Federal Pell Grant awards based on attendance and/or schedule adjustments up to the student census date. After the student census date, a student's Federal Pell Grant will not be adjusted for drops or adds even if the student has been attending class. However, if the student fails to complete all of his or her scheduled courses in the term, a Return of Title IV Funds calculation is required, and an adjustment may be made by Sinclair.
Federal Pell Grant awards will be based on the number of credit hours in which a student is enrolled as of the student census date. If a student withdraws from or drops all of his or her courses on the same date, then the student census date will be the latest census date for the course(s) they dropped with record. Students are strongly encouraged to finalize their course schedule no later than the start of the term.
Per the One Big Beautiful Bill Act, H.R. 1, 119th Congress (2025), Federal Direct Loans will also be adjusted for a student's final enrollment each term. Additional information will be provided once the regulations are finalized and guidance is provided by the U.S. Department of Education.
For students who withdrew from all classes during the 100% refund period, Sinclair will treat the students as if they had never begun attendance and all Title IV funds will be returned to the federal government.

DEFINITIONS		
Add	A course added by the student to his or her schedule.	
Drop	A course dropped by the student from his or her schedule on or before the course census date. No grade will be issued for the dropped course. The course will not be part of the student's academic record (**a drop without record**).	
Withdrawal	A course dropped by the student from his or her schedule after the course census date. A grade of "W" (withdrawal) will be issued for the course. The course will be part of the student's academic record (**a drop with record**).	
Purged	The process used by the school to remove courses from a student's schedule for nonpayment of tuition and fees.	
Canceled	A course removed by the school due to cancellation (e.g., due to low course enrollment)	
Course Census Date	The last date to add a course or drop a course with the possibility of a refund and without record. See the Sinclair Community College Registration Calendar for specific dates for a given academic year.	
Student Census Date	The latest course census date for all of the student's registered courses for a specific term. For example, in the Fall term a student has a full-term course (census date is Aug. 31), an A term course (census date is Aug. 28), and a B term course (census date is October 23 which is the latest starting course). The student census date is October 23. All adds or drops that occur on or before October 23, will be considered when determining the student's enrollment level and the amount of federal financial aid the student will receive.	
	Credit Hours	**Percentage of Scheduled Award**
	12	100%

Intensity Levels	11	92%
	10	83%
	9	75%
	8	67%
	7	58%
	6	50%
	5	42%
	4	33%
	3	25%
	2	17%
	1	8%

Credit Hours Included or Not Included in Determining Enrollment Levels for Federal Financial Aid					
Pell Grant				**Federal Loans**	
Student Enrollment Activity	Before Course Census Date	After Course Census Date but Before Student Census	After Student Census Date	Before Loan Disbursed to Student Account	After Loan Disbursed to Student Account
Add	Included	Included	Not Included	Disbursement allowed if at least 6 Title IV credit hours	NA - if the activity occurred after the federal loan was disbursed, no adjustment is made.
Drop without record (Drop)	Not Included	NA - cannot drop without record after the course census date	NA - cannot drop without record after the course census date	Disbursement allowed if at least 6 Title IV credit hours after excluding the dropped hours.	NA - if the activity occurred after the federal loan was disbursed, no adjustment is made.
Drop with record (Withdrawal)	NA -cannot drop with record before the course census date	Not Included	Included	Disbursement allowed if at least 6 Title IV credit hours after excluding the dropped hours.	NA - if the activity occurred after the federal loan was disbursed, no adjustment is made.
Purged	Not Included	Not Included	Included	Disbursement allowed if at least 6 Title IV credit hours after excluding the dropped hours.	NA - if the activity occurred after the federal loan was disbursed, no adjustment is made.

Financial Aid Repeat Coursework Policy

Students may receive federal financial aid funding for one (1) repetition of a course successfully completed. The repeated class may be counted towards a student's enrollment status and the student may be awarded Title IV aid for the enrollment status based on the inclusion of the class. Grades of A, B, C, D, Y, P and S are considered course credit hours successfully completed. Grades of W, F, U, I, IP, N and Z are considered course credit hours not successfully completed.

Students should be aware that for *Satisfactory Academic Progress*, all coursework attempted counts toward GPA, PACE of completion and maximum timeframe hours used to determine eligibility for federal financial aid. To see the Satisfactory Academic Progress Policy, you may visit: **www.sinclair.edu/satisfactory-academic-progress**.

Students taking repeated courses should consult with the Financial Aid & Scholarships office prior to registration to ensure repeated courses are counted appropriately for financial aid eligibility. In addition, a student may need to provide documentation from the department chairperson of their valid active program regarding the need to repeat courses.

A possible exception exists for coursework with the same department name, course number and title but whose content varies by term and is required to complete the student's current active program. All exceptions will require the student to complete and submit a *Repeat Coursework Appeal*, which is available online at www.sinclair.edu/finaid or any Sinclair location.

Examples of repeated coursework include the following scenarios:

- A student is enrolled in 12 credit hours which includes a 3 credit hour course that the student passed and is repeating. The student withdraws from the course before the last day to withdraw with a full refund (withdrawals without record). The next term, the student is again registered for 12 credit hours and repeats the same 3 credit course. Twelve credits will count for financial aid eligibility.
- A student is enrolled in 15 credit hours, which includes a 3 credit hour course that the student previously passed and is repeating. The student is enrolled in a minimum of 12 credit

hours which are not repeats, therefore, student's financial aid eligibility will not be impacted by the repeated course.

- A student is enrolled in 15 credit hours which includes 3 credits repeating a course not yet passed. Since the student has never passed the course, the student's financial aid eligibility is not impacted by the repeat.
- A student is registered for 12 credit hours which includes a 3 credit hour course that have been previously taken two times with grades of D and F respectively. Since the student has already taken the course one time since it was passed, he cannot receive federal aid for the second repeat of the course even though an F was earned. Only 9 credits will count for financial aid eligibility.

Financial Aid Student Attendance Policy

Federal regulations require that the Financial Aid & Scholarships office establish an attendance policy to govern a student's eligibility to receive federal student aid for a given semester. The Sinclair policy requires the Financial Aid & Scholarships office to verify that students establish attendance through academic engagement during the first 14 days of the following terms to receive federal financial aid:

- Full Term
- A Term
- 12 Week Term
- B Term

Attendance is verified for flex sections by the final grade earned for that course. Flex sections are defined as sections that are not full-term, A, B, or the 12-Week term. Unearned grades are a grade of "Z" which equates to a student never attending, "W", and a "U" or "F" with a last date of attendance.

Sinclair allows instructors to establish an academic attendance policy for each course they teach, which may be different from the Financial Aid Student Attendance Policy. Federal student aid is based on the Financial Aid Student Attendance Policy even if the academic attendance policy reports a different result.

Federal Pell Grant and Federal SEOG must be adjusted for students who have not established attendance in all courses through the first 14 days of the class, or in accordance with the provision for extenuating circumstances described below. Federal Direct Loans may be adjusted for students who have not established attendance in one or more classes. Per federal regulations, Direct Loans must be removed completely if students do not establish attendance in at least one class. Students reported as non-attending are typically not withdrawn from the course.

Attendance Policy Exceptions

There are exceptions to the Financial Aid Student Attendance Policy because of directives from outside entities.

The Ohio Department of Rehabilitation and Corrections (ODRC) requires attendance to be taken for all Prison Education Programs (PEP). For the students in these programs, attendance will be monitored throughout the semester. Instructors will still confirm students began attending within the first 14 days of class, but these students will not be required to submit attendance request changes since attendance documentation will be received weekly from each correctional institute.

The Ohio Peace Officer Training Commission (OPOTA) also requires attendance to be taken for the Criminal Justice Training/Police Academy. Instructors will still confirm students began attending within the first 14 days of class, but the Financial Aid & Scholarships office must be notified as soon as possible by representatives from the Criminal Justice Department for the Police Academy if a student stops attending, but no later than 14 days after the student's last date of attendance.

There are limited exceptions to the 14-day rule such as a natural disaster or the instructor has an unusual circumstance that kept them from taking and reporting attendance within a timely manner. Per Volume 5 of the Federal Student Aid Handbook, the school is expected to have determined whether the student intends to return to classes or to withdraw after 14 days. If the student is eventually determined to have withdrawn, the end of the 14-day period begins the timeframe for completing a Return of Title IV (R2T4) calculation.

Academic Engagement

Academic Engagement includes but is not limited to:

- Physically attend a class where there is an opportunity for direct interaction between the instructor and students
- Submit an academic assignment (defined as a task assigned by an instructor to assess the student's understanding of the subject matter).
- Take an exam, an interactive tutorial, or computer-assisted instruction
- Attend a study group assigned by the school
- Participate in an online discussion about academic matters and
- Initiate contact with a faculty member to ask a question about the academic subject studied in the course.

The definition of academic engagement does not include activities where a student may be present, but not academically engaged, such as:

- Participating in a student-organized study group
- Logging into an online class without active participation or
- Participating in academic counseling or advising.

A student's self-certification alone is not sufficient documentation of attendance in an academically related activity; it must be supported by institutional documentation of the student's attendance in the activity.

Attendance Reporting Change Request (Attendance Appeal)

If a student was reported as non-attending in error, it is the student's responsibility to request that their instructor submit an electronic attendance reporting change request to the Financial Aid & Scholarships office. In a case where the student attended the wrong section of a class, the instructor with whom the student established attendance must submit the attendance reporting change request form with the date the student established attendance in his/her section. The instructor of the correct section must also submit an attendance reporting change request with the date the student established attendance in his/her section. The electronic request form is available to instructors on Forms Central, accessed through the Sinclair portal.

Students Who Attended Within the First 14 Days of the Course

The instructor submits the request with the first date the student attended the course. The Financial Aid & Scholarships office reviews the student's financial aid award based on the date the instructor reported the student first attended the course.

Students Who Did Not Attend Within the First 14 Days of the Course Due to Extenuating Circumstances

The instructor submits the request with the first date the student attended the course and enters a brief explanation of his/her knowledge of the student's circumstances. The Financial Aid & Scholarships office notifies the student of the next steps via Sinclair email (See Extenuating Circumstances section for examples of acceptable documentation).

Extenuating Circumstances

The Financial Aid & Scholarships office considers the following extenuating circumstances to allow students to establish attendance after the 14th day of the course. The documentation provided must correspond to the attendance taking period for which the student is submitting the request:

- Severe illness preventing him or her from attending all classes during the first 14 days of the course and he or she provided documentation from a medical doctor or hospital, and a financial aid staff member agrees that attendance in the first 14 days of the course was not possible, or
- Death of a close family member and provides a copy of the death certificate or obituary referencing the student's name in relationship to the deceased, or
- Campus closure (inclement weather or an act of God) causing the student to miss classes, and in addition, the student documents the extenuating circumstances preventing him or her from establishing attendance during the remainder of the 14-day period, or
- Attended the wrong section of the course or changed sections but established attendance during the first 14 days of the course in that section as evidenced by the instructor for that course, even though the student was not registered in that course at the time attendance was verified, or
- The instructor ceased teaching the course or is no longer available to submit the attendance reporting change request form (for example due to death, medical illness or disability, relocating out of state, etc.) and the student has been regularly attending the courses, or
- Other documented extenuating circumstances that a financial aid staff member determines meets the requirements for proof of attendance.

Technology Errors

If a technical error occurs during the attendance reporting or college error prevented accurate attendance reporting, attendance verification may be updated without an attendance reporting change request if the instructor provides the course roster and documentation of the error to the Financial Aid & Scholarships office. The director of Financial Aid & Scholarships determines if an attendance reporting change request exception can be approved.

Attendance Reporting Change Request Review Timeline

Attendance Reporting Change Request decisions can take up to 10 business days. Students are notified of the request decision through their Sinclair.edu email account. All request decisions are final. Attendance Reporting Change Requests for Fall and Spring Semesters must be submitted within 30 days after the end of the term for which they are appealing. Attendance Reporting Change Request for Summer must be submitted within 15 days after the semester ends. Any appeals received after the deadline for each semester will be reviewed by a Financial Aid Manager on a case-by-case basis. *Note:* Processing deadlines may have an impact on Federal Direct Loan eligibility for students with requests approved after the semester ends. Contact the Financial Aid & Scholarships office for more information.

Earned Grades and Attendance

Students who receive an earned grade in a course previously reported by the instructor as non-attending will be reviewed by the Financial Aid & Scholarships office to determine if attendance needs to be updated and if applicable, Title IV aid adjusted. In some cases, attendance may be updated through other Financial Aid Processes such as Return to Title IV or Packaging if conflicting information exists. If a student believes an adjustment should have been made and was not, the student will have 30 days from the end of the term to notify the Financial Aid & Scholarships office. The student will have 15 days from the end of summer term to notify the Financial Aid & Scholarships office. *Note:* Processing deadlines may have an impact on Federal Direct Loan eligibility for students with requests approved after the semester ends. Contact the Financial Aid & Scholarships office for more information.
*Where days are addressed, Financial Aid & Scholarships office uses calendar days.

Remedial Coursework Policy

Remedial coursework prepares a student for study at the postsecondary level. According to Federal regulations, a student may receive Federal financial aid for up to 30 credit hours of remedial coursework. Remedial coursework includes most DEV, ACA, BIT, and EXL courses. Remedial coursework also includes prerequisite courses for MAT and MUS that are not required for a student's program of study, for example MAT 0200. A course will be excluded from the determination of a student's Federal financial aid if the total remedial credit hours, with the course included, exceeds 30 credit hours.
Remedial coursework content must be at least high school level. If a remedial course's content is below the high school level, the course cannot be included to determine federal financial aid eligibility and will not count toward the 30 credit hour remedial coursework limit because it does not meet the definition of remedial. At Sinclair, MAT 0050 is the only course that does not meet content standards.

Results of Financial Aid Application

If eligible for federal financial aid, Financial Aid Offers are sent to the student Sinclair.edu email account beginning in the spring for courses starting Fall 2026. The following offers must be accepted before funds are available:

- Federal Work Study
- Federal Direct Loans

Visit your Financial Aid Portal to review your offers. If you believe the offer does not fully represent your current financial situation, you can request an appointment with a Financial Aid & Scholarships representative to discuss your options. For information about how to schedule an appointment or for any additional questions, go to the Sinclair FAFSA Workshop webpage.
If your financial aid package includes Federal Direct Loans, you may accept or decline them on the Financial Aid Portal. The amount you have been offered may not be your full eligibility per the annual loan limit regulations. To view annual limits, go to Sinclair Federal Direct Loan webpage. It is possible to request more loan funds at the time that you accept the loan, but it will be reviewed by a Financial Aid & Scholarship representative to ensure you are eligible. You can also request additional loan funds later by completing a Change of Award Form on the FA Online Forms Portal.
Per the One Big Beautiful Bill Act, H.R. 1, 119th Congress (2025), Federal Direct Loan annual and aggregate limits may be adjusted for students and parents for the 2026-2027 Award Year. Additional information will be provided on the Sinclair Federal Direct Loan webpage once the regulations are finalized and guidance is provided by the U.S. Department of Education.
If you accept loans, visit StudentAid.gov to complete your loan requirements listed below:

- Loan Agreement (Master Promissory Note MPN)
- Entrance Counseling

New student loan borrowers must complete Entrance Counseling before receiving a Federal Direct Loan. New student and parent Federal Direct Loan borrowers must complete a Loan Agreement (MPN) prior to receiving a Federal Direct Loan, which is valid for 10 years. First-year (less than 30 credit hours), first-time borrowers are subject to a 30-day waiting period after the start of the semester, before their loans will be disbursed.

Payment of Aid: Students' financial aid will first be credited toward payment of tuition and fees, and then for books or other educationally related expenses. Look for the aid amount on your term statement after you have registered for classes each term. Any federal funds over and above tuition, fees, and books, will be refunded to the student. For Parent PLUS Loans, the parent will receive the refund unless they indicate the refund can be sent to the student. Be sure to set up your BankMobile preference for receiving refunds via direct deposit or a check mailed to the address on file with Sinclair. For more information about refunds, review the Refund Policy on the Bursar webpage.

Satisfactory Academic Progress (SAP) Policy

Process Overview and Responsibilities

Federal regulations require students receiving federal financial aid to maintain satisfactory academic progress (SAP) toward the completion of a federal aid eligible program. The following sources of federal student aid may be awarded if a student qualifies:

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- Federal Work Study
- Federal Direct Loan (subsidized and unsubsidized)
- Federal Direct PLUS Loan (parents of dependent students only)

The Financial Aid SAP Policy evaluates qualitative and quantitative components to determine federal financial aid eligibility. Failure to meet both requirements result in financial aid warning status for the following semester of enrollment if the SAP status was satisfactory in the prior semester of enrollment. If the student does not meet the SAP requirements after the warning semester, federal aid is suspended for subsequent semesters. The student may appeal for reconsideration if an extenuating circumstance prevented successful completion of the semesters in which the requirements were not met. Students who are determined to be unable to meet the quantitative measure of Maximum Timeframe are ineligible for the warning semester and will be suspended at the time it is determined the student will not complete the program before reaching Maximum Timeframe.

The Financial Aid SAP Policy applies consistently to all categories of students who have a FAFSA on file, regardless of enrollment status, program of study, or any other category of student.

"Same as or Stricter" than Requirement

Sinclair's Financial Aid SAP Policy and Academic Progress Policy each require students to maintain a cumulative Grade Point Average (GPA) greater than or equal to 2.0. The Academic Progress Policy applies to all students, including non-federal financial aid recipients, to ensure students meet the required 2.0 graduation requirement upon program completion. The Financial Aid SAP Policy evaluates quantitative measures (pace of completion and maximum timeframe) to ensure students can graduate within the maximum number of credit hours required for their program of study. The Academic Progress Policy does not evaluate quantitative measures to determine satisfactory academic progress. Additionally, the Financial Aid SAP Policy imposes stricter consequences for failing to meet the requirements (see below). Therefore, the Financial Aid SAP Policy is stricter than the Academic Progress Policy.

Evaluation Period	GPA Requirement	Financial Aid SAP Policy	Federal Aid Eligible	Academic Progress Policy	Academic Eligible to Enroll
Semester 1	>=2.0	Warning	Yes	Academic Intervention	Yes
Semester 2	>=2.0	Suspended	No	Academic Probation	Yes
Semester 3	>=2.0			Academic Dismissal	No

Qualitative Measure

Students must maintain a fixed, cumulative GPA of at least 2.0 when the SAP evaluation is completed after each semester of enrollment. The financial aid GPA is computed by dividing the total number of grade points by the total credit hours in which grades were earned at Sinclair. The GPA calculation is based on grades reported by faculty to the Registration & Student Records office. Financial Aid staff initiate the SAP evaluation each semester, which systematically determines if the GPA requirement is met.

Quantitative Measure

Pace of Completion (Pace) is the quantitative measures used to evaluate students' progress through their program.

The Pace component requires students to receive a passing grade in 66.67% of the total credit hours attempted to ensure students will complete within the maximum timeframe established for their program. The Pace component is evaluated at the end of each semester by dividing the total number of completed credit hours by the total number of attempted credit hours. The Pace component evaluates the percentage, not the number, of successfully completed classes, which allows students flexibility in their enrollment statuses.

Maximum Timeframe Requirement

The MTF component requires students to complete their active program of study within 150% of the published program credit hours. Maximum Timeframe is calculated by multiplying the published program credit hours by 150%. Students with unsatisfactory SAP status due to maximum timeframe are ineligible for financial aid warning, although financial aid probation status may be assigned if the student successfully appeals. Students fail the maximum timeframe measure at the point at which it is determined that it is not possible for the student to complete the program within the maximum timeframe.

Generally, all periods of the student's enrollment count when assessing progress, even periods in which the student did not receive Title IV funds. Credits that are not required for the student's program will also be counted as both attempted and completed hours.

Pace

Students must receive a passing grade in 66.67% of the total credit hours attempted to ensure program completion within 150% of the published program credit hours (MTF). The Pace component is evaluated at the end of each semester by dividing the completed credit hours by the total number of attempted credit hours. The Pace component evaluates the percentage, not the number, of successfully completed classes, which allows students flexibility in their enrollment statuses.

Frequency of Evaluation

The Financial Aid SAP Standards are evaluated at the end of each payment period (Fall, Spring, and Summer Semesters) for students who were enrolled for the semester and for whom Sinclair has received a FAFSA.

Note: An intersession course is combined with the following payment period. Credit hours attempted during intersessions are included in following payment period's SAP evaluation.

As determined by a Financial Aid Officer or Manager, students may be reviewed outside of the evaluation period on a case-by-case basis for situations such as changing their program while on probation, declaring a major after earning an ineligible program status, and/or failing to complete program within Maximum Timeframe. Students will also be reviewed when a FAFSA is received to determine if they are meeting the SAP Standards prior to federal aid disbursing for the first time.

Students on financial aid probation and identified as not meeting academic plan requirements or who fail for Maximum Timeframe before the end of semester evaluation are notified of their option to appeal. Any such review or notification does not replace the official end of term evaluation completed for all applicable students.

SAP Status Notification

Students are emailed when their financial aid eligibility has changed due to the end of term SAP review. The notification is sent via Sinclair.edu email by the Friday after the last date of the semester.

Financial Aid Warning

Financial Aid Warning status is assigned for one semester of enrollment following an unsuccessful GPA and/or Pace evaluation. This status may be assigned if a student's prior SAP status was Financial Aid Satisfactory (or its equivalent).

The student must meet the minimum cumulative GPA and Pace requirements at the evaluation for the warning semester to continue federal financial aid eligibility. If the requirements are not met, the student's federal financial aid is denied until regaining eligibility by meeting the requirements through completed coursework, or by successfully appealing for reconsideration of federal financial aid eligibility.

There is no limit to the number of times a student may be placed on a Financial Aid Warning status. However, no Financial Aid Warning status may be assigned to consecutive terms of enrollment, i.e., the student must be in a Financial Aid Satisfactory status (or its equivalent) the term prior to being assigned to a Financial Aid Warning status.

There is no Financial Aid Warning status for MTF status. Students may receive an early alert for maximum credit hours attempted. They will receive early notification of end of term suspension when it is determined that the student cannot complete the program of study within the 150% of published program hours.

SAP Appeal Process

Students may appeal federal financial aid suspension if extenuating circumstances prevented academic progress during the semester(s) of unsatisfactory SAP status. Students who are not meeting SAP after the end of term evaluation are notified of their financial aid suspension and the appeal process via their Sinclair.edu email.

The SAP appeal must be submitted to the Financial Aid & Scholarships office for review by the SAP Review Committee. If the student is enrolled and wants to have the appeal considered for the current payment period, the appeal must be received by the B term census date. Otherwise, probation will begin the next payment period for which the student enrolls.

The appeal must include the items listed below for initial consideration. Incomplete appeals will be rejected. The SAP Review Committee may request additional documentation or clarification if the documentation provided does not support the timeline or circumstances of the appeal.

SAP Appeal Requirements

- SAP Appeal Form
- Academic Plan Calculation Form completed by an Academic Advisor
- Personal statement addressing the extenuating circumstances that contributed to unsatisfactory academic progress during the corresponding semester(s) in which GPA/SAP requirements were not met or why student is unable to complete their program within the 150% of published program hours
- Statement addressing how circumstances have changed to achieve satisfactory academic progress in the future
- Third party statements must be unbiased documentation of the extenuating circumstances. Letters from individuals must be signed with wet ink, and professional statements must be signed on company letterhead.
- Extenuating circumstances include, but are not limited to, illness, accident, grievous personal loss, employment change or relocation, or other circumstances beyond the student's control. All circumstances must be addressed in the student's statement. However, for extenuating circumstances more than 10 years prior to the current calendar year, documentation can be waived. The following are examples of third-party documentation:
    - Obituaries or death certificates
    - Physician statements verifying extenuating circumstance described in the student's statement
    - Written statement from college staff supporting the student's statement
- Extenuating circumstances do not include, for example, a dislike of an instructor or mode of instruction or a circumstance for which a previous appeal was approved
- Submit SAP Appeal Form through FA Online forms.

Appeals are reviewed holistically taking into consideration academic history, extenuating circumstances, academic plan, written statements, and any other supporting documentation.

Academic Plan Calculation Form

Contact your Academic Advisor to initiate this form. Both the student and Academic Advisor must electronically sign the form to confirm and acknowledge how many credit hours away from certificate/degree completion the student is. This must be uploaded with appeal and is used to create the academic plan used for the probationary period if appeal is approved.

SAP Appeal Decision Notification

Appeal decisions are sent via Sinclair.edu email typically within 7-10 days after the appeal is submitted if the SAP Review Committee was able to make a determination.

Financial Aid Probation Status

Financial Aid Probation status is assigned when a student successfully appeals an Unsatisfactory or Maximum Time Frame SAP status. The student is assigned an academic plan that defines the requirements to maintain federal aid eligibility for each semester of enrollment. The Academic Advisor and student develop the academic plan to define the probationary period for each student. Successful completion of the

academic plan results in program completion or Financial Aid Satisfactory status and continued aid eligibility.
If the academic plan requirements are not met, the student's federal aid is denied until either regaining eligibility by meeting the requirements through completed coursework, or by successfully appealing for reconsideration of federal financial aid eligibility. The SAP appeal may be approved if the student documents extenuating circumstances during the probationary semester. These must be different than the extenuating circumstance from previous semesters.
For more information about regaining federal financial aid eligibility, review the Regaining Eligibility section.

Academic Plan Calculation
Students with an approved appeal are placed on a Financial Aid Academic Plan as a condition of Financial Aid Probation. This plan is calculated based on remaining credit hours needed for the active program completion, which the academic advisor certifies on the Financial Aid Academic Plan Calculation Form and the student submits with the SAP appeal. Financial aid staff evaluate the program and cumulative GPA to determine if institutional graduation requirements can be achieved within the remaining program credit hours.
The academic plan includes the required GPA and Pace for each semester of enrollment to maintain federal financial aid eligibility. The academic plan states the first semester of federal aid eligibility authorized by the approved appeal, and each subsequent semester. The active program of study for which the appeal was approved is the only program authorized by the academic plan. If a student on financial aid probation changes programs, federal financial aid is suspended at the end of semester evaluation. The student may re-appeal based on the new program of study.

Revised Academic Plans
A revised Financial Aid Academic Plan Calculation Form may be submitted due to changes in required courses or other necessary changes, such as admission to a limited enrollment Health Sciences Degree program. This must be completed and signed by the academic advisor and student. Revised calculation forms are reviewed by Financial Aid Officers on a case-by-case basis. It's possible some revisions could result in suspension at the end of semester evaluation.

Academic Plan Evaluation
Academic plans are reviewed at the end of semester SAP evaluation. The evaluation first assesses satisfactory status of the cumulative qualitative and quantitative SAP components. If the cumulative standards are satisfactory, the financial aid status is Satisfactory, and the student is no longer monitored under the terms of the academic plan. If the student does not meet the cumulative standards but meets the academic plan requirements for the semester, the student remains in financial aid probation status and retains federal financial aid eligibility. If cumulative and academic plan standards are unsatisfactory, federal financial aid is suspended for future semesters. Students may appeal to regain their eligibility if they have a different extenuating circumstance for which the prior appeal was approved.

Academic Plan Notification
The financial aid academic plan is sent via Sinclair.edu email.

Regaining Eligibility
Students who are ineligible to receive federal financial aid due to unsatisfactory SAP status and did not file a successful appeal will be evaluated at the end of the next semester of enrollment if Sinclair has received a FAFSA for the corresponding year. If the cumulative SAP requirements are met, federal financial aid eligibility will be reinstated. Federal financial aid cannot be paid retroactively for a semester during which a student was ineligible to receive federal financial aid.
Should students require more than four approved SAP Appeals, they will be required to pay out of pocket or through other non-federal aid if eligible and show progress. The number of terms on which they must show progress will be determined by the SAP Review Committee. Appeals submitted after a fourth appeal will be reviewed by the lead SAP Officer and a Financial Aid Manager.
On a case-by-case basis those appeals will either be sent back to the committee for review, or a determination made by the Officer and Manager. If a student has had multiple approved SAP appeals, a manager may require a meeting between the student and appropriate Sinclair staff based on the student's situation to discuss terms of FA probation.
A student whose SAP Appeal is denied can continue to take classes and pay out of pocket or use other non-federal aid as they work toward a Satisfactory status. After a period as determined by the SAP Review committee, the student may be able to use this successful progress as additional documentation toward another SAP appeal.
If choosing to re-appeal a previously rejected appeal, documentation not included in prior appeals is necessary for re-consideration, and approval is not guaranteed. For example, documentation of successful completion of college level courses since the previous rejection could be submitted to demonstrate academic progress.

Treatment of Nonpunitive Grades, Repeated Courses, Audited Courses, Pass/Fail Courses, Withdrawals, and Incompletes
Grade Definitions and Treatment in SAP Calculation
Institutional credit hours include college level, developmental (DEV, ACA, and EXL subject codes), and English as a Second Language (ESL subject code).

Grades	GPA	Attempted	Completed	Testing/Other Grades	GPA	Attempted	Completed
A - Excellent	Y	Y	Y	Y - Proficiency Credit	N	Y	Y
B - Good	Y	Y	Y	AA - Articulation Agreement	N	Y	Y
C - Average	Y	Y	Y	AP - Advanced Placement	N	Y	Y

D - Passing	Y	Y	Y	CL (CLEP)	N	Y	Y
F - Failure	Y	Y	N	CT - Career Tech Credit Transfer	N	Y	Y
S - Satisfactory	Y	Y	Y	DS - (DSST)	N	Y	Y
P - Pass	Y	Y	Y	WC - WEBCAPE	N	Y	Y
U - Unsatisfactory	Y	Y	N	- A, B, C, D, P and S followed by ":" are fresh start courses and calculated in the quantitative/qualitative SAP components the same as the grade preceding the ":". - A, B, C, D, and P followed by a "#" are grades earned through proficiency testing and calculated in the quantitative/qualitative SAP components the same as the grade preceding the "#". - SAP is calculated using a 2.0 GPA for grades of S and P. - SAP is calculated using a 0.0 GPA for grades of U and N.			
Z - Nonattendance	Y	Y	N				
I - Incomplete	N	Y	N				
W - Withdrawal	N	Y	N				
N - Progress	N	Y	N				
X - Audit	N	N	N				
IP - In Progress	N	Y	N				
-- No grade assigned	Y	Y	N				

Transfer Credit
Transfer credit hours accepted from other institutions are included in both the attempted and completed credit hours calculation for Pace and MTF, but not in cumulative GPA.

Repeat Coursework
All course attempts are calculated in the pace of completion and maximum timeframe. The financial aid SAP policy abides by the College's academic policy regarding the treatment of repeated courses and the placement of grades in the calculation of the cumulative GPA. See the complete Academic Repeat Coursework Policy for additional information.

Dropped Courses
Attempted credits include all courses in which a student remains enrolled beyond the last day of the add/ drop period of the course, whether the student began attending or not. Courses in which the student drops after the add/drop period are given a grade of "W."

Fresh Start
The College's academic amnesty policy is superseded by the Financial Aid Satisfactory Academic Progress policy when calculating the SAP status to determine financial aid eligibility.

Treatment of Remedial and English as a Second Language Courses
Remedial (Developmental) and English as a Second Language (ESL) courses are included in attempted and completed hours in the Pace and MTF end of semester SAP evaluations. If a grade of pass or fail is received in a remedial or ESL course, a passing grade is calculated as a 2.0 in the financial aid GPA and a failing grade is calculated as zero.

Treatment of Consortium, Change of Major, Second Degree, and Second Major Courses

Consortium Agreement Grades
Grades received through a consortium or contractual agreement are not included in the end of term GPA calculation. Consortium grades are included in the Pace and MTF end of term SAP calculations as attempted and completed credit hours if a passing grade was earned.

Single Program of Study Requirements
Students may not be enrolled in multiple academic programs concurrently to register for classes. If the student was granted an exception to this policy and has more than one active program of study, the active, highest-credential program with the most recent start date will be evaluated for satisfactory academic progress. The SAP standards will include all Sinclair credits and grades and transfer credits.
A student must be enrolled in a federal financial aid eligible program before the GPA, Pace or MTF SAP calculation occurs. The student is assigned the SAP status of ineligible program (IEP) until an eligible program is declared. Federal aid ineligible programs include, but are not limited to Ohio Transfer 36, SCC graduate, and non-degree programs with program code ending in ND. Additionally, many certificates are ineligible until approved by the U.S. Department of Education, and some programs are permanently ineligible for federal financial aid. Students should contact an Academic Advisor for information on program federal aid eligibility.

Second Degree or Certificate
Second or subsequent degrees or certificates after graduating from a Sinclair program are permitted under the Financial Aid SAP Policy but are subject to the SAP evaluation requirements. There is no limit to the number of programs a student may complete, and receive federal financial aid, if

eligible. If federal aid is suspended due to the SAP evaluation, the student has the option to appeal as described in the Financial Aid SAP Policy.

Change of Major
Changes of major are permitted if the student meets the SAP evaluation requirements. Students who have changed their major and have federal aid subsequently suspended may appeal in accordance with the SAP Appeal Policy. If the student is on financial aid probation and later changes their major, this may result in federal financial aid suspension at the end of term evaluation.

Policy Review
The Financial Aid SAP Policy is reviewed by the Financial Aid & Scholarships leadership staff and approved by the Director of Financial Aid & Scholarships at least annually. The online catalog and website policies are updated if policy changes occur after the annual review. In addition to the Sinclair Online Course Catalog, students may also access the SAP Policy on Sinclair's Financial Aid & Scholarships website or obtain a copy in person at the Financial Aid & Scholarships office located in Dayton Campus Welcome Center.
Effective: May 2026

Scholarships
Sinclair Community College offers a variety of scholarship opportunities for students.
Sinclair's institutional scholarships include need-based and merit-based awards to new and currently enrolled students ranging from $100 - $5,000 per year. Typically, students must have at least a 2.0 cumulative GPA; for the first semester, the GPA requirement is waived for new students. Students may be eligible for more than one institutional scholarship per academic year.
Competitive scholarships are also available to students on a departmental basis. Students should contact their department to determine if scholarships are offered for their department.

High School Merit Scholarships - These scholarships are offered each year to high school seniors planning to enroll at Sinclair in the Fall semester after graduation. They range in amount from $2,000 - $3,000 per year and include the following awards for Montgomery County residents: Presidential Scholarship (3.5 minimum high school GPA required) and the Virginia McNeal Scholarship (3.0 minimum high school GPA required). A Regional Scholarship is offered to non-Montgomery County residents (3.0 minimum high school GPA required). Further information regarding those scholarships can be found at **www.sinclair.edu/scholarships**

Foundation Scholarships - The Sinclair Foundation annually funds scholarships through endowment earnings and cash gifts to the college. Scholarships are available to currently enrolled Sinclair students, graduating high school seniors, and adults entering college for the first time. Students with enough Pell Grant and other grants to cover tuition, books and fees are typically not considered for these scholarships. Other criteria such as program of study, academics and community service may also be considered. Online applications can be submitted at **www.sinclair.edu/scholarships**

External Scholarships-- Several scholarships are awarded by agencies, clubs, and organizations outside of Sinclair. Students are encouraged to periodically check the External Scholarship Resources and other scholarship resources link on the web a **www.sinclair.edu/scholarships** Visit **www.sinclair.edu/scholarships** for additional scholarship information including application and selection details.

Student Loan Code of Conduct
The purpose of this Student Loan Code of Conduct is to ensure the integrity of the student aid process and ethical conduct of Sinclair officers, employees, and agents with respect to student loan practices.

Administrative Provisions
- The Sinclair Financial Aid & Scholarships office will publish this Student Loan Code of Conduct on its Consumer Information webpage and on its Federal Financial Aid webpage.
- The Sinclair Financial Aid & Scholarships office will administer and enforce this Student Loan Code of Conduct and will require its officers, employees, and agents with responsibilities with respect to federal program loans and private education loans to be informed annually of the provisions of the code of conduct.

Definition
For purpose of this code of conduct, Lending Institution means:
1. Any entity that itself or through an affiliate engages in the business of making loans to students, parents, or others for purposes of financing higher education expenses or that securitizes such loans; or
2. Any entity, or association of entities, that guarantees or services education loans; or
3. Any industry, trade or professional association that receives money from any entity described above in subsections (1) and (2).

Revenue Sharing
Sinclair prohibits its employees from entering into any type of revenue-sharing arrangement with any lender, guarantor, or servicer. The term "revenue-sharing arrangement" means an arrangement between an institution and a lender in which:
- The lender provides or issues a loan that is made, insured, or guaranteed to students under the Higher Education Act attending the institution or to the families of such students; and
- The institution recommends the lender or the loan products of the lender in exchange for a fee paid by the lender or in exchange for other material benefits, including revenue or profit sharing, provided to the institution, or to its officer, employee, or agent.

Sinclair will not accept material benefits including revenue or profit sharing to the institution, or to an officer or an employee of the institution or an agent.

Gifts
Employees of the Financial Aid & Scholarships office are prohibited from soliciting or accepting any gift or anything of more than a de minimus value from a lender, guarantor, or education loan servicers.
- Gifts include any gratuity, favor, discount, entertainment, hospitality, loan or other item. This includes transportation, lodging, or meals, or a gift of service whether provided in kind, by purchase of a ticket, payment in advance, or reimbursement after the expense has incurred.
- This provision shall not be construed to prohibit any officer, employee, or agent of Sinclair who has responsibility with respect to educational loans from conducting non-college business activity with any lending institution or prevent Sinclair from holding membership in any nonprofit professional association.
- Gifts to family members of a Sinclair employee are considered to be a gift to the employee if the gift is given with the knowledge and acquiescence of the employee and there is reason to believe the gift was given because of the official position of the Sinclair employee.

Family members include a person's: (1) Parent or stepparent, sibling or stepsibling, spouse, child or stepchild, or grandchild or step-grandchild; (2) Spouse's parent or stepparent, sibling or step-sibling, child or stepchild, or grandchild or step-grandchild; (3) Child's spouse; and (4) Sibling's spouse. A gift does not include:

- Standard materials, activities or programs related to a loan being provided
- Food, refreshments, training, or other informational material furnish as an integral part of a training session that is designed to improve the service of the lender if such training contributes to the professional development of the agent
- Favorable terms, conditions or borrower benefits provided to a student employed by Sinclair if comparable terms are provided to all students of Sinclair
- Entrance and exit counseling services provided to borrowers as long as the institution's staff is in control of the counseling session, and it does not promote the products and services of any specific lender
- Philanthropic contributions to the College unrelated to education loans or made in exchange for any advantage related to private education loans; or
- State education grants, scholarships, or financial aid funds.

Preferred Lender Status

Sinclair participates in the following loan programs that provide student and parent loans through the U.S. Department of Education: William D. Ford Federal Direct Loan Program.

Sinclair provides a preferred lender list from which to select a lender for a private education student loan. The list is available on FASTChoice and provides a list of preferred lenders based on low interest rates, no origination fees, timely processing, total loan volume, and electronic funds transfer capabilities. Sinclair will certify private loans from any lender. Terms, fees, and borrowing limits of private loans differ. Borrowing a private loan is a decision that should be made with careful consideration.

Contract Arrangements

Sinclair prohibits any employee, officer or agent employed by the financial aid office who otherwise has responsibilities with respect to federal or private education loans from accepting from any lender or affiliate any fee, payment, or other financial benefit (including the opportunity to purchase stock) as compensation for any type of consulting arrangement or other contract to provide services to a lender or on behalf of the lender.

Directing Borrowers or Delaying Certifications

Sinclair prohibits the assignment of a first-time borrower to a particular lending institution through award packaging or other methods. Sinclair will not assign a borrower's private student loan to a particular lender. All decisions shall be made by the borrower in his/her independent review of borrower benefits and lender services. Further, Sinclair will not refuse to certify, or delay certification of, any loan based on the borrower's selection of a particular lender or guaranty agency.

Opportunity Pool Loans

Sinclair prohibits any employee, officer or agent from requesting or accepting from any lender any offer of funds to be used for private education loans including an opportunity pool loan to students in exchange for concessions or promises regarding providing the lender with:

- A specified number of loans made, insured, or guaranteed
- A specified loan volume of such loans or
- A preferred lender arrangement for such loans.

Private education loans include an opportunity pool loan which means a private education loan made by a lender to a student or family member of the student attending the institution that involves a payment, directly or indirectly, by such institution of points, premiums, additional interest, or financial support to such lender for the purpose of such lender extending credit to the student or the family.

Staffing Assistance

Sinclair prohibits accepting or soliciting staffing assistance from a lending institution, including but not limited to call center staffing or financial aid office staffing. However, this does not prohibit requesting or accepting professional development training for aid officers, or requesting or accepting counseling, financial aid literacy, or debt management materials for borrowers, if the material discloses that the lender prepared or provided the materials.

Advisory Board Compensation

Employees of the Financial Aid & Scholarships office who serve on an advisory board, commission or group established by a lender or guarantor, must not receive anything of value from the lender or guarantor except that the employee may be reimbursed for reasonable expenses incurred for serving on such advisory board, commission, or group.

Student Private Loans

Private education loans are non-federal loans available to borrowers for postsecondary education expenses. These loans are provided through a private educational lender and not guaranteed by the federal government. It is recommended that students take full advantage of all government loans available to them before considering a supplemental private loan. Eligibility to borrow a private student loan is initially determined by each lender but Sinclair must also review to determine if the student meets criteria to qualify for private loan funds. Sinclair must certify to the lender that these criteria are met before the loan will be disbursed.

Visit the FASTChoice link on the Sinclair Private Student loans webpage for a list of lenders most used by Sinclair students. The total amount approved for a private student loan cannot exceed the student's Cost of Attendance (COA) minus Other Financial Assistance (OFA). For more information about COA, visit the Sinclair Cost of Attendance webpage.

Verification Process for Applicants Filing the FAFSA

Institutions are required to verify the accuracy of a student's FAFSA to assure federal aid is awarded to those who are eligible. Approximately 20% of FAFSA applications are selected for verification each year. Sinclair may also select FAFSAs for full verification but will request additional documentation if there is conflicting information that requires resolution. Federal financial aid is not awarded until verification is completed or conflict is resolved. If a student is selected for verification or a conflict occurs after federal financial aid is awarded, the aid will be placed on hold until verification or the conflict is resolved.

Students are notified they are selected for verification or have conflicting information that needs resolved via their Sinclair email account. The email specifies the actions required by the applicant and if applicable, how to access FA Online Forms to complete the required documents. The student also receives a FAFSA processing email notification from U.S. Department of Education (ED) stating their FAFSA was processed, and a FAFSA Submission Summary was generated, which indicates their eligibility status and if they are selected for verification.

For the 2026-2027 award year the FAFSA information selected by ED that an institution, applicant and, if appropriate, the applicant's parent(s) or spouse may be required to verify are:

- Adjusted Gross Income
- Income earned from work
- U.S. Income Tax Paid
- Untaxed Portions of Individual Retirement Account (IRA) Distributions

- Untaxed Portions of Pensions
- IRA Deductions and Payments
- Tax Exempt Interest Income
- Education Credits
- Foreign Income Exempt from Federal Taxation
- Family/Household Size
- Identity/Statement of Educational Purpose

Sinclair may select FAFSA items for verification beyond what is required by ED. If ED or Sinclair selects an applicant for verification under this policy, the applicant must complete the required actions specified or provide the requested documents/ information. Students may also review the list of required documents by logging into the Financial Aid Portal from my.sinclair.edu. Applicants are advised to complete the required actions or submit copies of the requested documents within 14 days of the request made by the Financial Aid & Scholarships office. However, the Federal deadline for verification completion is the earlier of 120 days than the applicant's last date of attendance or the federal deadline of September 12, 2026. This includes making any necessary corrections, submitting those corrections to the FAFSA Processing System, and receiving the newly corrected FAFSA Submission Summary.

For the 2026-2027 award year, the tax information verified is for the tax year ending December 31, 2024. If your financial situation has changed since 2024 or if any other information reported on the FAFSA has changed since it was submitted, Sinclair may be able to review and possibly adjust the information to better reflect your household financial situation. To be considered for this adjustment, you will need to complete the Special Circumstance - SAI Appeal Form on the FA Online Forms Portal and submit the requested documentation.

The following consequences occur for applicants who fail to complete verification in a timely manner:

- Applicants who do not complete verification within the required deadlines will not qualify for federal financial aid.
- No federal grant or loan funds will be disbursed.
- No federal financial aid loan will be originated.
- If a loan was originated prior to the notice of verification, any undisbursed monies will be cancelled.
- Student employment in a Federal Work Study job will be terminated.
- If federal grant funds were disbursed prior to being selected for verification and there was overpayment, the monies must be returned to the appropriate federal grant programs.
- Refunds, if any, will not be available until verification is completed and corrections (if necessary) have been processed and received by Sinclair from the U.S. Department of Education

Financial aid offers are based on the information provided on the applicants FAFSA. Federal need-based programs, such as the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant (FSEOG), and the Federal Subsidized Direct Loan Programs have strict eligibility requirements. If the data reported on verification documents differs from the information reported on the applicant's FAFSA, the applicant's eligibility for funding from these programs may be affected.

If any credible information indicates that the applicant engaged in fraud or other criminal misconduct in connection with their federal student aid application, Sinclair will report applicants to the Office of the Inspector General of the U.S. Department of Education after review.

Withdrawal & Return of Title IV Funds

Title IV funds are awarded to a student under the assumption that they will attend school for the entire period for which the funds are awarded. Sinclair Community College complies with federal regulations governing the Return of Title IV funds when a student ceases attendance before completing the applicable payment period. This policy applies to all students who receive Title IV federal financial aid and subsequently withdraw, drop out, or are dismissed.

The Title IV programs offered by Sinclair that are covered by this law are: Federal Pell Grants, Federal Supplemental Educational Opportunity Grants (FSEOG), Federal Direct Loans, and Federal PLUS Loans.

Calculating a Return of Title IV Funds When a Student Withdraws

Sinclair uses the Return of Title IV (R2T4) calculation to determine the amount of aid earned by the student and the amount that must be returned when a student withdraws. When this occurs, the Financial Aid & Scholarships office must calculate the earned and unearned portions of Title IV aid as of the last date of attendance (LDA). This process is done on a weekly basis.

There are two types of withdrawals:

1. Official: a student notifies Sinclair of the withdrawal. This may be electronically or in-person. If all courses are dropped officially, the withdrawal date and date of determination are (usually) the same date.
2. Unofficial: a student stops attending at least one course without notifying the school. If a student officially drops courses, but unofficially drops only one course, the student is still considered an unofficial withdrawal. Notification of unofficial withdrawal is not received until grades and last dates of attendance are reported at the end of the semester.

If the student completes 60% of the scheduled days, the student has earned 100% of the Title IV funds he or she was scheduled to receive. The school must still complete the R2T4 calculation to determine if a student is eligible for a post-withdrawal disbursement.

If a student does not begin attendance in any courses, all funds must be returned. For students who withdraw from all classes during the 100% refund period, Sinclair will treat the students as if they had never begun attendance and all Title IV funds will be returned to the federal government.

The amount of assistance that a student has earned is determined on a prorated basis. The percentage of the period completed is determined by dividing the number of calendar days completed in the payment period, as of the day the student withdrew or stopped attending, by the total number of calendar days in the payment period. The number of calendar days includes all days within the payment period, except for institutionally scheduled breaks of five or more consecutive days. The day the student withdrew is counted as a completed day. For example, if the student completed 30% of their payment period, the student earned 30% of the assistance they were originally scheduled to receive.

Withdrawing from a Class or all Classes Will Affect a Student's Financial Aid

Students receiving financial aid who withdrew or stop attending, in most cases, will be required to return a portion of financial aid received. A student should submit an official withdrawal from classes to the Registration & Student Records office (RSR). Before withdrawing or stopping attendance in classes, the student should be aware of the proper procedure for withdrawing from classes and the consequences of withdrawing or stopping attendance. Official withdrawal is the responsibility of the student. Information about officially withdrawing from Sinclair can be found on the Sinclair How to Register, Drop or Add Sections webpage.

Questions on Return of Title IV Funds may be addressed to the Financial Aid & Scholarship office. Questions about withdrawal should be addressed with an Academic Advisor or Registration.

The Withdrawal Date and Date of Determination

If a school is not required to take attendance, the determination of a withdrawal date varies with the type of withdrawal. Sinclair uses the date of the latest withdrawal for Official W/Ds and the date of the latest withdrawal or last date of attendance (LDA) for Unofficial W/Ds. This date is based on TIV eligible courses only.

The date of Sinclair's determination that the student withdrew is not necessarily the same as a student's withdrawal date. A student's withdrawal date is used to determine the percentage of the payment period and the amount of aid a student has earned. The date of determination that the student withdrew is used to track the following circumstances:

- A school must offer any amount of a PWD that is not credited to the student's account within 30 days of the date of determination.
- If the student or parent submits a timely response that instructs the school to make all or a portion of a Direct Loan PWD, the school must disburse the funds within 180 days of the date of determination.
- Title IV grant PWDs must be made within 45 days if required to be provided directly to the student and within 180 days if paying for allowable charges on the student's account.
- A school must document a student's withdrawal date and maintain the documentation as of the date of determination.
- Within 30 days of the date of determination, a school must notify a student if a grant overpayment is due.
- The school must return the amount of Title IV funds for which it is responsible no later than 45 days after the date of determination.

When a student dies while enrolled and attending a program of study, Sinclair must maintain the documentation it received that the student has died and determine an appropriate withdrawal date. Since Sinclair is not required to take attendance, the withdrawal date can be no later than the date of the student's death. If the R2T4 calculation indicates that Sinclair is required to return Title IV funds, we must return Title IV funds. The student's estate is not required to return any Title IV funds disbursed to the student.

Attendance Exception

The Prison Education Programs (PEPs) offered by Sinclair are attendance-taking programs due to a requirement by the Ohio Department of Rehabilitation and Corrections. For students pursuing a PEP, each site coordinator will submit attendance sheets to the Financial Aid & Scholarships office on a weekly basis and a financial aid representative will track a student's attendance. A PEP student will be considered an unofficial withdrawal if he/she has stopped attending all classes and the date of determination will be within 14 days of the student's last day of attendance.

Post Withdrawal Disbursements

If the student did not receive all funds that were earned prior to withdrawing, a post-withdrawal disbursement may be due.

- If the student is eligible for a post-withdrawal disbursement of a grant, it must be disbursed within 45 days.
- If the post-withdrawal disbursement includes loan funds, the student must give permission before the funds can be disbursed.

Students will be notified within 30 days of the date of the withdrawal determination of any direct loan eligibility, or a parent for a Direct Parent PLUS Loan eligibility.

If a post-withdrawal disbursement from a loan creates a credit balance, the credit balance will be refunded to the student and/or the parent in the case of a Direct Parent PLUS Loan as soon as possible, but no later than 14 days after the credit balance has occurred.

Sinclair must return the Title IV funds within 45 days of the date we determined the student withdrew. After completing the R2T4 calculation, the Financial Aid Compliance Specialists will mail a PWD letter to students who are eligible. The letter must be sent back within 14 days to give us permission to disburse the PWD.

Returning Unearned Federal Funds

The total amount of federal aid disbursed at the point of withdrawal minus the amount earned constitutes the unearned aid that must be returned to the federal government within 45 days of the date it has been determined the student has withdrawn. This amount includes the amount Sinclair is required to return along with any grant funds the student is required to return. This may result in the student owing Sinclair if the amount earned does not cover the charges for the term.

Sinclair chooses to return these funds so the student does not owe an overpayment of grant funds which could cause the student to lose Title IV eligibility if not paid to the US Department of Education promptly.

Any loan funds that the student (or parent for a Direct PLUS Loan) are eligible to keep must be repaid in accordance with the terms of the promissory note. That is, students or parents make scheduled payments to the holder of the loan over a period agreed upon by the student or parent.

Sinclair returns Title IV funds in the following order:

1. Unsubsidized Direct Loan
2. Subsidized Direct Loan
3. Direct PLUS Loan
4. Federal Pell Grant
5. Iraq and Afghanistan Service Grant
6. Federal Supplemental Educational Opportunity Act (FSEOG)

The required return of Title IV funds will be made to the Title IV programs within 45 calendar days of the date of determination of withdrawal.

The requirements for refunds and repayments of Title IV program funds when students withdraw are separate and different from any Sinclair refund of fees policy. The institutional refund policy determines the amount of tuition and other charges owed to the College and has no impact on the Return of Title IV funds calculation. Therefore, students may still owe funds to Sinclair to cover unpaid institutional charges. Sinclair may also charge students for any Title IV program funds that the school was required to return. Students are encouraged to review Sinclair's refund of fees policy which can be foundat **www.sinclair.edu/bursar-refund-policy** or may ask Sinclair for a copy of its refund policy.

If a credit balance exists on the student's account after applying institutional refund policy and the R2T4 calculation, the institution will disburse the credit balance to the student no later than 14 days from the date the school performs the R2T4 calculation.

If you have questions about your Title IV program funds, you can call the Federal Student Aid Information Center at (800) 4-FEDAID (800-433-3243). TTY users may call 1-800-730-8913. Information is also available on Student Aid on the Web at: www.studentaid.gov

All information contained in the Withdrawal and Return of Title IV Funds Policy is subject to change based on changes to federal law, regulation, or Sinclair's policy and procedure. If changes are made, students must abide by the new policy.

Note: In many instances, the student will owe a balance to Sinclair based on the returns made by Sinclair to the U.S. Department of Education. Please contact the Sinclair Financial Aid & Scholarships office for additional information.

Veterans & Military-Affiliated Educational Benefits

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about benefits offered by VA is available at the official U.S. Government Web Site at *https://benefits.va.gov/gibill/*

Military-affiliated Educational Benefits

Sinclair is proud to assist our military affiliated students. Educational benefits for military affiliated students come in several forms: Military Tuition Assistance (TA) programs, Veterans Affairs (VA) Education Benefits (also known as the GI Bill®), Scholarships and Ohio Funding. In general, Military TA programs provide funding to currently serving members of the United States Armed Forces, VA Education Benefits are determined by service information found on the service member's DD214, and other benefits are determined by military-affiliation.

The best way to get information about using these benefits is to contact the Military Family Education Center (MFEC). You can contact the MFEC by phone at (937) 512-2586, or by email at *mfec@sinclair.edu.* Students can find updated information and forms to process education benefits at *www.sinclair.edu/mfec.*

Veteran Educational Benefits

Students who meet the Department of Veteran Affairs (VA) eligibility criteria may be certified to use educational benefits. For information about VA benefits, students can visit the VA directly at www.va.gov. Students will work with the Military Family Education Center (MFEC) at Sinclair to assist in using this funding through the college.

Students that are interested in using their GI Bill® benefits at Sinclair should use the following steps:

1. Go to www.sinclair.edu/MFEC to find checklists for benefits and other important forms to assist in attaining education funding from the VA.
2. Official military transcripts from the Joint Services Transcript (JST) or the Community College of the Air Force (CCAF) are required for all students using military education benefits. Transcripts must be submitted and evaluated within the first two semesters of enrollment. Failure to complete this requirement may result in a hold on educational benefits.
3. MFEC will verify the following:

a. Student is degree seeking

i. Students' degree program has been approved by the VA at https://inquiry.vba.va.gov/weamspub/buildSearchInstitutionCriteria.do

b. All Development and Remedial classes require placement test scores indicating what course the student placed. Any remedial or developmental courses must be taken in-person to utilize VA funding.

c. All registered classes are required toward degree program or required prerequisites of the degree program.

4. GI Bill® Benefits Stipends

a. VA does not follow the same guidelines for full-time benefits. Students will need to visit the VA at https://www.va.gov/education/ to learn more.

b. Monthly Verification is required by the VA for the following benefits: CH 30, CH 33, CH 35 & CH 1606

For questions about using the GI Bill® at Sinclair, please contact: MFEC, Dayton Campus, 937-512-2586 or mfec@sinclair.edu.

Repayment of Benefits

Under certain circumstances, repayment of benefits to the VA could occur. Please see the following list of possible repayment situations.

1. Dropping from courses
2. Non-attendance of courses
3. Punitive grades for courses (Z, F, U grades)

To avoid these situations, it is advisable to speak with the MFEC to discuss the potential impacts of not successfully completing courses on your VA education benefits.

Transfer Credit

Students with prior credits who attended previous college(s) or served in the military must request official transcripts. Information about requesting official transcripts and tools to assist in preliminary searchable credit reviews, can be found at www.sinclair.edu/MFEC.

Official transcripts will be evaluated by the Office of Registration & Student Records (RSR). Once the credits have been officially evaluated, RSR will send the student a letter informing them of the number of credits accepted. Students can make an appointment with an Academic Advisor to discuss transfer credit by visiting https://www.sinclair.edu/services/welcome-center/academic-advising/.

Military Attendance Policies

Sinclair Community College is dedicated to the success of our military students. To best serve the students who serve our country, Sinclair has several policies to assist. We recommend that students, staff, and faculty speak with the MFEC to discuss each student situation.

1. Military Attendance Form- A form to assist in the facilitation of conversation between the student and instructor if a student is deployed or has mandatory training that impacts attendance. This form can be found at: www.sinclair.edu/mfec or on Sinclair Forms Central
2. Military Refund Appeal- A form to complete if a student dropped a class with a 'W' grade for military reasons. This form can be found at: https://www.sinclair.edu/services/welcome-center/bursar/tuition-refund-appeal-information/

Other Military Funding

In addition to the GI Bill® there are other funding sources that are available to military-affiliated students. These benefits are Federal Tuition Assistance (FTA), National Guard Scholarship (ONGSP), My Career Advancement Account (MyCAA), and the Ohio War Orphan Scholarship (OWOS). Detailed information about applying for and utilizing these benefits can be found on the checklists located on www.sinclair.edu/mfec.

Wright Patterson Air Force Base (WPAFB)

Sinclair is proud to partner with WPAFB with assisting students achieve their academic goals. Sinclair is one of the few colleges in the region that offers services and classes on base. The WPAFB Sinclair office is in Area B, Building 50. For directions, information, and to schedule appointments with Sinclair at WPAFB, please visit www.sinclair.edu/mfec.

Dayton Veteran Lounge

As a thank you for our veteran and service members, we offer a lounge space at the Dayton Campus next to the MFEC office. The lounge is intended to serve as a resource space for veterans and service members to use, while working toward their educational goals. For information about how to use the Veteran Lounge, please visit www.sinclair.edu/MFEC.

MFEC Contact Information:

Dayton Campus-Building 10444
www.sinclair.edu/mfec
(937) 512-2586 | MFEC@sinclair.edu

***GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at* https://www.benefits.va.gov/gibill.

Aviation Students Using the GI Bill®

Best Practices Process: Advising Students in the Aviation Technology/Professional Pilot program that are using the GI Bill®

Students that are in the Aviation Technology/Professional Pilot program and are utilizing GI Bill® benefits should be made aware that the

Department of Veteran Affairs (VA) does not pay for certificates within the program, they will only pay for a degree. This means you are required to take general education classes mixed with flight classes showing intent to complete the program.
First Seven (7) Days of a Flight Lab Class: A student must attend a class in the first seven (7) days of the semester. This information is covered during the orientation session at the start of the class.
For the most up to date information, please go to www.sinclair.edu/MFEC to review the Aviation Checklist.

Courses and Programs of Study
To help students reach their educational goals, those that have earned college credits outside of Sinclair or served in the U.S. Armed Forces, must have official transcripts sent to Sinclair and evaluated before VA benefits can be utilized. Transcripts will be evaluated by the office of Registration & Student Records. Once the credits have been evaluated, the school will send the student a letter informing them of the number of credits accepted. This information is essential for students and advisors to create an academic plan that accurately reflects the best path to success.
For assistance with creating an academic plan, students need to meet with an Academic Advisor. A degree plan is required before the MFEC can certify any VA educational benefits.
Sinclair's developmental (remedial) courses are approved for VA educational benefits if these courses are recommended through placement testing and are taken in-person.
The following is a listing of programs and courses that are not approved for VA educational benefits:

1. There are a limited amount of certifications that are approved for VA Benefits.
2. Courses that cannot be credited toward graduation in an approved associate and/or bachelor's degree program
3. Developmental courses taken in an online format (no face-to-face class meetings required)
4. Real Estate courses for students not enrolled in the Real Estate associate degree program
5. Professional Pilot courses for students not enrolled in the approved Professional Pilot associate/ bachelor's degree program(s)

Remember: Assistance may be received in course selection, but final course selection is the student's responsibility. Students should follow the course outline as contained in the college catalog and communicate regularly with their academic advisor.

Current Military Access Scholarship (CMAS)
Military TA and ONGSP programs do not cover college fees. To minimize out-of-pocket costs, Sinclair has established the Current Military Access Scholarship (CMAS) program that pays up to $250 in non-tuition fees per semester for students using Military TA. Funds are awarded directly to student accounts after TA has been applied. Students do not need to apply for this scholarship.

End of Term Reports
The MFEC is required to track information and progression for each student using the GI Bill® to maintain compliance standards. These reports are submitted within 30 days of the end of the full-term. The following reports are submitted by the MFEC:

- Academic Dismissal Report: The MFEC reports students that have previously been on Academic Probation and have been escalated to Academic Dismissal status within the term. This required reporting could cause a debt with the VA and/or drop of future registered classes.
- F/Z/U Grade Report: F/Z/U grades that are considered unearned by the VA. Unearned grades are defined as failing grades with a last date of attendance (LDA) before the end of the term. This required reporting could cause a debt with the VA and/or the college.
- Graduation Report the MFEC reports students that earn a degree within the term.

Military Tuition Assistance (TA)
Each branch of the United States Armed Forces offers Tuition Assistance (TA) programs for their active duty members and its reservists. Programs are administered by the individual service branches, and typically require coordination through the service member's command structure. Students with questions about using their Military TA at Sinclair can contact the Military Family Education Center (MFEC). You can contact the MFEC by phone at (937) 512-2586, or by email at mfec@sinclair.edu.
To use your TA at Sinclair, students need to provide their Branch's TA program with an Evaluated Degree Plan. Requirements for degree plans vary by service branch, but in general the plan must be created and signed by a Sinclair Academic Advisor, list all of the courses required for the degree and show all transfer courses that have been accepted by Sinclair and are applicable to course requirements of the student's program.
Students must submit a request to use TA each semester through their Branch's online education portal.
Student's who plan to use Tuition Assistance (TA) funding must complete the Semester Enrollment Form available on the Military & Family Education Center (MFEC) webstie each term after their class schedule is finalized. Failure to submit the required form may ddelay processing of TA funds.

My Career Advancement Account (MYCAA)
The My Career Advancement Account (MyCAA) Scholarship Program is a workforce development program that provides up to $4,000 ($2,000 per year) of financial assistance to eligible military spouses who are pursuing a license, certification or Associate's degree in an occupation or career field. For more information about MyCAA and to apply go to https://mycaa.militaryonesource.mil/mycaa.

Students who plan to use MyCAA funding must complete the Semester Enrollment Form available on the Military & Family Education Center (MFEC) website each term after their class schedule is finalized. Failure to submit the required form may delay processing of MyCAA funding. For questions regarding MyCAA, please contact the MFEC at (937)512-2586 or mfec@sinclair.edu

Ohio National Guard Scholarship Program (ONGSP)
The ONGSP is provided to Air and Army National Guard members serving in the Ohio National Guard. This is a state benefit that covers tuition only. To apply, please visit *ONGSP.Ohio.gov* for each term that you would like to use these benefits.
Students who plan to use ONGSP funding must complete the Semester Enrollment Form on the Military & Family Education Center (MFEC) website each term after their class schedule is finalized. Failure to submit the required form may delay processing of ONGSP funding.
Once these benefits are approved each term, please send the official document to the MFEC at mfec@sinclair.edu. For questions regarding this process, please contact the MFEC at (937) 512-2586 or mfec@sinclair.edu.

Ohio War Orphans Scholarship (OWOS)
The Ohio War Orphans and Severely Disabled Veterans' Children Scholarship (OWOS) Program awards tuition assistance to the children of

deceased or severely disabled Ohio veterans who served in the armed forces during a period of declared war or conflict.
To remain eligible for the scholarship, students must be enrolled in at least 12 credit hours each term and maintain a minimum cumulative 2.0 grade point average (GPA). In accordance with federal law, registration with the Selective Service System is required for individuals assigned male at birth who are between the ages of 18 and 25.
For more information about OWOS and to apply, visit https://highered.ohio.gov/wos. For questions regarding OWOS, please contact the Military & Family Education Center (MFEC) at (937) 512-2586 or mfec@sinclair.edu.

Retention of Records
Sinclair College under the law (38 U.S.C. 3690(c)) provides records and accounts to be made available for review by authorized representatives of the government "NOTWITHSTANDING ANY OTHER PROVISION OF LAW." The effect of this provision is to allow VA to examine necessary records that may be restricted under laws regarding privacy of student records such as PL 93-380 (Buckley Amendment) or other provisions of the law.
Records of an institution are retained through the MFEC for a period of at least three (3) years following the termination of the enrollment of an eligible individual, or longer if requested by VA or GAO (Government Accountability Office). Sinclair College courses are approved for the enrollment of eligible individuals and must maintain a complete record that includes copies of all advertising, sales, or enrollment materials utilized by or on behalf of the institution during the preceding 12-month period.

Transition Act of 2018
Sinclair's Statement of Compliance for the Veteran Benefit Transition Act of 2018: "In accordance with the Veteran Benefits and Transition Act of 2018, Sinclair College has enacted a policy that protects military-affiliated students using Chapter 33 Post 9/11 and Chapter 31 from being penalized for any delay in payment from the Department of Veteran Affairs (VA) for tuition or fees."
Military-affiliated students that provide an updated Certificate of Eligibility (COE) or Tungsten Authorization, showing eligibility for the current term in question, will not accrue any late penalties, purging of current term classes, restriction of access to any institutional facilities (i.e.; Library, Tutoring & Learning Center), or be required to borrow additional funds to meet the financial obligation while waiting for funding from the VA.
To learn more about the Veteran Benefit Transition Act of 2018, please visit: https://www.congress.gov/bill/115th-congress/senate-bill/2248/text

Transfer & Articulation

Articulation Agreements
Articulation agreements are formal partnerships between institutions that define how college credit is recognized and transferred. Sinclair Community College uses articulation agreements to avoid duplication of coursework, promote efficient use of resources, and support students' transition into and between postsecondary institutions. The College maintains agreements with secondary schools, hospitals, professional organizations, and colleges and universities.
Articulation agreements can be categorized in two ways:

- **Incoming Agreements:** Agreements with secondary schools, hospitals, and professional organizations outline how credits will be recognized at Sinclair Community College. This option, known as articulated credit, allows eligible students to receive college credit for approved prior learning. For more information, contact an Academic Advisor at (937) 512-3700 or email **plaprograms@sinclair.edu**.
- **Outgoing Agreements:** Agreements with other colleges and universities specify how Sinclair Community College programs and courses transfer to those institutions. Information about current agreements is available at: **www.sinclair.edu/agreements**

Articulation and Transfer Policies for Degree-Seeking Students
Begin your four-year degree at Sinclair Community College and take advantage of small class sizes, caring faculty, supportive staff, and affordable tuition.
Students can:

- Complete many freshman- and sophomore-level courses before transferring to a four-year institution.
- Earn an associate degree at Sinclair and apply many of those credits toward a bachelor's degree.
- Fulfill most general education requirements by completing courses within the Ohio Transfer 36 before transferring.

Students may transfer to and from Sinclair by following a few simple steps. Be sure to consult both a Sinclair academic advisor and the intended transfer institution.

Transfer of Credit to Sinclair
To ensure that credits from another institution transfer efficiently to Sinclair, follow these steps:

1. Request Official Transcripts
Contact all previously attended colleges or universities and request that official transcripts be sent to:
Sinclair Community College
Registration & Student Records
444 West Third Street
Dayton, Ohio 45402-1460
Upon receipt of a transcript, Sinclair will notify the student by mail. Within 15 business days, the Student Records department will evaluate the coursework and determine course equivalencies. A full report of transfer credits will then be mailed to the student.
Sinclair accepts credits from colleges and universities accredited by regional accrediting associations.

2. Meet with an Academic Advisor
An advisor will help determine appropriate courses for the student's degree program. If all official transcripts have not yet been received, students should bring unofficial copies to their advising appointment.

3. Register for Classes

Transfer of Credit from Sinclair
To ensure that Sinclair credits transfer efficiently to another institution (transfer institution), follow these steps:

1. Meet with an Academic Advisor
Meet with the appropriate Sinclair academic or faculty advisor and communicate regularly with a representative from the transfer institution. Early and consistent advising helps ensure appropriate course selection.

2. Follow Transfer Admission Procedures
Complete the transfer admission requirements of the receiving institution.

3. Send Official Transcripts
Request that official Sinclair transcripts be sent to the transfer institution and confirm that they have been received and evaluated.
For additional information, visit: www.sinclair.edu/transcripts

Important Reminders

- Meet with an academic or faculty advisor early in your academic career. Students are responsible for keeping advisors informed of their intended academic program and/or transfer plans.
- Contact the transfer institution as soon as possible and request specific course recommendations to align your Sinclair coursework with their requirements. Consulting advisors at both institutions helps ensure accurate and timely transfer information.
- Always confirm course selections with the transfer institution. Sinclair is accredited by the Higher Learning Commission and is recognized by the Ohio Department of Higher Education. As a result, most credits transfer to other colleges and universities. University Parallel courses generally transfer more readily than technical courses. Due to the specialized nature of many career-program courses, some may not be designed for transfer. Exceptions include courses covered by approved articulation agreements with four-year institutions. An academic advisor can provide additional information about these options.

Acceptance of Transfer and Articulated Credit
To recognize courses appropriately and provide equity in the treatment of incoming transfer students and students native to the receiving institution, transfer credit will be accepted for all successfully completed college-level courses completed in or after Fall 2005 from Ohio public institutions of higher education. Students who successfully completed Associate of Arts (AA) or Associate of Science (AS) degrees prior to Fall 2005 with a 2.0 or better overall grade-point average would also receive credit for all college-level courses they have passed. While this reflects the baseline policy requirement, individual institutions may set equitable institutional policies that are more accepting.
Pass/Fail courses, credit-by-examination credits, experiential learning courses, and other non-traditional credit courses that meet these conditions will also be accepted and posted to the student record.

Advanced Placement (AP) Exams
The State of Ohio, in partnership with its public institutions of higher education, has established policies to facilitate a smooth transition from high school to college and among Ohio's public colleges and universities. Beginning in the Fall term 2009:

1. Students who earn a score of 3 or higher on an Advanced Placement (AP) exam will receive the aligned course(s) and corresponding credit for the exam area successfully completed.
2. General education courses and credits awarded will apply toward graduation and will satisfy general education requirements if the equivalent course fulfills a requirement.
3. If no direct course equivalent exists for a completed AP exam area, elective or area credit will be awarded in the appropriate academic discipline and applied toward graduation, where such elective options are available within the major.
4. Additional credit may be awarded for scores of 4 or 5. The amount and type of credit granted for higher scores vary by institution and academic discipline.

In disciplines with highly sequential coursework, particularly in Science, Technology, Engineering, and Mathematics (STEM), students are strongly encouraged to consult with academic advisors to ensure they have the appropriate foundation for success in advanced courses.
A complete list of approved AP courses for Sinclair can be viewed at: **https://reports-cems.transfercredit.ohio.gov**

Application of Transfer and Articulated Credit
Application of credit is the decision process performed by the receiving institution to determine how the credits it has accepted and recorded on the student's official academic transcript will or will not apply toward program and degree requirements. While the receiving institution makes this decision, it will do so within the parameters of this Policy.

Apprenticeship Pathway Programs
The Apprenticeship Pathways initiative advocates for individuals completing apprenticeships by incorporating their learning into academic credit, thereby saving them time and money and encouraging them to advance their academic credentials to contribute to a strong, educated workforce.
Ohio apprenticeship programs partner with public two-year institutions to provide technology-specific statewide articulation agreements that recognize non-traditional prior learning. College credit is awarded toward a technical associate degree. Each agreement simplifies student advising by outlining how apprenticeship training in a certain pathway applies to an applied associate degree and lists remaining courses required to complete the degree. The application of the credit toward a technical associate degree in these agreements is guaranteed at the participating receiving institutions.

Career-Technical Assurance Guides
Collaboration among the Ohio Department of Higher Education, the Ohio Department of Education, and other key stakeholders led to the development of policies and procedures to create statewide career-technical discipline specific articulation agreements and further ensure that students completing coursework at an adult or secondary career-technical institution can articulate and transfer agreed-upon technical courses/programs to any Ohio public institution of higher education and among Ohio public institutions of higher education "without unnecessary duplication or institutional barriers."
Career-Technical Assurance Guides (CTAGs) are statewide articulation agreements that guarantee the recognition of learning which occurs at public adult and secondary career technical institutions and have the opportunity for the award of college credit toward technical courses/programs at any public higher education institution. CTAGs serve as advising tools, identifying the statewide content guarantee and describing other conditions or obligations (e.g., program accreditation or industry credential) associated with the guarantee.
A complete list of approved CTAG courses for Sinclair can be viewed at https://reports-cems.transfercredit.ohio.gov
Sinclair's Approved Career-Technical Assurance Guides (CTAGs)

College-Level Examination Program (CLEP)
The State of Ohio, working with public institutions of higher education and statewide faculty panels has developed policies to recognize students' prior learning and to facilitate the articulation and guaranteed transfer of such learning between Ohio's public colleges and universities.
College credit is guaranteed for students who achieve an established College-Level Examination Program (CLEP) test score for exams that have been endorsed statewide as college level. Statewide faculty panels aligned CLEP exams to equivalent Ohio Transfer 36 (OT36) and Transfer Assurance Guide (TAG) courses, as appropriate. If an equivalent course is not available for the CLEP exam area, by default, endorsed elective or area credit will still be awarded and applied towards graduation.
Specific endorsed alignments and scores for individual CLEP exams that are outlined in the College-Level Examination Program (CLEP) Endorsed

Alignment Policies document are available on the Ohio Department of Higher Education website at **https://transfercredit.ohio.gov.**

Conditions for Transfer Admission

1. Graduates who are considered transfer students under the Integrated Postsecondary Education Data System (IPEDS) definition, who hold associate degrees from Ohio's public institutions of higher education, and who have completed an approved Ohio Transfer 36 shall be admitted to an Ohio public institution of higher education, provided that their cumulative grade-point average is at least 2.0 for all previous college-level coursework and that all other institutional admission criteria, such as space availability, adherence to deadlines, payment of fees, and grade-point average requirements that are fairly and equally applied to all undergraduate students have been satisfied. These students shall receive admission priority over graduates with an out-of-state associate degree and other transfer students with transferable and/or articulated college credit.
2. Associate degree holders who have not completed the Ohio Transfer 36 at an Ohio public institution of higher education will be eligible for preferential consideration for admission as transfer students, provided that the institution's admission criteria such as minimum academic standards, space availability, adherence to deadlines, and payment of fees are fairly and equally applied to all undergraduate students.
3. To encourage completion of the baccalaureate degree, students who are not currently enrolled in or who have not earned a degree, but who have earned 60 semester hours or 90 quarter hours of credit toward a baccalaureate degree with a cumulative grade-point average of at least 2.0 for all previous college-level coursework, will be eligible for preferential consideration for admission as transfer students, provided that the institution's admission criteria, such as minimum academic standards, space availability, adherence to deadlines, and payment of fees are fairly and equally applied to all undergraduate students.
4. Students who have not earned an associate degree and who have not earned 60 semester hours or 90 quarter hours of credit with a cumulative grade-point average of at least 2.0 for all previous college-level coursework will be eligible for admission as transfer students on a competitive basis.
5. Incoming transfer students admitted to a college or university shall compete for admission to selective programs, majors, and academic units on an equal basis with students native to the receiving institution.

Admission to an institution as a transfer student does not guarantee admission to specific majors, minors, or fields of concentration. Some programs have additional academic and non-academic requirements beyond those for general admission (e.g., background checks or grade-point averages higher than 2.0 or higher than the institutional average required for admission). Once admitted, transfer students are subject to the same catalog requirements and academic regulations as native students. Furthermore, transfer students shall be accorded the same class standing and privileges as native students based on the number of credits earned. All residency requirements must be completed at the receiving institution.

General Education

Sinclair Community College believes every educated person should possess a set of basic, common knowledge, skills and attitudes. Through Sinclair's courses and programs of study, a student acquires breadth of knowledge and gains competence to achieve independent intellectual inquiry. Upon completion of the associate degree at Sinclair, the student will be able to demonstrate the following six general education outcomes:

1. **Oral Communication:** the creation of common understanding through the use of verbal and nonverbal messages in a variety of contexts.
2. **Written Communication:** the creation of understanding through composition and synthesis of the written word.
3. **Information Literacy:** the ability to effectively locate, evaluate, and use information.
4. **Critical Thinking:** the application of higher order analytical and creative cognitive processes.
5. **Cultural Diversity and Global Citizenship:** the ability to apply knowledge of cultural diversity to real world context by acknowledging, understanding, and engaging constructively within the contemporary world.
6. **Mathematical Reasoning and Problem Solving:** the application of quantitative problem-solving skills to the mathematical modeling, analysis and interpretation of real-world problems.
7. **Artificial Intelligence**: the ability to use Artificial Intelligence effectively and appropriately.

Note: For programs that require a multicultural elective, the following Ohio Transfer 36 courses meet the multicultural requirement.

- Multicultural General Education Electives

Industry Recognized Credential Transfer Assurance Guides

Industry Recognized Credential Transfer Assurance Guides (ITAGs) are a statewide transfer initiative that guarantees the awarding of college-level credit to students who earn agreed-upon, industry-recognized credentials. The award of credit is based upon the knowledge, skills, and competencies gained through credential attainment, regardless of where the learning to prepare for the credential took place.

The approved ITAG courses for Sinclair can be viewed here https://www.sinclair.edu/about/offices/provost/articulation-transfer/industry-recognized-credential-transfer-assurance-guides-itags/

Sinclair's Approved Industry-recognized Assurance Guides (ITAGs)

Institutional Transfer

The Ohio Department of Higher Education in 1990, following a directive of the 118th Ohio General Assembly, developed the Ohio Articulation and Transfer Policy to facilitate students' ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements. A subsequent policy review and recommendations produced by the Articulation and Transfer Advisory Council in 2004, together with mandates from the 125th Ohio General Assembly in the form of Amended Substitute House Bill 95, have prompted improvements of the original policy. Additional legislation from the 125th Ohio General Assembly also initiated the development of a statewide system for articulation agreements among state institutions of higher education for transfer students pursuing teacher education programs.

Action by the 126th Ohio General Assembly led to the establishment of criteria, policies, and procedures for the transfer of technical courses completed through a career-technical education institution; and standards for the awarding of college credit based on Advanced Placement (AP) test scores.

Legislation from the 130th Ohio General Assembly required public institutions of higher education to: use baseline standards and procedures in the granting of college credit for military training, experience, and coursework; establish an appeals process for resolving disputes over the awarding of credit for military experience; provide specific assistance and support to veterans and service members; adopt a common definition of a service member and veteran; and establish a credit articulation system in which adult graduates of public career-technical institutions who complete a 900 clock-hour program of study and obtain an industry-recognized

credential approved by the Chancellor shall receive 30 college technical credit hours toward a technical degree upon enrollment.
While all public colleges and universities are required to follow the Ohio Articulation and Transfer Policy, independent colleges and universities in Ohio may or may not participate in the Transfer Policy. Therefore, students interested in transferring to independent institutions are encouraged to check with the college or university of their choice regarding transfer agreements. Though some Ohio independent institutions follow articulation and transfer initiatives, without faculty review, courses are not guaranteed to transfer as equivalent. However, student mobility is evident in the state of Ohio and thus Public institutions are free and encouraged to enter articulation agreements with Ohio independent institutions as referenced in the Higher Learning Commission (HLC) policy book. In support of improved articulation and transfer processes, the Ohio Department of Higher Education has established an articulation and transfer clearinghouse to receive, annotate, and convey transcripts among public colleges and universities. This system is designed to provide standardized information and help colleges and universities reduce undesirable variability in the transfer credit evaluation process.

Military Transfer Assurance Guides
In response to the legislative requirement (Ohio Revised Code 3333.164) to create a military articulation and transfer assurance guide for college-level learning that took place through military training, experience, and coursework, college credit will be granted to students with military training, experience, and/or coursework that is recognized by the American Council on Education (ACE) or a institutional accreditor that was formerly a regional accreditor military institution, such as Community College of the Air Force.
In order to streamline the awarding, transferability, and applicability of college credit, service members and veterans are guaranteed to earn certain types of credit(s) or course(s) as specified in the Military Transfer Assurance Guides (MTAGs), which are based on the endorsed baseline standards and procedures by the Chancellor. Equivalent course(s), credits for courses, or block of credit is to be awarded and applied towards general education and/or major course requirements at the receiving institution in accordance with the MTAG guarantee. There is some training, experience, and coursework that the receiving institution may be able to award college credit only toward general or free electives.
In addition, public institutions of higher education shall ensure that appropriate equivalent credit is awarded for military training, experience, and coursework that meet the baseline standards and procedures according to the Ohio Revised Code 3333.164. This requirement goes beyond credit/course awarded based on the MTAG alignment process.
A complete list of approved MTAG courses can be viewed at:
https://transfercredit.ohio.gov
Sinclair's Approved Military Assurance Guides (MTAGs)

Ohio Consortium for Transfer Pathways to the Liberal Arts
Sinclair Community College is a member of the Ohio Consortium for Transfer Pathways to the Liberal Arts, a group of 25 two-year and four-year colleges working together to provide clear, consistent transfer pathways in **biology, English and psychology** for community college students transferring from Sinclair to 14 private colleges in Ohio; all of which have approved transfer pathways that align with the Ohio Guaranteed Transfer Pathways (OGTPs). This assures that the pathway you complete as part of your associate degree will provide a clear path with maximum transferable credit to private colleges and universities across Ohio. You will be able to transfer as a college junior, on track to graduate with your bachelor's degree.

Ohio Guaranteed Transfer Pathways
The Ohio Guaranteed Transfer Pathways (OGTPs) are designed to provide a clear path for students pursuing an associate degree at Ohio community colleges who plan to transfer to an Ohio public university to complete a bachelor's degree in an equivalent field. The OGTPs constitute an agreement between public community colleges and universities confirming that community college courses meet major preparation requirements and will be counted and applied toward the bachelor's degree. Students still must meet all university program admission requirements.
A student who completes all of the coursework within a major-specific Ohio Guaranteed Transfer Pathway (OGTP) will be eligible to earn an associate degree from an Ohio public community college. Successful completion of the OGTP will be recorded on the student's transcript, and upon transfer to an Ohio public university, the student should receive junior standing and all coursework taken as part of the pathway will transfer to the university toward the completion of a bachelor's degree in an equivalent field. OGTP builds upon the existing statewide credit transfer guarantees including the Ohio Transfer 36, Transfer Assurance Guides, Military Transfer Assurance Guides, and Career-Technical Assurance Guides. OGTPs can be found on the Ohio Department of Higher Education's website at https://transfercredit.ohio.gov/initiatives-upd/ohio-guaranteed-transfer-pathways
The following are approved Ohio Guaranteed Transfer Pathways for Sinclair Community College:

- Anthropology Associate of Arts to Bachelor of Arts
- Applied Business to Bachelors
- Art History Associate of Arts to Bachelor of Arts
- Biology Associate of Science to Bachelor of Science
- Business Administration Associate of Science to Bachelor of Science
- Chemistry Associate of Science to Bachelor of Science
- Communication Studies Associate of Arts to Bachelor of Arts
- Computer Science Associate of Science to Bachelor of Science
- Economics Associate of Science to Bachelor of Arts
- Electronics Engineering Technology Associate of Applied Science to Electrical Engineering Technology Bachelors
- English Associate of Arts to Bachelor of Arts
- Geography Associate of Arts to Bachelor of Arts
- Geology Associate of Science to Bachelor of Science
- History Associate of Arts to Bachelor of Arts
- Mathematics Associate of Science to Bachelor of Arts
- Mathematics Associate of Science to Bachelor of Science
- Philosophy Associate of Arts to Philosophy Bachelor of Arts
- Physics Associate of Science to Bachelor of Science
- Political Science Associate of Arts to Bachelor of Arts
- Psychology Associate of Arts to Bachelor of Arts
- Psychology Associate of Arts to Bachelor of Science
- Social Work Associate of Arts to Bachelor of Arts
- Sociology Associate of Arts to Bachelor of Arts
- Teacher Education Preparatory Pathway to Education Bachelors

Please contact your Sinclair Academic Advisor for additional information or if you intend to complete one of the above Ohio Guaranteed Transfer Pathways.

Ohio Technical Center Degree Pathways
The Ohio Technical Center Degree Pathways (formerly known as One-Year Option) builds upon Ohio's articulation and transfer system to help more adults accelerate their preparation for work by earning a technical associate degree. Consistent with the philosophy of the Career-Technical Assurance Guides (CTAGs), the One-Year Option guarantees that college

credit will be awarded for college-level learning that occurs through adult programs at public career-technical institutions.
Adults who complete a career-technical education program of study consisting of a minimum of 900 clock-hours and achieve an industry-recognized credential approved by the Chancellor shall receive thirty (30) semester hours of technical course credit toward a standardized Associate of Technical Study Degree (ATS) upon matriculation at a public institution of higher education that confers such a degree. The 30 semester hours will be awarded as a block of credit rather than credit for specific courses. Proportional credit is to be awarded toward the ATS degree for adults who complete a program of study between 600 and 899 clock hours and achieved an industry-recognized credential approved by the Chancellor. The credit earned through the One-Year Option will be applied to ATS degrees bearing the following standardized degree titles:

1. Associate of Technical Study in Building and Industrial Technology
2. Associate of Technical Study in Business Technology
3. Associate of Technical Study in Health and Allied Health Technology
4. Associate of Technical Study in Information Technology
5. Associate of Technical Study in Services Technology

Ohio Transfer 36

The Ohio Department of Higher Education's Articulation and Transfer Policy established the Ohio Transfer 36, which may be a subset or the entire set of a public higher education institution's general education curriculum in Associate of Arts (AA), Associate of Science (AS) and baccalaureate degree programs. Students in applied associate degree programs may complete some individual Ohio Transfer 36 courses within their degree program or continue beyond the degree program to complete the entire Ohio Transfer 36 The Ohio Transfer 36 contains 36-40 semester of course credit in English composition (minimum of 3 semester); mathematics, statistics and logic (minimum of 3 semester); arts and humanities (minimum of 6 semester); social and behavioral sciences (minimum of 6 semester); and natural sciences (minimum of 6 semester). Oral communication, Interdisciplinary areas may be included as additional options. Additional elective hours from among these areas make up the total hours for a completed Ohio Transfer 36. Courses for the Ohio Transfer 36 should be 100- and 200-level general education courses commonly completed in the first two years of a student's course of study. Each public university and technical and community college is required to establish and maintain an approved Ohio Transfer 36.
Ohio Transfer 36 course(s) or the full Ohio Transfer 36 completed at one college or university will automatically meet the requirements of individual Ohio Transfer 36 course(s) or the full Ohio Transfer 36 at another college or university once the student is admitted. Students may be required, however, to meet additional general education requirements at the institution to which they transfer. For example, a student who completes the Ohio Transfer 36 at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the Ohio Transfer 36 portion of Institution R's general education program. Institution R, however, may have general education courses that go beyond its Ohio Transfer 36. State policy initially required that all courses in the Ohio Transfer 36 be completed to receive its benefit in transfer. However, subsequent policy revisions have extended this benefit to the completion of individual Ohio Transfer 36 courses on a course-by-course basis.
A complete list of approved OT36 courses for Sinclair can be viewed at: **https://reports-cems.transfercredit.ohio.gov**
Ohio Transfer 36 is a subset or a complete set of general education requirements at Ohio public colleges and universities. Courses are guaranteed to transfer to any of Ohio's public institutions of higher education. Ohio Transfer 36 represents a common body of knowledge and academic skills and is comprised of 36 semester hours of courses in the following areas:

- English Composition/Oral Communication (Minimum of 3 credit hours)
- Mathematics, Statistics, and Logic (Minimum of 3 credit hours)
- Arts and Humanities (Minimum of 6 credit hours from two disciplines)
- Social and Behavioral Sciences (Minimum of 6 credit hours from two disciplines)
- Natural Sciences (Minimum of 6 credit hours - one lab course required)

The additional 12 credit hours should be chosen based on a student's academic interests.

Responsibilities of Students

To maximize transfer credit application, prospective transfer students must take responsibility for planning their course of study to meet both the academic and non-academic requirements of the institution to which they desire to articulate or transfer credit as early as possible. The student is responsible to investigate and use the information, advising, and other available resources to develop such a plan. Students should actively seek program, degree, and transfer information; meet with an advisor from both the current and receiving institutions to assist them in preparing a course of study that meets the academic requirements for the program/degree to which they plan to transfer; use the various electronic course/program transfer and applicability database systems, including Ohio Transfer to Degree Guarantee web resources; and select courses/programs at their current institution that satisfy requirements at the receiving institution to maximize the application of transfer credit. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are foreign language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will better articulate with the receiving institution's major.

Transfer Appeals Process

Following the evaluation of a student transcript from another institution, the receiving college institution will provide the student with a Statement of Transfer and Articulated Credit Applicability (Degree Audit Report). A student disagreeing with the application of transfer and/or articulated credit by the receiving institution must file his/her appeal in writing within ninety (90) days of receipt of the Statement of Transfer and Articulated Credit Applicability. The institution shall respond to the appeal within thirty (30) days of the receipt of the appeal at each appeal level.

Student Complaints Following Transfer Appeals at the Receiving Institution

After a student exhausts the appeals process at the receiving institution and chooses to pursue further action, the Ohio Department of Higher Education (ODHE) responds to formal written complaints related to Ohio Articulation and Transfer Policy against public, independent non-profit, and proprietary institutions of higher education in Ohio. While the ODHE has limited authority over colleges and universities and cannot offer legal advice or initiate civil court cases, staff will review written complaints submitted through its established process and work with student complainants and institutions.

Report Problems Transferring Credit

The Ohio Department of Higher Education (ODHE) guarantees the transfer of certain courses between Sinclair and Ohio public colleges and

universities. In addition, Sinclair has articulation agreements with universities that guarantee transfer of credit.

If you transferred to either an Ohio public university or a private university Sinclair has an articulation with, and you believe your credits were not transferred as guaranteed by either ODHE guarantees or Sinclair articulation agreements, please complete the report at this link: Report Problems Transferring Guaranteed Credits

Transfer Assurance Guides
Transfer Assurance Guides (TAGs) courses are pre-major/beginning major courses that have been identified as common requirements across public bachelor's degree programs. They are guaranteed to transfer and apply to specific TAG-related degree/program requirements as equivalent courses. TAGs identify common major course work that is guaranteed to transfer. Students may elect to complete the full TAG or any subset of courses from the TAG. Because of specific major requirements, early identification of a student's intended major is encouraged.
A complete list of approved TAG courses for Sinclair can be viewed at:
https://reports-cems.transfercredit.ohio.gov
Sinclair's Approved Transfer Assurance Guides (TAGs)

Transferology™
Students who have completed courses in higher education and want to know which colleges and universities will accept those courses and apply them to a degree should visit: **www.transferology.com**
Transferology will provide quick answers from hundreds of institutions in a streamlined and dynamic interface.

Learning & Support Opportunities

- Accessibility Services
- Case Management Services
- Career Development Services
- College for Lifelong Learning
- Counseling Services
- Food Pantry
- International Education
- LGBTQ+ Outreach
- Multifaith Campus Ministry
- Office of the Ombudsman
- Prior Learning Assessment (PLA)
- School Partnerships
- Sinclair Campus Store
- Sinclair Online Bookstore
- Sinclair Talks
- Student Enrichment Programs
- Student Life
- Tartan Tops
- Tutoring and Learning Center
- Work-based Learning
- Workforce Development

Accessibility Services
Building 10, Room 10424 • (937) 512-5113 • www.sinclair.edu/accessibility-services
Accessibility Services provides assistance to all qualified students with disabilities, whether they are physical, psychiatric or educational. Students are required to register with the office and identify their needs in order to be eligible for academic adjustments. All services are based on individual needs. We are here to help students reach their academic goals. Students may begin the process by completing an application on our website www.sinclair.edu/services/support/accessibility-services

Case Management Services
Building 10, Room 10424 • (937) 512-3032 • https://www.sinclair.edu/services/support/counseling-services/case-management-services/
Case Managers at Sinclair help students with basic needs insecurities, such as housing, food, child care, bills, and transportation. Students who work with Case Managers are assisted with connections for both community resources and campus resources that can reduce barriers to the student's success.

College for Lifelong Learning
Building 10, First Floor, Welcome Desk • (937) 512-2372 • www.sinclair.edu/lifelong
Adults of any age may enroll in 6000 level, non-credit semester courses. Classes offered can include Art, History and more. Classes carry a modest fee to cover instructional costs. For more information, visit the College for Lifelong Learning web page.

Counseling Services
Building 10, Room 10424 • (937) 512-3032 • https://www.sinclair.edu/services/support/counseling-services/
Counseling Services offers free and confidential counseling to students to address personal and academic concerns. Counselors help students identify actions steps they can take to reduce and eliminate challenges in their lives.

Food Pantry
Building 13, Room 426 • foodpantry@sinclair.edu • https://www.sinclair.edu/services/support/counseling-services/
The Sinclair Student Food Pantry offers a selection of shelf-stable pantry goods, hygiene products, cleaning supplies, diapers, formula, wipes and for in-person shoppers, the pantry now offers a selection of refrigerated and frozen food items.

International Education
Building 10, Room 10303 • (937) 512-3060 • www.sinclair.edu/international
The International Education Office supports international students and promotes programs and initiatives such as study abroad and Collaborative Online International Learning (COIL). These programs are designed to make Sinclair more globally oriented and internationally connected. Staff members strive to provide high quality services and support to international students and to the Sinclair community.

LGBTQ+ Outreach
Building 10, Room 10424 • (937) 512-2481 • www.sinclair.edu/lgbtq-support/
LGBTQ+ Outreach works to welcome students who identify as LGBTQ+ and to advocate for issues related to the LGBTQ+ community, in order to ensure that all students on campus feel welcome, respected, and safe as valued members of the campus community.

Multifaith Campus Ministry
Building 10, Room 10441 • (937) 512-2481 • www.sinclair.edu/services/support/campus-ministry/
The Office of Multifaith Campus Ministry is a center for spiritual life that encourages interfaith dialogue and spiritual deepening. The Multifaith Campus Chaplain works to provide pastoral care, educational opportunities,

and programs related to religious and spiritual life. Students, staff, and faculty from all religious traditions and spiritual practices, as well as those who have no affiliation, are welcome.

Office of the Ombudsman
Building 10, Room 10424 • (937) 512-2205 • www.sinclair.edu/ombudsman
The mission of the Office of the Ombudsman at Sinclair is to provide support, mediation, and advocacy for fair processes throughout the institution. The office works to analyze information gathered from student experiences in order to implement procedural changes into Sinclair's culture. The Ombudsman can provide collaborative mediation, intervention, and connecting services, as well as advocate for fair processes and procedures.

Prior Learning Assessment (PLA)
plaprograms@sinclair.edu • www.sinclair.edu/pla
Prior Learning Assessment (PLA) empowers students to earn college credit for knowledge gained through work experience, military training, professional certifications, or previous education. By demonstrating proficiency through exams, credential evaluations, or academic portfolios, students can accelerate their progress toward a degree or certificate. For more information, visit our Prior Learning Assessment page or contact the PLA office at plaprograms@sinclair.edu.

School Partnerships
Building 6, Room 6122 • (937) 512-2267 • www.sinclair.edu/about/offices/sp
College Credit Plus, Tech Prep, and Transition Advising, provide opportunities for students in grades 7-12 to:

- Be exposed to college coursework and career pathways
- Earn college credit PRIOR to high school graduation
- Receive added support with their high school teacher and Sinclair faculty
- Reduce time and cost to a college credential
- Earn scholarship opportunities - Tech Prep and CCP Completion for students continuing at Sinclair after high school
- Develop a post-high school enrollment plan

Sinclair Campus Store
Building 7, First Floor • (937) 512-2665 • campuswebstore.sinclair.edu
Visit the Sinclair Campus Store for all the college essential and required supplies you need right on campus or online!

Sinclair Online Bookstore
Books by eCampus.com • sinclair.ecampus.com Use the Online Bookstore to order new, used, rental, eBook and marketplace textbooks.

Sinclair Talks
Sinclair Talks are a variety of workshops, seminars, interactive sessions, dialogues, and service-learning opportunities that are focused on enriching the student experience through a variety of academic resources, career exploration, diversity dialogues, financial opportunities, leadership training, interpersonal development, peer discussions, and more.

Student and Community Engagement
www.sinclair.edu/engagement
Career Development Services: provide comprehensive, student-centered support designed to prepare students and alumni for successful entry into the workforce and continued career advancement. Through individualized guidance, skill development, and employer connections, the office equips learners with the tools needed to explore career pathways, secure employment, and achieve long-term professional goals.
Services include assistance with résumé and cover letter development, job search strategies, and interview preparation, including mock interviews and coaching. Students are supported in identifying their strengths, interests, and transferable skills, and in aligning these with in-demand career opportunities.
Student Life: provides an integrated, student-centered approach to engagement, wellness, and belonging by uniting Physical Education (PED) and Student Activities into a cohesive, co-curricular experience. This department is designed to support the development of the whole student by fostering connections that enhance academic success, personal well-being, and community involvement.
Through a wide range of programs, services, and experiences, Student Life promotes active learning beyond the classroom. Physical Education offerings emphasize lifelong wellness, physical health, and stress management, while Student Activities create opportunities for leadership development, civic engagement, cultural enrichment, and peer connection. Together, these areas provide students with meaningful opportunities to build skills, explore interests, and engage with the college community in ways that support persistence and completion.
The department also serves as a central hub for student involvement, offering clubs and organizations, campus events, service-learning opportunities, and wellness-focused programming. These experiences are intentionally designed to complement academic pathways, strengthen a sense of belonging, and develop essential career-ready competencies such as teamwork, communication, and leadership.

Student Enrichment Programs
Building 19, Room 19103 • (937) 512-5185 • www.sinclair.edu/about/offices/sep
The Student Enrichment Programs at Sinclair collaborate with schools and other community stakeholders to provide programming and support that increase access to college and build a foundation for career readiness and completion of a college certificate or degree. This is achieved through the design and delivery of high-quality, student-centered programs that create synergy between in-class and out-of-class learning. This department believes that through education ALL students will achieve their dreams.

Tartan Tops
(937) 512-2309 • accessibility@sinclair.edu
The TOPS Program will provide an educational/career pathway for part-time students who have an intellectual disability. Students completing the pathway will receive an Academic Career Readiness and Training credential. The general education courses taken as part of this program will assist students with developing the skills needed for academic and career success. Students will complete two semesters of internship experiences to prepare them to enter the workforce.

Tutoring and Learning Center
Library, Room 7L07 • (937) 512-2792 • www.sinclair.edu/tlc
The Tutoring & Learning Center is the centralized location for academic support on campus. The mission of the Tutoring & Learning Center is to empower students through quality tutoring. Services are free to currently enrolled students. The Tutoring & Learning Center provides support for over 200 courses. Students can self-schedule on the TLCs website to meet with a tutor either face-to-face or virtually.

Work-based Learning

Building 11, Room 11346 • Dayton Campus • (937) 512-2769 • www.sinclair.edu/work-based-learning • workbasedlearning@sinclair.edu

The Office of Work-based Learning (WBL) prepares and supports students in pursuing meaningful internship experiences within their chosen field of study, guiding them toward opportunities that align with their academic and career goals. WBL also partners with local industry to strengthen the regional workforce by developing pre-apprenticeship and Registered Apprenticeship programs that build talent pipelines and address workforce shortages.

The integration of academic curriculum within the workplace provides students with real-world experience where they apply technical knowledge and develop professional skills. Sixty-seven of Sinclair's academic programs require or offer internship courses as part of their degree requirements or as electives. Internship positions must be secured and approved prior to enrollment in the internship course. Internships may be credit or non-credit and paid or unpaid, depending on the academic program and employer partnership.

Staff within the Office of Work-based Learning provide professional development support and individualized guidance to assist students in preparing for and obtaining internship opportunities, whether the experience is required or optional.

Workforce Development

Building 11, Room 11346 • Dayton Campus • (937) 252-9787
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Sinclair Workforce Development partners with employers and organizations to provide professional development and training programs that empower organizational, professional, and personal growth. We offer an extensive portfolio of innovative programs and services in areas such as manufacturing, healthcare, information technology, and leadership and organizational development tailored to meet a client's development and training needs. We welcome the opportunity to help you enrich, elevate, and empower your workforce.

Student Services and Support
www.sinclair.edu/services

Sinclair provides access to academic support services, programs and resources that proactively and collaboratively guide, assist, and help students achieve their personal learning goals.

Visit *www.sinclair.edu/services* and *www.sinclair.edu/student-life/wellness/resources* for more information.

- Academic Advising Center
- Academic Departments
- Academic Division
- Academic Testing
- Accessibility Services
- Admissions
- African American Male Initiative (AAMI)
- Alerts: Campus Closing Information
- Alumni Resources
- Appalachian Outreach
- Biology Self Instruction Service B.I.O.S.I.S
- Books by eCampus
- Bursar College Cashier
- Business Information Systems (BIS) Lab
- Campus Life
- Campus Store
- Campus Visits (Tour Campus)
- Career & Transfer Fairs
- Career Advising & Exploration
- Career Communities
- Career Development & Employment Assistance
- CCAMPIS (Child Care Access Means Parents in School)
- Chemistry Resource Center
- College Credit Plus (CCP)
- College for Lifelong Learning
- Computer Access (Computer Labs)
- Counseling Services
- Course Catalog
- Dental Hygiene Clinic
- Discount RTA Bus Passes
- Displaced Worker Services
- DMV Disability Plates/Placards
- eLearning Division
- Email (Office365)
- Employee Directory
- FAFSA Workshops (Financial Aid)
- English as a Second Language (ESL)
- Fast Forward Re-engagement Center
- Fee & Tuition Schedule
- Financial Aid & Scholarships
- Financial Aid Portal
- Financial Aid TV
- FlexPace Online Courses
- Focus 2
- Geology Resource Center (GRC)
- Greene CATS Public Transit
- Greene County Board of Developmental Disabilities (GCBDD)
- Help Desk (Information Technology Support)
- Honors Program
- How to Succeed Online Tutorial
- International Education
- Internships &Apprenticeships (Office of Work-based Learning)
- IT Documentation (Students)
- JobLink
- Kappa Beta Delta Honor Society
- LGTBQ+ Support
- Library
- Louis Stokes Alliance for Minority Participation (LSAMP) Program
- Mathematics Lab
- Military Family Education Center/ Veterans Services
- Mobile App
- Modern Languages Lab
- Multi-faith Campus Ministry
- My Academic Plan (MAP)
- My.Sinclair (Student Portal)
- Net Price Calculator
- New Student Orientation (NSO)
- Ohio Career Information Systems (OCIS)
- Ohio Transfer 36 (OT36) for Transferable Courses
- Ombudsman Solution Center
- Parking
- Payment Deadlines

- Phi Theta Kappa (PTK)
- Physical Activities Center (PAC)
- Physical Education Classes
- Physics Resource Lab
- Placement Testing
- Prior Learning Assessment (PLA)
- Project Lead the Way (PLTW)
- Public Safety (Sinclair Police)
- Registration & Student Records
- Registration Calendar (Registration & Student Records)
- Registration Portal
- SCC 1101 First Year Experience Class
- Scholarship Workshops
- Scholarships (Financial Aid & Scholarships)
- Service Learning
- Sinclair Calendar (Events)
- Sinclair News
- Sinclair Policies
- Sinclair Talks (Student & Community Engagement)
- SinclairOnline
- Sponsored Student Payment Information
- Student & Community Engagement
- Student Affairs
- Student Clubs & Organizations
- Student Employment (Financial Aid & Scholarships)
- Student Enrichment Programs
- Student Judicial Affairs
- Student Lactation Rooms
- Student Support Services
- Study Abroad (International Education)
- Tartan Card (Student ID)
- Tartan Marketplace
- Taylor Scholars
- Tech Prep (MVTPC)
- Testing Center
- The Clarion (Student Newspaper)
- Think College
- Title IX Office
- Transfer Agreements
- Transfer Student Services
- Tuition Payment Plan
- Tutoring & Learning Center (TLC)
- UD Sinclair Academy
- University Partnerships
- Upward Bound
- Web Accessibility Help
- Welcome Week
- Work Study (financial Aid)
- Wright Path Program
- Writing Lab
- YMCA Childcare (Englewood)
- YMCA Childcare (Huber Heights)
- Young Scholars Program

Published Program Length

The chart below represents the amount of classroom time that each program will take to complete. For example, a 24 credit hour short-term certificate will take a student going full-time two semesters to complete. Following Sinclair's academic year, two semesters is equivalent to one academic year, 9 months or 32 weeks.

CREDIT HOURS IN PROGRAM	YEARS	MONTHS	WEEKS
12 or less	.5	5	16
13 to 24	1.0	9	32
25 to 36	1.5	14	48
37	2.0	18	64
60	2.5	23	80
61 to 73	3.0	27	96

Years were calculated based on (credit hours ÷ 12) ÷ 2 because there are 2 terms per year in the academic calendar.
Months were calculated based on years x 9 months because budgets for an academic year are based on 9 months.
Weeks were calculated based on the number of terms in a year x 16 weeks.

Programs by Degree
There are three types of two-year degree programs and one type of four-year degree program offered at Sinclair:

- **University parallel programs** are associate of arts or associate of science degree programs designed specifically for transfer to a four-year institution.
- **Career programs** are associate of applied science degree programs designed to prepare for a particular job or vocational area or transfer to a four-year school.
- **Individualized degrees** are associate of individualized study or associate of technical study degree programs designed for specialized interest, often combining multiple degree programs.

Associate of Arts (AA) and Associate of Science (AS)
Associate of Arts and Associate of Science degrees are designed for students wishing to complete the first two years of a bachelor's degree, as well as those desiring two years of a liberal arts education.
Associate of Applied Science (AAS)
Associate of Applied Science degrees are awarded in recognition of successful completion of career technical education programs and prepare students for immediate employment upon graduation. The curricula for applied associate degree programs are described in terms of technical and non-technical studies. Non-technical studies include general education and courses that serve as a base for the technical field. Some degrees require program prerequisites as noted. Program prerequisites are courses or requirements that must be successfully completed prior to entering the program.
Associate of Technical Study (ATS)
Associate of Technical Study degrees are awarded for successful completion of a planned program of study designed to respond to the need for specialized technical education. The program must have an area of concentration which is equivalent to at least 30 semester credit hours in technical studies and a clearly identifiable career objective. The area of concentration can either be formed by: a) a coherent combination of technical courses selectively drawn from two or more technical programs currently offered by the college to serve a career objective that would not be adequately addressed by one of the existing programs alone; or b) courses completed or training received by a student at other institutions of higher education, career centers, or other educational enterprises judged by

the institution to be of college level and for which the institution awards degree credit.

Associate of Individualized Study (AIS)

Associate of Individualized Study degrees are awarded for the satisfactory completion of an individually planned program designed to serve an educational objective that could not be served through another degree program of the institution. The program, planned by the student and advisor must contain an area of concentration consisting of a minimum of 20 semester credit hours which is formed according to one of the following models: a) an interdisciplinary, but coherent combination of courses drawn from a minimum of two and a maximum of four instructional areas; b) up to forty semester credit hours awarded by the institution for documentable educational experiences or courses completed at other institutions of higher education or educational enterprises judged by the institution to be of college level; or c) an unusual but academically coherent combination of technical and general studies courses.

Bachelor of Applied Science (BAS)

Bachelor of Applied Science degrees offer educational opportunities to students who have completed an AAS degree and are now seeking to complete a four-year degree.

Bachelor of Science in Nursing (BSN)

The Bachelor of Science in Nursing degree is designed to fill a workforce need by optimizing the practice of registered nurses (RN) who have earned an associate degree in nursing.

Note: Some degree programs contain embedded certificates. These are certificate programs that contain all of the same courses required for a degree program. When a student completes these requirements while they are pursuing their selected degree program, the certificate(s) will be automatically awarded. If a student does not want to automatically receive embedded certificates, they must come to the Registration & Student Records office on the Dayton Campus, or the front desk at any Regional Center, to fill out the required form to prevent the embedded certificate(s) from being awarded. The form must be completed and submitted during the first term the degree program is declared.

Certificate (CRT) and Short Term Certificate (STC)

Certificate programs are academic programs of study designed to prepare students for a particular career area, but not at the level required for an associate degree. There are one year certificate programs and short term technical certificates. The technical certificates are much more industry-focused and designed for workforce preparation.

Art, AA

Program Code: ART.S.AA • Credit Hours: 65

Description

The Art university parallel program is oriented toward students who intend to transfer to a four-year college or university. The Art curriculum challenges students' creative thinking abilities with its studio and art history courses. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Accreditation

Sinclair Community College has been accredited by the National Association of Schools of Art and Design (NASAD) since 2002.

Career Opportunities

For students who want a career in art, the faculty of working professional artists will advise and assist in developing techniques and a body of work that will transfer well to other colleges and universities. If the goal is to set up a working studio after graduation, students will be given the necessary information by the faculty. Although the most obvious career for college graduates with art degrees is that of fine artists, there are other opportunities which require the skill, knowledge and talents gained through the study of art. These include art teachers, art historians, art curators and art therapists.

Program Requirements

- ART 1101 - 2-D Foundations
- ART 1102 - 3-D Foundations
- ART 1111 - Drawing I
- ART 2230 - Art History: Ancient through Medieval Periods
- ART 2231 - Art History: Renaissance through Contemporary Periods
- ART 2270 - Fine Art Internship
- ART 2295 - Graduation Portfolio Development & Exhibition
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- OT36 Social & Behavioral Sciences Elective (from two or more discplines) **6 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Arts & Humanities Elective (May not be an ART course) **3 Cr. Hr(s).**
- Art History Elective **3 Cr. Hr(s).** (see options below)
- Art Studio Concentration Electives **6 Cr. Hr(s).** (see options below)
- Art Studio Electives **12 Cr. Hr(s).** (must include at least one 2D and one 3D course; see options below)

Art History Electives

Choose one Art History elective from the courses below:

- ART 2235 - History of Photography
- ART 2236 - History of Women Artists
- ART 2237 - History of American Art
- ART 2238 - History of African Art
- ART 2239 - History of Asian Art

Art Concentration -- 6 Cr. Hr(s).

Choose two courses in one of the following Art concentrations:

Drawing Concentration (2D)

- ART 1112 - Drawing II
- ART 2111 - Intermediate Drawing I

Ceramics Concentration (3D)

- ART 1141 - Ceramics I
- ART 1142 - Ceramics II

Life Drawing and Anatomy Concentration (2D)

- ART 2216 - Life Drawing & Anatomy I
- ART 2217 - Life Drawing & Anatomy II

Painting Concentration (2D)

- ART 1121 - Beginning Painting I
- ART 1122 - Beginning Painting II

Photography Concentration (2D)

- ART 1161 - Black & White Darkroom Photography I
- ART 1162 - Black & White Darkroom Photography II
- ART 1170 - Alternative Photographic Processes
- ART 1171 - Studio Photography
- ART 2265 - Digital Color Photography

Printmaking Concentration (2D)

- ART 2269 - Printmaking I
- ART 2279 - Printmaking II

Sculpture Concentration (3D)

- ART 1131 - Sculpture I
- ART 1132 - Sculpture II

Art Studio Electives -- 12 Cr. Hr(s).

Choose 12 hours of Art Studio electives from the options below (must include at least one in each area):

2D Art Electives

- ART 1112 - Drawing II
- ART 1121 - Beginning Painting I
- ART 1122 - Beginning Painting II
- ART 1161 - Black & White Darkroom Photography I
- ART 1162 - Black & White Darkroom Photography II
- ART 1170 - Alternative Photographic Processes
- ART 1171 - Studio Photography
- ART 1175 - Computer Photography
- ART 2111 - Intermediate Drawing I
- ART 2112 - Intermediate Drawing II
- ART 2216 - Life Drawing & Anatomy I
- ART 2217 - Life Drawing & Anatomy II
- ART 2221 - Intermediate Painting-Observation & Concept
- ART 2222 - Intermediate Painting - The Figure
- ART 2265 - Digital Color Photography
- ART 2269 - Printmaking I
- ART 2279 - Printmaking II
- ART 2280 - Intermediate Printmaking I
- ART 2281 - Intermediate Printmaking II
- ART 2285 - Printmaking - Monotype

3D Art Electives

- ART 1131 - Sculpture I
- ART 1132 - Sculpture II
- ART 1133 - Figurative Sculpture
- ART 1141 - Ceramics I
- ART 1142 - Ceramics II
- ART 2141 - Intermediate Ceramics

Associate of Arts, AA

Program Code: LA.S.AA • Credit Hours: 60

Description

The Associate of Arts-Liberal Arts is designed for students who are planning to transfer to a four-year college or university in a variety of majors, including education. The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. Transferring students can select specific electives based on the requirements of their intended major at the receiving institution. Students should communicate with the receiving institution early into their educational program and are required to work with an academic advisor to select appropriate courses. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Students will graduate with a general understanding of the complex nature of human society. Introductory knowledge of communication, critical thinking and inter-cultural awareness will transfer to baccalaureate programs or as soft skills in a variety of industries.

Program Requirements

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- OT36 Arts & Humanities Elective (at least two disciplines) **9 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **9 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- Multicultural Electives **3 Cr. Hr(s).**
- SCC 1101 - First Year Experience
- Electives - **20 Cr. Hr(s).**

Communication, AA

Program Code: COM.S.AA • Credit Hours: 61-62

Description

Communication is the study of interactions between people in interpersonal, small group, public speaking, organizational, and mass-media settings. This degree can lead to successful transfer to a four-year college or university baccalaureate program. Through careful course selection, a program of study can be planned to satisfy a student's particular educational and career interests. Enhancing communication skills provides invaluable benefits for all students, regardless of major. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

A communication degree can provide opportunities in journalism, speech education, business, industry, government, broadcast media, law, ministry, social services, and public relations, or provide valuable communication skills to enrich any career. Through careful course selection, students can create a plan to satisfy their particular educational and career interests. Enhancing communication skills provides invaluable benefits for all students, regardless of major or career path.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2201 - Introduction to Mass Communication
- COM 2206 - Interpersonal Communication
- COM 2211 - Effective Public Speaking
- COM 2225 - Small Group Communication
- COM 2278 - Communication Capstone
- **Choose one Communication concentration -- 11-12 Cr. Hr(s). (options listed below)**

  Communication Studies Concentration
  Digital Journalism Concentration

- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Any Group **6 Cr. Hr(s).**
- SCC 1101 - First Year Experience

Communication Studies Concentration

- COM 2220 - Introduction to Communication Theory

  Choose six hours of Communication electives from:

- COM 2230 - Nonverbal Communication
- COM 2235 - Principles of Interviewing
- COM 2245 - Intercultural Communication
- COM 2285 - Organizational Communication
- COM 2286 - Public Relations Principles
- COM 2287 - Effective Listening

- JOU 2101 - Introduction to Journalism
- JOU 2203 - Reporting & Writing for Media

- Choose any college-level elective **3 Cr. Hr(s).**

Digital Journalism Concentration

- CSC 1350 - Web Site Development with HTML & CSS
- JOU 2101 - Introduction to Journalism
- JOU 2203 - Reporting & Writing for Media
- JOU 2270 - Journalism Internship (minimum of 2 credit hours)

Creative Writing, AA

Program Code: CRWE.S.AA • Credit Hours: 61

Description

The Creative Writing Program is designed specifically for students interested in studying how to write original creative work, including poetry, fiction, and nonfiction. Students hone their writing skills and learn about the world of publishing in this program, as well. Graduates of this program are well-prepared to transfer to a four-year college or university to continue their studies. The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- ENG 2250 - Introduction to Creative Writing
- ENG 2262 - Writing to Publish

  Choose three creative writing courses from:
- ENG 2255 - Poetry Writing OR
- ENG 2256 - Fiction Writing OR
- ENG 2257 - Creative Writing: Nonfiction OR
- ENG 2259 - Novel Writing
- LIT 2220 - Introduction to Literature

  Choose one additional literature course from:
- LIT 2217 - Images of Women in Literature OR
- LIT 2234 - Literature of Africa, Asia, & Latin America OR
- LIT 2236 - African American Literature
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **9 Cr. Hr(s).**
- Language Elective **4 Cr. Hr(s).** (choose from options below)

Language Elective 4 Cr. Hr.

- CHN 1101 - Elementary Chinese I
- FRE 1101 - Elementary French I
- GER 1101 - Elementary German I
- JPN 1101 - Elementary Japanese I
- SPA 1101 - Elementary Spanish I

Elementary Education, AA

Program Code: ELEE.S.AA • Credit Hours: 64

Description

The Elementary Education program provides the knowledge, skills, and competencies necessary to prepare students for transfer to complete their license and enter the field of education within the state of Ohio. The program includes the academic preparation required by the Ohio Department of Education to meet Ohio State Teacher Licensure standards. Students must successfully pass a full criminal background investigation before enrolling in the final program observation course. A grade of "C" or better is required in ALL courses.

Career Opportunities

This degree will serve as a degree for students to transfer to 4-year programs for teacher education in grades PreK-12th.

Program Requirements

- COM 2211 - Effective Public Speaking
- ECE 1101 - Introductory Child Development
- ECE 2200 - Families, Communities & Schools
- EDU 1100 - Introduction to Education
- EDU 1105 - Individuals with Exceptionalities
- EDU 1109 - Effective Classroom Management & Learning Environments
- EDU 1111 - Classroom Observation K-12
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- HIS 1102 - United States History II OR
- HIS 1112 - Western Civilization II
- MAT 2415 - Mathematics for Elementary Education I
- MAT 2435 - Mathematics for Elementary Education II
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **7 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (may not be PSY) **3 Cr. Hr(s).**
- PSY 1100 - General Psychology
- PSY 2242 - Educational Psychology
- Elective **3 Cr. Hr(s).**

English, AA

Program Code: ENGE.S.AA • Credit Hours: 62

Description

The Associate of Arts in English comprises an array of literature courses that introduces students to the world of literature. Students planning to transfer to a four-year program in English or a related field will have a strong foundation based on the broad English curriculum, which also fulfills the first and second year general education requirements of most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II

  Choose two literature courses from:
- LIT 2201 - British Literature I OR
- LIT 2202 - British Literature II OR
- LIT 2211 - American Literature I OR
- LIT 2212 - American Literature II
- LIT 2217 - Images of Women in Literature
- LIT 2220 - Introduction to Literature
- LIT 2230 - Great Books of the Western World

- LIT 2234 - Literature of Africa, Asia, & Latin America
- LIT 2236 - African American Literature
- OT36 Arts & Humanities Elective (May not be LIT course) **3 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **9 Cr. Hr(s).**
- SCC 1101 - First Year Experience
- Associate of Arts Elective **3 Cr. Hr(s).**
- Language Elective **4 Cr. Hr(s).** (choose from options below)

Language Elective

Choose one course from:

- CHN 1101 - Elementary Chinese I
- FRE 1101 - Elementary French I
- GER 1101 - Elementary German I
- JPN 1101 - Elementary Japanese I
- SPA 1101 - Elementary Spanish I

Geography, AA

Program Code: GEOE.S.AA • Credit Hours: 64

Description

Geography is the study of Earth's landscapes, peoples, places and environments. It provides a knowledge of the Earth's physical and human systems and of the interdependency of living things and physical environments. The degree offers two concentrations for students' specific needs: A Geography Concentration, helping students focus on the transfer route, and a Geospatial Technology Concentration, preparing students for careers and transfer degrees in geographical information systems (GIS). The Associates of Arts Degree in Geography is designed for students who are planning to transfer to a four-year college or university and pursue baccalaureate degree programs in geography or related fields. The curriculum fulfills the freshman and sophomore general education requirements for most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Ample opportunities exist for students with a degree in geography. The US Department of Labor projects "much faster than average growth in excess of 20% or more, in jobs for geographers, and other geographic professionals." A list of possible careers include: Environmental Scientist/Analyst, Natural Resource Management, Urban and Regional Planning, Education, GIS Analyst, Tourism, International Development, Marketing Analyst, Demographer, Park Ranger and Environmental Conservation. Note: Some career opportunities may require more than two years of college study.

Program Requirements

- BIO 2225 - Ecology OR
- GLG 1101 - Physical Geology AND
- GLG 1111 - Physical Geology Laboratory

- COM 2211 - Effective Public Speaking
- CSC 2165 - Database Management
- ENG 1101 - English Composition I
- GEO 1101 - Global Forces, Local Diversity
- GEO 1102 - Earth's Physical Environment
- GEO 1107 - Introduction to Geographic Information Systems (GIS)
- GEO 1209 - Map Design & Visualization
- GEO 1300 - Introduction to Weather & Climate
- GEO 2210 - Advanced Spatial Analysis

- GEO 2600 - Geography Capstone OR
- GEO 2700 - Geography Internship (Minimum of 3 credit hours)

- MAT 1450 - Introductory Statistics
- OT36 Arts and Humanities Elective (from two discplines) **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (may not be GEO course) **3 Cr. Hr(s).**
- SCC 1101 - First Year Experience

Choose a concentration from the list below -- 11 Cr. Hr(s).

- Geography Concentration
- Geospatial Technology Concentration

Geography Concentration

- GEO 1201 - World Regional Geography: People, Places & Globalization
- Language Electives **8 Cr. Hr(s).**

Geospatial Technology Concentration

- AVT 1121 - Multispectral & Hyperspectral Data Analysis
- AVT 1158 - Aerospace Spatial Visualization
- CSC 2268 - Structured Query Language (SQL) Programming
- EET 1121 - UAS Remote Sensing & Analysis
- MAT 1470 - College Algebra

History, AA

Program Code: HISE.S.AA • Credit Hours: 61

Description

An Associate of Arts in History introduces students to broad periods of the human experience. History, though, is more than just the study of the past. Students will also develop cultural literacy, critical thinking, and other skills that inform global citizenry. These skills can prepare students planning to transfer to a four-year college or university and pursue a baccalaureate degree in history or a related field, providing a foundation for careers in teaching, journalism, archival work, government, politics, and law. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- HIS 1101 - United States History I
- HIS 1102 - United States History II
- HIS 1111 - Western Civilization I
- HIS 1112 - Western Civilization II
- HIS 1105 - African-American History OR
- HIS 2218 - History of Ohio

Choose two additional history courses from:

- HIS 2215 - Survey of African History OR
- HIS 2216 - Survey of Latin American History OR
- HIS 2217 - Survey of East Asian History

- MAT 1445 - Quantitative Reasoning OR
- MAT 1470 - College Algebra
- OT36 Arts & Humanities Elective (May not be HIS course) **3 Cr. Hr(s).**

- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **6 Cr. Hr(s).**
- SCC 1101 - First Year Experience
- Multicultural Electives **3 Cr. Hr(s).**
- Associate of Arts Elective **6 Cr. Hr(s).**

Math Education, AA
Program Code: MED.S.AA • Credit Hours: 64
Description
This program is for students who wish to pursue teaching mathematics in grades 7-12. The course content includes mathematics and education courses that students need during the first two years of a bachelor's degree program in Math Education. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
Career Opportunities
With a completed bachelor's in Math Education students will be able to be a Math Teacher in grades 7-12.
Program Requirements

- COM 2211 - Effective Public Speaking
- EDU 1100 - Introduction to Education
- EDU 1105 - Individuals with Exceptionalities
- EDU 1109 - Effective Classroom Management & Learning Environments
- SOC 2210 - Cultural Humility for Working with Youth

- EDU 1111 - Classroom Observation K-12 OR
- MAT 2800 - Writing Mathematical Proofs

- ENG 1101 - English Composition I

- ENG 1201 - English Composition II OR
- MAT 2320 - Linear Algebra

- MAT 2270 - Calculus & Analytic Geometry I
- MAT 2280 - Calculus & Analytic Geometry II
- MAT 2290 - Calculus & Analytic Geometry III
- MAT 2310 - Elementary Differential Equations
- PSY 1100 - General Psychology
- PSY 2242 - Educational Psychology
- OT36 Social & Behavioral Sciences Elective (may not be PSY course) **3 Cr. Hr(s).**
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**

Modern Languages, AA
Program Code: FORE.S.AA • Credit Hours: 60-62
Description
The Associate of Arts in Modern Languages is designed for students who are planning to transfer to a four-year university as a Chinese, French, German, Japanese, or Spanish major, or into a major for which modern language is a strong base. The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II

- MAT 1445 - Quantitative Reasoning OR
- MAT 1470 - College Algebra
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Any Group **9 Cr. Hr(s).**
- Multicultural Electives **3 Cr. Hr(s).**
- SCC 1101 - First Year Experience

- First-year Language Electives **8 Cr. Hr(s).**
- Student may choose either the second year of the same foreign language or the first year of a different foreign language: Second-year Foreign Language Electives **6 - 8 Cr. Hr(s). OR** First-year Language Electives **8 Cr. Hr(s).**

Music, AA
Program Code: MUS.S.AA • Credit Hours: 65
Description
The Associate of Arts in Music is designed for students who will be transferring to a four-year institution for further studies upon graduation in music education, music performance, or any baccalaureate program in music. The A.A. curriculum fulfills the requirements of the first two years of a bachelor of music, with special emphasis on public performance. An audition is required upon entering the program and a solo recital is required before graduation. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
Program Requirements

- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- MUS 1110 - Music Technology for Music Majors
- MUS 1111 - Music Theory I
- MUS 1112 - Aural Skills I
- MUS 1113 - Music Theory II
- MUS 1114 - Aural Skills II
- MUS 2111 - Music Theory III
- MUS 2112 - Aural Skills III
- MUS 2113 - Music Theory IV
- MUS 2114 - Aural Skills IV
- MUS 2117 - Survey of Musical Styles I
- MUS 2118 - Survey of Musical Styles II
- MUS 2601 - Applied Music for Majors I
- MUS 2602 - Applied Music for Majors II
- MUS 2603 - Applied Music for Majors III
- MUS 2604 - Applied Music for Majors IV
- MUS Recital **0 Cr. Hr(s).** (students arrange their recital through the Music Department)

Student must take the appropriate major ensemble from the following:

- MUS 2231 - Chorale for Majors OR
- MUS 2241 - Music Practicum for Majors OR
- MUS 2243 - Concert Band for Majors OR
- MUS 2245 - Classical Guitar Ensemble for Majors

Secondary Instrument (piano students must take voice while all other student must take piano):

- MUS 1115 - Piano for Music Majors I AND
- MUS 1116 - Piano for Music Majors II AND
- MUS 2115 - Piano for Music Majors III AND
- MUS 2116 - Piano for Music Majors IV
  OR
- MUS 1119 - Secondary Voice AND
- MUS 1119 - Secondary Voice AND
- MUS 1119 - Secondary Voice AND
- MUS 1119 - Secondary Voice
- OT36 Arts and Humanities Elective (at least two disciplines and may not include MUS 1121) **6 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **6 Cr. Hr(s).**

Political Science, AA
Program Code: PLSE.S.AA • Credit Hours: 61
Description
An Associate of Arts in Political Science degree exposes students to the political thought, processes, and behavior of governments, institutions, and organizations. The study of political science provides one with the concepts, theories and methods necessary to analyze problems scientifically. These tools serve as an underpinning for a level of civic engagement constructed around critical thinking and cultural literacy, and can be applied in a wide range of careers including government, law, business, international organizations, nonprofits, journalism, and teaching. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective **6 Cr. Hr(s).**
- Multicultural Electives **3 Cr. Hr(s).**
- PLS 1121 - US Federal Government & Civics
- PLS 1232 - State & Local Government
- PLS 2200 - Political Life, Systems & Issues
- PLS 2220 - International Relations
- SCC 1101 - First Year Experience
- Associate of Arts Elective **12 Cr. Hr(s).**

Psychology, AA
Program Code: PSYE.S.AA • Credit Hours: 60
Description
The Associate of Arts in Psychology prepares students for entry-level positions in fields such as education, mental health, and community service. The curriculum includes courses in social psychology, abnormal psychology, human development, and personality psychology, as well as current psychological theory and practice. This degree prepares students to directly enter the workforce and it transfers well to most 4-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
Career Opportunities
Graduates are employed as psychiatric and mental health technicians, case workers or managers, victim advocates, residential/ group home specialists, and in a variety of other positions in which knowledge of human behavior and mental processes is beneficial, including sales and marketing, human resources, community service agencies, administrative positions, and others.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (May not be PSY course) **3 Cr. Hr(s).**
- PSY 1100 - General Psychology
- PSY 1160 - Black Psychology OR
- PSY 2180 - Psychology of Gender
- PSY 2200 - Lifespan Human Development
- PSY 2217 - Abnormal Psychology
- PSY 2220 - Personality Psychology
- PSY 2225 - Social Psychology
- Psychology Elective **3 Cr. Hr(s).** (choose from options below)
- SCC 1101 - First Year Experience
- Associate of Arts Elective **8 Cr. Hr(s).**

Psychology Electives

- PSY 2126 - Stress Management
- PSY 2180 - Psychology of Gender
- PSY 2205 - Child Development
- PSY 2206 - Adolescent & Adult Development
- PSY 2214 - Drugs & Behavior
- PSY 2218 - Principles of Counseling
- PSY 2228 - Industrial Organizational Psychology
- PSY 2235 - Behavioral Science Research Methods
- PSY 2236 - Behavioral Science Statistics
- PSY 2242 - Educational Psychology
- PSY 2250 - Behavior Modification
- PSY 2270 - Psychology Internship

Social Work, AA
Program Code: SWKE.S.AA • Credit Hours: 60-62
Description
Social Work is a profession for people who want to help those in need to overcome difficulties and improve their lives. The Associate of Arts in Social Work is dedicated to students wishing to transfer to a four year university in Social Work or a related field. With an associate's, students can begin working in the field as paraprofessionals in social service settings. Social Work will provide students with skills and knowledge necessary to help people with a wide range of issues including psychological/mental health, behavioral, financial, health, relationships, and substance abuse problems. At the Associate's level, students complete practicum and service learning opportunities and explore skills related to

advocacy and case management as well as skills related to working with multicultural client populations. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Social Work is a helping profession which aims to assist individuals, families, and larger groups; as well as targeting the social problems which effect society today. The Department of Labor Statistics shows the job outlook for Social Work is projecting growth in the field of 19% between 2012 and 2022 which is faster than the average growth for other occupations. There is an increased demand for social work in fields such as aging and healthcare. Social Work allows opportunities for licensure and higher education which lead to more open doors for employment in the field. Social Workers are found in almost every facet of society including in the medical field such as hospitals and nursing homes, child welfare, schools, jails, and private practice.

Program Requirements

- BIO 1111 - General Biology I
- BIO 1211 - General Biology II OR
- OT36 Natural and Physical Science Elective
- COM 2206 - Interpersonal Communication
- ECO 1100 - Introduction to Economics OR
- ECO 2160 - Principles of Macroeconomics
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- OT36 Arts and Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary OR
- OT36 Social and Behavioral Sciences Elective
- PLS 1121 - US Federal Government & Civics
- PSY 1100 - General Psychology
- SCC 1101 - First Year Experience
- SOC 1101 - Introduction to Sociology
- SOC 1115 - Sociology of Marriage & Family
- SWK 1206 - Introduction to Social Work
- SWK 1213 - Introduction to Social Welfare
- SWK 2207 - Anti-Oppressive Social Work
- Modern Language Electives **6-8 Cr. Hr(s).**

Sociology, AA

Program Code: SOCE.S.AA • Credit Hours: 60

Description

Sociology is the study of social life, social change, and the social causes and consequences of human behavior. The Associates of Arts in Sociology can lead to successful transfer to a four-year college or university baccalaureate program. Sociology provides 21st century skills for all students regardless of the major: The ability to critically analyze social problems/issues necessary for responsible decision making; a systematic approach to information gathering and interpretations of data; a fundamental comprehension of multi-cultural differences and global diversity. With an associate's, students can begin working in the field as paraprofessionals in social service & business settings. The curriculum fulfills the freshman and sophomore general education requirements for most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **8 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology
- SCC 1101 - First Year Experience
- SOC 1101 - Introduction to Sociology
- SOC 1115 - Sociology of Marriage & Family
- SOC 1145 - Introduction to Cultural Anthropology
- SOC 1160 - Sociology of Aging
- SOC 2205 - Social Problems
- SOC 2215 - Race & Ethnicity
- Associate of Arts Elective **6 Cr. Hr(s).**

Sport and Recreation Education, AA

Program Code: PED.S.AA • Credit Hours: 65

Description

This program is designed for sport and recreation careers and will fulfill the freshman and sophomore educational requirements at most four-year colleges or universities. Sport and Recreation provides two years of a solid foundation in sport related business. It also contains a Coaching short-term certificate. Course work includes management, marketing, coaching, and leadership along with many other respective components of the industry. Students are prepared to enter the profession or transfer for completion of a baccalaureate degree. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Sport and Recreation Education gives the student a variety of options. The student could work in sports information, promotions, ticket sales, media relations, event management, tournament planning and marketing and facility management. Some careers will require a baccalaureate degree.

Program Requirements

- ALH 1132 - Heartsaver First Aid, CPR & AED
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- ENS 1118 - Lifetime Physical Fitness & Wellness
- ENS 2419 - Health Promotion, Fitness & Sport Programming
- ENT 2140 - Small Business Finance
- GLG 1101 - Physical Geology
- GLG 1201 - Historical Geology
- HIS 1111 - Western Civilization I

- HIS 1112 - Western Civilization II
- MAN 1107 - Foundations of Business
- MAN 1114 - Introduction to Sports Management
- MAN 2414 - Foundations of Coaching
- MAN 2415 - Coaching & Leadership
- MAN 2270 - Management Internship
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (may not be PSY course) **3 Cr. Hr(s).**
- MRK 2220 - Small Business Marketing
- PSY 1100 - General Psychology

Theatre, AA

Program Code: THEP.S.AA • Credit Hours: 62-65

Description

This degree program offers a comprehensive, university-parallel curriculum designed to prepare students for successful transfer to four-year institutions while providing them with a broad foundation in both the artistic and practical aspects of theatre. Students can customize their program of study to focus on either Acting or Theatre Technology, allowing them to specialize in their area of interest while gaining a well-rounded education in theatre. Students must pass all THE courses with a grade of C or better. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

Employment opportunities are available in areas such as performer, director, educator, dramaturge, playwright, arts administrator, company business or artistic manager, designer, technician, or stage manager. These positions can commonly be found in theatre, film, television commercials, voice over work, theme parks, cruise ships, education, rock shows, museums, churches, or fashion. This Theatre Performance degree also provides skills to enrich any career that requires artistic research, presentations, customer service, confidence or communication, safety troubleshooting, management, and creative problem solving.

Program Prerequisite(s):

Approval of Department

Program Requirements

- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- MAT 1445 - Quantitative Reasoning OR
- MAT 1470 - College Algebra
- OT36 Arts & Humanities Elective (May not be THE course) **3 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **6 Cr. Hr(s).**
- THE 1105 - Introduction to Theatre
- THE 1106 - Stagecraft
- THE 1107 - Lab for Stagecraft
- THE 1111 - Acting I
- THE 1194 - Applied Theatre Technology I
- THE 1194 - Applied Theatre Technology I
- THE 1196 - Applied Theatre Technology II
- THE 2201 - History of Theatre I
- THE 2202 - History of Theatre II
- THE 2206 - Script Analysis
- **Choose one of the following concentrations - 14 - 17 Cr. Hr(s).** (see options below)
  - Theatre Acting Concentration
  - Theatre Technology Concentration

Theatre Acting Concentration

- DAN 1172 - Ballet
- THE 1199 - Applied Theatre Performance
- THE 1199 - Applied Theatre Performance
- THE 1212 - Voice For The Actor
- THE 2115 - Movement For The Actor
- THE 2216 - Acting II

Theatre Technology Concentration

- THE 1114 - Live Sound Fundamentals
- THE 1115 - Live Sound Fundamentals Lab
- THE 1116 - Stage Lighting Fundamentals
- THE 1117 - Lab for Stage Lighting Fundamentals
- THE 1118 - Costume Fundamentals
- THE 1119 - Lab for Costume Fundamentals
- THE 1196 - Applied Theatre Technology II
- THE 2220 - Theatre Portfolio
- THE 2240 - Stage Management
- THE 2298 - Applied Theatre Technology V (minimum of 2 credit hours)

Associate of Science, AS

Program Code: LA.S.AS • Credit Hours: 60-65

Description

The Associate of Science is designed for students who are planning to transfer to a four-year college or university and pursue baccalaureate degree programs such as Biology, Chemistry, Earth and Environmental Sciences, Mathematics, Physics, and Pre-professional programs , e.g., medicine, pharmacy, etc. The curriculum fulfills the freshman and sophomore general education requirements of most four-year colleges and universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate. Based on their transfer and career goals, students will choose one of four pathways: Chemistry, Earth and Environmental Sciences, Physics, or General Science.

Career Opportunities

Students completing this degree are prepared to transfer to four-year institutions to complete degrees in science-related areas including pre-medicine, math and science education, and other similar programs.

Program Requirements

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **6 Cr. Hr(s).**
- SCC 1101 - First Year Experience
- **Choose one of the following pathways 41-46 Cr. Hr(s).** (see requirements below)
  Chemistry Pathway
  Earth and Environmental Sciences Pathway
  General Science Pathway
  Physics Pathway

Chemistry Pathway

- CHE 1211 - General Chemistry I
- CHE 1221 - General Chemistry II

- CHE 1251 - Lab for General Chemistry I
- CHE 1261 - Lab for General Chemistry II
- CHE 2111 - Organic Chemistry I
- CHE 2121 - Organic Chemistry II
- CHE 2151 - Lab for Organic Chemistry I
- CHE 2161 - Lab for Organic Chemistry II
- MAT 2270 - Calculus & Analytic Geometry I
- MAT 2280 - Calculus & Analytic Geometry II

- MAT 2290 - Calculus & Analytic Geometry III OR
- MAT 2600 - Applied Statistics

- PHY 1141 - College Physics I AND
- PHY 1142 - College Physics II
  OR
- PHY 2201 - General Physics I AND
- PHY 2202 - General Physics II AND
- PHY 2207 - Lab for General Physics I AND
- PHY 2208 - Lab for General Physics II

Earth and Environmental Sciences Pathway

- BIO 1171 - Principles of Biology I
- BIO 1272 - Principles of Biology II
- CHE 1211 - General Chemistry I
- CHE 1221 - General Chemistry II
- CHE 1251 - Lab for General Chemistry I
- CHE 1261 - Lab for General Chemistry II
- GLG 1101 - Physical Geology
- GLG 1111 - Physical Geology Laboratory

- BIO 2225 - Ecology OR
- GLG 1201 - Historical Geology AND
- GLG 1211 - Historical Geology Laboratory

- MAT 2240 - Calculus for the Life Sciences OR
- MAT 2270 - Calculus & Analytic Geometry I

- MAT 1450 - Introductory Statistics OR
- MAT 2280 - Calculus & Analytic Geometry II

- PHY 1141 - College Physics I
- PHY 1142 - College Physics II

General Science Pathway

- MAT 1450 - Introductory Statistics OR
- MAT 1455 - Introduction to Data Science OR
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus OR
- MAT 2240 - Calculus for the Life Sciences OR
- MAT 2270 - Calculus & Analytic Geometry I

- OT36 Mathematics, Statistics, and Logic OR OT36 Natural Sciences **3 Cr. Hr(s).**
- OT36 Natural Sciences **12 Cr. Hr(s).**
- Any college level courses in catalog **23 Cr. Hr(s).**

Physics Pathway

- CHE 1211 - General Chemistry I
- CHE 1221 - General Chemistry II
- CHE 1251 - Lab for General Chemistry I
- CHE 1261 - Lab for General Chemistry II
- MAT 2270 - Calculus & Analytic Geometry I
- MAT 2280 - Calculus & Analytic Geometry II
- MAT 2290 - Calculus & Analytic Geometry III

- MAT 2310 - Elementary Differential Equations AND
- MAT 2320 - Linear Algebra OR
- MAT 2330 - Differential Equations & Linear Algebra

- PHY 2201 - General Physics I
- PHY 2202 - General Physics II
- PHY 2207 - Lab for General Physics I
- PHY 2208 - Lab for General Physics II

Biology Education, AS

Program Code: BIOED.S.AS • Credit Hours: 63-64

Description

This program is for students who wish to pursue teaching Biology and General Science in grades 7-12. The course content includes science and education courses that students need during the first two years of a bachelor's degree program in Biology Education. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.

Career Opportunities

With a completed Bachelor's in Biology Education, students will be able to apply for Biology teaching positions in the State of Ohio

Program Requirements

- BIO 1171 - Principles of Biology I
- BIO 1272 - Principles of Biology II
- BIO 2235 - Genetics AND
- BIO 2236 - Lab for Genetics
- CHE 1211 - General Chemistry I AND
- CHE 1251 - Lab for General Chemistry I
- CHE 1221 - General Chemistry II AND
- CHE 1261 - Lab for General Chemistry II
- CHE 2111 - Organic Chemistry I AND
- CHE 2151 - Lab for Organic Chemistry I
- CHE 2121 - Organic Chemistry II AND
- CHE 2161 - Lab for Organic Chemistry II
- COM 2211 - Effective Public Speaking
- EDU 1100 - Introduction to Education
- EDU 1105 - Individuals with Exceptionalities
- ENG 1101 - English Composition I

- HIS 1111 - Western Civilization I OR
- HIS 1112 - Western Civilization II

Choose one math course from the following options:

- MAT 1450 - Introductory Statistics OR
- MAT 2240 - Calculus for the Life Sciences OR
- MAT 2270 - Calculus & Analytic Geometry I

- PSY 1100 - General Psychology
- SCC 1101 - First Year Experience
- OT36 Social & Behavioral Sciences Elective (may not be another PSY class) **3 Cr. Hr(s).**

- OT36 Arts & Humanities Elective (may not be another HIS class) **3 Cr. Hr(s).**

Biology, AS
Program Code: BIOE.S.AS • Credit Hours: 64
Description
The Associate of Science in Biology is designed for students who are planning to transfer to a four-year college or university and pursue a baccalaureate degree in biology. The curriculum fulfills the freshman and sophomore requirements of most colleges and universities. The biology courses offer a solid foundation in key areas of biology such as cell biology, genetics, evolution, and ecology with a broad survey of life on Earth. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 to graduate.
Career Opportunities
Studying biology opens the door to a wide variety of teaching, research, and service careers including health sciences, forensic science, environment, agriculture, and science writing. Students of the biological sciences find jobs in colleges and universities, primary and secondary schools, museums, zoos, nature centers, hospitals, clinics, and laboratories. Governments need the expertise of biologists to formulate sound policies and legislation. Many non-profit organizations, businesses, and industries also depend on biologists to fulfill their missions.
Program Requirements

- BIO 1171 - Principles of Biology I
- BIO 1272 - Principles of Biology II
- BIO 2235 - Genetics AND
- BIO 2236 - Lab for Genetics
- CHE 1211 - General Chemistry I AND
- CHE 1251 - Lab for General Chemistry I
- CHE 1221 - General Chemistry II AND
- CHE 1261 - Lab for General Chemistry II

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **6 Cr. Hr(s).**
- Multicultural Electives **3 Cr. Hr(s).**
- SCC 1101 - First Year Experience
- Choose 15 hours of science and math electives (see list below) - **15 Cr. Hr(s).**

Science and Math Electives - 15 Hrs.

- BIO 1141 - Principles of Anatomy & Physiology I AND
- BIO 1147 - Lab for Principles of Anatomy & Physiology I
- BIO 1242 - Principles of Anatomy & Physiology II AND
- BIO 1248 - Lab for Principles of Anatomy & Physiology II
- BIO 2205 - Microbiology AND
- BIO 2206 - Lab for Microbiology
- BIO 2222 - Evolution
- BIO 2225 - Ecology
- CHE 2111 - Organic Chemistry I AND
- CHE 2151 - Lab for Organic Chemistry I
- CHE 2121 - Organic Chemistry II AND
- CHE 2161 - Lab for Organic Chemistry II
- PHY 1141 - College Physics I
- PHY 1142 - College Physics II
- MAT 2240 - Calculus for the Life Sciences
- MAT 2270 - Calculus & Analytic Geometry I

Business Administration, AS
Program Code: BUS.S.AS • Credit Hours: 64
Description
The University Parallel program is designed for the student who wants to pursue a baccalaureate degree at a four-year institution in a business discipline. The purpose of the degree program is to provide the basic core of business and general education requirements for the first two years of a four-year program. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Accreditation
This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).
Program Requirements

- ACC 1210 - Introduction to Financial Accounting
- ACC 1220 - Introduction to Managerial Accounting
- BIS 1120 - Introduction to Software Applications
- COM 2211 - Effective Public Speaking
- ECO 2160 - Principles of Macroeconomics
- ECO 2180 - Principles of Microeconomics
- ENG 1101 - English Composition I
- ENG 1131 - Business Writing
- ENG 1201 - English Composition II
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAN 2150 - Management & Organizational Behavior
- MRK 2101 - Principles of Marketing Management
- MAT 2160 - Calculus for Business & Economics
- MAT 2170 - Business Statistics I
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **7 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (May not be ECO course) **3 Cr. Hr(s).**

Computer Science, AS
Program Code: CS.S.AS • Credit Hours: 61
Description
Course work will focus on giving students a foundational knowledge of computer science concepts such as mathematics and programming skills. Furthermore, this Associate of Science degree will provide students a much needed transfer pathway to Computer Science Bachelor Degrees at four-year universities. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
Accreditation
This program is fully accredited by the Council on Higher Education Accreditation (CHEA).
Career Opportunities
According to Ohio Bureau of Labor Information data, statewide increases of 18.1% for Software Developers; Applications, and 7.8% for Software Developers; Systems Software, are projected between 2014 and 2024. Workforce Supply Data from the Governor's Office of Workforce

Transformation shows that, from 2015 to 2018, there were 1,460 Associate Degree computer program graduates and 2,986 Bachelor Degree graduates.
Program Requirements

- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 2212 - Java Software Development I
- CSC 2217 - Java Software Development II
- CSC 2207 - Data Structures & Algorithms OR
- CSC 2266 - Python for Data Analytics
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- OT36 Mathematics Elective **18 Cr. Hr(s).**
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **9 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **6 Cr. Hr(s).**
- Multicultural Electives **3 Cr. Hr(s).**

Engineering and Engineering Technology University Transfer, AS
Program Code: ESUP.S.AS • Credit Hours: 60-62
Description
The Engineering and Engineering Technology University Transfer Associate degree programs are for students who plan to attend a four-year college or university for a degree in Engineering Science or Engineering Technology. This program is designed to bring an entering student up to the level of a third year university student in Engineering or Engineering Technology. Course sequence is designed to transfer the basic requirements of most universities. The student is strongly advised to consult the particular school he or she will be entering as well as a Sinclair academic advisor, before signing up for any courses. Please see an academic advisor for the listing of available electives and assistance in selecting electives toward your major that will be accepted by the receiving transfer institution.
As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
Career Opportunities
Students complete this program to transfer to a four-year institution to study various engineering disciplines to complete a BS degree in Engineering
Program Requirements

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- MAT 2270 - Calculus & Analytic Geometry I
- MAT 2280 - Calculus & Analytic Geometry II
- OT36 Arts and Humanities (at least two discplines) **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **6 Cr. Hr(s).**
- PHY 2201 - General Physics I AND
- PHY 2207 - Lab for General Physics I OR
- PHY 1141 - College Physics I

- PHY 2202 - General Physics II AND
- PHY 2208 - Lab for General Physics II OR
- PHY 1142 - College Physics II OR
- CHE 1211 - General Chemistry I AND
- CHE 1251 - Lab for General Chemistry I

Choose one of the following pathways -- 24 Cr. Hr(s). (see options below; consult an academic advisor for more information)

- Engineering Technology Electives
- Engineering Science Electives

Engineering Technology Electives

- CSC 1202 - C++ Software Development
- CAM 1109 - Fundamentals of Tooling & Machining
- EET 1116 - Electronics Schematics & Fabrication
- EET 1131 - Digital Electronics
- EET 1150 - DC Circuits
- EET 1155 - AC Circuits
- EET 2201 - Electronic Devices & Circuits
- EET 2259 - Programming for Electronics Technology
- EET 2261 - Microprocessors
- EGR 1101 - Introductory Mathematics for Engineering Applications
- EGR 2201 - Circuit Analysis
- EGR 2261 - Engineering Problem Solving using "C" & "C++"
- ENG 1131 - Business Writing
- ENG 1201 - English Composition II
- ISE 1100 - Product Development Fundamentals
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 2208 - Engineering Technology Economics & Cost Analysis
- ISE 2240 - Six Sigma: Green Belt
- MAT 1450 - Introductory Statistics
- MAT 2240 - Calculus for the Life Sciences
- MET 1161 - Software Tools for Engineering Technology
- MET 1231 - Introduction to Engineering Design Using 3D CAD
- MET 1301 - SolidWorks Basics
- MET 2101 - Thermodynamics
- MET 2201 - Statics
- MET 2251 - Strength of Materials
- MET 2301 - Fluid Mechanics
- MET 2351 - Dynamics

Engineering Science Electives

- BIO 1171 - Principles of Biology I
- BIO 1272 - Principles of Biology II
- CAT 1301 - Civil Construction CAD
- CAT 1501 - Fundamentals of Surveying & Mapping
- CHE 1211 - General Chemistry I AND
- CHE 1251 - Lab for General Chemistry I
- CHE 1221 - General Chemistry II AND
- CHE 1261 - Lab for General Chemistry II
- CHE 2111 - Organic Chemistry I AND
- CHE 2151 - Lab for Organic Chemistry I
- CHE 2121 - Organic Chemistry II AND
- CHE 2161 - Lab for Organic Chemistry II
- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CSC 1350 - Web Site Development with HTML & CSS
- CSC 2207 - Data Structures & Algorithms
- CSC 2212 - Java Software Development I
- CSC 2217 - Java Software Development II
- CSC 2268 - Structured Query Language (SQL) Programming

- CIT 2550 - Linux Operating System
- EGR 1101 - Introductory Mathematics for Engineering Applications
- EGR 2131 - Engineering Digital Design
- EGR 2201 - Circuit Analysis
- EGR 2261 - Engineering Problem Solving using "C" & "C++"
- ENG 1201 - English Composition II
- GLG 1101 - Physical Geology AND
- GLG 1111 - Physical Geology Laboratory
- GLG 1201 - Historical Geology AND
- GLG 1211 - Historical Geology Laboratory
- MAT 2170 - Business Statistics I
- MAT 2290 - Calculus & Analytic Geometry III
- MAT 2310 - Elementary Differential Equations
- MAT 2320 - Linear Algebra
- MAT 2330 - Differential Equations & Linear Algebra
- MAT 2570 - Discrete Mathematics
- MAT 2600 - Applied Statistics
- MEE 2101 - Statics for Engineers
- MEE 2201 - Thermodynamics for Engineers
- MEE 2301 - Strength of Materials for Engineers
- MEE 2401 - Dynamics for Engineers
- MET 1301 - SolidWorks Basics
- PHY 2210 - MATLAB for Scientists & Engineers

Health Sciences Pre-Professional Studies, AS
Program Code: PPS.S.AS • Credit Hours: 63-64
Description
The Sinclair Health Sciences Pre-Professional Studies degree provides a flexible pathway for students interested in the following professions who wish to pursue transfer to a university program through an academic pathway* to the following Health Science Professions: Doctor of Dental Sciences, Medical Doctor, Doctor of Osteopathy, Physician's Assistant, Doctor of Pharmacy, Doctor of Physical Therapy, Doctor of Veterinary Medicine. This degree does include some patient-interaction through work-based learning or clinical practicums. *Students will be advised that different professional schools have different pre-requisites and they must consult their intended school of study to determine their best curricular pathway to complete their prerequisites. Further courses may be needed in order to meet the pre-requisites required by different programs. Communication with an Academic Adviser is strongly recommended. This list is not inclusive. Further professional program prerequisites may be identified as students indicate interest.
Career Opportunities
This highly transferable degree has been designed for the student interested in a medical degree in one of the following fields: Doctor of Osteopathy (DO), Medical Doctor (MD), Doctor of Dental Surgery (DDS), Doctor of Veterinary Medicine (DVM), Doctor of Pharmacy (DP), Doctor of Physical Therapy (DPT), or Physician's Assistant (PA). Completion of this degree will position the student with over 60 credits toward entry to a University program as well as clinical experience in the field of interest (a requirement of many professional schools.) Working closely with an Academic Adviser, the student will be able to design their program to best fit the requirements of their intended profession and intended school of transfer.
Program Requirements

- ALH 1102 - Basic Healthcare Practices & Medical Scribe
- ALH 1120 - Nurse Aide Training
- BIO 1171 - Principles of Biology I
- BIO 1272 - Principles of Biology II
- CHE 1211 - General Chemistry I
- CHE 1251 - Lab for General Chemistry I
- CHE 1221 - General Chemistry II
- CHE 1261 - Lab for General Chemistry II
- CHE 2111 - Organic Chemistry I
- CHE 2151 - Lab for Organic Chemistry I
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- HUM 1135 - Environmental Ethics OR
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**

- OT36 Arts & Humanities Elective (student must have two Arts/Humanities from different discplines) **3 Cr. Hr(s).**

- MAT 2240 - Calculus for the Life Sciences OR
- MAT 2270 - Calculus & Analytic Geometry I
- OT36 Natural & Physical Sciences Elective **9 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (must be a non-PSY course) **3 Cr. Hr(s).**
- PSY 1100 - General Psychology

Mathematics, AS
Program Code: MATE.S.AS • Credit Hours: 60
Description
The curriculum of the Associate of Science in Mathematics degree is designed to correspond to both the math and general education courses that a student would take in the first two years of pursuing a Bachelor's degree in math at a four-year institution. Coursework can be customized to fit interests in Statistics/Actuarial Science, Secondary Math Education, Pure/Applied Mathematics, or Applied Mathematical Economics. Students will get a solid grounding in the mathematics that is applied in the physical science and engineering disciplines, and an introduction to more theoretical mathematics. As part of this degree program, students must complete the requirements of the Ohio Transfer 36 in order to graduate.
Career Opportunities
Actuary, Statistical Consultant, Investment Analyst, Cryptographer, Operations Researcher, High School or College-Level Teacher.
Visit www.maa.org/careers/career-profiles for more examples. For more information on these and other careers, including employment outlook and working conditions, go to www.ohcis.intocareers.org and login with username "sinclaircoll" and password "ohiocis03".
Program Requirements

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- MAT 2270 - Calculus & Analytic Geometry I
- MAT 2280 - Calculus & Analytic Geometry II
- MAT 2290 - Calculus & Analytic Geometry III

Complete 10 hours in one track below:

- MAT 2310 - Elementary Differential Equations OR
- MAT 2600 - Applied Statistics OR
- MAT 2800 - Writing Mathematical Proofs AND
- Any Course in Catalog -- 6-7 Cr. Hrs.
  OR
- CSC 1111 - Introduction to Problem Solving & Computer Programming AND
- CSC 2212 - Java Software Development I AND
- Any Course in Catalog -- 4 Cr. Hrs.

- MAT 2320 - Linear Algebra OR
- CSC 2217 - Java Software Development II
- OT36 Arts & Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **10 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective (at least two disciplines) **6 Cr. Hr(s).**
- Multicultural Electives **3 Cr. Hr(s).**
- SCC 1101 - First Year Experience

Accounting, AAS

Program Code: ACC.S.AAS • Credit Hours: 64

Description

Accountants prepare, analyze and verify financial reports and monitor information systems that furnish this information to management. Business executives, bankers, government leaders and investors all rely on financial statements and other reports prepared by accountants that summarize and interpret financial transactions that occur in every business. An accountant must have the ability to develop reliable analyses of business operations which can be used in making business decisions. Students who complete the accounting program can qualify to sit for the CPA exam in Ohio after completing a few additional courses and a qualifying exam as determined by the Ohio Board of Accountancy.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

Employment opportunities in addition to accounting firms, exist in private business and industry as well as not-for-profit and governmental organizations. Positions available to graduates include staff accountant, cost accountant, payroll accountant, auditor, tax accountant and financial analyst.

Program Requirements

- ACC 1210 - Introduction to Financial Accounting
- ACC 1220 - Introduction to Managerial Accounting
- ACC 1510 - Computerized Accounting Systems
- ACC 2101 - Intermediate Accounting I
- ACC 2102 - Intermediate Accounting II
- ACC 2211 - Cost Accounting
- ACC 2212 - Managerial Accounting & Finance
- ACC 2321 - Federal Taxation
- ACC 2435 - Auditing
- ACC Accounting Elective **3 Cr. Hr(s).** (see options below)
- BIS 1120 - Introduction to Software Applications

- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication

- ECO 2160 - Principles of Macroeconomics
- ECO 2180 - Principles of Microeconomics
- ENG 1101 - English Composition I
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business

- MAT 1460 - Mathematics for Business Analysis OR
- MAT 1470 - College Algebra

- MAT 2170 - Business Statistics I
- MRK 2101 - Principles of Marketing Management
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**

Accounting Electives

- ACC 2270 - Accounting Internship
- ACC 2322 - Advanced Taxation
- ACC 2510 - Advanced Accounting
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- LAW 1102 - Consumer Law
- MAN 1106 - Introduction to Radio Frequency Identification
- MAN 1110 - International Business
- MAN 2110 - Introduction to Project Management
- MRK 2145 - Principles of Retailing

Addiction Services, AAS

Program Code: MHTCD.S.AAS • Credit Hours: 65

Description

In the Mental Health and Addiction Services department, the Addiction Services degree program prepares entry-level professionals for employment working on an inter-disciplinary team with clinical supervision in chemical dependency treatment settings. Graduates of this program work directly with a diverse group of clients. The program can be taken full-time or part-time. If enrolled full-time, it is designed to be completed in five (5) semesters. It consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. Second-year practicum hours can be submitted toward partial employment requirements of the Ohio Chemical Dependency Professionals Board (OCDP). To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the web page. A cumulative GPA of 2.0 is required, as well as an initial faculty advising appointment during MHT 1101. A grade of C or higher is required in all program courses. The practicum portion of the curriculum provides 420 hours of supervised experience. Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Addiction Services graduates can work at hospitals, substance use disorder treatment centers, and numerous other field-related positions in the community. Graduates have completed the 180 hours of specific education required to sit for the LCDC II exam. The OCDP Board has other requirements for licensure.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- BIO 1107 - Human Biology
- BIO 1108 - Lab for Human Biology
- ENG 1101 - English Composition I
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- MHT 1101 - Introduction to Mental Health Services
- MHT 1120 - Trauma-Informed Healthcare
- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary
- MHT 1202 - Motivational Interviewing
- MHT 1236 - Assessment & Diagnosis of Substance Use Disorders

- MHT 2105 - Mental Health Treatment Methods
- MHT 2111 - Group Dynamics I
- MHT 2121 - Practicum I
- MHT 2137 - Treatment Techniques in Substance Use Disorders
- MHT 2138 - Ethical Issues in the Helping Professions
- MHT 2211 - Group Dynamics II
- MHT 2222 - Practicum II
- MHT 2235 - Family Dynamics of Addiction
- PSY 1100 - General Psychology
- PSY 2217 - Abnormal Psychology
- SWK 2207 - Anti-Oppressive Social Work

Architectural Technology, AAS
Program Code: ARC.S.AAS • Credit Hours: 62-65
Description
The Architectural Technology program helps students develop skills applicable in a variety of Built Environment professions, including architecture, engineering and design practices, contracting firms, and material suppliers. Building Information modeling (BIM) and Integrated Project design (IPD) are core principles taught throughout the curriculum, with Autodesk Revit being the primary BIM tool. Environmental responsibility is emphasized, with students taking a USGBC LEED exam prep course. Curriculum tracks are available for both building technology and building design.
Career Opportunities
Graduates are employed as drafters for architectural firms and inspectors and project managers in the construction industry. Many opportunities exist in the building materials and assemblies sales and supply area.
Program Requirements

- CAT 1100 - Introduction to the Built Environment
- CAT 1101 - Architectural Graphics I
- CAT 1121 - Architectural Graphics II
- CAT 1201 - Construction Methods & Materials
- CAT 1241 - Building Systems
- CAT 1341 - Architectural Design I
- CAT 2101 - Architectural Design II
- CAT 2201 - Architectural Visualization
- CAT 2411 - Commercial Building Code
- CAT 2700 - Architectural Technology Internship (Minimum of 2 credit hours)
- CAT 2780 - Architectural Technology Capstone
- COM 2211 - Effective Public Speaking
- EGV 1100 - Sustainability in the Built Environment
- EGV 1301 - Sustainable Architecture
- ENG 1101 - English Composition I
- MAT 1200 - Technical Mathematics OR
- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- OT36 Social and Behavioral Sciences Elective **3 Cr. Hr(s).**

- PHY 1100 - Introduction to Physics OR
- PHY 1141 - College Physics I
- Architectural Technology Elective **3 Cr. Hr(s).** (see options below)

Architectural Technology Electives

- ART 1111 - Drawing I
- ART 1112 - Drawing II
- CAT 1131 - Introduction to Revit MEP
- CAT 1141 - Reading Architectural Drawings
- CAT 1401 - Construction Cost Estimating
- CAT 2401 - Construction Project Management
- CAT 2610 - Stakeholders & Participants for Design & Construction Projects
- CAT 2620 - Construction Documents, Legal Requirements, & Project Delivery
- CAT 2630 - Architectural Practice Project Deliverables & Contractual Obligations
- CAT 2640 - Construction Project Change Management
- CAT 2741 - Current Topics in Architecture
- EGV 1251 - Introduction to Energy Management Principles
- IND 1180 - History & Theory of Interior Design
- IND 1234 - Materials & Textiles
- IND 1240 - Color Theory
- IND 2140 - Interior Building Systems & Design
- VIS 1140 - Design Processes I

Automation & Control Technology with Robotics, AAS
Program Code: AMCT.S.AAS • Credit Hours: 63-67
Description
The Automation and Control Technology with Robotics program builds knowledge in the application of electrical and mechanical skills for developing, installing, programming and troubleshooting the complex machinery found in the modern manufacturing and Supply Chain environments.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
This program prepares graduates for control system technician and designer, electrical and electronic systems engineering technician, industrial equipment sales, purchasing, installation, and service. Graduates will also be prepared to assume roles as industrial maintenance technician, plant maintenance technician, robotics technician, system integrators, and supply chain technician.
Program Requirements

- COM 2211 - Effective Public Speaking
- EET 1120 - Introduction to DC & AC Circuits
- EET 1139 - Electrical Machinery
- EET 1166 - Industrial Machine Wiring
- EET 1131 - Digital Electronics OR
- EET 1198 - Digital Technology

- EET 2281 - Programmable Logic Controllers
- EET 2282 - Advanced Programmable Logic Controllers
- EGR 1106 - Basic Mechanical & Electrical Skills
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- EGR 1144 - Sensors & Vision Systems
- EGR 1217 - Fluid Power & Control
- EGR 2231 - Troubleshooting of Automated Systems
- EGR 2252 - Teach Pendant Robot Programming
- EGR 2278 - Automation & Control Capstone
- ENG 1101 - English Composition I

- MAT 1470 - College Algebra AND

- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus
- MET 2711 - Ethics for Engineering Technology Professionals
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr(s).**
- PHY 1141 - College Physics I

- EGR 1105 - Soldering Fundamentals OR
- EET 2157 - Radio Frequency Identification (RFID) Technology OR
- EGR 2250 - Electromechanical Repair

- CAM 1107 - Introduction to Mechanical Drafting with CAD OR
- MET 1301 - SolidWorks Basics

- EGR 2250 - Electromechanical Repair OR
- EGR 2256 - Automated Data Acquisition Systems OR
- EGR 2261 - Engineering Problem Solving using "C" & "C++" OR
- EGR 2275 - Automation & Control Technology Internship (Minimum of 3 credit hours)

Automotive Technology (GM ASEP), AAS
Program Code: ASEP.S.AAS • Credit Hours: 65
Description
The Associate of Applied Science in General Motors Automotive Service Educational Program (ASEP) provides training for students aspiring to become automotive technicians for General Motors dealerships or AC Delco independent shops. Specific General Motors training is presented to apprentice student technicians as they apply learned content to a co-op work experience. Students attend classes for half a semester and then apprentice at a GM/ AC Delco sponsoring dealership the other half. Students are paid for work rendered during the co-op experience. Upon graduation, students will receive hundreds of hours of official General Motors training credits that are recorded in the corporation's training database. Graduates should be 85 to 90% trained towards meeting the certification requirements for a GM Master Technician. Graduates will also receive an Associate of Applied Science from Sinclair along with a job opportunity from the sponsoring dealer.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Accreditation
The Sinclair Automotive Technology program is an ASE Accredited Training Program at the Master Automobile Service Technology level by the ASE Education Foundation. The ASE Education Foundation was founded as an independent, nonprofit organization with a single mission: To evaluate technician training programs against standards developed by the automotive industry. The ASE Education Foundation accreditation process has resulted in certified automotive training programs in all 50 states at the secondary and post-secondary levels.
Career Opportunities
Career opportunities are available in positions for automotive service technicians in General Motors dealerships, independent shops and automotive machine shops. In addition, graduates are also employed as service managers, shop foremen, parts managers, sales representatives or automotive instructors. Graduates with practical experience, education, willingness to work and a high degree of professionalism may expect to find jobs in middle management or research occupations within major automotive corporations.
Program Requirements

- AUT 1102 - Introduction to Automotive Service
- AUT 1108 - Automotive Engine Systems
- AUT 1114 - Automotive Electrical/Electronic Systems I
- AUT 1115 - Automotive Engine Performance I
- AUT 1116 - Automotive Steering & Suspension Systems
- AUT 1142 - Automotive Manual Transmission & Driveline
- AUT 1146 - Automotive Heating Ventilation & Air Conditioning Systems
- AUT 1165 - Automotive Brake Systems
- AUT 1170 - Automotive Internship I
- AUT 1171 - Automotive Internship II
- AUT 1172 - Automotive Internship III
- AUT 1173 - Automotive Internship IV
- AUT 2214 - Automotive Electrical/Electronic Systems II
- AUT 2215 - Automotive Engine Performance II
- AUT 2241 - Automatic Transmission Systems

- CAM 1109 - Fundamentals of Tooling & Machining OR
- CAM 1180 - Welding & Metal Joining I
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- MAT 1110 - Math for Technologists
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- SOC 1101 - Introduction to Sociology
- AUT Automotive Elective **2 Cr. Hr(s).**

Automotive Electives

- AUT 1100 - Consumer Automotive
- AUT 1111 - Automotive Service Consulting & Advising
- AUT 1170 - Automotive Internship I
- AUT 2221 - High Performance Engine Blocks & Heads
- AUT 2222 - High Performance Engine Assembly & Dyno Testing
- AUT 2224 - High Performance Fuel Induction Systems
- AUT 2230 - Hybrid Electric Vehicle Systems
- AUT 2240 - Automotive Diesel Systems
- AUT 2297 - Special Topics

Automotive Technology (Honda PACT), AAS
Program Code: AUTHA.S.AAS • Credit Hours: 65
Description
This Associate of Applied Science program provides training for students aspiring to become Honda/Acura dealership technicians and requires students to co-op at a Honda or Acura dealership. Students receive specific Honda technical training resulting in training, credits/certifications from the corporation. These credits/ certifications help a student secure employment with a Honda/ Acura dealership.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Accreditation
The Sinclair Automotive Technology program is an ASE Accredited Training Program at the Master Automobile Service Technology level by the ASE Education Foundation. The ASE Education Foundation was founded as an independent, nonprofit organization with a single mission: To evaluate technician training programs against standards developed by the automotive industry. The ASE Education Foundation accreditation process has resulted in certified automotive training programs in all 50 states at the secondary and post-secondary levels.

Program Requirements

- AUT 1102 - Introduction to Automotive Service
- AUT 1108 - Automotive Engine Systems
- AUT 1114 - Automotive Electrical/Electronic Systems I
- AUT 1115 - Automotive Engine Performance I
- AUT 1116 - Automotive Steering & Suspension Systems
- AUT 1142 - Automotive Manual Transmission & Driveline
- AUT 1146 - Automotive Heating Ventilation & Air Conditioning Systems
- AUT 1165 - Automotive Brake Systems
- AUT 1170 - Automotive Internship I
- AUT 1171 - Automotive Internship II
- AUT 1172 - Automotive Internship III
- AUT 1173 - Automotive Internship IV
- AUT 2214 - Automotive Electrical/Electronic Systems II
- AUT 2215 - Automotive Engine Performance II
- AUT 2241 - Automatic Transmission Systems
- CAM 1109 - Fundamentals of Tooling & Machining OR
- CAM 1180 - Welding & Metal Joining I
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- MAT 1110 - Math for Technologists
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr(s).**
- AUT Automotive Elective **2 Cr. Hr(s).**

Automotive Electives

- AUT 1100 - Consumer Automotive
- AUT 1111 - Automotive Service Consulting & Advising
- AUT 1170 - Automotive Internship I
- AUT 2221 - High Performance Engine Blocks & Heads
- AUT 2222 - High Performance Engine Assembly & Dyno Testing
- AUT 2224 - High Performance Fuel Induction Systems
- AUT 2230 - Hybrid Electric Vehicle Systems
- AUT 2240 - Automotive Diesel Systems
- AUT 2297 - Special Topics

Automotive Technology (Mopar CAP), AAS

Program Code: CAP.S.AAS • Credit Hours: 65

Description

The Associate of Applied Science in the Mopar Career Automotive Program (CAP) provides training for students aspiring to become automotive technicians for Chrysler, Dodge, Jeep, and Ram dealerships. Specific Chrysler training is presented to apprentice student technicians as they apply learned content to a co-op work experience. Students attend classes for half a semester and then apprentice at a Fiat Chrysler Automobile sponsoring dealership the other half. Students are paid for work rendered during the co-op experience. Upon graduation, students will receive hundreds of hours of official Chrysler training credits that are recorded in the corporation's training database. Graduates should be 85% to 90% trained towards meeting the certification requirements for a Chrysler Master Technician. Graduates will also receive an Associate of Applied Science from Sinclair along with a job opportunity from the sponsoring dealer.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Sinclair Automotive Technology program is an ASE Accredited Training Program at the Master Automobile Service Technology level by the ASE Education Foundation. The ASE Education Foundation was founded as an independent, nonprofit organization with a single mission: To evaluate technician training programs against standards developed by the automotive industry. The ASE Education Foundation accreditation process has resulted in certified automotive training programs in all 50 states at the secondary and post-secondary levels.

Career Opportunities

Career opportunities are available in positions for automotive service technicians in Chrysler, Dodge and Jeep dealerships, independent shops and automotive machine shops. In addition, graduates are also employed as service managers, shop foremen, parts managers, sales representatives or automotive instructors. Graduates with practical experience, education, willingness to work and a high degree of professionalism may expect to find jobs in middle management or research occupations within major automotive corporations.

Program Requirements

- AUT 1102 - Introduction to Automotive Service
- AUT 1108 - Automotive Engine Systems
- AUT 1114 - Automotive Electrical/Electronic Systems I
- AUT 1115 - Automotive Engine Performance I
- AUT 1116 - Automotive Steering & Suspension Systems
- AUT 1142 - Automotive Manual Transmission & Driveline
- AUT 1146 - Automotive Heating Ventilation & Air Conditioning Systems
- AUT 1165 - Automotive Brake Systems
- AUT 1170 - Automotive Internship I
- AUT 1171 - Automotive Internship II
- AUT 1172 - Automotive Internship III
- AUT 1173 - Automotive Internship IV
- AUT 2214 - Automotive Electrical/Electronic Systems II
- AUT 2215 - Automotive Engine Performance II
- AUT 2241 - Automatic Transmission Systems
- CAM 1109 - Fundamentals of Tooling & Machining OR
- CAM 1180 - Welding & Metal Joining I
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- MAT 1110 - Math for Technologists
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- SOC 1101 - Introduction to Sociology
- AUT Automotive Elective **2 Cr. Hr(s).**

Automotive Electives

- AUT 1100 - Consumer Automotive
- AUT 1111 - Automotive Service Consulting & Advising
- AUT 1170 - Automotive Internship I
- AUT 2221 - High Performance Engine Blocks & Heads
- AUT 2222 - High Performance Engine Assembly & Dyno Testing
- AUT 2224 - High Performance Fuel Induction Systems
- AUT 2230 - Hybrid Electric Vehicle Systems
- AUT 2240 - Automotive Diesel Systems
- AUT 2297 - Special Topics

Automotive Technology, AAS

Program Code: AUT.S.AAS • Credit Hours: 65

Description

The Associate of Applied Science in Automotive Technology provides training for students aspiring to become automotive technicians. Training in

automotive management and business operations is a component of the program. To earn the associate degree students must participate in a capstone course offered only during the day or complete four paid internship courses with an automotive service facility.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Sinclair Automotive Technology program is an ASE AccreditedTraining Program at the Master Automobile Service Technology level by the ASE Education Foundation. The ASE Education Foundation was founded as an independent, nonprofit organization with a single mission: To evaluate technician training programs against standards developed by the automotive industry. The ASE Education Foundation accreditation process has resulted in certified automotive training programs in all 50 states at the secondary and post-secondary levels.

Career Opportunities

Graduates are finding excellent employment opportunities existing in dealerships, independent service facilities, machine shops and other automotive businesses. Graduates may also find employment as automotive instructors or sales, service and parts managers.

Program Requirements

- AUT 1102 - Introduction to Automotive Service
- AUT 1108 - Automotive Engine Systems
- AUT 1114 - Automotive Electrical/Electronic Systems I
- AUT 1115 - Automotive Engine Performance I
- AUT 1116 - Automotive Steering & Suspension Systems
- AUT 1142 - Automotive Manual Transmission & Driveline
- AUT 1146 - Automotive Heating Ventilation & Air Conditioning Systems
- AUT 1165 - Automotive Brake Systems
- AUT 2214 - Automotive Electrical/Electronic Systems II
- AUT 2215 - Automotive Engine Performance II
- AUT 2241 - Automatic Transmission Systems
- AUT 1170 - Automotive Internship I AND
- AUT 1171 - Automotive Internship II AND
- AUT 1172 - Automotive Internship III AND
- AUT 1173 - Automotive Internship IV OR
- AUT 2250 - Automotive Service Operations
- CAM 1109 - Fundamentals of Tooling & Machining OR
- CAM 1180 - Welding & Metal Joining I
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- MAT 1110 - Math for Technologists
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr(s).**
- Automotive Technical Elective -- **2 Cr. Hr(s).**

Automotive Electives

- AUT 1100 - Consumer Automotive
- AUT 1111 - Automotive Service Consulting & Advising
- AUT 1170 - Automotive Internship I
- AUT 2221 - High Performance Engine Blocks & Heads
- AUT 2222 - High Performance Engine Assembly & Dyno Testing
- AUT 2224 - High Performance Fuel Induction Systems
- AUT 2230 - Hybrid Electric Vehicle Systems
- AUT 2240 - Automotive Diesel Systems
- AUT 2297 - Special Topics

Aviation Maintenance Technology, AAS

Program Code: AVIAO.S.AAS • Credit Hours: 89

Description

This program leads to an Associate of Applied Science in Aviation Maintenance Technology and provides the knowledge and skills required by the Federal Aviation Administration (FAA) for certification as an Aviation Maintenance Technician (AMT). To become an AMT, two ratings are required, the Airframe (A) and the Powerplant (P); this is commonly referred to as an "A&P Certificate". Students will complete the requirements for Sinclair's General, Airframe and Powerplant Aviation Maintenance certificates and will refine the knowledge and skills they have learned with extensive hands-on training in the aviation maintenance lab. Students, having completed this course work, will be eligible to test for the FAA A&P Certificate. The graduate can either continue towards a bachelor's degree in aviation (or related field) or can begin a career as an AMT. Sinclair is an FAA-approved Aviation Maintenance Technician School (AMTS) under Part 147.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The programs General and Airframe certificates are approved by the FAA under air agency certificate XSCT086K.

Career Opportunities

The Bureau of Labor Statistics projects "favorable future job opportunities" over the long term as older mechanics and technicians retire. Maintenance Repair Organizations (M.R.O.s) are contracting for the work that airlines used to do in house. Many of the M.R.O.s are in need of maintenance technicians. Boeing Commercial Aircraft Company recently predicted 1,000,000 more jobs in aviation in the next 15 years. Airbus of Europe has predicted about 800,000 more jobs in the next 15-20 years. Both predictions are based on anticipated growth in aircraft production and flying passengers. Many mechanics will reach retirement age in the next three years as a result of an interruption of current certificates issued by the FAA. More jet aircraft means more need for mechanics. The general aviation sector already has a shortage of certificated mechanics.

Program Requirements

- AVT 1106 - Airframe Safety Systems
- AVT 1107 - Fuel Systems
- AVT 1113 - Drawings for Aviation
- AVT 1116 - Regulations for Maintenance
- AVT 1118 - Weight & Balance
- AVT 1128 - Powerplant Safety Systems
- AVT 1130 - Basic Aviation Electricity I
- AVT 1132 - Basic Aviation Electricity II
- AVT 1133 - Instruments/Communications
- AVT 1135 - Materials & Processes
- AVT 1136 - Sheet Metal
- AVT 1213 - Corrosion
- AVT 1214 - Cabin Atmospheric Control
- AVT 1218 - Utility Systems
- AVT 2121 - Assembly & Rigging
- AVT 2122 - Ignition & Starting
- AVT 2126 - Reciprocating Engines
- AVT 2129 - Propellers
- AVT 2132 - Airframe Electrical Systems

- AVT 2138 - Engine Fuel & Fuel Metering
- AVT 2143 - Review & Recommendation
- AVT 2219 - Turbine Engines
- AVT 2236 - Non-Metallic Structures
- AVT 2237 - Aircraft Inspections
- AVT 2280 - Introduction to UAS Maintenance
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- MAT 1110 - Math for Technologists
- MET 1131 - Personal Computer Applications for Engineering Technology
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- PHY 1106 - Physics for Technology
- PHY 1107 - Lab for Physics for Technology

Biomedical Engineering Technology, AAS
Program Code: BMET.S.AAS • Credit Hours: 62-63
Description
The Biomedical Engineering Technology (BMET) program provides students with exciting opportunities to put biomedical engineering technology concepts into practice. The curriculum balances instruction in electronics, healthcare, and information technology theory with hands-on laboratory applications. A strong background in basics and in-depth study of advanced topics gives students careers in diversified areas, such as medical device certification in health care and field service engineer environments, computer networking, software and hardware technologies, and electronics theory and application. The program has modern equipment laboratories and a highly qualified faculty. This degree program provides students with knowledge concepts for the pursuit of the Certified Biomedical Equipment Technician (CBET) certification.
Career Opportunities
Graduates may find careers in diversified areas such as medical device certification in health care and field service engineer environments, computer networking, software and hardware technologies, and electronics theory and application.
Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 1110 - Principles of Electrocardiography

- BIO 1101 - Body Structure & Function OR
- BIO 1107 - Human Biology AND
- BIO 1108 - Lab for Human Biology

- CIT 1107 - Introduction to Operating Systems
- CIT 1411 - Introduction to Networks
- CIT 1500 - A+ Hardware & Software
- COM 2211 - Effective Public Speaking
- EET 1100 - Introduction to Biomedical Equipment Maintenance
- EET 1116 - Electronics Schematics & Fabrication
- EET 1150 - DC Circuits
- EET 1155 - AC Circuits
- EET 1198 - Digital Technology
- EET 2101 - Biomedical Instrumentation I
- EET 2102 - Biomedical Instrumentation II
- EET 2201 - Electronic Devices & Circuits
- EGR 1105 - Soldering Fundamentals
- EGR 1106 - Basic Mechanical & Electrical Skills
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology
- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- OT36 Arts and Humanities **3 Cr. Hr(s).**

Biotechnology, AAS
Program Code: BTN.S.AAS • Credit Hours: 61-64
Description
The Associate of Applied Science in Biotechnology provides a full range of courses to prepare students for entry-level positions in the biotechnology field. The academic curriculum provides a background in historical development of biotechnology, bioethics, safety, reagent preparation, cell culture techniques, protein purification and analysis techniques, microbiology and fermentation methods, molecular biology (DNA) techniques and bioinformatics. With advances in molecular and cellular biology, the biotechnology industry has expanded in scope to include human diagnoses and therapeutics, agricultural and veterinary applications, food production and environmental cleanup.
Career Opportunities
This degree program prepares graduates to enter the biotechnology workforce as entry-level technicians and conduct a variety of basic and advanced laboratory techniques used in biomedical research.
Program Requirements

- BIO 1107 - Human Biology
- BIO 1111 - General Biology I AND
- BIO 1211 - General Biology II OR
- BIO 1171 - Principles of Biology I AND
- BIO 1272 - Principles of Biology II
- BIS 1120 - Introduction to Software Applications
- BTN 1110 - Biotechnology & Bioethics
- BTN 1120 - Laboratory Safety & Regulatory Compliance
- BTN 1130 - Biological Reagents Preparation
- BTN 1140 - Cell Culture
- BTN 2210 - Protein Purification & Analysis
- BTN 2220 - Microbiology & Fermentation Methods
- BTN 2230 - Molecular Biology Techniques
- BTN 1201 - Biotechnology Careers OR
- BTN 2700 - Biotechnology Internship
- CHE 1111 - Introduction to Chemistry I OR
- CHE 1211 - General Chemistry I
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- MAT 1470 - College Algebra
- OT36 Arts & Humanities Elective **6 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr(s).**

Business Information Systems, AAS
Program Code: BIS.S.AAS • Credit Hours: 60 - 61
Description
Students in this program will learn advanced features in various software applications and will practice integrating multiple applications to be more productive. The degree includes a strong technology emphasis and sound business foundation with courses in accounting, economics, management and business math. The program will prepare software and information technology staff in all industries to work in teams, support internal and external customers, and use new technologies to maximize business productivity. Students will select one of four concentrations: software

applications, computer support, business analytics, or medical office to gain expertise in their area of interest.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Association (CHEA).

Career Opportunities

Employment opportunities are available in many types of businesses, including banks, insurance offices, advertising agencies, manufacturing companies, small to large businesses and educational facilities, to name a few.

Program Requirements

- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- BIS 1220 - Word Processing Software
- BIS 1230 - Spreadsheet Software
- BIS 1260 - Database Software
- BIS 2170 - BIS Capstone
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ECO 2160 - Principles of Macroeconomics
- ENG 1101 - English Composition I
- ENG 1131 - Business Writing
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business OR
- MAN 2150 - Management & Organizational Behavior
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**

  Choose one of the following concentrations -- 18 - 19 Cr. Hr(s). (see options below)
- Software Applications
- Business Data
- Medical Office
- Computer Support

Software Applications Concentration

- BIS 1201 - Keyboarding & Document Formatting
- BIS 1240 - Presentation Software
- BIS 1250 - Specialized Business Software Application
- BIS 1400 - Customer Service
- BIS 2270 - Business Information Systems Internship
- BIS or MAN/MRK Elective **3 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective

Business Data Concentration

- CSC 1140 - Information Systems Analysis & Design
- CSC 1160 - Introduction to Data Literacy
- CSC 2165 - Database Management
- CSC 2265 - Data Visualization with Tableau
- CSC 2269 - Data Analytics Theory & Solutions
- OT36 Natural & Physical Sciences Elective

Medical Office Concentration

- BIO 1121 - Human Anatomy & Physiology I
- BIS 1400 - Customer Service
- BIS 2180 - Medical Office Simulation
- BIS 2270 - Business Information Systems Internship
- HIM 1101 - Medical Terminology
- HIM 1201 - Introductory Medical Office Coding

Computer Support Concentration

- BIS 1201 - Keyboarding & Document Formatting
- BIS 1400 - Customer Service
- BIS 2270 - Business Information Systems Internship
- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CIT 1500 - A+ Hardware & Software

Business Management, AAS

Program Code: GBM.S.AAS • Credit Hours: 60

Description

This program emphasizes preparation for a wide variety of management-related positions. It is designed to provide a balance in technical business education along with general education courses while providing a considerable choice of electives and alternatives. Opportunities for managers include supervision, office managers, management trainees, assistant managers, and owners within a variety of settings, including small and medium-size businesses, corporations, industries, non-profit organizations, and governmental agencies. Students are encouraged to tailor their course selection to incorporate at least one certificate and should work with an academic advisor to determine best options.

Career Opportunities

Students completing this degree can expect to be prepared to work as supervisors or entry-level managers in retail, manufacturing or medium and small businesses.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ECO 1100 - Introduction to Economics OR
- ECO 2160 - Principles of Macroeconomics OR
- ECO 2180 - Principles of Microeconomics

- ENG 1101 - English Composition I
- ENG 1131 - Business Writing
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAN 1110 - International Business OR
- MAN 2110 - Introduction to Project Management
- MAN 2150 - Management & Organizational Behavior
- MAN 2270 - Management Internship OR
- MAN 2275 - Retail Management Capstone OR
- MAN 2279 - Business Management Capstone
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

- MRK 2100 - Foundations of Marketing OR
- MRK 2101 - Principles of Marketing Management

- OT36 Arts and Humanities Elective **3 Cr. Hr(s)**. OR

- OT36 Natural and Physical Sciences Elective **3 Cr. Hr(s).**

- Electives **18 Cr. Hr(s).**

Business Management/Entrepreneurship, AAS
Program Code: ENTR.S.AAS • Credit Hours: 60
Description
This area of concentration within the Management degree program prepares existing or potential entrepreneurs in a wide variety of small business functions. In addition to general education courses and traditional management courses, the following key areas are emphasized: opportunities for entrepreneurs, financial plan development, marketing plan development and complete business plan development.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Accreditation
This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).
Career Opportunities
Students completing this degree can expect to be prepared to begin their own businesses or to work in larger companies in an entrepreneurial role.
Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- BIS 1400 - Customer Service
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication OR
- COM 2286 - Public Relations Principles
- ECO 2180 - Principles of Microeconomics
- ENG 1101 - English Composition I
- ENG 1131 - Business Writing
- ENT 2140 - Small Business Finance
- ENT 2160 - Business Plan Development
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAN 2101 - Introduction to Supervision
- MAN 2144 - Negotiation Techniques
- MAN 2150 - Management & Organizational Behavior
- MAN 2159 - Supply Chain Management Concepts & Applications

- MRK 2100 - Foundations of Marketing OR
- MRK 2101 - Principles of Marketing Management OR
- MRK 2135 - Digital Marketing

- MRK 2220 - Small Business Marketing

- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

- OT36 Arts and Humanities Elective **3 Cr. Hr(s).**
- Entrepreneurship Elective **3 Cr. Hr(s).** (see options below)

Entrepreneurship Electives

- MAN 1106 - Introduction to Radio Frequency Identification
- MAN 1157 - Management Applications of Radio Frequency Identification Technology
- MAN 2110 - Introduction to Project Management
- MAN 2140 - Human Resource Management
- MRK 2102 - Principles of Advertising
- MRK 2135 - Digital Marketing
- MRK 2145 - Principles of Retailing
- MRK 2225 - Sales Fundamentals

Construction Management Technology, AAS
Program Code: CMO.S.AAS • Credit Hours: 60-64
Description
The Construction Management Technology program prepares students to lead and manage today's construction projects through a blend of technical knowledge and real-world experience. Students build skills in project planning and organization, job-site safety, cost estimating, plan reading, surveying, current construction methods, modern building materials, and Building Information Modeling (BIM), while gaining an understanding of how construction trades come together to deliver successful projects.
A hallmark of the program is its emphasis on hands-on learning. Students have opportunities to engage directly with construction trades through applied coursework, apprenticeships, and extended internship experiences that connect classroom learning to active job sites. These experiences help students develop practical skills, professional confidence, and valuable industry connections.
An internship course is required, ensuring every student graduates with meaningful, real-world experience.
Career Opportunities
Graduates pursue careers as project managers, estimators, superintendents, inspectors, and skilled trades professionals across residential, commercial, and governmental sectors.
Program Requirements

- CAT 1100 - Introduction to the Built Environment
- CAT 2431 - OSHA Construction Standards
- ENG 1101 - English Composition I
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr(s).**
- **Choose one of the following pathways -- 49 - 53 Cr. Hr(s).** (see options below)
- General Construction Management Pathway
- Civil Engineering Technology Pathway
- Electrical Construction Management Pathway
- Dayton Construction Academy Pathway

General Construction Management Pathway

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking

- MAT 1110 - Math for Technologists OR
- MAT 1200 - Technical Mathematics OR
- MAT 1470 - College Algebra

- PHY 1100 - Introduction to Physics OR
- PHY 1141 - College Physics I

- CAT 1101 - Architectural Graphics I
- CAT 1121 - Architectural Graphics II
- CAT 1201 - Construction Methods & Materials
- CAT 1211 - Construction Materials Testing
- CAT 1241 - Building Systems
- CAT 1401 - Construction Cost Estimating
- CAT 1501 - Fundamentals of Surveying & Mapping

- CAT 2401 - Construction Project Management
- CAT 2411 - Commercial Building Code
- CAT 2435 - Construction Credentials
- CAT 2702 - Construction Management Technology Internship (Minimum of 2 credit hours)
- CAT 2782 - Construction Management Technology Capstone
- EGV 1100 - Sustainability in the Built Environment
- **Construction Technology Electives** -- 5 Cr. Hr(s). (see options below)

Construction Management Technology Electives

- CAT 1111 - Mechanical Systems Print Reading
- CAT 1131 - Introduction to Revit MEP
- CAT 1141 - Reading Architectural Drawings
- CAT 1205 - Construction Engineering Technology
- CAT 1300 - Introduction to CAD for Applications in Civil Engineering Technology
- CAT 1301 - Civil Construction CAD
- CAT 1431 - OSHA Construction Standards 10 Hour
- CAT 1601 - Building Electric & Controls
- CAT 1701 - Construction Craft Skills/Concrete
- CAT 1721 - Structural Framing Systems
- CAT 1741 - Residential Electrical Systems
- CAT 1761 - Interior & Exterior Finishes
- CAT 1781 - Construction Project
- CAT 1810 - Construction Techniques I
- CAT 1820 - Construction Techniques II
- CAT 1830 - Construction Techniques III
- CAT 1840 - Construction Techniques IV
- CAT 2101 - Architectural Design II
- CAT 2201 - Architectural Visualization
- CAT 2301 - Land Development Design in Civil 3D
- CAT 2421 - Soil Mechanics
- CAT 2425 - Introduction to Structural Analysis & Design
- CAT 2501 - GPS & GIS for Engineering Technology Professionals
- CAT 2531 - Advanced Surveying & Mapping
- CAT 2561 - Route Surveying with Construction Applications
- CAT 2571 - NSPS Certified Survey Technician Preparation
- CAT 2581 - Legal Principles for Surveyors
- CAT 2610 - Stakeholders & Participants for Design & Construction Projects
- CAT 2620 - Construction Documents, Legal Requirements, & Project Delivery
- CAT 2630 - Architectural Practice Project Deliverables & Contractual Obligations
- CAT 2640 - Construction Project Change Management
- CAT 1827 - NCCER Electrical Construction Level 1A
- CAT 1828 - NCCER Electrical Construction Level 1B
- EGV 1101 - Alternate & Renewable Energy Sources
- EGV 1251 - Introduction to Energy Management Principles
- EGV 1301 - Sustainable Architecture
- EGV 1401 - Weatherization & Building Performance Training
- EGV 2101 - Solar Photovoltaic Design & Installation
- EGV 2151 - Solar Thermal Systems
- EGV 2251 - Energy Control Strategies
- EGV 2301 - Commercial & Industrial Assessment
- CAT 1341 - Architectural Design I
- HVA 1201 - Basic HVAC Systems with Cooling
- HVA 1221 - Heating Systems
- HVA 1241 - HVAC Installation Techniques & Practices
- HVA 1261 - HVAC Loads & Distribution for Small Buildings
- HVA 1301 - Air & Water Distribution Systems
- HVA 1352 - Psychrometrics, Health & Comfort in HVAC
- HVA 1401 - HVAC Mechanical & Electrical Troubleshooting
- HVA 2351 - HVAC Systems & Controls
- HVA 2751 - HVAC-R Operations & Best Practices
- MAT 1110 - Math for Technologists
- MAT 1120 - Business Mathematics
- MAT 1445 - Quantitative Reasoning
- MAT 1450 - Introductory Statistics
- MAT 1455 - Introduction to Data Science
- MAT 1570 - Analytic Geometry & Trigonometry
- MAT 1580 - Precalculus
- MAT 2160 - Calculus for Business & Economics
- MAT 2270 - Calculus & Analytic Geometry I
- Most CAT, EGV, HVA, and college-level MAT courses will count toward electives. Consult an advisor for courses not on the list.

Civil Engineering Technology Pathway

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking

- MAT 1200 - Technical Mathematics OR
- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- PHY 1106 - Physics for Technology AND
- PHY 1107 - Lab for Physics for Technology OR
- PHY 1141 - College Physics I

- CAT 1205 - Construction Engineering Technology
- CAT 1211 - Construction Materials Testing
- CAT 1300 - Introduction to CAD for Applications in Civil Engineering Technology
- CAT 1401 - Construction Cost Estimating
- CAT 1501 - Fundamentals of Surveying & Mapping
- CAT 2301 - Land Development Design in Civil 3D
- CAT 2401 - Construction Project Management
- CAT 2411 - Commercial Building Code
- CAT 2421 - Soil Mechanics
- CAT 2501 - GPS & GIS for Engineering Technology Professionals
- CAT 2531 - Advanced Surveying & Mapping
- CAT 2561 - Route Surveying with Construction Applications
- CAT 2701 - Civil Engineering Technology Internship (Minimum of 2 credit hours)
- CAT 2781 - Civil Engineering Technology Capstone
- **Civil Engineering Technology Pathway Elective** - 2 Cr. Hr(s). (see options below)

Civil Engineering Technology Electives - 2 Cr. Hrs.

- CAT 1301 - Civil Construction CAD

- CAT 2425 - Introduction to Structural Analysis & Design
- CAT 2610 - Stakeholders & Participants for Design & Construction Projects
- CAT 2620 - Construction Documents, Legal Requirements, & Project Delivery
- CAT 2630 - Architectural Practice Project Deliverables & Contractual Obligations
- CAT 2640 - Construction Project Change Management

Electrical Construction Management Pathway

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking

- MAT 1110 - Math for Technologists OR
- MAT 1200 - Technical Mathematics OR
- MAT 1470 - College Algebra

- PHY 1100 - Introduction to Physics OR
- PHY 1141 - College Physics I

- CAT 1101 - Architectural Graphics I
- CAT 1201 - Construction Methods & Materials
- CAT 1211 - Construction Materials Testing
- CAT 1241 - Building Systems
- CAT 1401 - Construction Cost Estimating
- CAT 2401 - Construction Project Management
- CAT 2411 - Commercial Building Code

- CAT 1827 - NCCER Electrical Construction Level 1A AND
- CAT 1828 - NCCER Electrical Construction Level 1B AND
- CAT 1837 - NCCER Electrical Construction Level 2A AND
- CAT 1838 - NCCER Electrical Construction Level 2B AND
- CAT 1847 - NCCER Electrical Construction Level 3A AND
- CAT 1848 - NCCER Electrical Construction Level 3B AND
- CAT 1857 - NCCER Electrical Construction Level 4A AND
- CAT 1858 - NCCER Electrical Construction Level 4B AND
- **Electrical Construction Management Electives** - 3 Cr. Hr(s). (see advisor for options)
  OR
- CAT 1861 - Electrical Construction 1A AND
- CAT 1862 - Electrical Construction 1B AND
- CAT 1863 - Electrical Construction 2A AND
- CAT 1864 - Electrical Construction 2B AND
- CAT 1865 - Electrical Construction 3A AND
- CAT 1866 - Electrical Construction 3B AND
- CAT 1867 - Electrical Construction 4A AND
- CAT 1868 - Electrical Construction 4B

Correctional Rehabilitation, AAS
Program Code: CR.S.AAS • Credit Hours: 60
Description
The Correctional Rehabilitation Associate of Applied Science will prepare students for a career assisting returning citizens in navigating the transition from incarceration to re-entry into the community. This program provides a broad-based study on navigating the criminal justice system as well as how to support someone in transition with their personal and professional goals. Upon completion, graduates will be qualified for careers within correctional rehabilitation that support individuals leaving incarceration and transitioning into their communities.

Career Opportunities
Graduates of this program may find career opportunities in areas of reentry support such as rehabilitation and corrections, reentry services, community corrections, job and family services, and non-profit re-entry programming.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1103 - Constitutional Law & Evidentiary Procedures
- CJS 1105 - Criminal Law
- CJS 1106 - Transition Skills
- CJS 1110 - Interrogation, Documentation & Testimony
- CJS 1165 - Corrections
- CJS 2111 - Ethics & Professionalism in Criminal Justice
- CJS 2145 - Correctional Case Management
- CJS 2200 - Human Relations, Mediation & Conflict Resolution
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- MAN 2101 - Introduction to Supervision
- MAN 2150 - Management & Organizational Behavior

- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective - 3 Cr. Hr.(s)

- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary
- SOC 1101 - Introduction to Sociology
- SOC 2226 - Criminology
- OT36 Arts and Humanities **3 Cr. Hr.(s)**
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr.(s)**

Criminal Justice Science/Corrections, AAS
Program Code: CJCO.S.AAS • Credit Hours: 60
Description
This program is designed to combine the criminal justice concepts, theories and laws with practical application techniques and modern technology skills to prepare the Criminal Justice Science student for productive employment in corrections. The corrections track maintains cutting-edge curriculum that enhances critical thinking, written and oral communications, teamwork, leadership and assessment. The curriculum includes general education requirements, theory and practice courses and educational requirements in ethics, law and the current best practices in the field of criminal justice.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
Employment is available in the corrections field as correctional officers, security guards, county probation and parole officers, positions in commercial, school, and private security organizations, and correctional treatment specialists.
Program Requirements

- BIO 1107 - Human Biology OR
- OT36 Natural & Physical Sciences Elective **3 Cr. Hr(s).**
- BIS 1120 - Introduction to Software Applications
- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1103 - Constitutional Law & Evidentiary Procedures
- CJS 1105 - Criminal Law
- CJS 1110 - Interrogation, Documentation & Testimony
- CJS 1165 - Corrections OR

- CJS 1197 - Corrections Full Service Jails/Basic Correction Officer Academy
- CJS 2111 - Ethics & Professionalism in Criminal Justice
- CJS 2145 - Correctional Case Management
- CJS 2200 - Human Relations, Mediation & Conflict Resolution
- CJS 2270 - Criminal Justice Science Internship OR
- CJS 2295 - Criminal Justice Science Seminar
- COM 2245 - Intercultural Communication
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology
- SOC 1101 - Introduction to Sociology
- SOC 2226 - Criminology

Criminal Justice Science/Law Enforcement, AAS
Program Code: CJLE.S.AAS • Credit Hours: 62-63
Description
The Associate of Applied Science Degree in Criminal Justice prepares entry-level professionals from diverse backgrounds in theoretical foundations, knowledge, skills, and practices of criminal justice operations. This study enables students to develop rational decisions and informed responses to challenges facing law enforcement and criminal justice professionals today.
Career Opportunities
A broad range of career opportunities are available in the area of criminal justice/law enforcement, including those in court systems, court administration, patrol, victim services, investigation, and probation/parole.
Program Requirements

- BIO 1107 - Human Biology OR
- OT36 Natural & Physical Sciences Elective **3 Cr. Hr(s).**
- BIS 1120 - Introduction to Software Applications
- CJS 1101 - Introduction to Criminal Justice Science

Traditional Law Enforcement -- 30 Cr. Hr(s)**.**

- CJS 1103 - Constitutional Law & Evidentiary Procedures AND
- CJS 1105 - Criminal Law AND
- CJS 1110 - Interrogation, Documentation & Testimony AND
- CJS 1125 - Policing AND
- CJS 1155 - Homeland Security Issues & Administration AND
- CJS 2111 - Ethics & Professionalism in Criminal Justice AND
- CJS 2200 - Human Relations, Mediation & Conflict Resolution AND
- CJS 2205 - Introduction to Criminal Investigation & Forensic Science AND
- CJS 2209 - Computer Crime AND
- CJS 2270 - Criminal Justice Science Internship OR
- CJS 2295 - Criminal Justice Science Seminar
  OR
  Ohio Peace Officer Basic Training Academy (OPOTA) -- 29 Cr. Hr(s).
- CJS 2280 - Basic Peace Officer Training I AND
- CJS 2281 - Basic Peace Officer Training II AND
- Choose one additional CJS courses
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- COM 2245 - Intercultural Communication
- ENG 1101 - English Composition I
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology
- SOC 1101 - Introduction to Sociology
- SOC 2226 - Criminology

Culinary Entrepreneurship, AAS
Program Code: CENT.S.AAS • Credit Hours: 65
Description
The Associate of Applied Science degree in Culinary Entrepreneurship has the right combination of Culinary, Business, and Entrepreneurship elements to meet the needs of motivated individuals that aspire to start their own restaurants and other food related businesses, to employ others, and to develop their brand recognition. Potential applications include development and oversight of businesses related to food operations in new restaurants, kiosks, food trucks, and other business models. The Culinary Entrepreneurship degree program at Sinclair College offers specialized credentials and provides content area knowledge that will allow graduates to realize their dreams of business ownership in the area of food production.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
An individual majoring in Culinary Entrepreneurship can explore the following career opportunities:
--Open Your Own Restaurant
--Start a Food Truck
--Go Virtual by considering owning Ghost Kitchen
--Become a Caterer
--Become Food Stylist
--Become a Food Consultant
--Mix Art and Science and become a Recipe Developer
--Become a Food Influencer
--Become the next TIK TOK sensation
Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting

- BIS 1120 - Introduction to Software Applications

- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication

- ENG 1101 - English Composition I
- ENT 2140 - Small Business Finance
- ENT 2160 - Business Plan Development
- HMT 1101 - Basic Culinary Skills
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1112 - Food Principles & Basic Preparation
- HMT 1129 - Restaurant Desserts
- HMT 2203 - Street Foods & Food Trucks
- HMT 2215 - Hospitality Cost Controls

- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAN 2101 - Introduction to Supervision
- MAN 2144 - Negotiation Techniques
- MAN 2150 - Management & Organizational Behavior
- MAT 1125 - Math for the Culinary Arts & Baking & Pastry Arts Professional
- MRK 2220 - Small Business Marketing
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr(s).**

Cyber Investigation Technology, AAS
Program Code: CYIT.S.AAS • Credit Hours: 61
Description
The Cyber Investigation Technology degree will prepare students for careers in the areas of computer network protection, managing networks and operating systems, and IT criminal investigation, which includes evidence procedures and computer forensics. The degree incorporates preparation for industry-recognized certifications, articulated credit for Law Enforcement and Corrections entities, and transfer opportunities to four-year degrees.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
Job titles include but are not limited to: Intelligence Analyst, IT Specialist (Government Breakout Codes 2210), Systems Administrator, Network Engineer, Information System Security Manager, Cyber Security Incident Response Specialist, and Private Investigator.
Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CIT 1500 - A+ Hardware & Software
- CIT 2510 - Microsoft Windows Server Operating System
- CIT 2550 - Linux Operating System
- CIT 2630 - Securing a Windows Network Environment
- CIT 2640 - Network Security
- CIT 2808 - Introduction to Computer Forensics
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 2165 - Database Management
- CJS 1103 - Constitutional Law & Evidentiary Procedures
- CJS 2111 - Ethics & Professionalism in Criminal Justice
- CJS 2209 - Computer Crime
- CJS 2295 - Criminal Justice Science Seminar

- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication

- ECO 1100 - Introduction to Economics OR
- ECO 2160 - Principles of Macroeconomics

- ENG 1101 - English Composition I
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- MAN 2150 - Management & Organizational Behavior

Data Analytics, AAS
Program Code: DATA.S.AAS • Credit Hours: 65
Description
Students will be prepared for entry-level data analytics positions requiring knowledge, setup, and usage of business intelligence and data analysis solutions. Students will have the ability to extract, curate, and visualize data in a way that is meaningful to a variety of organizations. Course work will include database concepts, data modeling, Structured Query Language (SQL), data analysis and visualization, data mining tools, mathematical and statistical techniques, project management, and systems analysis. Emphasis is placed on strong communication skills necessary to interact with key stakeholders to achieve their desired objectives.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
Opportunities include positions such as Data Engineer, Data Analyst, Business Intelligence Analyst, Data Manager, Visualization Analyst, and Business Systems Analyst.
Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- BIS 1230 - Spreadsheet Software
- CIT 1130 - Network Fundamentals
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 1140 - Information Systems Analysis & Design
- CSC 1160 - Introduction to Data Literacy
- CSC 2165 - Database Management
- CSC 2265 - Data Visualization with Tableau
- CSC 2266 - Python for Data Analytics
- CSC 2267 - Advanced Python for Data Analytics
- CSC 2268 - Structured Query Language (SQL) Programming
- CSC 2269 - Data Analytics Theory & Solutions
- CSC 2270 - Computer Science Internship
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- MAT 1455 - Introduction to Data Science
- MAT 2170 - Business Statistics I
- MAT 2180 - Business Statistics II
- OT36 Arts and Humanities Elective **3 Cr. Hr(s).**
- OT36 Social and Behavioral Sciences Elective **3 Cr. Hr(s).**

Dental Hygiene, AAS
Program Code: DEH.S.AAS • Credit Hours: 69
Description
Working as part of a dental team, dental hygienists treat patients needing non-surgical periodontal therapy and radiographs, apply preventive agents, provide intra- and extra-oral exams and oral hygiene instructions. Registered dental hygienists work in private dental offices, public health settings, and in higher education. The Dental Hygiene program is designed to be completed in five (5) semesters on a full-time basis when the student begins the technical portion of the program. The degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the web page. In order to be invited into the Dental Hygiene Program all students must have a GPA of

2.7 with an overall HESI score of 70. You have three opportunities to successfully take the HESI. For any students applying under the Accelerated Admission for Academic Achievement (AAAA) you must have a GPA of 3.0 with an overall HESI score of 75. A student may take the HESI test two times for consideration. In addition, you must earn an A or B in all required biology and chemistry courses. Complete CHE 1111/CHE 1151 (Introduction to Chemistry I) or provide proof of High School chemistry with a C or better within past 5 years to the Dental Health Sciences Department.

Accreditation

The program in Dental Hygiene at Sinclair Community College is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of Approval (without reporting requirements). The Commission is a specialized accrediting body recognized by the United States Department of Education.

The Commission on Dental Accreditation can be contacted at (800) 621- 8099 or (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678.

Career Opportunities

Career options may vary according to state practice act restrictions. Dental hygienists have a variety of career opportunities in a wide range of employment settings, including private practice, hospitals, HMO's, community health programs, long-term care facilities, school systems, dental product research, marketing and sales, military bases, universities and research centers.

Program Prerequisite(s)

- ALH 1101 - Introduction to Healthcare Delivery AND
- BIO 1141 - Principles of Anatomy & Physiology I AND
- DEH 1102 - Introduction to Dental Hygiene AND
- ENG 1101 - English Composition I AND
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective AND
- Refer to program website for additional requirements

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- BIO 1141 - Principles of Anatomy & Physiology I
- BIO 1147 - Lab for Principles of Anatomy & Physiology I
- BIO 1242 - Principles of Anatomy & Physiology II
- BIO 1248 - Lab for Principles of Anatomy & Physiology II
- BIO 2205 - Microbiology
- DEH 1102 - Introduction to Dental Hygiene
- DEH 1202 - Head, Neck & Dental Anatomy
- DEH 1203 - Lab for Head, Neck & Dental Anatomy
- DEH 1204 - Preclinical Dental Hygiene I
- DEH 1205 - Lab for Preclinical Dental Hygiene I
- DEH 1206 - Nutrition & Oral Health
- DEH 1302 - Preclinical Dental Hygiene II
- DEH 1303 - Lab for Preclinical Dental Hygiene II
- DEH 1304 - Oral Histology & Embryology
- DEH 1305 - Medical Emergencies in Dental Practice
- DEH 1306 - General & Oral Pathology
- DEH 1308 - Dental Radiology
- DEH 1309 - Lab for Dental Radiology
- DEH 2402 - Clinical Dental Hygiene I
- DEH 2403 - Dental Hygiene Clinic I
- DEH 2502 - Pharmacology in the Dental Practice
- DEH 2503 - Pain Control in the Dental Practice
- DEH 2504 - Dental Hygiene Research
- DEH 2506 - Dental Materials
- DEH 2507 - Lab for Dental Materials
- DEH 2508 - Clinical Dental Hygiene II
- DEH 2509 - Dental Hygiene Clinic II
- DEH 2601 - Community Dental Health
- DEH 2602 - Clinical Dental Hygiene III
- DEH 2603 - Dental Hygiene Clinic III
- DEH 2604 - Dental Hygiene Practice
- ENG 1101 - English Composition I
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology
- SOC 1101 - Introduction to Sociology

Digital Marketing, AAS

Program Code: MRK.S.AAS • Credit Hours: 61

Description

Digital Media has disrupted many of the traditional areas of business management. This program provides a broad-based study of digital marketing strategies including customer engagement and consumer behavior, social media, online reputation management, inbound marketing, advertising and branding, graphic design, and website development. Students will have the opportunity to learn new media theories, online consumer psychology and marketing approaches while developing hands-on experience with digital marketing tools and techniques. All students will produce a portfolio of their digital marketing projects and benefit from an internship in the digital marketing field. This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed..

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).

Career Opportunities

According to a recent jobs survey from Adecco's Creative and Marketing Recruiting Division, "Inbound Marketing is on the rise" and many consumers are making their initial approach to a business using mobile media/smartphones, social media, social networks and search engines. Many marketing departments are not fully prepared to address this shift in consumer behavior. 82% of survey respondents indicated they don't have formal training in digital marketing and frequently learn on the job. Further, 60% of respondents think their company's digital marketing is ineffective. There is a significant need for a formalized education program in the digital marketing space. Employers are actively searching for candidates that have formalized education and experience in digital marketing. Within the digital marketing space, there are multiple career paths that a student can pursue. If a student has a passion for social media, there are positions available as a social media manager, social media project leader, social media designer, interactive content specialist and customer engagement manager. If a student is interested in broader aspects of digital marketing including website development, search engine optimization and measurement, there are many career options. Potential career paths could include coordinator, specialist, manager and even director roles in e-commerce, new media, website marketing, search engine optimization, web analytics, digital media, online marketing, paid search, and digital optimization. Digital Marketing is an exciting career path with a wide assortment of career options from which to choose.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications

- CSC 1350 - Web Site Development with HTML & CSS OR
- VIS 1310 - History & Theory of Web Design

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication

- ECO 1100 - Introduction to Economics OR
- ECO 2160 - Principles of Macroeconomics OR
- ECO 2180 - Principles of Microeconomics

- ENG 1101 - English Composition I
- ENG 1131 - Business Writing
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAN 2150 - Management & Organizational Behavior
- MAN 2270 - Management Internship

- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

- MRK 2100 - Foundations of Marketing OR
- MRK 2101 - Principles of Marketing Management

- MRK 2135 - Digital Marketing
- MRK 2230 - Social Media & Consumer Engagement
- MRK 2236 - Consumer Behavior
- MRK 2250 - Digital Marketing Analytics
- OT36 Arts and Humanities **3 Cr. Hr(s).**
- VIS 1140 - Design Processes I

Choose one marketing elective from:

- MRK 2102 - Principles of Advertising OR
- MRK 2145 - Principles of Retailing OR
- MRK 2225 - Sales Fundamentals OR
- COM 2201 - Introduction to Mass Communication OR
- COM 2286 - Public Relations Principles

Digital Media Design, AAS

Program Code: DMD.S.AAS • Credit Hours: 62-64

Description

The Digital Media Design degree will prepare students for careers and transfer degrees in digital media. In this interdisciplinary program, students select a pathway specific to their interest -- Video Production or Web Design. The program is creative, fast-paced, and in-demand by most businesses. Students will develop the knowledge and technical skills necessary to produce and design quality videos or web applications. Creativity, problem-solving, and the design process are stressed. Advanced computer skills, portfolio development, and job-seeking strategies are also incorporated into the curriculum.

Career Opportunities

Graduates from this program will be able to obtain positions in the field of video production (television, internet, live broadcasts, home or other purposes) or web design (web designer and coding, user experience/user interface design, search engine optimization, and motion design).

Program Requirements

- ART 2230 - Art History: Ancient through Medieval Periods OR
- ART 2231 - Art History: Renaissance through Contemporary Periods OR
- ART 2235 - History of Photography

- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- MAT 1110 - Math for Technologists OR
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- SOC 1101 - Introduction to Sociology
- VIS 1100 - Design Foundations
- VIS 1140 - Design Processes I
- VIS 2130 - Motion Design
- VIS 2260 - Design Portfolio

Choose one of the following pathways -- 33 - 34 Cr. Hr(s). (see options below)

- Video Production Pathway
- Web Design Pathway

Video Production Pathway

- AVT 1103 - Remote Pilot Ground School
- VIS 1210 - Design Drawing
- VIS 1410 - History & Theory of Video Production
- VIS 1420 - Video Production
- VIS 1430 - Lighting & Cinematography
- VIS 1440 - Sound Design
- VIS 2180 - Video Principles
- VIS 2190 - Video Applications I
- VIS 2200 - Video Applications II

Video Production Pathway Electives

Choose one course for Video Production Pathway elective:

- ART 2265 - Digital Color Photography
- ENG 2256 - Fiction Writing
- MRK 2135 - Digital Marketing

Web Design Pathway

- CSC 1350 - Web Site Development with HTML & CSS
- VIS 1150 - Design Processes II
- VIS 1310 - History & Theory of Web Design
- VIS 1320 - User Experience/User Interface
- VIS 1330 - Web Design
- VIS 2140 - Web Principles
- VIS 2150 - Web Applications
- VIS 2170 - Web Content Management

Web Design Pathway Electives

Choose one course for Web Design Pathway elective:

- ART 2265 - Digital Color Photography
- CSC 1375 - JavaScript
- IND 1240 - Color Theory
- MRK 2135 - Digital Marketing
- VIS 1420 - Video Production

Early Childhood Education, AAS

Program Code: ECE.S.AAS • Credit Hours: 63

Description

This program provides the knowledge, skills and competencies important to an entry-level teacher working with, or planning to work with, young children. The program includes the academic preparation required by the

Ohio Department of Education to meet Pre-Kindergarten Associate Teacher Licensure standards. Students interested in completing this degree program must have a full criminal background investigation completed before enrolling in the final practicum course. A grade of "C" or better is required in all courses.

Career Opportunities

Graduates may work as pre-kindergarten associate licensed teachers, child care center directors, infant-toddler teachers, and paraprofessionals in public schools or as school age child care coordinators.

Program Requirements

- COM 2211 - Effective Public Speaking
- ECE 1100 - Introduction to Early Childhood Education
- ECE 1101 - Introductory Child Development
- ECE 1200 - Observation & Assessment
- ECE 1201 - Curriculum & Planning
- ECE 1202 - Healthy & Safe Environments
- ECE 2103 - Literacy, Art & Music
- ECE 2104 - Math, Science & Social Studies
- ECE 2105 - Professionalism in Early Childhood Education
- ECE 2200 - Families, Communities & Schools
- ECE 2201 - Guidance of Young Children
- ECE 2302 - Infant & Toddler Curriculum
- ECE 2301 - Early Childhood Education Practicum OR
- ECE 2303 - Early Childhood Education Practicum Part 1 AND
- ECE 2304 - Early Childhood Education Practicum Part 2
- EDU 1100 - Introduction to Education
- EDU 1105 - Individuals with Exceptionalities
- ENG 1101 - English Composition I
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Natural & Physical Sciences Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology
- PSY 2242 - Educational Psychology

Electro-Mechanical Engineering Technology, AAS

Program Code: EMET.S.AAS • Credit Hours: 60-61

Description

This program prepares students for a career in Mechatronics by combining knowledge of mechanical technology with knowledge of electrical and electronic circuits. The program prepares students to operate, test, and maintain unmanned, automated, robotic, or electromechanical equipment. The degree includes traditional classroom instruction, and hands-on laboratory experiences every semester.

Career Opportunities

Prepares students for a career in advanced manufacturing, defense industry, semi-conductor manufacturing sector, high tech logistics/warehousing, consulting, technical sales, or related field.

Program Requirements

- CAM 1108 - Machine Shop Fundamentals OR
- CAM 1109 - Fundamentals of Tooling & Machining

- COM 2211 - Effective Public Speaking
- EET 1120 - Introduction to DC & AC Circuits
- EET 1139 - Electrical Machinery
- EET 1198 - Digital Technology
- EET 2281 - Programmable Logic Controllers
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- EGR 1217 - Fluid Power & Control
- EET 2282 - Advanced Programmable Logic Controllers OR
- EGR 1105 - Soldering Fundamentals OR
- EGR 2252 - Teach Pendant Robot Programming OR
- EGR 2279 - Mechatronics Capstone OR
- MET 2700 - Mechanical Engineering Technology Internship

- ENG 1101 - English Composition I

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- MET 1111 - Preparatory Math for Engineering Technology
- MET 1131 - Personal Computer Applications for Engineering Technology
- MET 1231 - Introduction to Engineering Design Using 3D CAD
- MET 1301 - SolidWorks Basics
- MET 1401 - Additive Design & Printing
- MET 1431 - Additive Manufacturing Post Process
- MET 2281 - Engineering Technology Professional Practice

- OT36 Natural and Physical Sciences Elective **4 Cr. Hr.(s).**
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr.(s)**

Electronics Engineering Technology, AAS

Program Code: EET.S.AAS • Credit Hours: 60-62

Description

The Electronics Engineering Technology (EET) program provides students with exciting opportunities to put engineering technology concepts into practice. The curriculum balances instruction in theory with hands-on laboratory applications. A strong background in basics and in-depth study of advanced topics gives students careers in diversified areas, such as digital systems, microcomputers, programmable logic controllers, and analog systems. The program has modern state-of-the-art equipped laboratories and a highly qualified faculty. Those who wish to further their studies are well prepared for entry into the best four-year electronics engineering technology programs

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Electronic Engineering Technology Associate degree is accredited through the Engineering Technology Accreditation Commission of ABET, Inc., www.abet.org

Career Opportunities

Prepares graduates for careers in electronics technician troubleshooting with testing equipment and assisting engineers with design and fabrication.

Program Requirements

- COM 2211 - Effective Public Speaking
- EET 1116 - Electronics Schematics & Fabrication
- EET 1131 - Digital Electronics
- EET 1150 - DC Circuits
- EET 1155 - AC Circuits
- EET 2201 - Electronic Devices & Circuits
- EET 2259 - Programming for Electronics Technology
- EET 2261 - Microprocessors
- EET 2278 - Electronics Project Capstone
- EET 2281 - Programmable Logic Controllers

- EGR 2261 - Engineering Problem Solving using "C" & "C++"
- ENG 1101 - English Composition I

- MAT 1580 - Precalculus OR
- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry

- MET 2711 - Ethics for Engineering Technology Professionals
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr(s).**
- PHY 1141 - College Physics I
- EET Electronics Elective **3 Cr. Hr(s).** (see options below)

Electronics Electives

- EET 2157 - Radio Frequency Identification (RFID) Technology
- EET 2257 - Radio Frequency Identification (RFID) Capstone
- EET 2270 - Electronics Engineering Technology Internship
- EET 2282 - Advanced Programmable Logic Controllers
- PHY 1142 - College Physics II

Emergency Medical Services/Fire Science, AAS
Program Code: EMSFO.S.AAS • Credit Hours: 64-65
Description
The Emergency Medical Services (EMS) Fire Science option is designed to augment the skills of the practicing paramedic. Paramedics are challenged with a variety of courses to increase their skill sets in fire technical areas. Students will gain experience from currently practicing paramedics, fire fighters and managers. This degree allows students to capitalize on their paramedic education, positioning themselves for advancement within the fire service. A grade of "C" or better is required in all technical-level courses. Interested students should contact the EMS offices at (937) 512- 5338 or contact an academic adviser.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.
Accreditation
The certificates within the degree meet accreditation standards. The EMT certificate meets the Ohio Division of EMS accreditation standards. The Paramedic certificate meets the Ohio Division of EMS and the CAAHEP accreditation standards. The professional firefighting program is in compliance with all appropriate state laws/ rules.
Career Opportunities
Careers with the fire service are beginning to change. Most departments will not require a degree for an entry level position. But departments are beginning to acknowledge the degree and give some preference for those entry level applicants with degrees. It is clear that to advance or get promotions with the fire services, degrees are needed.
Program Prerequisite(s)

- EMS 1150 - Emergency Medical Technician: Lecture AND
- EMS 1155 - Laboratory for Emergency Medical Technician

Program Requirements

- BIO 1121 - Human Anatomy & Physiology I OR
- BIO 1141 - Principles of Anatomy & Physiology I
- EMS 1150 - Emergency Medical Technician: Lecture
- EMS 1155 - Laboratory for Emergency Medical Technician
- EMS 2100 - Applied Anatomy, Physiology & Pathophysiology for Emergency Medical Services Provider
- EMS 2105 - Paramedic 1: Lecture
- EMS 2110 - Paramedic 1: Laboratory
- EMS 2125 - Paramedic 2: Lecture
- EMS 2130 - Paramedic 2: Laboratory
- EMS 2135 - Paramedic 2: Clinical OR
- EMS 2136 - Paramedic 2a: Clinical AND
- EMS 2137 - Paramedic 2b: Clinical
- EMS 2150 - Paramedic 3: Lecture
- EMS 2155 - Paramedic 3: Laboratory
- EMS 2160 - Paramedic 3: Clinical
- EMS 2175 - Paramedic 4: Lecture
- EMS 2180 - Paramedic 4: Field Experience
- EMS 2200 - Paramedic 5: Integration / Refresher Lecture
- EMS 2205 - Paramedic 5: Integration / Refresher Laboratory
- ENG 1101 - English Composition I
- PSY 1100 - General Psychology
- COM 2211 - Effective Public Speaking OR
- COM 2206 - Interpersonal Communication
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- FST 1102 - Firefighter I AND
- FST 1103 - Firefighter II Transition AND
- FST 1442 - Emergency Vehicle Operator OR
- FST 1104 - Firefighter II AND
- FST 1442 - Emergency Vehicle Operator

Flight Operations, AAS
Program Code: APPAO.S.AAS • Credit Hours: 62-68
Description
This program leads to an Associate of Applied Science in Aviation Technology and provides students with the knowledge and skills necessary for employment in the aviation industry or continuation toward a bachelor's degree in aviation or a related field. The curriculum includes a common core of foundational aviation coursework, after which students select a track aligned with their career goals.
Available tracks include Aviation Management, Aircraft Dispatch, Airline Flight Attendant, Professional Pilot - Fixed Wing, and Professional Pilot - Helicopter. The Aircraft Dispatch track prepares students to obtain the Federal Aviation Administration (FAA) Aircraft Dispatcher (ADX) certificate. The Airline Flight Attendant track leads to completion of the Sinclair Airline Flight Attendant short-term certificate.
The Professional Pilot tracks combine academic coursework with flight training and are designed for students seeking employment as pilots. The fixed wing track is authorized by the FAA to allow eligible graduates to apply for a Restricted Privileges Airline Transport Pilot (R-ATP) certificate with reduced flight hours.
Admission to the Professional Pilot tracks is competitive and requires completion of an application process and possession of an FAA Second Class Medical Certificate prior to entry. Students are expected to maintain full-time enrollment, follow the prescribed curriculum sequence, meet with an academic advisor each semester, and maintain a minimum cumulative GPA of 2.5. Part-time enrollment is permitted on a space-available basis.
In addition to standard tuition, students in the Professional Pilot tracks are assessed flight lab fees that cover the minimum flight hours required for each FAA certification. Any additional flight time beyond FAA minimums is the responsibility of the student.
Career Opportunities
Career opportunities are available in airline, corporate, business, and general aviation. Continued growth among major, regional, and low-cost airlines, along with expansion in business and helicopter operations, is

expected to increase demand for aviation professionals across the industry. A significant portion of this demand will result from a combination of fleet growth, retirements, and workforce attrition, creating ongoing hiring needs. Industry forecasts, including the Boeing Pilot & Technician Outlook, project substantial long-term demand for pilots and technicians worldwide. Employers such as PSA Airlines continue to hire actively and offer competitive pathways into the industry.

Aviation professionals who obtain higher levels of experience, certifications, and education will have access to the strongest and most diverse career opportunities.

Program Requirements

- AVT 1105 - Orientation to Aviation
- AVT 1119 - Aviation Meteorology
- AVT 1140 - Introduction to Business Aviation
- AVT 1141 - Principles of Aviation Leadership
- AVT 1245 - Aviation Law
- AVT 2146 - Introduction to Airline Operations
- AVT 2240 - Human Factors in Aviation
- AVT 2242 - Aircraft Accident Investigation I
- AVT 2700 - Aviation Internship
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- MET 1131 - Personal Computer Applications for Engineering Technology
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- PHY 1141 - College Physics I

Choose one of the following tracks - 23 - 27 Cr. Hr(s). (options listed below)

- Aircraft Dispatch Track
- Airline Flight Attendant Track
- Aviation Management Track
- Fixed Wing Track
- Helicopter Track

Aircraft Dispatch Track

- AVT 1110 - Private Pilot Ground School
- AVT 2125 - Developments in Aviation I
- AVT 2157 - Aircraft Performance I
- AVT 2158 - Aircraft Performance II
- AVT 2159 - Canadair Regional Jet (CRJ) Aircraft Systems
- AVT 2166 - Practical Dispatch Applications
- AVT 2167 - Instrument Flight Rules (IFR) Navigation & Planning
- AVT 2168 - Dispatcher Oral Preparation
- 7 credit hours of any AVT courses not already taken

Airline Flight Attendant Track

- AVT 1102 - Orientation to Inflight Services
- AVT 1148 - Aircrew Emergency Management
- AVT 1151 - Crew Survival & Rescue Techniques
- AVT 2125 - Developments in Aviation I
- 12 credit hours of any AVT courses not already taken

Aviation Management Track

- AVT 2125 - Developments in Aviation I
- AVT 2290 - Principles of Aviation Management
- MAN 1107 - Foundations of Business
- MAN 2101 - Introduction to Supervision
- MAN 2150 - Management & Organizational Behavior
- 9 credit hours of any AVT courses not already taken

Fixed Wing Track

- AVT 1110 - Private Pilot Ground School
- AVT 1124 - Private Pilot Flight Lab - Airplane Single Engine
- AVT 1170 - Instrument Pilot Ground School
- AVT 1224 - Instrument Pilot Flight Lab - Airplane Single Engine
- AVT 1254 - Flight Simulator Instruction
- AVT 2167 - Instrument Flight Rules (IFR) Navigation & Planning
- AVT 2247 - Aerodynamics & Flight Mechanics I
- AVT 2250 - Commercial Pilot Ground
- AVT 2258 - Flight Instructor Ground
- AVT 2263 - Commercial Pilot Flight Lab - Airplane Single Engine
- AVT 2269 - Flight Instructor Flight Lab - Airplane Single Engine

Helicopter Track

- AVT 1111 - Helicopter Private Pilot Ground
- AVT 1126 - Private Pilot Flight Lab - Rotorcraft Helicopter
- AVT 1171 - Helicopter Instrument Pilot Ground
- AVT 1226 - Instrument Pilot Flight Lab - Rotorcraft Helicopter
- AVT 1255 - Helicopter Flight Simulator Instruction
- AVT 2167 - Instrument Flight Rules (IFR) Navigation & Planning
- AVT 2247 - Aerodynamics & Flight Mechanics I
- AVT 2251 - Helicopter Commercial Pilot Ground
- AVT 2259 - Helicopter Flight Instructor Ground
- AVT 2265 - Commercial Pilot Flight Lab - Rotorcraft Helicopter
- AVT 2271 - Flight Instructor Flight Lab - Rotorcraft Helicopter

Full Stack Developer, AAS

Program Code: SODE.S.AAS • Credit Hours: 61

Description

The Full Stack Developer Associate of Applied Science degree prepares students to design and build web and application solutions using both front-end and back-end development concepts. Students develop skills in programming, web development, and database design. The curriculum focuses on how applications are structured and how different components interact, including user experiences, application logic, and data management. Students apply problem-solving and computational thinking to develop functional applications. Through hands-on coursework and projects, students gain experience designing and building applications that demonstrate their understanding of core development concepts.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Graduates of the Full Stack Developer program are prepared for entry-level roles in web and application development, including positions such as web developer, software developer, application developer, front-end developer, and database support or database administrator. These roles involve building and maintaining websites or applications, working with user interfaces, writing and modifying code, and managing data.

Program Requirements

- ACC 1100 - Survey of Accounting OR

- ACC 1210 - Introduction to Financial Accounting
- BIS 1105 - IT Fundamentals OR
- BIS 1120 - Introduction to Software Applications
- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 1140 - Information Systems Analysis & Design
- CSC 1350 - Web Site Development with HTML & CSS
- CSC 2165 - Database Management
- CSC 2212 - Java Software Development I
- CSC 2217 - Java Software Development II
- CSC 2222 - ASP.NET with C#
- CSC 2270 - Computer Science Internship

- CSC 1202 - C++ Software Development AND
- CSC 2207 - Data Structures & Algorithms OR
- CSC 2268 - Structured Query Language (SQL) Programming OR
- CSC 1375 - JavaScript AND
- CSC 2250 - Web Site Development with PHP

- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- MAN 2150 - Management & Organizational Behavior

- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

- OT36 Art and Humanities Elective **3 Cr. Hr(s).**
- OT36 Social and Behavioral Sciences **3 Cr. Hr(s).**
- SCC 1101 - First Year Experience

Health Information Management, AAS
Program Code: HIM.S.AAS • Credit Hours: 62
Description
Health Information Management (HIM) professionals are experts in the field of managing and protecting patient health information, administering computer information systems, and coding the diagnoses and procedures for health care services provided to patients in accordance with medical, administrative, ethical, legal, accreditation, and regulatory requirements of the health care delivery system.
The Health Information Management program is designed to be completed in five (5) semesters on a full-time basis. Students preferring to complete on a part-time basis may take longer than five sequential semesters. The degree program consists of open-enrollment courses and program-specific courses with limited enrollment. The open-enrollment courses may be taken prior to entry into the limited-enrollment courses. Most second-year HIM courses are limited-enrollment courses. All courses in the program are available online. To qualify for entry to limited-enrollment courses, please see the Applicant Information packet located on the HIM program webpage. A minimum cumulative GPA of 2.0 and completion of prerequisite courses are required. A grade of "C" or higher is required in all program courses.
The curriculum includes a professional practice experience (PPE) that occurs virtually with HIM professionals. Students work online with professionals to experience HIM processes, projects, and "a day in the life". Generally, these experiences occur online during daytime business hours, however, many sessions are recorded and can be accomplished asynchronously.
Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Accreditation
The Health Information Management program is fully accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). Upon successful completion of the HIM program, students are eligible to take the national certification exam to obtain the Registered Health Information Technician (RHIT) credential.
Career Opportunities
Employment prospects continue to be excellent throughout the nation. HIM graduates work in hospitals, clinics, ambulatory care centers, skilled nursing facilities, rehabilitation centers, long term care facilities, mental healthcare and psychiatric facilities, home healthcare agencies, hospice facilities, physician offices, managed healthcare plans, insurance companies, law firms, colleges and universities, state and federal agencies, consulting firms, medical research institutions, and companies that market health information products and services.
Program Prerequisite(s)

- BIO 1121 - Human Anatomy & Physiology I AND
- HIM 1101 - Medical Terminology

Program Requirements

- ALH 1140 - Fundamentals of Disease Processes
- BIO 1121 - Human Anatomy & Physiology I
- BIO 1222 - Human Anatomy & Physiology II
- BIS 1221 - Specialized Computer Applications for Health Information Management
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology
- HIM 1110 - Health Information Processing
- HIM 1165 - Drug Classification for Coding
- HIM 1201 - Introductory Medical Office Coding
- HIM 1204 - Medicolegal & Ethics in Healthcare Records
- HIM 1217 - Alternative Health Records & Registries
- HIM 2110 - Ambulatory Coding
- HIM 2144 - Quality Improvement, Statistics & Research
- HIM 2145 - Health Information Resource Management
- HIM 2165 - Healthcare Data in Reimbursement
- HIM 2211 - Inpatient Coding
- HIM 2233 - Healthcare Information Systems
- HIM 2252 - Professional Practice Experience
- HIM 2278 - Health Information Management Capstone
- PSY 1100 - General Psychology OR
- SOC 1101 - Introduction to Sociology
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

Health Sciences, AAS
Program Code: HS.S.AAS • Credit Hours: 64-68
Description
The associate of applied science degree in Health Sciences provides students with a general degree in the health science field. Students with technical certificates or college credits in allied health courses can apply

their credits toward the AAS. Graduates will be able to enter a health-related field, or continue their education toward a Bachelor's of Science degree at a four-year university.
Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.
Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 1102 - Basic Healthcare Practices & Medical Scribe
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- PSY 1100 - General Psychology
- SOC 1101 - Introduction to Sociology
- SCC 1101 - First Year Experience
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- MAT 1130 - Mathematics in Health Sciences OR
- MAT 1450 - Introductory Statistics OR
- MAT 1470 - College Algebra
- CHE 1111 - Introduction to Chemistry I OR
- CHE 1211 - General Chemistry I OR
- BIO 1121 - Human Anatomy & Physiology I AND
- BIO 1222 - Human Anatomy & Physiology II
  OR
- BIO 1141 - Principles of Anatomy & Physiology I AND
- BIO 1242 - Principles of Anatomy & Physiology II
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- Health Sciences Technical Electives (AAS) **27 Cr. Hr(s).**

Heating, Ventilating, Air Conditioning & Refrigeration (HVACR) Technology, AAS
Program Code: HVACR.S.AAS • Credit Hours: 60
Description
This degree is designed for entry-level students pursuing careers in the HVAC-R industries, as well as experienced technicians in need of upgrade training. The program focuses on the basic operating principles of commercial and industrial HVAC systems, allowing one to pursue careers in sales, service, facilities operation, project management, laboratory technician, building automation, and even design. These principles are presented through lecture and laboratory exercises in a step-by-step fashion by addressing refrigeration, heating, distribution, filtration and control as individual subsystems. Upper-level courses tie the subsystems together to discuss how they interact, providing the HVAC-R technician or designer with knowledge regarding proper system operation.
Career Opportunities
The program focuses on the basic operating principles of commercial and industrial HVAC systems, allowing one to pursue careers in sales, service, facilities operation, project management, laboratory technician, building automation, design, and many other niche and introductory technologies in HVAC.
Program Requirements

- CAT 1111 - Mechanical Systems Print Reading
- CAT 1131 - Introduction to Revit MEP
- CAT 1601 - Building Electric & Controls
- CAT 2431 - OSHA Construction Standards
- CHE 1011 - Chemistry in Modern Life for General Education
- CHE 1051 - Lab for Chemistry in Modern Life for General Education
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- HVA 1201 - Basic HVAC Systems with Cooling
- HVA 1221 - Heating Systems
- HVA 1241 - HVAC Installation Techniques & Practices
- HVA 1261 - HVAC Loads & Distribution for Small Buildings
- HVA 1301 - Air & Water Distribution Systems
- HVA 1352 - Psychrometrics, Health & Comfort in HVAC
- HVA 1401 - HVAC Mechanical & Electrical Troubleshooting
- HVA 2251 - Primary HVAC Equipment Operation & Selection
- HVA 2351 - HVAC Systems & Controls
- HVA 2780 - HVACR Engineering Technology Capstone Project
- MAT 1110 - Math for Technologists
- MET 1131 - Personal Computer Applications for Engineering Technology
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr(s).**
- HVACR Elective **2 Cr. Hr(s).** (see options below)

HVACR Electives

- CAT 1201 - Construction Methods & Materials
- CAT 1401 - Construction Cost Estimating
- CAT 1741 - Residential Electrical Systems
- CIT 1411 - Introduction to Networks
- EGV 1100 - Sustainability in the Built Environment
- EGV 1251 - Introduction to Energy Management Principles
- EGV 1301 - Sustainable Architecture
- EGV 1401 - Weatherization & Building Performance Training
- HVA 2700 - HVACR Engineering Technology Internship
- HVA 2751 - HVAC-R Operations & Best Practices
- HVAC 1800 series courses (See an advisor for more information)

Hospitality Management & Tourism, AAS
Program Code: HMTT.S.AAS • Credit Hours: 64
Description
The Hospitality Management & Tourism program prepares students for entry-level positions in restaurants, private clubs, beverage establishments, and general hospitality centers and includes skills in supervision, cost controls, purchasing and human relations.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Accreditation
The program is accredited by the Accreditation Commission on Programs in Hospitality Administration (ACPHA), which is recognized by the Council on Higher Education Accreditation (CHEA). Please visit acpha-cahm.org and chea.org on the importance of being accredited.
Career Opportunities
The hospitality/tourism industry is a broad category of fields within the service industry that includes lodging, restaurants, event planning, theme parks, transportation, cruise line, and additional fields within the tourism industry. The hospitality industry is a several billion dollar industry that mostly depends on the availability of leisure time and disposable income. It is the number one employer among service industries and is fast becoming the largest single employment category of all industries worldwide. In the United States, hospitality accounts for a larger and ever growing portion of the country's Gross National Product. Top ranked hospitality professionals have almost unlimited possibilities for career satisfaction such as front office managers, restaurant managers, convention services managers, airline attendants, assistant managers, meeting/event planners, car rental agencies, or travel firms.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1110 - Menu Planning & Table Service Practicum
- HMT 1125 - Beverage Management
- HMT 1136 - Front Office Operations
- HMT 1137 - Hospitality Industry Computer Systems
- HMT 1139 - Housekeeping Management
- HMT 1143 - Organization of the Travel Product
- HMT 1148 - Meeting & Events Contracts & Obligations
- HMT 1149 - Meeting & Events Set-up & Breakdown
- HMT 2201 - Food Service Equipment, Design & Maintenance
- HMT 2215 - Hospitality Cost Controls
- HMT 2225 - Hospitality & Tourism Supervision
- HMT 2226 - Hospitality Purchasing & Negotiations
- HMT 2227 - Hospitality Marketing
- HMT 2230 - Risk & Prevention Management
- HMT 2291 - Hospitality Management & Tourism Cooperative Work Experience
- HMT 2295 - Hospitality Management & Tourism Capstone
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- SOC 1145 - Introduction to Cultural Anthropology
- Language Elective **3 Cr. Hr(s).** (see options below)

Language Electives

- ASL 1111 - Beginning American Sign Language I
- CHN 1100 - Conversational Chinese I
- CHN 1101 - Elementary Chinese I
- FRE 1100 - Conversational French
- FRE 1101 - Elementary French I
- GER 1100 - Conversational German
- GER 1101 - Elementary German I
- JPN 1100 - Conversational Japanese I
- JPN 1101 - Elementary Japanese I
- SPA 1100 - Conversational Spanish I
- SPA 1101 - Elementary Spanish I

Hospitality Management & Tourism/Bakery & Pastry Arts, AAS
Program Code: BPAO.S.AAS • Credit Hours: 65
Description

The baking/pastry/confection program at Sinclair Community College prepares its graduates for an exciting career as a pastry chef. Skills learned in a commercial-grade bakery kitchen include proper mixing methods, shaping/sculpting techniques, advanced baking, and the science behind it all. Students will be allowed to showcase their creativity through artisan breads, pastries, chocolate and confection displays, as well as constructing show-stopping wedding cakes. Start today and allow our certified chefs to guide you through graduation and prepare you for an exciting career.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Culinary Arts program is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEF) and by the Accreditation Commission on Programs in Hospitality Administration (ACPHA), which both are recognized by the Council on Higher Education Accreditation (CHEA). Please visit acfchefs.org, acpha-cahm.org and chea.org on the importance of being accredited.

Career Opportunities

Students who graduate from the baking/pastry/confectionery concentration will find employment as a baker, pastry cook, pastry chef, pastry department assistant manager, or bake shop manager.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication
- DIT 1108 - Nutrition for the Culinary Professional
- ENG 1101 - English Composition I
- HMT 1102 - Kitchen Chemistry
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1126 - Baking I, II, & Barista Basics
- HMT 2110 - Pastry & Confectionary
- HMT 2118 - Artisan Breads
- HMT 2126 - Cake Production & Cake Decoration
- HMT 2200 - Baking & Culinary Fundamentals & Commercial Equipment OR
- HMT 2201 - Food Service Equipment, Design & Maintenance
- HMT 2215 - Hospitality Cost Controls
- HMT 2218 - Advanced Pastry Skills
- HMT 2225 - Hospitality & Tourism Supervision
- HMT 2226 - Hospitality Purchasing & Negotiations
- HMT 2227 - Hospitality Marketing
- HMT 2230 - Risk & Prevention Management
- HMT 2293 - Baking & Pastry Arts Option Cooperative Work Experience
- MAT 1125 - Math for the Culinary Arts & Baking & Pastry Arts Professional
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology OR
- SOC 1145 - Introduction to Cultural Anthropology

Hospitality Management & Tourism/Culinary Arts, AAS
Program Code: CAO.S.AAS • Credit Hours: 65
Description

The Culinary Arts program provides the basic knowledge a student needs to develop into a certified chef. The serving of good food is important to the reputation of any restaurant. Chefs and cooks are responsible for preparing meals that are pleasing to the eye and taste. Through this specialized program, students develop extensive skills and knowledge of food preparation and presentation. Students also gain an understanding of the duties and responsibilities of a chef and other culinary personnel.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are

completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Culinary Arts program is accredited by the American Culinary Federation Education Foundation Accrediting Commission (ACFEF) and by the Accreditation Commission on Programs in Hospitality Administration (ACPHA), which both are recognized by the Council on Higher Education Accreditation (CHEA). Please visit acfchefs.org, acpha-cahm.org and chea.org on the importance of being accredited.

Career Opportunities

Students completing the Culinary degree would find employment as a restaurant/banquet cook, short-order cook, fast food cook, private household cook, personal chef, food preparation worker, Sous chef, baker, pastry cook, pastry chef, galley cook, executive chef, executive pastry chef, research chef, corporate chef.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication
- DIT 1108 - Nutrition for the Culinary Professional
- ENG 1101 - English Composition I
- HMT 1101 - Basic Culinary Skills
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1110 - Menu Planning & Table Service Practicum
- HMT 1112 - Food Principles & Basic Preparation
- HMT 1125 - Beverage Management
- HMT 1129 - Restaurant Desserts
- HMT 2200 - Baking & Culinary Fundamentals & Commercial Equipment OR
- HMT 2201 - Food Service Equipment, Design & Maintenance
- HMT 2206 - Garde Manger
- HMT 2207 - Butchery & Fish Management
- HMT 2208 - Advanced Culinary & Competition Skills OR
- HMT 2209 - Advanced Culinary Skills
- HMT 2215 - Hospitality Cost Controls
- HMT 2225 - Hospitality & Tourism Supervision
- HMT 2226 - Hospitality Purchasing & Negotiations
- HMT 2227 - Hospitality Marketing
- HMT 2230 - Risk & Prevention Management
- HMT 2292 - Culinary Arts Option Cooperative Work Experience
- MAT 1125 - Math for the Culinary Arts & Baking & Pastry Arts Professional
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology OR
- SOC 1145 - Introduction to Cultural Anthropology

Hospitality Management & Tourism/Meeting & Event Planning, AAS
Program Code: HMTTM.S.AAS • Credit Hours: 65

Description

The Hospitality Management & Tourism Meeting & Event Planning program prepares students for entry-level positions in hotels, resorts, convention and visitor centers, corporate centers, private clubs, and meeting and event operations.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The program is accredited by the Accreditation Commission on Programs in Hospitality Administration (ACPHA), which is recognized by the Council on Higher Education Accreditation (CHEA). Please visit acpha-cahm.org and chea.org on the importance of being accredited.

Career Opportunities

The hospitality/tourism industry is the number one employer among service industries, and is fast becoming the largest single employment category of all industries worldwide. In the United States, hospitality accounts for a larger and ever growing portion of the country's Gross National Product. Right now, over half a million jobs in the hospitality industry go unfilled each year, and that number is likely to continue to grow as the food service industry grows. Top ranked hospitality professionals have almost unlimited possibilities for career satisfaction as meeting/event planners for corporate events, association/non-profit events, government events, special events and expositions and large-scale convention business.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1110 - Menu Planning & Table Service Practicum
- HMT 1125 - Beverage Management
- HMT 1141 - Destination Geography
- HMT 1143 - Organization of the Travel Product
- HMT 1148 - Meeting & Events Contracts & Obligations
- HMT 1149 - Meeting & Events Set-up & Breakdown
- HMT 1150 - Meeting & Event Planning
- HMT 1151 - Special Events, Expositions & Festivals
- HMT 2215 - Hospitality Cost Controls
- HMT 2225 - Hospitality & Tourism Supervision
- HMT 2226 - Hospitality Purchasing & Negotiations
- HMT 2227 - Hospitality Marketing
- HMT 2230 - Risk & Prevention Management
- HMT 2291 - Hospitality Management & Tourism Cooperative Work Experience
- HMT 2295 - Hospitality Management & Tourism Capstone
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- SOC 1145 - Introduction to Cultural Anthropology
- Language Elective **3 Cr. Hr(s).** (see options below)

Language Electives

- ASL 1111 - Beginning American Sign Language I
- CHN 1100 - Conversational Chinese I
- CHN 1101 - Elementary Chinese I
- FRE 1100 - Conversational French
- FRE 1101 - Elementary French I
- GER 1100 - Conversational German
- GER 1101 - Elementary German I
- JPN 1100 - Conversational Japanese I

- JPN 1101 - Elementary Japanese I
- SPA 1100 - Conversational Spanish I
- SPA 1101 - Elementary Spanish I

Industrial & Systems Engineering Technology, AAS
Program Code: OPTIO.S.AAS • Credit Hours: 64-65
Description
The Industrial and Systems Engineering Technology (ISET) program prepares individuals for leadership roles in the operations of business, industry, and service organizations with a special emphasis on ISET skills. Students learn analysis, continuous improvement, quality assurance, and problem-solving techniques that can be applied in financial, health care, manufacturing, and service/retail fields. Students take part in lecture-lab structured courses and hands-on demonstrations of course principles, assuring that they will gain practical knowledge as well as the fundamentals. Those who wish to further their studies may transfer to four-year colleges and universities.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
Graduates are employed as Industrial and Systems Engineering Technicians, Quality Control Technicians, Production Supervisors, Continuous Improvement Specialists, and similar positions. Those who wish to further their studies may transfer to four-year colleges and universities.
Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining
- COM 2211 - Effective Public Speaking
- ECO 2180 - Principles of Microeconomics
- ENG 1101 - English Composition I
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1120 - Problem Solving & Continuous Improvement
- ISE 1130 - Lean Operations & Continuous Improvement
- ISE 1300 - Fundamentals of Dimensional Metrology
- ISE 1313 - Coordinate Measurement
- ISE 2208 - Engineering Technology Economics & Cost Analysis
- ISE 2210 - Methods Engineering
- ISE 2260 - Work Flow & Facility Design
- Industrial & Systems Engineering Technology Electives **3 Cr. Hrs.** (see options below)

- ISE 2700 - Industrial & Systems Engineering Technology Internship (minimum of 3 credit hours) OR
- ISE 2780 - Industrial & Systems Engineering Technology Capstone

- MAN 2110 - Introduction to Project Management

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- MAT 2170 - Business Statistics I
- MAT 2180 - Business Statistics II
- PHY 1141 - College Physics I

Industrial & Systems Engineering Technology Electives

- ISE 1100 - Product Development Fundamentals
- ISE 1201 - Introduction to Manufacturing Safety
- ISE 1202 - Quality Practices & Measurement for Manufacturing
- ISE 1203 - Manufacturing Processes & Production
- ISE 1204 - Maintenance Awareness for Manufacturing
- ISE 1310 - Advanced Metrology & Gauging
- ISE 1401 - Introduction to Digital Thread Technology
- ISE 1402 - Digital Thread Enabled Manufacturing
- ISE 2240 - Six Sigma: Green Belt
- ISE 2310 - Quality Assurance
- ISE 2360 - Quality Management Systems & Auditing

Interior Design, AAS
Program Code: IND.S.AAS Credit Hours: 63-65
Description
The program prepares students for careers in the creative, detail-oriented field of interior design. Students will develop the knowledge and technical skills necessary to design an interior. Developing floor plans and selecting and coordinating colors, floor and wall coverings are common tasks performed by interior designers. They also place furniture, fixture and cabinetry, and prepare drawings, cost estimates and contracts. Sustainability, building codes, the ADA and basic business practices are included, as well as the development of individual design portfolios.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Accreditation
Sinclair Community College has been accredited by the National Association of Schools of Art and Design (NASAD) since 2002.
Career Opportunities
Interior design graduates typically pursue careers as designers or consultants in design studios, architecture firms or commercial retailers. Some graduates choose to continue their education in design or a related field at a four-year institution.
Program Requirements

- ART 2230 - Art History: Ancient through Medieval Periods OR
- ART 2231 - Art History: Renaissance through Contemporary Periods
- CAT 1101 - Architectural Graphics I
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- IND 1180 - History & Theory of Interior Design
- IND 1230 - Residential Design
- IND 1234 - Materials & Textiles
- IND 1240 - Color Theory
- IND 2130 - Non-Residential Design
- IND 2135 - Rendering
- IND 2140 - Interior Building Systems & Design
- IND 2260 - Interior Design Portfolio
- Interior Design Elective **2-4 Cr. Hr(s).** (see options below)

- MAT 1110 - Math for Technologists OR
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

- MRK 2100 - Foundations of Marketing OR
- MRK 2145 - Principles of Retailing OR
- MRK 2225 - Sales Fundamentals

- PSY 1100 - General Psychology
- VIS 1100 - Design Foundations
- VIS 1150 - Design Processes II
- VIS 1210 - Design Drawing

Interior Design Electives

- ART 1101 - 2-D Foundations
- ART 1102 - 3-D Foundations
- ART 1111 - Drawing I
- ART 1141 - Ceramics I
- ART 1161 - Black & White Darkroom Photography I
- ART 2230 - Art History: Ancient through Medieval Periods
- ART 2231 - Art History: Renaissance through Contemporary Periods
- ART 2235 - History of Photography
- ART 2236 - History of Women Artists
- ART 2237 - History of American Art
- ART 2238 - History of African Art
- CAT 1121 - Architectural Graphics II
- CAT 1141 - Reading Architectural Drawings
- CAT 1201 - Construction Methods & Materials
- CAT 2741 - Current Topics in Architecture
- IND 2280 - Kitchen & Bath Design
- VIS 1180 - History & Theory of Graphic Design
- VIS 1220 - Typographic Design
- VIS 1250 - Print Production
- VIS 2270 - Design Internship

Interpreter Education, AAS

Program Code: ASL.S.AAS • Credit Hours: 65

Description

The Interpreter Education program provides the unique opportunity for students to develop a solid foundation in language, linguistics, culture and interpretation and to master the skills necessary to successfully function as an interpreter for Deaf, Hard of Hearing, and DeafBlind individuals in a variety of educational and community settings. Students will gain rich insights into the American Deaf community, their beliefs, values, history, rights and cultural norms. A grade of "C" or better is required in all ASL courses.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

This program holds accreditation by the Ohio Department of Education. Graduates are eligible to apply for the Interpreter for the Hearing Impaired Five-Year Associate Licensure.

Career Opportunities

Employment opportunities are available in areas such as educational, community interpreter referral agencies, business, medical, legal, theatrical, governmental and religious interpreting settings.

Program Prerequisite(s)

- DEV 0035 - Integrated Developmental Reading & Writing II

Program Requirements

- ASL 1101 - Orientation to Deafness
- ASL 1102 - Interpreting Theory & Best Practices
- ASL 1111 - Beginning American Sign Language I
- ASL 1112 - Beginning American Sign Language II
- ASL 1228 - Intermediate American Sign Language I
- ASL 1229 - Intermediate American Sign Language II
- ASL 2201 - Interpreting I
- ASL 2202 - Interpreting II
- ASL 2203 - Interpreting III
- ASL 2207 - Role of the Interpreter
- ASL 2212 - Specialized Interpreting I
- ASL 2213 - Specialized Interpreting II
- ASL 2231 - Linguistics of ASL
- ASL 2236 - Transliterating & Signing Modalities
- ASL 2261 - Practicum I
- ASL 2262 - Practicum II
- ASL 2300 - Educational Interpreting
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- PSY 1100 - General Psychology
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- OT36 Mathematics Elective **3 Cr. Hr(s).**

Legal Studies, AAS

Program Code: PAR.S.AAS • Credit Hours: 61

Description

The Legal Studies program educates students with practical assignments in a simulated law office environment. All student work models the professional, ethical and technology concepts they will use in the legal field. Student learning is supported by experienced paralegals who serve as team teachers. All legal studies students are required to complete an attorney-supervised internship for hands-on experience using their paralegal skills.

Classes are taught in a simulated law office environment that makes current practices and technology available to students. All full-time faculty in the Legal Studies program are licensed attorneys. Legal research is conducted by students both online and in professional law libraries. All students produce a personal portfolio of their legal work and benefit from an internship experience under the supervision of a licensed attorney.

A grade point average of 2.0 is required to enter the Paralegal program. A grade of "C" is required in all PAR courses. An overall grade point average of at least 2.0 is required to continue in the program, and is required for graduation. Students must take at least nine credits of the equivalent of legal specialty courses through synchronous instruction.

Accreditation

The Legal Studies Program is approved by the American Bar Association. All full-time faculty in the Legal Studies Program are licensed attorneys. Sinclair is accredited by The Higher Learning Commission of the North Central Association of Colleges and Schools. Programs of study are approved by the Ohio Department of Higher Education. Completion of the Legal Studies Program does not authorize a graduate to practice law as an attorney, or to give legal advice.

Career Opportunities

Graduates may find work in large and small law firms, the business world, courts and government agencies. Under the supervision of a lawyer, a professional paralegal may perform such interesting duties as investigating cases, interviewing clients and witnesses, preparing legal documents and legal research. These responsibilities are carried out in a variety of legal fields, such as criminal law, probate, family law, litigation and real estate.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- ENG 1199 - Textual Editing
- ENG 1201 - English Composition II

- LAW 1101 - Business Law
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Arts and Humanities Elective **3 Cr. Hr(s).**
- PAR 1101 - Introduction to Legal Studies
- PAR 1102 - Legal Technology
- PAR 1103 - Litigation
- PAR 1201 - Legal Research & Writing
- PAR 1202 - Advanced Legal Technology
- PAR 1203 - Advanced Litigation
- PAR 2301 - Advanced Legal Research & Writing
- PAR 2302 - Family Law
- PAR 2303 - Probate Law
- PAR 2401 - Legal Studies Internship
- Legal Studies Electives **6 Cr. Hr(s).** (see options below)
- PSY 1100 - General Psychology OR
- SOC 1101 - Introduction to Sociology
- RES 1201 - Real Estate Law

Legal Studies Electives

- CJS 1105 - Criminal Law
- LAW 1102 - Consumer Law
- LAW 1104 - Employment Law

Manufacturing Engineering Technology, AAS
Program Code: MENT.S.AAS • Credit Hours: 61-65
Description
The Manufacturing Engineering Technology degree combines elements from Precision and CNC Machining, Mechanical, and Industrial Engineering Technology to prepare students to enter the world of manufacturing. Students in this program are exposed to foundational courses in mathematics and physics as well as take courses in additive manufacturing, computer-aided design (CAD), prototyping, and manufacturing operations.
Career Opportunities
Graduates of this program will be prepared to enter in the manufacturing industry as engineering technicians or related roles.
Program Requirements

- CAM 1108 - Machine Shop Fundamentals OR
- CAM 1109 - Fundamentals of Tooling & Machining

- COM 2211 - Effective Public Speaking
- EET 1120 - Introduction to DC & AC Circuits
- EGR 1106 - Basic Mechanical & Electrical Skills
- ENG 1101 - English Composition I
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1300 - Fundamentals of Dimensional Metrology
- ISE 2240 - Six Sigma: Green Belt

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- MET 1111 - Preparatory Math for Engineering Technology

- MET 1151 - Guitar Manufacturing using Science, Technology, Engineering, & Mathematics (STEM) Concepts OR
- MET 2151 - Material Science
- MET 1131 - Personal Computer Applications for Engineering Technology
- MET 1231 - Introduction to Engineering Design Using 3D CAD
- MET 1301 - SolidWorks Basics
- MET 1401 - Additive Design & Printing
- MET 1431 - Additive Manufacturing Post Process
- MET 2281 - Engineering Technology Professional Practice

- MET 2780 - Mechanical Engineering Technology Capstone OR
- MET 2781 - Manufacturing Engineering Technology Capstone

- OT36 Social & Behavioral Sciences Elective **3 Cr. Hrs.**
- PHY 1141 - College Physics I

Manufacturing Technology, AAS
Program Code: MFGT.S.AAS • Credit Hours: 60-65
Description
This program prepares students for a career in Manufacturing by developing an understanding of manufacturing processes and how to implement and improve these processes in the areas of Mechanical and Industrial & Systems Engineering Technology, Automation, and Advanced Manufacturing. The degree includes traditional classroom instruction and "hands-on" laboratory experience. The student may achieve the Industry Recognized MSSC Certified Production Technician Certificate in the first year. The second year of study will culminate in an AAS degree in one of seven certificate pathways. These pathways include General Manufacturing, Advanced Manufacturing, Automation Technology, Mechanical Engineering Technology, Industrial & Systems Engineering Technology, Digital Thread Technology, and Semiconductor Technology. This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
Careers from entry-level to mid-level are possible in these fields -General Manufacturing, Advanced Manufacturing, Automation Technology, Mechanical Engineering Technology, and Industrial & Systems Engineering Technology.
Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining
- COM 2211 - Effective Public Speaking
- EGR 1106 - Basic Mechanical & Electrical Skills
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- ENG 1101 - English Composition I
- ISE 1201 - Introduction to Manufacturing Safety
- ISE 1202 - Quality Practices & Measurement for Manufacturing
- ISE 1203 - Manufacturing Processes & Production
- ISE 1204 - Maintenance Awareness for Manufacturing
- MAT 1110 - Math for Technologists
- MET 1131 - Personal Computer Applications for Engineering Technology
- MET 1161 - Software Tools for Engineering Technology
- OT36 Arts & Humanities Elective **3 Cr. Hr(s).**
- OT36 Social & Behavioral Sciences Elective **3 Cr. Hr(s).**

Choose one of the following pathways -- 24 - 29 Cr. Hr(s). (options listed below)

- Advanced Manufacturing

- Automation Technology
- Digital Thread
- General Manufacturing
- Industrial and Systems Technology
- Mechanical Engineering Technology
- Semiconductor Technology

Advanced Manufacturing

- CAM 1110 - Advanced Machine Operations
- CAM 1116 - Fundamentals of Computer Numerical Control Operations
- CAM 1142 - Advanced Shop Floor Math
- CAM 2114 - Jig & Fixture Design
- CAM 2145 - Shop Floor Programming
- CAM 1214 - Computer Numerical Control Mill Programming OR
- CAM 2204 - Computer Numerical Control Lathe Programming
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- MET 1231 - Introduction to Engineering Design Using 3D CAD

Automation Technology

- EET 1120 - Introduction to DC & AC Circuits
- EET 1139 - Electrical Machinery
- EET 1166 - Industrial Machine Wiring
- EET 2281 - Programmable Logic Controllers
- EGR 1144 - Sensors & Vision Systems
- EGR 1217 - Fluid Power & Control
- EGR 2231 - Troubleshooting of Automated Systems
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1120 - Problem Solving & Continuous Improvement

Digital Thread

- BIS 1010 - Digital Thread Data Management
- CAM 1116 - Fundamentals of Computer Numerical Control Operations
- CIT 1010 - Digital Thread Cyber Security
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1401 - Introduction to Digital Thread Technology
- ISE 1402 - Digital Thread Enabled Manufacturing
- MAN 1010 - Digital Thread Enhanced Logistics
- MET 1231 - Introduction to Engineering Design Using 3D CAD

General Manufacturing

- CAM 1116 - Fundamentals of Computer Numerical Control Operations
- CAM 1142 - Advanced Shop Floor Math
- CAM 2145 - Shop Floor Programming
- EET 1120 - Introduction to DC & AC Circuits
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 2240 - Six Sigma: Green Belt
- MET 1231 - Introduction to Engineering Design Using 3D CAD
- MET 2151 - Material Science

Industrial and Systems Technology

- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1120 - Problem Solving & Continuous Improvement
- ISE 1130 - Lean Operations & Continuous Improvement
- ISE 2100 - Lean Leadership, Teamwork & Management
- ISE 2208 - Engineering Technology Economics & Cost Analysis
- ISE 2220 - Applied Statistics for Process Control & Improvement
- ISE 2240 - Six Sigma: Green Belt
- MAT 1470 - College Algebra OR
- MAT 1580 - Precalculus

Mechanical Engineering Technology

- CAM 1116 - Fundamentals of Computer Numerical Control Operations
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- MET 1231 - Introduction to Engineering Design Using 3D CAD
- MET 1301 - SolidWorks Basics
- MET 1401 - Additive Design & Printing
- MET 1431 - Additive Manufacturing Post Process
- MET 2151 - Material Science

Semiconductor Technology

- EET 1120 - Introduction to DC & AC Circuits
- EET 1139 - Electrical Machinery
- EET 1166 - Industrial Machine Wiring
- EET 2103 - Introduction to Vacuum System Technology
- EET 2281 - Programmable Logic Controllers
- EGR 1144 - Sensors & Vision Systems
- EGR 1217 - Fluid Power & Control
- EGR 2205 - Integrated Circuit (IC) Fabrication Techniques
- EGR 2231 - Troubleshooting of Automated Systems
- ISE 1207 - Introduction to Manufacturing

Mechanical Engineering Technology, AAS
Program Code: MEGT.S.AAS • Credit Hours: 60-62
Description

The Mechanical Engineering Technology program provides the courses needed to begin a career as a technician in the engineering field. As a mechanical engineering technology graduate, career options are open in a diverse number of fields and companies. Students will complete relevant and practical coursework taught by knowledgeable faculty. The courses are non-calculus based, and electives can tailor the degree to an individual's needs.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Graduates may enter a variety of industries in entry-level positions doing conceptual design, systems engineering, manufacturing, product research and development, or related technical work.

Program Requirements

- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus
- MET 1111 - Preparatory Math for Engineering Technology
- MET 1161 - Software Tools for Engineering Technology
- MET 1231 - Introduction to Engineering Design Using 3D CAD OR

- MET 1301 - SolidWorks Basics
- MET 2101 - Thermodynamics
- MET 2151 - Material Science
- MET 2201 - Statics
- MET 2251 - Strength of Materials
- MET 2281 - Engineering Technology Professional Practice
- MET 2301 - Fluid Mechanics
- MET 2351 - Dynamics
- MET 2401 - Machine Design
- MET 2780 - Mechanical Engineering Technology Capstone
- Mechanical Engineering Technology Elective **6-7 Cr. Hr(s).** (options listed below)
- OT36 Social and Behavioral Sciences Elective **3 Cr. Hr(s).**
- PHY 1141 - College Physics I

Mechanical Engineering Technology Electives

- AUT 1108 - Automotive Engine Systems
- AUT 1116 - Automotive Steering & Suspension Systems
- AVT 1106 - Airframe Safety Systems
- AVT 1113 - Drawings for Aviation
- AVT 2138 - Engine Fuel & Fuel Metering
- CAM 1109 - Fundamentals of Tooling & Machining
- CAM 1110 - Advanced Machine Operations
- CAM 1116 - Fundamentals of Computer Numerical Control Operations
- CAM 1180 - Welding & Metal Joining I
- EET 1120 - Introduction to DC & AC Circuits
- EET 1150 - DC Circuits
- EET 1155 - AC Circuits
- EGR 1106 - Basic Mechanical & Electrical Skills
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- EGR 1217 - Fluid Power & Control
- EGV 1101 - Alternate & Renewable Energy Sources
- EGV 1251 - Introduction to Energy Management Principles
- ISE 1201 - Introduction to Manufacturing Safety
- ISE 1202 - Quality Practices & Measurement for Manufacturing
- ISE 1203 - Manufacturing Processes & Production
- ISE 1300 - Fundamentals of Dimensional Metrology
- ISE 2240 - Six Sigma: Green Belt
- MET 1151 - Guitar Manufacturing using Science, Technology, Engineering, & Mathematics (STEM) Concepts
- MET 1401 - Additive Design & Printing
- MET 1431 - Additive Manufacturing Post Process
- MET 2700 - Mechanical Engineering Technology Internship
- PHY 1142 - College Physics II
- PHY 2210 - MATLAB for Scientists & Engineers

Medical Laboratory Technology, AAS

Program Code: CLT.S.AAS • Credit Hours: 60-64

Description

The associate degree program in Medical Laboratory Technology prepares students to enter the workforce as Laboratory Technicians. In this profession, graduates are responsible for performing routine clinical laboratory tests as the primary analysis, making specimen oriented decisions on predetermined criteria, including a working knowledge of critical values. As part of the program, the students will complete a non-paid, supervised health-related practicum in a hospital lab setting.

This degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage.

Students will have a maximum of three opportunities to successfully complete BIO 1121, ALH 1101, and all general education courses required by the program. All course withdrawals (W) or failures (D) or (F) will countas an attempt. After a third unsuccessful attempt, the student is no longer eligible to enter or continue in the program.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Accreditation

Sinclair Community College's Clinical Laboratory Technology associate degree program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 66018; P:773.714.8880; naaclsinfor@naacls.org

Career Opportunities

Laboratory Technicians perform highly technical diagnostic tests in medical or scientific laboratories. Lab technicians might collect samples, study and perform tests on body fluids, chemical compounds and biological specimens. Lab techs use various types of lab equipment and complex computer programs to perform their tests.

Program Prerequisite(s)

- ALH 1101 - Introduction to Healthcare Delivery AND
- BIO 1141 - Principles of Anatomy & Physiology I OR
- BIO 1121 - Human Anatomy & Physiology I AND
- Approval of Department AND
- 2.7 cumulative grade point average or greater is required for admission to the program and to begin technical studies AND
- Students have a maximum of three opportunities to successfully complete BIO and MAT courses. Students may withdraw or fail, but must successfully complete the course on or before the third attempt. Students are ineligible for admission to the Clinical Laboratory Technology Program after a third unsuccessful course attempt. AND
- Refer to program website for additional requirements.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 2220 - Pathophysiology
- BIO 1171 - Principles of Biology I

- BIO 1121 - Human Anatomy & Physiology I OR
- BIO 1141 - Principles of Anatomy & Physiology I AND
- BIO 1147 - Lab for Principles of Anatomy & Physiology I

- BIO 1222 - Human Anatomy & Physiology II OR
- BIO 1242 - Principles of Anatomy & Physiology II AND
- BIO 1248 - Lab for Principles of Anatomy & Physiology II

- CHE 1111 - Introduction to Chemistry I AND
- CHE 1151 - Lab for Introduction to Chemistry I OR
- CHE 1211 - General Chemistry I AND
- CHE 1251 - Lab for General Chemistry I

- CHE 1121 - Introduction to Chemistry II AND

- CHE 1161 - Lab for Introduction to Chemistry II OR
- CHE 1221 - General Chemistry II AND
- CHE 1261 - Lab for General Chemistry II

- CLT 1200 - Introduction to Clinical Laboratory
- CLT 1203 - Lab for Introduction to Clinical Laboratory
- CLT 2110 - Urine & Body Fluid Analysis/Immunology/Serology
- CLT 2113 - Lab for Urine & Body Fluid Analysis/Immunology/Serology
- CLT 2210 - Hematology
- CLT 2213 - Lab for Hematology
- CLT 2310 - Clinical Chemistry
- CLT 2313 - Lab for Clinical Chemistry
- CLT 2410 - Clinical Microbiology/Parasitology
- CLT 2413 - Lab for Clinical Microbiology/Parasitology
- CLT 2510 - Immunohematology
- CLT 2513 - Lab for Immunohematology
- CLT 2810 - CLT Practicum
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- MAT 1450 - Introductory Statistics
- PSY 1100 - General Psychology

Mental Health Services, AAS
Program Code: MHT.S.AAS • Credit Hours: 65
Description
The Mental Health Services degree prepares entry-level mental health professionals as members of an inter-disciplinary team under clinical supervision. Duties may include client interviewing, crisis intervention, advocacy, group facilitation and case management. The Mental Health Services degree can be completed on a full-time or part-time basis. If enrolled full-time, it is designed to be completed in five (5) semesters. This degree consists of open enrollment courses (general education and division specific) and program specific courses restricted to majors. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry in to limited enrollment MHT courses, students must have a 2.0 cumulative GPA, a grade of C or higher in all program courses and complete MHAS Online Orientation and an initial faculty advising appointment while enrolled in MHT 1101 Introduction to Mental Health Services. The practicum portion of the curriculum provides 420 hours of supervised clinical experience.
Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
Graduates can work as mental health technicians, chemical dependency counselor assistants, social work assistants, case managers, and several other jobs in hospitals or mental health treatment settings.
Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- BIO 1107 - Human Biology
- BIO 1108 - Lab for Human Biology
- ENG 1101 - English Composition I
- MHT 1101 - Introduction to Mental Health Services
- MHT 1120 - Trauma-Informed Healthcare
- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary
- MHT 1202 - Motivational Interviewing
- MHT 1203 - Professional Documentation
- MHT 2105 - Mental Health Treatment Methods
- MHT 2111 - Group Dynamics I
- MHT 2121 - Practicum I
- MHT 2138 - Ethical Issues in the Helping Professions
- MHT 2211 - Group Dynamics II
- MHT 2222 - Practicum II
- MHT 2245 - Mental Health & the Family
- MHT 2250 - Child & Adolescent Mental Health
- PSY 1100 - General Psychology
- PSY 1160 - Black Psychology
- PSY 2217 - Abnormal Psychology
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

Network Engineering, AAS
Program Code: NEEN.S.AAS • Credit Hours: 60
Description
Students learn Cisco routing protocols, troubleshooting the routing protocols, components, methods and technologies required for network and Internet communications, operation of IP addressing services, network security threats and functions of common security appliances and applications, wireless network standards and components, basic switching concepts, operation of Cisco switches, Virtual Local Area Networks (VLANs) to create logically separate networks. Sinclair is a Regional Cisco Academy.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
Employment opportunities in IT include entry-level positions such as network administrators, network security analysts, and network engineers.
Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1105 - IT Fundamentals
- CIT 1107 - Introduction to Operating Systems
- CIT 1411 - Introduction to Networks
- CIT 1500 - A+ Hardware & Software OR
- CIT 1510 - Windows Client Operating System OR
- CIT 2510 - Microsoft Windows Server Operating System

- CIT 2416 - Routing & Switching Essentials
- CIT 2421 - Scaling Networks
- CIT 2427 - IoT Fundamentals
- CIT 2640 - Network Security
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 1140 - Information Systems Analysis & Design
- CSC 2165 - Database Management

- CIT 2270 - Computer Information Technology Internship OR
- CIT 2178 - Computer Information Technology Capstone
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication

- ECO 1100 - Introduction to Economics OR
- ECO 2160 - Principles of Macroeconomics

- ENG 1101 - English Composition I
- MAN 2150 - Management & Organizational Behavior
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

- OT36 Arts and Humanities Elective **3 Cr. Hr(s).**

Neurodiagnostic Technology, AAS

Program Code: END.S.AAS • Credit Hours: 63-64

Description

The associate degree program in Neurodiagnostic Technology prepares competent entry-level Neurodiagnostic Technologists, specializing in Electroencephalograms (EEG) with additional expertise in the following additional areas: Evoked Potentials (EP); Intraoperative Neuromonitoring (IONM); Nerve Conduction Students (NCS) and Polysomnography (PSG), in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Neurodiagnostic is the allied health care profession that records, monitors, and analyzes nervous system functions to promote the effective treatment of pathological conditions. Technologists record electrical activity arising from the brain, spinal cord, peripheral nerves, somatosensory or motor nerve systems using a variety of techniques and instruments. Technologists prepare data and documentation for interpretation by a physician. As part of the program, the students will complete a non-paid, supervised health-related practicum in a medical setting. A grade of "C" or higher is required in all program courses to remain in the program.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

Sinclair Community College's Neurodiagnostic Technology program is accredited by the Commission on Accreditation of Allied Health Education Program (CAAHEP: https://www.caahep.org/Home.aspx). The Committee on Accreditation for Education in Neurodiagnostic Technology (CoA-NDT) and CAAHEP's board of Directors recognized the programs substantial compliance with the nationally established accreditation standards. Commission on Accreditation of Allied Health Education Programs, 9355 113th St. N, #7709 Seminole, FL 33775 Phone: 727-210-2350 Fax: 727-210-2354

Career Opportunities

Employment may be found in hospitals, out-patient clinics and surgical centers.

Program Prerequisite(s):

- ALH 1101 - Introduction to Healthcare Delivery AND
- BIO 1121 - Human Anatomy & Physiology I AND
- NDT 1101 - Introduction to Neurodiagnostic Technology AND

- MAT 1130 - Mathematics in Health Sciences OR
- MAT 1450 - Introductory Statistics OR
- MAT 1470 - College Algebra AND

- Approval of Department AND
- GPA of 2.0 or higher AND
- Refer to program website for additional requirements.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 1110 - Principles of Electrocardiography
- BIO 1121 - Human Anatomy & Physiology I
- BIO 1222 - Human Anatomy & Physiology II
- CHE 1111 - Introduction to Chemistry I
- CHE 1151 - Lab for Introduction to Chemistry I

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology
- MAT 1130 - Mathematics in Health Sciences OR
- MAT 1450 - Introductory Statistics OR
- MAT 1470 - College Algebra
- NDT 1101 - Introduction to Neurodiagnostic Technology
- NDT 1102 - Introduction to Electroencephalography (EEG)
- NDT 1182 - Lab for Introduction to Electroencephalography (EEG)
- NDT 1250 - Intermediate Electroencephalography (EEG)
- NDT 1260 - Basic Evoked Potentials
- NDT 1285 - Lab for Intermediate EEG
- NDT 1286 - Lab for Basic Evoked Potentials
- NDT 1901 - Seminar for NDT Practicum I
- NDT 1991 - Practicum Experience I for NDT
- NDT 2350 - Intraoperative Monitoring for Neurodiagnostic Technologists
- NDT 2360 - Neonatal/Pediatric Electroencephalography
- NDT 2386 - Lab for Neonatal/Pediatric EEG
- NDT 2450 - Nerve Conduction Studies
- NDT 2460 - Neurophysiology of Electroencephalography/Sleep Disorders
- NDT 2485 - Lab for Nerve Conduction Studies
- NDT 2550 - Fundamentals of Polysomnography
- NDT 2585 - Lab for Polysomnography
- NDT 2902 - Seminar for NDT Practicum II
- NDT 2903 - Seminar for NDT Practicum III
- NDT 2990 - Neurodiagnostic Capstone
- NDT 2992 - NDT Practicum II
- NDT 2993 - Neurodiagnostic Technology Practicum III
- PSY 1100 - General Psychology

Nursing, AAS

Program Code: NUR.S.AAS • Credit Hours: 65

Description

The Nursing program prepares students to meet the health needs of a diverse population in a variety of dynamic community environments. The curriculum is divided among nursing theory, nursing clinical practice, general education, and the sciences, where students participate in classroom, laboratory, and clinical experiences. Graduates of the program are eligible to take the NCLEX-RN for licensure.

The Nursing program is designed to be completed in five (5) semesters on a full-time basis. The curriculum may be taken on a part-time basis, but the nursing courses must be taken in sequence. This degree program consists of open enrollment courses (general education and division-specific) and

program-specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. Details on eligibility for the limited enrollment courses can be found online in the Nursing Student Handbook.
Sinclair offers advance placement into the nursing program for qualified Licensed Practical Nurses (LPNs) or equivalent military experience and transfer students. After successful completion of the transition courses (NSG 1700 and NSG 1750), students will receive articulated credit for ALH 1101 , NSG 1400, NSG 1450, NSG 1600, and NSG 1650. Additionally, NSG 1200 and the science elective will be waived. Those students will continue to NSG 2400/2450. Students transferring from other nursing programs must meet the criteria outlined in the online Nursing Student Handbook.
Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether the student may enroll.

Accreditation

The Associate Degree Nursing (ADN) program is accredited by the Accreditation Commission for Education in Nursing, Inc. (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326, (404) 975- 5000, and approved by the State of Ohio Board of Nursing.

Career Opportunities

Registered nurses have a variety of employment opportunities. Workplace settings may include hospitals, extended care and long-term care facilities, rehabilitation programs, physicians' offices, home health agencies and various types of clinics and outpatient services.

Program Prerequisite(s)

- ALH 1101 - Introduction to Healthcare Delivery AND
- BIO 1141 - Principles of Anatomy & Physiology I AND
- ENG 1101 - English Composition I AND
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective AND
- NSG 1200 - Introduction to Nursing AND
- High School Diploma or equivalency AND
- GPA of 2.5 or greater AND
- Nurse Aide training course or equivalent work experience AND
- Restricted to Majors AND
- Refer to program website for additional requirements.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 2202 - General Pharmacology
- BIO 1141 - Principles of Anatomy & Physiology I
- BIO 1242 - Principles of Anatomy & Physiology II
- BIO 2205 - Microbiology OR
- CHE 1111 - Introduction to Chemistry I
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- NSG 1200 - Introduction to Nursing
- NSG 1400 - Health & Illness I: Foundational Concepts in Nursing
- NSG 1450 - Professional Nursing I: Introduction to the Role of the Professional Nurse
- NSG 1600 - Health & Illness II: Health & Wellness Concepts
- NSG 1650 - Professional Nursing II: Healthcare System Concepts
- NSG 2400 - Health & Illness III: Health & Wellness Concepts
- NSG 2450 - Professional Nursing III: Leadership & Management of Care
- NSG 2600 - Concept Synthesis
- PSY 1100 - General Psychology

Nutrition and Dietetics Technician, AAS

Program Code: DIT.S.AAS • Credit Hours: 60-61

Description

Graduates of the Nutrition and Dietetics Technician (NDT) program are trained food and nutrition practitioners that work under the supervision of a registered dietitian nutritionist (RDN). The NDT program consists of three domains that include Human Nutrition & Clinical Care, Community Nutrition & Wellness, and Foodservice Operations, which align with the NDTR national credentialing exam domains. The Nutrition & Dietetics Technician program is designed to be completed in five (5) consecutive semesters on a full-time basis. Some students elect to attend on a part-time basis, extending the length of study to three academic years. The curriculum consists of open enrollment courses (general education and division specific) and program-specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. The limited enrollment coursework includes 600 hours of unpaid supervised practice experiences at area community, food service, and health care facilities. The limited enrollment coursework also includes 285 lab hours completed in the Nutrition & Dietetics Food Lab and general education laboratories. To qualify for entry into limited enrollment courses, a cumulative GPA of 2.0 is required, as well as a grade of "C" or higher in all program courses. NDT program students must successfully complete the DIT 2855 Program Assessment Capstone course with a "C" or higher to earn the ACEND accreditation Verification Statement required to take the NDTR credentialing exam. Note: For students under age 16, there may be restrictions on participating in certain Health Sciences programs. Any student under age 16 must contact the program director/department chair to discuss whether he or she may enroll.
Students of Sinclair's Nutrition and Dietetics Program are eligible to become members of the Academy of Nutrition and Dietetics (AND), a nationally recognized organization located at 120 South Riverside Plaza, Suite 2190, Chicago Illinois 60606, 1-800-877-1600, www.eatright.org. This specially designed program enables students to enjoy benefits of student AND membership while attending school. Graduates are eligible for active AND membership. Benefits include networking, professional growth, educational enrichment, and developing leadership skills.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Program Outcomes Data is available upon request by contacting the NDT Program Administrative Assistant, Ann Young,
at: ann.young1@sinclair.edu

Accreditation

The NDT program is fully accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics (AND) a nationally recognized organization located at 120 South Riverside Plaza, Suite 2190, Chicago Illinois 60606, 1-800-877-1600, www.eatrightpro.org/acend. The Dietary Manager embedded certificate in the NDT program is also approved by the Association of Nutrition and Foodservice Professionals (ANFP) a national not-for-profit association located at 616 E Main St Suite 3610, St. Charles, IL 60174, 1-800-323-1908, www.anfponline.org

Career Opportunities

Nutrition and dietetics technicians, registered (NDTRs) work independently or in teams with registered dietitian nutritionists (RDNs) in a variety of employment settings, including health care (hospitals, nursing homes, retirement centers, and home health care programs), foodservice (schools,

day-care centers, correctional facilities, restaurants, health care facilities, corporations, and hospitals), community/public health (public health agencies, health clubs, weight management clinics, and community wellness centers), and business and industry (food companies, food vending, and distributing operations).

Program Prerequisite(s)

- DIT 1105 - Exploration of the Nutrition & Dietetics Profession AND
- DIT 1525 - Human Nutrition

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- BIO 1107 - Human Biology
- BIO 1108 - Lab for Human Biology
- COM 2211 - Effective Public Speaking
- DIT 1105 - Exploration of the Nutrition & Dietetics Profession
- DIT 1210 - Medical Terminology for Dietetics
- DIT 1525 - Human Nutrition
- DIT 1630 - Nutrition Through the Lifecycle
- DIT 1635 - Community Nutrition
- DIT 2101 - Dining Assistant Dietary Aide
- DIT 2240 - Motivational Interviewing, Nutrition Counseling & Education
- DIT 2305 - Food, Culture & Cuisine
- DIT 2310 - Lab for Food, Culture & Cuisine
- DIT 2505 - Food Science Introductory Foods Lab
- DIT 2510 - Institutional Food Safety & Quantity Food Systems
- DIT 2515 - Foodservice Systems Supervised Practice
- DIT 2520 - Advanced Food Science Lab
- DIT 2625 - Medical Nutrition Therapy I
- DIT 2630 - Medical Nutrition Therapy Clinical I Supervised Practice
- DIT 2735 - Foodservice Retail Business Management & Mid-Program Assessment
- DIT 2740 - Retail Business Management Supervised Practice
- DIT 2845 - Medical Nutrition Therapy II
- DIT 2850 - Medical Nutrition Therapy Clinical II Supervised Practice
- DIT 2855 - Nutrition & Dietetics Program Assessment Capstone
- ENG 1101 - English Composition I

- MAT 1130 - Mathematics in Health Sciences OR
- MAT 1450 - Introductory Statistics

- PSY 1100 - General Psychology

Occupational Therapy Assistant, AAS

Program Code: OTA.S.AAS • Credit Hours: 65

Description

Occupational therapy assistants (OTAs), under the supervision of occupational therapists, provide services to individuals whose abilities to cope with daily tasks are threatened or impaired by developmental deficits, aging, injury or illness. OTAs help people prevent, lessen, or overcome physical, cognitive and/or psychosocial dysfunction so that they are able to function with maximum independence. The program includes extensive clinical training that must be finished within 12 months of completion of the academic course work. A grade of "C" or higher (77%) is required in all program courses to remain in the program. The Occupational Therapy Assistant program is designed to be completed in five (5) semesters on a full-time basis. This degree program consists of open enrollment courses (prerequisite and general education) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses (OTA specific courses). To qualify for entry to limited enrollment courses, please see the OTA Program Information Packet (PDF) located on the webpage (http://www.sinclair.edu/program/params/programCode/OTA-S-AAS/).

Accreditation

The Occupational Therapy Assistant Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at ACOTE c/o AOTA, 7501 Wisconsin Avenue, Suite 510E, Bethesda, MD 20814. AOTA's telephone number is (301)652-6611 and web site is www.acoteonline.org/ The program received a 10-year reaccreditation term in 2021-2022. It is scheduled to be reaccredited in 2031-2032.

Career Opportunities

Occupational therapy assistants work in hospitals, clinics, schools, nursing facilities, group homes, home health agencies and rehabilitation centers.

Program Prerequisite(s)

- ALH 1101 - Introduction to Healthcare Delivery AND
- BIO 1121 - Human Anatomy & Physiology I AND
- ENG 1101 - English Composition I AND
- OTA 1111 - Introduction to Occupational Therapy Assistant AND
- Minimum cumulative GPA of 2.5 AND
- Refer to program website for additional requirements

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery

- ALH 1140 - Fundamentals of Disease Processes OR
- ALH 2220 - Pathophysiology

- BIO 1121 - Human Anatomy & Physiology I
- BIO 1222 - Human Anatomy & Physiology II
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology

- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OTA 1111 - Introduction to Occupational Therapy Assistant
- OTA 1211 - Occupational Therapy Assistant Foundations I
- OTA 1212 - Functional Anatomy
- OTA 1213 - Occupational Therapy & Adults with Physical Dysfunction
- OTA 1214 - Occupational Therapy & Adults with Physical Dysfunction Lab
- OTA 1311 - Occupational Therapy Assistant Foundations II
- OTA 1312 - Occupational Therapy & Human Development
- OTA 1313 - Occupational Therapy & Adults with Neurological Dysfunction
- OTA 1314 - Occupational Therapy & Neurological Dysfunction Lab
- OTA 1315 - Therapeutic Use of Self
- OTA 2412 - Occupational Therapy Assistant & Pediatrics
- OTA 2413 - Occupational Therapy Assistant & Pediatrics Lab
- OTA 2414 - Occupational Therapy Assistant & Psychosocial Dysfunction

- OTA 2415 - Occupational Therapy Assistant & Psychosocial Dysfunction Lab
- OTA 2416 - Occupational Therapy Assistant Level 1 Fieldwork
- OTA 2511 - Occupational Therapy Assistant Level 2 Fieldwork A
- OTA 2512 - Occupational Therapy Assistant Level 2 Fieldwork B
- OTA 2523 - Occupational Therapy Assistant Clinical Issues A
- OTA 2524 - Occupational Therapy Assistant Clinical Issues B
- PSY 1100 - General Psychology
- SOC 2215 - Race & Ethnicity

Physical Therapist Assistant, AAS
Program Code: PTA.S.AAS • Credit Hours: 65
Description
The Physical Therapist Assistant (PTA) program prepares students to provide physical therapy services under the direction and supervision of a physical therapist. The curriculum is divided among general education and technical courses, and includes classroom, laboratory, and clinical education experiences. Upon completion of the PTA program curriculum, the student is awarded the Associate of Applied Science (AAS) degree. Graduates of the program are eligible to take the National Physical Therapy Examination for Physical Therapist Assistants (NPTE-PTA) for licensure. The PTA program is designed to be completed on a full-time basis. The degree program consists of open enrollment courses (prerequisites and general education) and program specific technical courses with limited enrollment. The open enrollment courses may be taken prior to entry into the program technical courses. The PTA program enrolls students through General Admission and Tech Prep pathways. Details on admissions eligibility and processes can be found online in the PTA Program Information Packet. The mission of the PTA program is to provide high quality education to students seeking the opportunity to practice as a physical therapist assistant under the direction and supervision of a physical therapist.
Accreditation
The Physical Therapist Assistant Program at Sinclair Community College is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 3030 Potomac Ave., Suite 100, Alexandria, Virginia 22305-3085; telephone: 703-706-3245; email: accreditation@apta.org; website: http://www.capteonline.org. If needing to contact the program/institution directly, please call 937-512-5355 or email ptaprogram@sinclair.edu.
Career Opportunities
Graduates, once licensed by the State of Ohio, work either full- or part-time under the supervision of a physical therapist in a variety of practice environments, such as outpatient clinics, rehabilitation units in hospitals or nursing homes, assisted living, home health, or school-based programs.
Program Prerequisite(s)

- BIO 1121 - Human Anatomy & Physiology I AND
- ENG 1101 - English Composition I AND
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Math, Statistics, or Logic Elective AND
- PHY 1106 - Physics for Technology AND
- PHY 1107 - Lab for Physics for Technology AND
- PTA 1000 - Introduction to Physical Therapy AND
- The student must be at least 18 years of age by initiation of PTA technical courses AND
- Refer to program website for additional requirements

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 1140 - Fundamentals of Disease Processes OR
- ALH 2220 - Pathophysiology

- BIO 1121 - Human Anatomy & Physiology I
- BIO 1222 - Human Anatomy & Physiology II

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- PHY 1106 - Physics for Technology AND
- PHY 1107 - Lab for Physics for Technology
- PSY 1100 - General Psychology
- PTA 1000 - Introduction to Physical Therapy
- PTA 1005 - Musculoskeletal Anatomy
- PTA 1100 - Professional Issues
- PTA 1105 - Kinesiology
- PTA 1165 - Manual Therapy
- PTA 1215 - Functional Mobility
- PTA 1300 - Pathophysiology for the PTA
- PTA 1325 - Neuropathophysiology
- PTA 1350 - Therapeutic Exercise
- PTA 1375 - Professional Issues II
- PTA 2305 - Neuromuscular Rehabilitation
- PTA 2315 - The Medically Complex Patient
- PTA 2330 - Seminar for Clinical Practicum I
- PTA 2335 - Clinical Practicum I
- PTA 2355 - Physical Agents
- PTA 2365 - Orthopedics
- PTA 2430 - Seminar for Clinical Practicum II
- PTA 2435 - Clinical Practicum II

Precision and CNC Machining, AAS
Program Code: CAMCT.S.AAS • Credit Hours: 63
Description
Graduates of the machining certificate programs are candidates for the completion of this two-year associate degree option. Coursework includes tool and manufacturing processes, computers in engineering technology, quality control, and CNC applications. Facilities and equipment rank among the best in the nation, with more than four million dollars in conventional machining equipment and computer numerical control machines for laboratory use by students.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
Careers are available for CNC operators, precision machining, programmers and process improvement specialists.
Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining
- CAM 1110 - Advanced Machine Operations
- CAM 1111 - Advanced Machine Operations II
- CAM 1116 - Fundamentals of Computer Numerical Control Operations

- CAM 1142 - Advanced Shop Floor Math
- CAM 1214 - Computer Numerical Control Mill Programming
- CAM 2114 - Jig & Fixture Design
- CAM 2145 - Shop Floor Programming
- CAM 2204 - Computer Numerical Control Lathe Programming
- CAM 2212 - Computer Assisted Programming
- CAM 2225 - Tool Design

- CAM 2700 - Computer Aided Manufacturing Internship OR
- CAM 2780 - Computer Aided Manufacturing Capstone

- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- ISE 1300 - Fundamentals of Dimensional Metrology
- ISE 1313 - Coordinate Measurement
- OT36 Arts and Humanities Elective - **3 Cr. Hr.(s)**
- OT36 Social & Behavioral Sciences Elective **- 3 Cr. Hr.(s)**
- MAT 1110 - Math for Technologists

- CAM 1180 - Welding & Metal Joining I OR
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology OR
- ISE 1207 - Introduction to Manufacturing OR
- ISE 2240 - Six Sigma: Green Belt

Quality Engineering Technology, AAS
Program Code: QET.S.AAS • Credit Hours: 63-64
Description
The Quality Engineering Technology (QET) program prepares individuals for quality management, engineering, or technician roles in the areas of business, industry, and service. Students learn Quality Management, Quality Assurance, and Quality Control skills. Competencies include metrology, auditing, data analysis, continuous improvement, and problem-solving techniques that can be applied toward financial, health care, manufacturing, and service/retail fields. Students take part in lecture-lab structured courses and hands-on demonstrations of course principles, ensuring that they will gain practical knowledge as well as the fundamentals. Those who wish to further their studies may transfer to four-year colleges and universities. This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
Career opportunities exist for Quality Technicians, Quality Engineering Technicians and Quality engineers. This degree can be the pathway to multiple career opportunities within the field of Quality.
Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- COM 2211 - Effective Public Speaking
- ECO 2180 - Principles of Microeconomics
- ENG 1101 - English Composition I
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1120 - Problem Solving & Continuous Improvement
- ISE 1130 - Lean Operations & Continuous Improvement
- ISE 1300 - Fundamentals of Dimensional Metrology
- ISE 1310 - Advanced Metrology & Gauging
- ISE 1313 - Coordinate Measurement
- ISE 2100 - Lean Leadership, Teamwork & Management
- ISE 2220 - Applied Statistics for Process Control & Improvement
- ISE 2250 - New Product Realization
- ISE 2310 - Quality Assurance
- ISE 2360 - Quality Management Systems & Auditing

- ISE 2700 - Industrial & Systems Engineering Technology Internship (minimum of 3 credit hours) OR
- ISE 2780 - Industrial & Systems Engineering Technology Capstone

- MAN 2110 - Introduction to Project Management

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- PHY 1141 - College Physics I
- Quality Engineering Technology Elective **3 Cr. Hr(s).** (options listed below)

Quality Engineering Technology Elective

- ISE 1100 - Product Development Fundamentals
- ISE 1201 - Introduction to Manufacturing Safety
- ISE 1202 - Quality Practices & Measurement for Manufacturing
- ISE 1203 - Manufacturing Processes & Production
- ISE 1204 - Maintenance Awareness for Manufacturing
- ISE 1401 - Introduction to Digital Thread Technology
- ISE 1402 - Digital Thread Enabled Manufacturing
- ISE 2208 - Engineering Technology Economics & Cost Analysis
- ISE 2210 - Methods Engineering
- ISE 2240 - Six Sigma: Green Belt

Radiologic Technology, AAS
Program Code: RAT.S.AAS • Credit Hours: 62-63
Description
As a specialized discipline within the radiologic science profession, radiographers perform medical imaging procedures to aid the physician in the diagnosis and treatment of injury and disease. Graduates will be eligible to apply for the national credentialing examination offered by the American Registry of Radiologic Technologists (ARRT). Successful completion of the ARRT credentialing examination simultaneously satisfies the Ohio Department of Health (ODH) Radiologic Licensure Program requirements. The Radiologic Technology program is designed to be completed in five (5) semesters on a full-time basis when the student begins the technical portion of the program. The degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage. Completion of prerequisites and a cumulative GPA of 2.8 is required, as well as a grade of "C" or higher is required in all program courses.
Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.
Accreditation
The Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), located at

20 N. Wacker Drive, Suite 2850, Chicago, IL. 60606-3182. 312-704-5300 mail@jrcert.org or www.jrcert.org

Career Opportunities

A career in Radiologic Technology can lead in many directions. Graduates may find employment in comprehensive hospitals, suburban or rural outpatient centers or physician offices. Completion of this associate degree program can also lead to additional educational opportunities such as higher degree programs in management, education, etc. and advanced imaging programs designed to prepare radiographers for specialization in imaging modalities such as Computed Tomography (CT), Magnetic Resonance Imaging (MRI), etc.

Program Prerequisite(s)

- ALH 1101 - Introduction to Healthcare Delivery AND
- BIO 1107 - Human Biology AND
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology AND
- MAT 1450 - Introductory Statistics OR
- MAT 1470 - College Algebra AND
- RAT 1101 - Introduction to Radiologic Technology
- Approval of Department AND
- Refer to program website for additional requirements.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- BIO 1107 - Human Biology
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology

- MAT 1450 - Introductory Statistics OR
- MAT 1470 - College Algebra
- PSY 1100 - General Psychology OR
- SOC 1101 - Introduction to Sociology
- RAT 1101 - Introduction to Radiologic Technology
- RAT 1111 - Clinical Practicum I
- RAT 1121 - Radiographic Procedures I
- RAT 1131 - Patient Care in Radiologic Technology
- RAT 1212 - Clinical Practicum II
- RAT 1222 - Radiographic Procedures II
- RAT 1241 - Radiologic Sciences I
- RAT 2413 - Clinical Practicum III
- RAT 2415 - Radiographic Pathology
- RAT 2423 - Radiographic Procedures III
- RAT 2429 - Lab for Radiographic Procedures III
- RAT 2442 - Radiologic Sciences II
- RAT 2514 - Clinical Practicum IV
- RAT 2526 - Capstone in Radiologic Technology
- RAT 2543 - Radiologic Sciences III

Real Estate, AAS

Program Code: RES.S.AAS • Credit Hours: 60-61

Description

In the Real Estate degree program, students acquire a variety of skills in selling, marketing, leasing, buying, appraising, investing in and managing real property. Courses are offered which are required by the Ohio Division of Real Estate for persons taking the real estate sales examination.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Employment opportunities include but are not limited to careers in property management, investing, appraising, abstracting, and real estate sales.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting

- BIS 1120 - Introduction to Software Applications

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking

- ECO 2180 - Principles of Microeconomics
- ENG 1101 - English Composition I
- FIN 2450 - Personal Finance
- LAW 1101 - Business Law
- MAN 2150 - Management & Organizational Behavior
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Arts and Humanities Elective **3 Cr. Hr(s).**
- PLS 1232 - State & Local Government
- RES 1101 - Real Estate Principles
- RES 1102 - Real Estate Abstracting
- RES 1201 - Real Estate Law
- RES 1302 - Real Estate Investment: Analysis & Financing
- RES 1402 - Property Management
- RES 1501 - Real Estate Finance & Appraisal
- RES 2170 - Real Estate Internship
- SOC 1101 - Introduction to Sociology
- RES Real Estate Elective **5-6 Cr. Hr(s).** (see options below)

Real Estate Electives

- ACC 1220 - Introduction to Managerial Accounting
- ENT 2140 - Small Business Finance
- MAN 2140 - Human Resource Management
- MRK 2135 - Digital Marketing
- MRK 2225 - Sales Fundamentals

Respiratory Care, AAS

Program Code: RET.S.AAS • Credit Hours: 65

Description

Respiratory care practitioners are responsible for the prevention, treatment, management and rehabilitation of patients of all ages with deficiencies or abnormalities associated with the cardiopulmonary system. The Respiratory Care program is designed to be completed in five (5) semesters (excluding prerequisites), on a full-time basis. The degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the web page. A cumulative GPA of 2.5 is required and an overall grade point average of at least 2.0 is necessary for continuance in the program and graduation.

Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Program Outcomes

To prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by Registered Respiratory Therapists (RRTs).

- **Cognitive** - Demonstrate the ability to comprehend, apply and evaluate information relevant to the job description of a registered respiratory therapist.
- **Psychomotor** - Perform all prescribed therapeutic modalities and diagnostic procedures relevant to the job description of a registered respiratory therapist.
- **Affective** - Demonstrate personal behaviors and attitudes consistent and appropriate to the registered respiratory therapist.
- **Communication** - Acknowledge the influence of diversity on patients, families and the health care team and be able to listen and effectively communicate both verbally and nonverbally.

Accreditation

The program is fully accredited by the Commission on Accreditation for Respiratory Care (CoARC), www.coarc.com. For further information regarding the Sinclair College respiratory care program outcomes data, please visit the CoARC website. Upon completion of the program the graduate is eligible for the national credentialing examinations provided by the National Board for Respiratory Care (NBRC). Graduates will also be eligible for a license to practice in the State of Ohio via the State Medical Board of Ohio. In addition, graduates meet the requirements for licensure in other states.

Career Opportunities

Respiratory Care is a growing profession with opportunities for graduates to work with newborn, children, adult and geriatric patients in hospitals/acute care setting, long-term facilities, home care/durable medical equipment companies and physician offices.

Program Prerequisite(s)

- BIO 1107 - Human Biology AND
- CHE 1111 - Introduction to Chemistry I AND
- HIM 1101 - Medical Terminology AND
- RET 1100 - Introduction to Respiratory Care AND
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective AND
- Refer to program website for additional requirements

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- BIO 1107 - Human Biology
- CHE 1111 - Introduction to Chemistry I
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology
- RET 1100 - Introduction to Respiratory Care
- RET 1101 - Respiratory Care Fundamentals I
- RET 1102 - Lab for Respiratory Care Fundamentals I
- RET 1124 - Cardiopulmonary Pharmacology I
- RET 1125 - Respiratory Care Sciences
- RET 1201 - Respiratory Care Fundamentals II
- RET 1202 - Lab for Respiratory Care Fundamentals II
- RET 1203 - Respiratory Care Clinic I
- RET 1205 - Cardiopulmonary Disease Processes
- RET 1301 - Respiratory Care Fundamentals III
- RET 1303 - Respiratory Care Clinic II
- RET 2101 - Critical Care I
- RET 2102 - Lab for Critical Care I
- RET 2103 - Respiratory Care Clinic III
- RET 2124 - Cardiopulmonary Pharmacology II
- RET 2201 - Critical Care II
- RET 2202 - Lab for Critical Care II
- RET 2203 - Respiratory Care Clinic IV
- RET 2204 - Respiratory Care Clinic V
- RET 2220 - Respiratory Care Emergency Preparedness
- RET 2222 - Lab for Respiratory Care Emergency Preparedness
- RET 2250 - Pediatrics & Neonatology

Secure System Administration, AAS

Program Code: NEMA.S.AAS • Credit Hours: 61

Description

Students are prepared in problem solving, designing and documenting programs, system and network administration, and computer operating systems. Students learn to manage and configure computers, using various operating systems, to provide critical network services to diverse clients in a secure manner. Security concepts that are vendor neutral and applicable to all system types are discussed; those concepts are then applied to specific systems using various operating systems. The overall objective, to securely and efficiently administer networked systems of client and server machines, is emphasized throughout.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Students learn to manage and configure computers, using various operating systems, to provide critical network services to diverse clients in a secure manner. Security concepts that are vendor neutral and applicable to all system types are discussed; those concepts are then applied to specific systems using various operating systems. The overall objective to configure high standards of system and network security is emphasized throughout. Increased recognition of the need for secure systems and networks has provided significantly increased opportunities for those prepared to work in this field.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1105 - IT Fundamentals OR
- BIS 1120 - Introduction to Software Applications
- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CIT 2510 - Microsoft Windows Server Operating System
- CIT 2515 - Windows Network Infrastructure
- CIT 2520 - Windows Server Advanced Services
- CIT 2550 - Linux Operating System

- CIT 2630 - Securing a Windows Network Environment OR
- CIT 2650 - Ethical Hacker

- CIT 2640 - Network Security
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 1140 - Information Systems Analysis & Design
- CSC 2165 - Database Management

- CIT 2270 - Computer Information Technology Internship OR

- CIT 2178 - Computer Information Technology Capstone
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ECO 1100 - Introduction to Economics OR
- ECO 2160 - Principles of Macroeconomics

- ENG 1101 - English Composition I
- MAN 2150 - Management & Organizational Behavior
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

- OT36 Arts and Humanities Elective **3 Cr. Hr(s).**
- SCC 1101 - First Year Experience

Supply Chain Management, AAS
Program Code: SCM.S.AAS • Credit Hours: 60
Description
The Supply Chain Management degree provides a broad-based study of organizational strategic plans, resources, roles, responsibilities, and functions, while also focusing on management of supply chain activities. This study involves consideration and application of processes to develop coordinated supplier-to-customer systems, including: identifying needs for raw materials, supplies, and components; developing specifications; computing quantity requirements; selecting sources and negotiating agreements; acquiring, transporting, and storing inventory; managing and maintaining operations; and logistics management.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Accreditation
This program is fully accredited by the Accreditation Council for Collegiate Business Schools and Programs (ACBSP), a specialized accreditation recognized by the Council on Higher Education Accreditation (CHEA).
Career Opportunities
SCM specialists have opportunities for management positions at all levels in virtually every type of business, throughout small and medium-sized businesses, corporations, industries, nonprofit organizations and government agencies. SCM involves coordinating supplier-to-customer systems, including: identifying the need for materials, computing quantity requirements, selecting sources and negotiating agreements, and logistics and transportation management.
Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- BIS 1230 - Spreadsheet Software
- COM 2225 - Small Group Communication

- ECO 2160 - Principles of Macroeconomics OR
- ECO 2180 - Principles of Microeconomics

- ENG 1101 - English Composition I
- ENG 1131 - Business Writing
- HUM 1130 - Humanity & the Challenge of Technology
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1130 - Lean Operations & Continuous Improvement
- ISE 2240 - Six Sigma: Green Belt
- LAW 1101 - Business Law OR
- LAW 1102 - Consumer Law OR
- LAW 1104 - Employment Law
- MAN 1106 - Introduction to Radio Frequency Identification
- MAN 1157 - Management Applications of Radio Frequency Identification Technology
- MAN 2101 - Introduction to Supervision OR
- MAN 2140 - Human Resource Management
- MAN 2110 - Introduction to Project Management
- MAN 2144 - Negotiation Techniques
- MAN 2150 - Management & Organizational Behavior
- MAN 2159 - Supply Chain Management Concepts & Applications
- MAN 2270 - Management Internship OR
- MAN 2279 - Business Management Capstone
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

Surgical Technology, AAS
Program Code: SUT.S.AAS • Credit Hours: 60
Description
The Surgical Technology program at Sinclair Community College has been CAAHEP approved since 1998 and offers the opportunity to prepare for a career as a member of a surgical team.
A surgical technologist works together with the surgeon, registered nurse, and anesthesiologist as a member of the surgical team. To ensure proper surgical case management, the surgical technologist prepares and passes all sterile instruments during the surgical procedure while maintaining the sterile field and anticipating the needs of the surgeon.
The surgical technologist helps to meet the needs of patients in the operating rooms of hospitals, ambulatory surgery centers, physician offices, diagnostic facilities and other agencies where surgery is performed.
The Surgical Technology program is designed to be completed in five (5) semesters on a full-time basis. The degree program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. A cumulative GPA of 2.5 is required, as well as a grade of "C" or higher in all program courses.
The program includes both didactic instruction and supervised clinical practice in all areas required by the ARC/STSA (in collaboration with CAAHEP). Supervised clinical practice in area operating rooms include participating in procedures in general surgery, obstetrics and gynecology, ophthalmology, otorhinolaryngology, plastic surgery, urology, orthopedics, neurosurgery, thoracic surgery, cardiovascular, and peripheral vascular surgery.
Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.
Accreditation
Accredited by CAAHEP (Commission on Accreditation of Allied Health Education Programs), Sinclair's Surgical Technology program provides students with the opportunity to work as a Certified Surgical Technologists. In this program, students will be required to complete the academic classroom requirements, but will also have the opportunity to gain valuable supervised clinical practice. As part of the curriculum, the students will rotate through the clinical affiliates as scheduled in the course sequence. The standard surgical rotation case requirements that students must achieve is 120 cases, following the Core Curriculum for Surgical Technology, 6e

(CCST6e). Students are required to complete a minimum of thirty (30) cases in General Surgery, twenty (20) of which should be in the First Scrub Role. In addition, students are required to complete a minimum of ninety (90) cases in various surgical specialties. Sixty (60) of those cases should be in the first scrub role and evenly, but not necessarily equally distributed between a minimum of four (4) surgical specialties.

Career Opportunities

A Surgical Technologist helps to meet the surgical needs of patients in the operating rooms in a variety of different environments. Employment may be found in hospital operating rooms, same day surgery centers, labor and delivery units, endoscopy units, and many other settings where invasive therapeutic or diagnostic surgical procedures are performed. Surgical Technologists may also be employed privately by a surgeon or by surgeon group practices that have specialized teams.

Program Prerequisites

- ALH 1101 - Introduction to Healthcare Delivery AND
- BIO 1121 - Human Anatomy & Physiology I AND
- ENG 1101 - English Composition I AND
- HIM 1101 - Medical Terminology AND
- MAT 1130 - Mathematics in Health Sciences AND
- Restricted to Majors AND
- Refer to program website for additional requirements.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 2201 - Survey of Drug Therapy
- BIO 1121 - Human Anatomy & Physiology I
- BIO 1222 - Human Anatomy & Physiology II
- BIO 2205 - Microbiology
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology
- MAT 1130 - Mathematics in Health Sciences
- PSY 1100 - General Psychology
- SUT 1110 - Theory & Fundamentals
- SUT 1117 - Laboratory for Theory & Fundamentals
- SUT 1120 - The Surgical Process
- SUT 1127 - Lab for the Surgical Process
- SUT 2110 - Surgical Procedures I
- SUT 2117 - Directed Practice for Surgical Procedures I
- SUT 2120 - Surgical Procedures II
- SUT 2127 - Directed Practice for Surgical Procedures II
- SUT 2200 - Surgical Procedures III
- SUT 2207 - Directed Practice for Surgical Procedures III
- SUT 2300 - Surgical Technology Review

Sustainability and Energy Management Technology, AAS

Program Code: EGMT.S.AAS • Credit Hours: 60-64

Description

This program provides students with the skills and knowledge to work in the emerging fields of sustainability and energy management, with an emphasis on performance of energy audits and improving building energy efficiency. Upon completing this program, students will have the ability to perform energy audits, assess energy efficiency and control strategies for energy-consuming equipment, and prepare sustainability and energy management plans for various built environment applications.

Career Opportunities

Students can find employment assessing various aspects of building performance, and planning for sustainable design and operation of facilities.

Program Requirements

- CAT 1100 - Introduction to the Built Environment
- CAT 1111 - Mechanical Systems Print Reading
- COM 2211 - Effective Public Speaking
- EGV 1100 - Sustainability in the Built Environment
- EGV 1301 - Sustainable Architecture
- EGV 2700 - Energy Management Technology Internship
- EGV 2780 - Energy Management Technology Capstone
- ENG 1101 - English Composition I
- HVA 1201 - Basic HVAC Systems with Cooling
- HVA 1221 - Heating Systems
- HVA 1261 - HVAC Loads & Distribution for Small Buildings
- HVA 1352 - Psychrometrics, Health & Comfort in HVAC

- MAT 1200 - Technical Mathematics OR
- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- PHY 1106 - Physics for Technology AND
- PHY 1107 - Lab for Physics for Technology OR
- PHY 1141 - College Physics I

- OT36 Arts and Humanities Elective **3 Cr. Hr(s).**
- OT36 Social and Behavioral Sciences Elective **3 Cr. Hr(s).**
- Technical Electives **14 Cr. Hr(s).** (see options below)

Technical Electives

- CAT 1121 - Architectural Graphics II
- CAT 1131 - Introduction to Revit MEP
- CAT 2431 - OSHA Construction Standards
- EGV 1101 - Alternate & Renewable Energy Sources
- EGV 1251 - Introduction to Energy Management Principles
- EGV 1401 - Weatherization & Building Performance Training
- EGV 2101 - Solar Photovoltaic Design & Installation
- EGV 2151 - Solar Thermal Systems
- EGV 2201 - Electrical Lighting & Motors
- EGV 2251 - Energy Control Strategies
- EGV 2301 - Commercial & Industrial Assessment
- EGV 2700 - Energy Management Technology Internship

Unmanned Aerial Systems, AAS

Program Code: UAS.S.AAS • Credit Hours: 60-64

Description

The Unmanned Aerial Systems (UAS) degree program prepares students for entry level positions in the UAS industry by providing foundational knowledge and skills in UAS mission planning, applications, maintenance, laws and regulations, and data analytics, and project management using UAS platforms. Program content includes an introduction to UAS flight, history, avionics, sensors, communications systems and selectable paths including Data Analysis and applications such as First Responders, Geographic Information Systems, Precision Agriculture, and Entrepreneurship. Students will prepare for and conduct unmanned flights similar to those commonly performed in the industry observing Federal Aviation Administrations (FAA) regulations that govern UAS operations. This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

The Sinclair Unmanned Aerial Systems Associate of Applied Science degree will produce graduates who will serve the immediate Dayton area, broader region, and nationally. Graduates of the associate degree program from Sinclair Community College will contribute to filling the current and growing need within the state of Ohio and nation for unmanned aerial systems related applications such as Geographic Information, Data Analytics, First Responders and Precision Agriculture.

Program Requirements

- AVT 1101 - Introduction to Unmanned Aerial Systems
- AVT 1103 - Remote Pilot Ground School
- AVT 1104 - UAS Standards, Regulations & Law
- AVT 1109 - UAS Remote Sensing & Analysis
- AVT 1110 - Private Pilot Ground School
- AVT 1119 - Aviation Meteorology
- AVT 1130 - Basic Aviation Electricity I
- AVT 1158 - Aerospace Spatial Visualization
- AVT 1246 - Air Traffic Control Communications
- AVT 2150 - Crew Resource Management for UAS
- AVT 2151 - UAS Operations I
- AVT 2221 - UAS Sensors & Systems
- AVT 2240 - Human Factors in Aviation
- AVT 2279 - Unmanned Aerial Systems Project
- AVT 2280 - Introduction to UAS Maintenance
- COM 2211 - Effective Public Speaking
- ECO 2160 - Principles of Macroeconomics
- ENG 1101 - English Composition I

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- MET 1131 - Personal Computer Applications for Engineering Technology
- PHY 1141 - College Physics I

- AVT 2700 - Aviation Internship OR
- AVT UAS Elective **1-2 Cr. Hr(s).**

  Choose one of the following pathways -- 9 - 11 Cr. Hr(s) (see options below)
- Data Analytics Pathway
- Entrepreneurship Pathway
- First Responders Pathway
- Geographic Information Pathway
- Precision Agriculture Pathway

Data Analytics Pathway

- AVT 1120 - Electro-Optical & Infrared Data Analysis
- AVT 1121 - Multispectral & Hyperspectral Data Analysis
- AVT 1122 - Synthetic Aperture Radar & Light Detection & Ranging Data Analysis
- AVT 1123 - Acoustic & CBRNE Data Analysis
- GEO 1107 - Introduction to Geographic Information Systems (GIS)

Entrepreneurship Pathway

- AVT 1115 - Introduction to UAS Entrepreneurship
- AVT 2115 - UAS Entrepreneurship Capstone
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business

First Responders Pathway

- AVT 1108 - UAS First Responder Applications
- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1155 - Homeland Security Issues & Administration
- EMS 1100 - Emergency Medical Responder Lecture & Laboratory

Geographic Information Pathway

- AVT 1114 - Geospatial Information for UAS
- CAT 1501 - Fundamentals of Surveying & Mapping
- GEO 1107 - Introduction to Geographic Information Systems (GIS)

Precision Agriculture Pathway

- AVT 1112 - UAS Precision Agriculture
- AGR 1160 - Introduction to Agriculture Science
- AGR 1300 - Agronomy
- AGR 1503 - Agricultural Economics

User Support, AAS

Program Code: USSU.S.AAS • Credit Hours: 62

Description

Students learn hardware and software troubleshooting, personal computer and system maintenance, and documentation, and are prepared in logical problem solving, designing and documenting programs, computer and network operating systems, and business applications using current computer languages.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Career Opportunities

Computer support specialists provide help and advice to people and organizations using computer software or equipment. Computer network support specialists support information technology (IT) employees within their organization, while computer user support specialists assist non-IT users who are having computer problems.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1105 - IT Fundamentals OR
- BIS 1120 - Introduction to Software Applications

- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CIT 1500 - A+ Hardware & Software
- CIT 1510 - Windows Client Operating System
- CIT 2427 - IoT Fundamentals
- CIT 2640 - Network Security
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 1140 - Information Systems Analysis & Design
- CSC 2165 - Database Management
- Computer Information Technology Electives **6 Cr. Hr(s).** (see options below)

- CIT 2178 - Computer Information Technology Capstone OR
- CIT 2270 - Computer Information Technology Internship

- COM 2211 - Effective Public Speaking OR

- COM 2225 - Small Group Communication

- ECO 1100 - Introduction to Economics OR
- ECO 2160 - Principles of Macroeconomics

- ENG 1101 - English Composition I
- MAN 2150 - Management & Organizational Behavior
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

- OT36 Arts and Humanities Elective **3 Cr. Hr(s).**

Computer Information Technology Electives

- CSC 1202 - C++ Software Development
- CSC 1350 - Web Site Development with HTML & CSS
- CSC 2212 - Java Software Development I
- CSC 2268 - Structured Query Language (SQL) Programming
- CIT 2510 - Microsoft Windows Server Operating System
- CIT 2515 - Windows Network Infrastructure
- CIT 2520 - Windows Server Advanced Services
- CIT 2550 - Linux Operating System

Veterinary Technology, AAS

Program Code: VET.S.AAS • Credit Hours: 64

Description

The Veterinary Technology Program consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. Most open enrollment courses must be taken prior to entry into the limited enrollment courses. To be considered for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage. A graduate from this program will be eligible to sit for the Veterinary Technician National Exam (VTNE.) Those graduates who pass this exam with a score of 75% or better will be eligible to register with the Ohio Veterinary Medical Licensing Board in order to practice within the State of Ohio.

NOTE: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

The Sinclair College Veterinary Technology Program is fully accredited by the American Veterinary Medical Association Committee on Veterinary Technician Education and Activities (AVMA CVTEA), effective March 28, 2019.

Career Opportunities

The Associate of Applied Science degree in Veterinary Technology is designed to train Veterinary Technicians to assist Veterinarians in animal hospitals, laboratory research centers, referral centers, zoos, etc. A registered veterinary technician (RVT) is responsible for assisting the veterinarian in a general practice and performing essential animal care tasks. His or her job duties may include, but are not limited to: performing dental cleanings and radiologic procedures; surgical and anesthetic assistance; diagnostic laboratory techniques; IV catheter placement; patient monitoring; inventory control; and office staff management. In addition, this degree can be a stepping-stone to a 4-year degree at another institution, and eventually to Veterinary School (an additional 4-year program). This program provides training in animal husbandry and restraint, nursing, surgical preparation and techniques, drug administration, anesthesia, anatomy, laboratory techniques, and radiography. Preceptorships at various private practices and research institutions provide valuable on-the-job training. The veterinarians of the Miami Valley anticipate a need of nearly 60 registered veterinary technicians for hire annually for at least the next 5 years. This program is unique in that it places students within veterinary hospitals very early in the course of study, allowing students and hospitals alike to determine what the "best fit" will be for them within the hospital environment. Nearly all students are offered one or more jobs prior to the completion of the program.

Program Prerequisite(s)

- ALH 1101 - Introduction to Healthcare Delivery

- BIO 1121 - Human Anatomy & Physiology I AND
- BIO 1222 - Human Anatomy & Physiology II
  OR
- BIO 1141 - Principles of Anatomy & Physiology I AND
- BIO 1242 - Principles of Anatomy & Physiology II

- BIO 2205 - Microbiology
- BIO 2206 - Lab for Microbiology
- CHE 1111 - Introduction to Chemistry I
- CHE 1151 - Lab for Introduction to Chemistry I

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking

- ENG 1101 - English Composition I

- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Math, Statistics, or Logic Elective AND

- PSY 1100 - General Psychology
- VET 1000 - Introduction to Veterinary Medicine
- VET 1102 - Topics in Veterinary Technology
- VET 1107 - Topics in Veterinary Medicine Laboratory
- VET 2008 - Veterinary Assisting Laboratory
- VET 2108 - Veterinary Technical Practice I
- Approval of Department

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery

- BIO 1121 - Human Anatomy & Physiology I AND
- BIO 1222 - Human Anatomy & Physiology II
  OR
- BIO 1141 - Principles of Anatomy & Physiology I AND
- BIO 1242 - Principles of Anatomy & Physiology II

- BIO 2205 - Microbiology
- BIO 2206 - Lab for Microbiology
- CHE 1111 - Introduction to Chemistry I
- CHE 1151 - Lab for Introduction to Chemistry I
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology

- VET 1000 - Introduction to Veterinary Medicine
- VET 1102 - Topics in Veterinary Technology
- VET 1107 - Topics in Veterinary Medicine Laboratory
- VET 2005 - Veterinary Terminology & Ethics
- VET 2008 - Veterinary Assisting Laboratory
- VET 2104 - Animal Husbandry & Disease
- VET 2106 - Comparative Anatomy & Physiology
- VET 2107 - Veterinary Technical Practice II
- VET 2108 - Veterinary Technical Practice I
- VET 2110 - Veterinary Parasitology
- VET 2111 - Large Animal Husbandry & Veterinary Techniques
- VET 2113 - Laboratory for Comparative Anatomy & Physiology
- VET 2114 - Exotic & Pocket Pet Health & Disease
- VET 2115 - Veterinary Anesthesia & Surgical Skills
- VET 2116 - Large Animal Husbandry & Disease Laboratory
- VET 2117 - Laboratory for Veterinary Anesthesia & Surgical Skills
- VET 2205 - Veterinary Dentistry, Advanced Radiology & Diagnostics
- VET 2207 - Veterinary Technical Practice III
- VET 2211 - Veterinary Case Studies
- VET 2217 - Veterinary Dentistry, Radiology, & Diagnostics Laboratory
- VET 2250 - Veterinary Pharmacology
- VET 2300 - Preceptorship
- VET 2301 - Veterinary Technician National Exam Preparation

Visual Communications, AAS

Program Code: VIS.S.AAS • Credit Hours: 64-65

Description

The program prepares students for careers in visual communication which is creative, fast paced and in demand by most businesses. Students will develop the knowledge and technical skills necessary to create both printed and digital design work. This includes the design of stationery, brochures, magazines, advertising, packaging, signage, web pages, interactive media and other pieces. Creativity, problem solving and the design process are stressed. Advanced computer skills, portfolio development and job-seeking strategies are also incorporated into the curriculum.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.

Accreditation

Sinclair Community College has been accredited by the National Association of Schools of Art and Design (NASAD) since 2002.

Career Opportunities

Visual Communications graduates typically pursue careers as graphic designers (print) or digital designers (interactive/web) in design studios, advertising agencies, web firms, magazine and book publishing companies, printing companies or corporate design departments. Some graduates choose to continue their education in design or a related field at a four-year institution.

Program Requirements

- ART 2230 - Art History: Ancient through Medieval Periods OR
- ART 2231 - Art History: Renaissance through Contemporary Periods
- ART 1161 - Black & White Darkroom Photography I OR
- ART 2265 - Digital Color Photography
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- MAT 1110 - Math for Technologists OR
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology
- VIS 1100 - Design Foundations
- VIS 1140 - Design Processes I
- VIS 1150 - Design Processes II
- VIS 1180 - History & Theory of Graphic Design
- VIS 1210 - Design Drawing
- VIS 1220 - Typographic Design
- VIS 1250 - Print Production
- VIS 2110 - Design Principles
- VIS 2120 - Design Applications I
- VIS 2160 - Design Applications II
- VIS 2260 - Design Portfolio
- Visual Communications Elective **3-4 Cr. Hr(s).** (see options below)

Visual Communications Electives

- ART 1101 - 2-D Foundations
- ART 1102 - 3-D Foundations
- ART 1111 - Drawing I
- ART 1141 - Ceramics I
- ART 2235 - History of Photography
- ART 2236 - History of Women Artists
- ART 2237 - History of American Art
- ART 2238 - History of African Art
- CSC 1350 - Web Site Development with HTML & CSS
- IND 1180 - History & Theory of Interior Design
- IND 1230 - Residential Design
- IND 1240 - Color Theory
- IND 2135 - Rendering
- MAN 1107 - Foundations of Business
- MRK 2100 - Foundations of Marketing
- MRK 2102 - Principles of Advertising
- MRK 2135 - Digital Marketing
- MRK 2145 - Principles of Retailing
- MRK 2220 - Small Business Marketing
- MRK 2225 - Sales Fundamentals
- VIS 1420 - Video Production
- VIS 2270 - Design Internship

Advanced PM/CNC Machining, CRT

Program Code: CAMAPM.S.CRT • Credit Hours: 30

Description

This program provides any student, whether working full time, raising a family, or going to college, the ability to pursue the exciting and in-demand career of Precision/CNC machining. Recent events have shown that these careers are essential in nature and can offer employment when others do not. Starting from basic machining through advanced machining, close tolerance grinding, introduction into the world of CNC and Conversational programming, the production of detail parts ,and then their fit and assembly into a working product. This program will ready the student for a wide variety of manufacturing careers through the development of the skills and traits that manufacturers are looking for. This program can be started in any semester.

Career Opportunities

Careers are available for entry-level in a wide variety of manufacturing careers which include, but are not limited to, the machining and tool-and-die industries.

Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining
- CAM 1110 - Advanced Machine Operations
- CAM 1116 - Fundamentals of Computer Numerical Control Operations
- CAM 1142 - Advanced Shop Floor Math
- CAM 1214 - Computer Numerical Control Mill Programming
- CAM 2145 - Shop Floor Programming
- ISE 1300 - Fundamentals of Dimensional Metrology
- ISE 1313 - Coordinate Measurement
- MAT 1110 - Math for Technologists

Advanced Quality, CRT

Program Code: ADQ.S.CRT • Credit Hours: 33-35

Description

This advanced certificate will provide the student with the Basic Quality Certificate and then advance them further in the Quality field covering Advanced Metrology and Gauging used in various fields. Quality Assurance and Quality Control principles will be introduced to include the elements of different inspection categories, material conformance, sampling techniques, traceability methods, and the relationship to PPAP/First Article submission. The last major components of this certificate are Quality Management Systems & Auditing as it relates to industry standards such as ISO, TS, FDA, and the Medical Device industries.

Career Opportunities

Quality is in everything we do and the need for Quality technicians and personnel is growing every day. The courses in this certificate will give the student an upper-level hands-on experience of what it takes to work with many of the requirements of today's Quality technicians and managers.

Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1120 - Problem Solving & Continuous Improvement
- ISE 1300 - Fundamentals of Dimensional Metrology
- ISE 1310 - Advanced Metrology & Gauging
- ISE 1313 - Coordinate Measurement
- ISE 2100 - Lean Leadership, Teamwork & Management
- ISE 2310 - Quality Assurance
- ISE 2360 - Quality Management Systems & Auditing

- MAT 1470 - College Algebra OR
- MAT 1570 - Analytic Geometry & Trigonometry

Advanced Video Production, CRT

Program Code: VIDP.S.CRT • Credit Hours: 32

Description

This one-year certificate introduces students to video production, including lighting and cinematography, motion design, video editing, and audio production. Students will learn the design process, including use of digital photography, appropriate applications; and, video and audio equipment to create quality videos.

Career Opportunities

There are various career paths in video production. You could work in television, advertising, or news reporting. You also could apply your skills in education, government, or business industries. Within these settings, you could hold positions in a variety of positions, such as a video editor, camera operator, audio editor, live stream operator, or motion graphics. There are also freelance videographer opportunities.

Program Requirements

- ART 2265 - Digital Color Photography
- VIS 1100 - Design Foundations
- VIS 1140 - Design Processes I
- VIS 1210 - Design Drawing
- VIS 1410 - History & Theory of Video Production
- VIS 1420 - Video Production
- VIS 1430 - Lighting & Cinematography
- VIS 1440 - Sound Design
- VIS 2130 - Motion Design

Advanced Web Design, CRT

Program Code: WEBDES.S.CRT • Credit Hours: 32

Description

This one-year certificate introduces students to web coding and design, including conceptualizing, designing, developing, and maintaining websites. Students will also learn UX/UI, motion design, and working with a web content management tool. Students will learn a variety of web concepts and digital design applications.

Career Opportunities

Web designers develop, create, and test website or interface layout, functions, and navigation for usability. Web Designers typically work for corporations across industries, but they can also work for web design agencies or as self-employed individuals. They work closely with software and marketing professionals to make sure websites are designed coded correctly. Still others work in industries including publishing, management consulting, and advertising.

Program Requirements

- CSC 1350 - Web Site Development with HTML & CSS
- VIS 1100 - Design Foundations
- VIS 1140 - Design Processes I
- VIS 1150 - Design Processes II
- VIS 1310 - History & Theory of Web Design
- VIS 1320 - User Experience/User Interface
- VIS 1330 - Web Design
- VIS 2130 - Motion Design
- VIS 2170 - Web Content Management

Agribusiness Greenhouse Management, CRT

Program Code: AGM.S.CRT • Credit Hours: 33

Description

The Agribusiness Greenhouse Management certificate will prepare students for a successful business career in industries related to the food and agricultural system including input markets, farm production, greenhouse management, food manufacturing and distribution, and food and plant retailing. This program provides a broad-based study of the successful production of food, plants, and other agricultural products and will help students develop the skills for decision making and an understanding of the agricultural-food system dynamics. Upon completion, students will have the knowledge to enhance their contributions to agricultural enterprises or initiate their own entrepreneurial ventures.

Career Opportunities

Job opportunities for this certificate include greenhouse manager, farm manager, grain and livestock buyer, crop producer, marketing head, quality controller, urban landscaper, inventory technician, landscape enhancement manager, landscape technician, etc.

Program Requirements

- AGR 1201 - Horticulture I

- AGR 1202 - Science of Soil
- AGR 1203 - Trees & Shrubs
- AGR 1204 - Plant Propagation
- AGR 1205 - Greenhouse Management
- AGR 1206 - Horticulture II
- AGR 1208 - Sustainable Landscape Design
- AGR 1209 - Greenhouse Management Capstone
- AGR 1504 - Management & Supervision in Agriculture

- AGR 1500 - Foundations of Agricultural Business OR
- MAN 1107 - Foundations of Business

- AGR 1501 - Agricultural Finance for Small Business OR
- ENT 2140 - Small Business Finance

Agricultural Technology, CRT
Program Code: AGR.S.CRT • Credit Hours: 31
Description
The certificate will prepare students for employment in various areas of agriculture. Completers of this certificate will gain additional expertise in areas including agronomy, large animal science, agricultural economics, retail and customer service.
Career Opportunities
Potential employment in agriculture includes agricultural technician, farm operations, farm retail, farm bureau representative or farm assistant.
Program Requirements

- AGR 1160 - Introduction to Agriculture Science

- AGR 1300 - Agronomy OR
- AGR 1110 - Introduction to Large Animal Sciences: Handling & Husbandry
- BIS 1120 - Introduction to Software Applications
- BIS 1400 - Customer Service
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- MAN 1107 - Foundations of Business
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- OT36 Arts and Humanities Elective **3 Cr. Hr(s).** OR
- OT36 Natural and Physical Sciences Elective **3 Cr. Hr(s).**

- LAW 1101 - Business Law AND
- AGR 1111 - Principles of Large Animal Reproduction AND
- AGR 1112 - Principles of Large Animal Nutrition

Airframe Aviation Maintenance, CRT
Program Code: AAM.S.CRT • Credit Hours: 30
Description
This program is one of two Sinclair certificate programs (GAM.S.STC & AAM.S.CRT) needed to qualify the student for the Federal Aviation Administration (FAA) Airframe (A) certificate. To become an Aviation Maintenance Technician (AMT), two ratings are required, the Airframe (A) and the Powerplant (P); this is commonly referred to as an "A&P Certificate". Subjects include assembling and rigging, metallic and non-metallic structures, fuel systems, electrical power production and distribution, instruments, communication/navigation systems, cabin atmospheric control systems, landing gear, hydraulics and pneumatics, fire protection systems, aircraft finishing, ice protection systems and welding inspections. Students will learn to apply the knowledge and skills they have learned with extensive hands-on training in the aviation maintenance lab. Sinclair is an FAA-approved Aviation Maintenance Technician School (AMTS) under Part 147.
Career Opportunities
The Aviation industry is experiencing a pressing shortage of aviation mechanics. In its most recent pilot and technician outlook report, issued in 2020, Boeing estimated that 739,000 new technicians would be needed worldwide during the next 20 years, much of it due to the large number of recent and upcoming retirements in the field...that includes 192,000 new technicians needed in North America.
Program Requirements

- AVT 1106 - Airframe Safety Systems
- AVT 1107 - Fuel Systems
- AVT 1133 - Instruments/Communications
- AVT 1136 - Sheet Metal
- AVT 1214 - Cabin Atmospheric Control
- AVT 1218 - Utility Systems
- AVT 2121 - Assembly & Rigging
- AVT 2132 - Airframe Electrical Systems
- AVT 2236 - Non-Metallic Structures

Architectural Design Technician, CRT
Program Code: ARCD.S.CRT • Credit Hours: 34
Description
This program helps students develop residential and commercial architectural design skills. Design courses are combined with construction materials and building systems courses, providing a broad foundation for entry level architectural design work. Students will receive training to help them create and understand architectural drawings as well as proper use of building materials and components. Upon completion, students will be able to utilize various design and analysis software to assist with the development of architectural projects.
Career Opportunities
Graduates are employed as designers and drafters for architectural and design-build firms. Many opportunities also exist in the building materials and assemblies' sales and supply area.
Program Requirements

- CAT 1101 - Architectural Graphics I
- CAT 1121 - Architectural Graphics II
- CAT 1201 - Construction Methods & Materials
- CAT 1241 - Building Systems
- CAT 1341 - Architectural Design I
- CAT 2101 - Architectural Design II
- CAT 2201 - Architectural Visualization
- CAT 2431 - OSHA Construction Standards
- EGV 1301 - Sustainable Architecture
- IND 1234 - Materials & Textiles
- VIS 1140 - Design Processes I

Architectural Project Technician, CRT
Program Code: ARCP.S.CRT • Credit Hours: 30
Description
This program is designed to build skills required for managing architectural projects in a variety of professional settings. Students will receive training to help them understand architectural practice, including an understanding of building materials and components, the financial aspects of project management, and the management skills necessary to deal with the diverse population of the industry. Upon completing this program, students will be qualified to move into project management positions in architecture and similar businesses.
Career Opportunities

Graduates are employed as project managers in the architecture and construction industry. Many opportunities exist in the building materials and assemblies sales and supply area.

Program Requirements

- CAT 1101 - Architectural Graphics I
- CAT 1201 - Construction Methods & Materials
- CAT 1241 - Building Systems
- CAT 2431 - OSHA Construction Standards
- CAT 2401 - Construction Project Management
- CAT 2610 - Stakeholders & Participants for Design & Construction Projects
- CAT 2620 - Construction Documents, Legal Requirements, & Project Delivery
- CAT 2630 - Architectural Practice Project Deliverables & Contractual Obligations
- CAT 2640 - Construction Project Change Management
- COM 2211 - Effective Public Speaking
- EGV 1301 - Sustainable Architecture
- ENG 1101 - English Composition I

Automotive Technology, CRT

Program Code: AUT.S.CRT • Credit Hours: 37

Description

The Automotive Certificate program is designed for students who want to become automotive technicians without pursuing an associate degree. Students will expand their knowledge of the automotive service industry and secure employment with dealerships, independent service shops, machine shops and other corporate service jobs. .

Career Opportunities

Career opportunities are available in positions for automotive service technicians in dealerships, independent shops and automotive machine shops. In addition, graduates are also employed as service managers, shop foremen, parts managers, sales representatives or automotive instructors. Graduates with practical experience, education, willingness to work and a high degree of professionalism may expect to find jobs in middle management or research occupations within major automotive corporations.

Program Requirements

- AUT 1102 - Introduction to Automotive Service
- AUT 1108 - Automotive Engine Systems
- AUT 1114 - Automotive Electrical/Electronic Systems I
- AUT 1115 - Automotive Engine Performance I
- AUT 1116 - Automotive Steering & Suspension Systems
- AUT 1142 - Automotive Manual Transmission & Driveline
- AUT 1146 - Automotive Heating Ventilation & Air Conditioning Systems
- AUT 1165 - Automotive Brake Systems
- AUT 2214 - Automotive Electrical/Electronic Systems II
- AUT 2215 - Automotive Engine Performance II
- AUT 2241 - Automatic Transmission Systems

Bakery Operations and Pastry Skills, CRT

Program Code: BOP.S.CRT • Credit Hours: 35

Description

This one year certificate focuses on basic baking as well as advanced techniques including bread making, pastry, and confections (such as chocolate work, sugar sculptures, and more).

Career Opportunities

This certificate provides career opportunities in businesses that specialize in Breads, Fine Pastries, Chocolates, Candy's, restaurants, and the opportunity to be self-employed.

Program Requirements

- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication

- ENG 1101 - English Composition I
- HMT 1102 - Kitchen Chemistry
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1126 - Baking I, II, & Barista Basics
- HMT 2110 - Pastry & Confectionary
- HMT 2118 - Artisan Breads
- HMT 2201 - Food Service Equipment, Design & Maintenance
- HMT 2215 - Hospitality Cost Controls
- HMT 2225 - Hospitality & Tourism Supervision
- MAT 1125 - Math for the Culinary Arts & Baking & Pastry Arts Professional

Basic Manufacturing, CRT

Program Code: BMFG.S.CRT • Credit Hours: 31

Description

This certificate in Basic Manufacturing prepares the student for entry level positions in any of the following five: General Manufacturing, Computer Aided Manufacturing, Automation Technology, Mechanical Engineering Technology, and Industrial Engineering Technology. Completion of this certificate prepares the student to earn the Industry Recognized MSSC - Certified Production Technician Certificate.

Career Opportunities

Basic Manufacturing prepares the student for entry level positions in any of the five areas within General Manufacturing, Computer Aided Manufacturing, Automation Technology, Mechanical Engineering Technology, and Industrial Engineering Technology. Completion of this certificate prepares the student to earn the Industry Recognized MSSC - Certified Production Technician Certificate.

Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining
- CAM 1116 - Fundamentals of Computer Numerical Control Operations
- EGR 1106 - Basic Mechanical & Electrical Skills
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1201 - Introduction to Manufacturing Safety
- ISE 1202 - Quality Practices & Measurement for Manufacturing
- ISE 1203 - Manufacturing Processes & Production
- ISE 1204 - Maintenance Awareness for Manufacturing
- MET 1131 - Personal Computer Applications for Engineering Technology
- MET 1161 - Software Tools for Engineering Technology
- MET 1231 - Introduction to Engineering Design Using 3D CAD

Bioscience Lab Skills, CRT

Program Code: BLS.S.CRT • Credit Hours: 30-32

Description

The Bioscience Lab Skills certificate will prepare students for internships and some entry level jobs in bioscience laboratories. The students will learn the background of the biotechnology industry, basic lab safety and regulation, and the practical math needed to calculate reagents, dilutions and sample analysis.

Program Requirements

- BIO 1107 - Human Biology AND
- BIO 1108 - Lab for Human Biology
- BIO 1111 - General Biology I AND
- BIO 1117 - Lab for General Biology I OR
- BIO 1171 - Principles of Biology I
- BIS 1120 - Introduction to Software Applications
- BTN 1110 - Biotechnology & Bioethics
- BTN 1120 - Laboratory Safety & Regulatory Compliance
- BTN 1130 - Biological Reagents Preparation
- BTN 1131 - Lab for Biological Reagents Preparation
- BTN 1201 - Biotechnology Careers
- CHE 1111 - Introduction to Chemistry I AND
- CHE 1151 - Lab for Introduction to Chemistry I OR
- CHE 1211 - General Chemistry I AND
- CHE 1251 - Lab for General Chemistry I
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- MAT 1470 - College Algebra

Business Foundations Specialist, CRT
Program Code: BFS.S.CRT • Credit Hours: 33

Description
This certificate takes the Entrepreneurship and Business Foundations STC one step further by preparing existing or potential entrepreneurs with background issues in skills such as customer service and negotiation techniques by addressing the application of basic principles of negotiation through the introduction and analysis of the negotiation process, case studies, and simulations. This certificate contains foundational courses that apply towards AAS in Business Management/Entrepreneurship.
Career Opportunities
Students completing this certificate can expect to be prepared to begin their own business or to work in larger companies in an entrepreneurial role.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- BIS 1400 - Customer Service
- CJS 1106 - Transition Skills

- ENG 1131 - Business Writing OR
- MAN 2150 - Management & Organizational Behavior

- ENT 2140 - Small Business Finance
- ENT 2160 - Business Plan Development
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAN 2144 - Negotiation Techniques
- MRK 2220 - Small Business Marketing

- COM 2206 - Interpersonal Communication OR
- SOC 1101 - Introduction to Sociology OR
- PSY 1100 - General Psychology

Business Information Systems/Information Processing, CRT
Program Code: BUIP.S.CRT • Credit Hours: 30
Description
This one-year certificate is intended to provide advanced software application training necessary to work improve efficiency and productivity and aid in business decision making.
Career Opportunities
Employment opportunities are available in many types of businesses, including banks, insurance offices, advertising agencies, manufacturing companies, small to large businesses and educational facilities.
Program Requirements

- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- BIS 1201 - Keyboarding & Document Formatting
- BIS 1220 - Word Processing Software
- BIS 1230 - Spreadsheet Software
- BIS 1240 - Presentation Software
- BIS 1250 - Specialized Business Software Application
- BIS 1260 - Database Software
- BIS 1400 - Customer Service
- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I

Business Information Systems/Medical Office Specialist, CRT
Program Code: BUMS.S.CRT • Credit Hours: 32
Description
In this one-year certificate, students will work with various software applications, learn medical terminology, and take medical office and customer service courses that prepare them to work in a medical office environment.
Career Opportunities
Employment opportunities include medical office receptionists, secretaries, billing/insurance clerks, and medical office administrators in physician's offices, urgent care centers, managed care organizations, laboratories, nursing homes and hospitals.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- BIS 1201 - Keyboarding & Document Formatting
- BIS 1220 - Word Processing Software
- BIS 1230 - Spreadsheet Software
- BIS 1260 - Database Software
- BIS 1400 - Customer Service
- BIS 2180 - Medical Office Simulation
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology
- MAN 1107 - Foundations of Business OR
- MAN 2150 - Management & Organizational Behavior
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

Business Management, CRT
Program Code: BM.S.CRT • Credit Hours: 30
Description
Students gain an understanding of business procedures to prepare them for a management position or update the management skills of those currently employed in a managerial, administrative or office support role.
Career Opportunities
Students completing this certificate can expect to be prepared to work as supervisors or entry-level managers in retail, manufacturing or medium and small businesses.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2211 - Effective Public Speaking
- ECO 1100 - Introduction to Economics OR
- ECO 2180 - Principles of Microeconomics

- ENG 1131 - Business Writing

- MRK 2100 - Foundations of Marketing OR
- MRK 2101 - Principles of Marketing Management

- MAN 1107 - Foundations of Business
- MAN 1110 - International Business
- MAN 2101 - Introduction to Supervision
- MAN 2150 - Management & Organizational Behavior

- Business Management Elective **3 Cr. Hr(s).** (options list below)

Business Management Electives

- ENT 2140 - Small Business Finance
- ENT 2160 - Business Plan Development
- MAN 1106 - Introduction to Radio Frequency Identification
- MAN 1157 - Management Applications of Radio Frequency Identification Technology
- MAN 2110 - Introduction to Project Management
- MAN 2140 - Human Resource Management
- MAN 2144 - Negotiation Techniques
- MAN 2159 - Supply Chain Management Concepts & Applications
- MRK 2102 - Principles of Advertising
- MRK 2135 - Digital Marketing
- MRK 2145 - Principles of Retailing
- MRK 2220 - Small Business Marketing
- MRK 2225 - Sales Fundamentals

Business Transfer, CRT

Program Code: BUS.S.CRT • Credit Hours: 30

Description

This certificate is designed for the student who desires to complete Transfer Assurance Guide (TAG) courses to transfer into a four-year business program. This certificate can be used to help students from non-business backgrounds begin preparation for entrance into a Masters of Business Administration (MBA) program by packaging the prerequisite business core courses into a convenient certificate offering. Additionally, students wanting to pursue a two-year business degree or needing to augment current work skills with academic credentials may find this certificate beneficial.

Career Opportunities

Employers more often than in the past require four-year business degrees or evidence that students are in the process of earning these credentials. This certificate serves as a credentialing tool for students to use in their career search, as well as, for currently employed students to show further evidence of growth and academic progress toward a bachelor's degree in business.

Program Requirements

- ACC 1210 - Introduction to Financial Accounting
- ACC 1220 - Introduction to Managerial Accounting
- BIS 1120 - Introduction to Software Applications
- ECO 2160 - Principles of Macroeconomics
- ECO 2180 - Principles of Microeconomics
- ENG 1131 - Business Writing
- LAW 1101 - Business Law
- MRK 2101 - Principles of Marketing Management
- OT36 Arts and Humanities Elective **3 Cr. Hr(s).**
- OT36 Social and Behavioral Sciences Elective **3 Cr. Hr(s).**

Community and Public Services Specialist, CRT

Program Code: CSS.S.CRT • Credit Hours: 30

Description

The certificate takes the Social Service Assistant certificate one step further by preparing students to work in a variety of settings.

Career Opportunities

Community and Social Service Specialist fob duties typically include working under the supervision of a program director, director of social services, social worker, or similar title.

Program Requirements

- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1106 - Transition Skills
- CJS 2145 - Correctional Case Management
- CJS 2200 - Human Relations, Mediation & Conflict Resolution

- BIS 1120 - Introduction to Software Applications OR
- BIS 1400 - Customer Service

- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary OR
- PSY 1100 - General Psychology OR
- SOC 1101 - Introduction to Sociology

- CJS 1165 - Corrections OR
- SOC 2130 - Sociology of Family Violence OR
- SOC 2205 - Social Problems

- CJS 2111 - Ethics & Professionalism in Criminal Justice OR
- SOC 1145 - Introduction to Cultural Anthropology

- ENG 1131 - Business Writing OR
- MAN 1107 - Foundations of Business OR
- MAN 2150 - Management & Organizational Behavior

- LAW 1101 - Business Law OR
- SOC 2226 - Criminology

Community Health Worker, CRT

Program Code: AHCN.S.CRT • Credit Hours: 30-31

Description

The Community Health Worker program curriculum is designed to prepare the student for employment as community health workers, patient navigators, and health insurance navigators. The aim of this certificate is to provide individuals with the expertise and experience in assisting individuals and communities to navigate the U.S. community health, health care and health insurance systems. The certificate offers a combination of classroom, lab and practical training that will help the student succeed in their future career. A portion of this program will involve 210 hours of non-paid practice at various facilities. A State and Federal Background check will be required prior to starting the clinical practice.

Career Opportunities

Community Health Workers will be educated to obtain the expertise and experience in assisting individuals and communities to navigate the U.S. community health, health care, and health insurance systems, as well as to improve the equality and cultural competence of service delivery and accomplish personal prevention and health care goals.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 1105 - Overview of Holistic Health
- ALH 1107 - Core Concepts of Public Health
- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I

- HIM 1101 - Medical Terminology
- MHT 1101 - Introduction to Mental Health Services
- PSY 1100 - General Psychology
- PSY 2200 - Lifespan Human Development

- BIO 1107 - Human Biology OR
- BIO 1121 - Human Anatomy & Physiology I
- ALH 1102 - Basic Healthcare Practices & Medical Scribe OR
- ALH 1120 - Nurse Aide Training OR
- MAS 1102 - Clinical Medical Assisting I

Community Service Support, CRT
Program Code: SWT.S.CRT • Credit Hours: 33
Description
Students gain a better understanding of various sociological topics and how social problems can impact their communities. This certificate provides the knowledge and skills to provide assistance to Social Work and Social Service Professionals in the field and may perform duties such as providing information or referring individuals to public or private agencies for assistance, interviewing individuals or family members to compile information on social, educational, criminal, institutional, or substance abuse history; and advising clients regarding food stamps, child care, and transportation. Job duties may include transportation, visitation supervision, documentation, detention monitoring, school enrollments etc. This certificate is especially pertinent to students who may have dealt with personal and family problems and want to use their experience knowledge and passion to help others avoid the mistakes they made, which lead them to prison.
Career Opportunities
A graduate of the Community Service Support certificate is employable at a number of social service agencies, in the role of a case aide or monitor. Job duties may include transportation, visitation monitoring, school enrollment, detention monitoring etc. A student who continues with their education can achieve a degree in the Community and Public Service AAS or an AA in Social Work with additional coursework.
Program Requirements
- BIS 1120 - Introduction to Software Applications OR
- BIS 1400 - Customer Service

- CJS 1106 - Transition Skills
- CJS 2200 - Human Relations, Mediation & Conflict Resolution
- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary
- MHT 2138 - Ethical Issues in the Helping Professions
- OT36 Arts and Humanities **3 Cr. Hr.(s)**
- SOC 1101 - Introduction to Sociology
- SOC 1145 - Introduction to Cultural Anthropology
- SOC 2205 - Social Problems
- SOC 2226 - Criminology
- SWK 1206 - Introduction to Social Work

Computer Support Technician, CRT
Program Code: SUP.S.CRT • Credit Hours: 31
Description
Computer Support Technicians provide first level support for users on computers, software, mobile devices and other devices connected to a network. Students will learn to provide technical support and problem-solving of operating systems, computer networks, software applications, and will utilize interpersonal communication and customer service fundamentals. Students will have the opportunity to earn A+ certification, Microsoft Office Specialist (MOS) certifications and customer service certification in specific courses in the curriculum.
Career Opportunities
Program prepares students to for entry-level positions as computer support technician, desktop support technician, IT help desk technician/representative, customer support specialist, technical support specialist, or IT service desk specialist/technician.
Program Requirements
- BIS 1120 - Introduction to Software Applications
- BIS 1201 - Keyboarding & Document Formatting
- BIS 1230 - Spreadsheet Software
- BIS 1260 - Database Software
- BIS 1400 - Customer Service
- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CIT 1500 - A+ Hardware & Software
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1131 - Business Writing

Corrections, CRT
Program Code: COR.S.CRT • Credit Hours: 33
Description
This certificate is designed to provide the student with the basics necessary for entry-level employment in a correctional environment. All courses can be applied to the Associate of Applied Science Degree in Corrections, if desired.
Career Opportunities
There are openings in local and state correctional facilities, local nonprofit agencies providing correctional services, as well as employment through private prison corporations.
Program Requirements
- BIS 1120 - Introduction to Software Applications
- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1103 - Constitutional Law & Evidentiary Procedures
- CJS 1105 - Criminal Law
- CJS 1110 - Interrogation, Documentation & Testimony

- CJS 1165 - Corrections OR
- CJS 1197 - Corrections Full Service Jails/Basic Correction Officer Academy

- CJS 2111 - Ethics & Professionalism in Criminal Justice
- CJS 2200 - Human Relations, Mediation & Conflict Resolution

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking

- ENG 1101 - English Composition I
- SOC 1101 - Introduction to Sociology

CPA Exam Eligibility: Business Component, CRT
Program Code: CPABUS.S.CRT • Credit Hours: 30
Description
In order to be eligible to sit for the CPA examination in the state of Ohio, a candidate must fulfill the basic requirements in both business and accounting courses. This certificate is designed for the student to obtain the business courses necessary to sit for the CPA exam. It will provide the pathway for a student who has earned a non-business bachelor's degree to transition to a career in accounting.
Career Opportunities

Employment opportunities in addition to accounting firms, exist in private business and industry as well as not-for profit and governmental organizations. Positions available to graduates include staff accountant, cost accountant, payroll accountant, auditor, tax accountant and financial analyst.

Program Prerequisite

- *Students must have obtained a bachelor's degree to be eligible to pursue this certificate.*

Program Requirements

- ACC 1210 - Introduction to Financial Accounting
- ACC 1220 - Introduction to Managerial Accounting
- BIS 1120 - Introduction to Software Applications
- ECO 2160 - Principles of Macroeconomics
- ECO 2180 - Principles of Microeconomics
- LAW 1101 - Business Law
- MRK 2101 - Principles of Marketing Management
- MAN 2150 - Management & Organizational Behavior
- Accounting Elective **6 Cr. Hr(s).** (options listed below)

Accounting Electives

- BIS 1260 - Database Software
- CIT 1107 - Introduction to Operating Systems
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CIT 1130 - Network Fundamentals
- CSC 1350 - Web Site Development with HTML & CSS
- ENT 2140 - Small Business Finance
- FIN 2450 - Personal Finance
- MAN 2110 - Introduction to Project Management
- MAN 2140 - Human Resource Management
- MAN 2144 - Negotiation Techniques
- MRK 2135 - Digital Marketing
- MRK 2225 - Sales Fundamentals

Culinary Management, CRT

Program Code: CM.S.CRT • Credit Hours: 31

Description

This certificate takes the Food Production Specialist short-term certificate one step further by preparing students for management positions in the catering and food service industry. This certificate highlights customer service skills by incorporating concepts of the American business system and basic principles of the free market system along with fundamental tenets necessary for understanding management, motivation, and behavior in organizational settings. This certificate contains foundational courses that apply towards an Associate of Applied Science in Hospitality Management and Tourism/Culinary Arts.

Career Opportunities

The restaurant industry is open to ex-offenders and is one of the fastest growing fields in the service sector of a global economy, 16.5 million people are currently working in this industry

Program Requirements

- BIS 1120 - Introduction to Software Applications
- BIS 1400 - Customer Service
- CJS 1106 - Transition Skills

- ENG 1131 - Business Writing OR
- MAN 2150 - Management & Organizational Behavior

- HMT 1101 - Basic Culinary Skills
- HMT 1102 - Kitchen Chemistry
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1112 - Food Principles & Basic Preparation
- HMT 2215 - Hospitality Cost Controls
- MAT 1120 - Business Mathematics

Culinary Skills and Food and Beverage Operations, CRT

Program Code: CSFO.S.CRT • Credit Hours: 36

Description

This program focuses on back-of-the-house talents in culinary arts as well as the skills necessary to operate and oversee front-of-house tasks in most food and beverage operations.

Career Opportunities

This certificate provides career opportunities in the businesses of food trucks, restaurants, college and university food outlets, as well as hospital food outlets, grocery stores, and more, and the opportunity to be self-employed. This certificate is not only skills-oriented but also has supervisory components as well.

Program Requirements

- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication

- ENG 1101 - English Composition I
- HMT 1101 - Basic Culinary Skills
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1110 - Menu Planning & Table Service Practicum
- HMT 1112 - Food Principles & Basic Preparation
- HMT 1125 - Beverage Management
- HMT 1129 - Restaurant Desserts
- HMT 2201 - Food Service Equipment, Design & Maintenance
- HMT 2207 - Butchery & Fish Management
- HMT 2215 - Hospitality Cost Controls
- HMT 2225 - Hospitality & Tourism Supervision
- MAT 1125 - Math for the Culinary Arts & Baking & Pastry Arts Professional

Cyber Investigation, CRT

Program Code: CYSEC.S.CRT • Credit Hours: 33-34

Description

Students will learn computer network protection, maintenance and usage of computer hardware and software, management of networks and operating systems, and criminal and constitutional law, and IT criminal investigation, which includes evidence procedures and computer forensics.

Career Opportunities

The Cyber Investigation Certificate will prepare students for careers in the areas of computer network protection, managing networks and operating systems and IT criminal investigation, which includes evidence procedures and computer forensics. Job titles include but are not limited to: Intelligence Analyst, IT Specialist (Government Breakout Codes 2210), Systems Administrator, Network Engineer, Information System Security Manager, Cyber Security Incident Response Specialist and Private Investigator.

Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals

- CIT 1500 - A+ Hardware & Software OR
- CIT 2550 - Linux Operating System

- CIT 2640 - Network Security

- CIT 2808 - Introduction to Computer Forensics
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 2165 - Database Management
- CJS 1103 - Constitutional Law & Evidentiary Procedures
- CJS 2111 - Ethics & Professionalism in Criminal Justice
- CJS 2209 - Computer Crime
- CJS 2295 - Criminal Justice Science Seminar

Data Analytics, CRT
Program Code: DA.S.CRT • Credit Hours: 33
Description
This certificate prepares students for entry-level data analytics positions requiring knowledge, setup and usage of business intelligence and data analysis solutions. Data analytics is expanding in businesses, government agencies and not-for-profit organizations, enabling them to make better decisions utilizing appropriate data and information. Students will have the ability to structure data and prepare reports in a way that is meaningful to business, government agency and not-for-profit organization users. Course work will include database concepts, data modeling, SQL, data analysis, data mining tools, mathematical and statistical techniques, project management and systems analysis. Emphasis is placed on strong communication skills necessary to interact with key users and understand their requirements.
Career Opportunities
Employment opportunities in IT include entry-level positions such as software developers, web developers, help desk analysts, network administrators, user support specialists, network security analysts and network engineers.
Program Requirements
- BIS 1120 - Introduction to Software Applications
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 1140 - Information Systems Analysis & Design
- CSC 2165 - Database Management
- CSC 2268 - Structured Query Language (SQL) Programming
- CSC 2269 - Data Analytics Theory & Solutions
- CSC 2270 - Computer Science Internship
- MAT 1455 - Introduction to Data Science
- MAT 2170 - Business Statistics I
- MAT 2180 - Business Statistics II

Data Literacy Foundation, CRT
Program Code: DL.S.CRT • Credit Hours: 32
Description
This certificate will prepare students to work in a business setting and assist a data technician or data scientist with data management. Students will learn how to collect, interpret, analyze, and turn raw data into meaningful, actionable insights. Students will gain the programming, math, visualization, and technical skills needed to solve specific problems and challenges within an organization. A data literate person has the ability to read, work with, analyze, and argue with data.
Career Opportunities
Career opportunities include the following: Data Analyst, Business Analyst, Data Analytics Manager, Business Intelligence Analyst, and Data Mining Specialist.
Program Requirements
- BIS 1120 - Introduction to Software Applications
- BIS 1230 - Spreadsheet Software
- CIT 1130 - Network Fundamentals
- CSC 1160 - Introduction to Data Literacy
- CSC 2165 - Database Management
- CSC 2265 - Data Visualization with Tableau
- CSC 2266 - Python for Data Analytics
- CSC 2267 - Advanced Python for Data Analytics
- CSC 2268 - Structured Query Language (SQL) Programming
- MAT 1455 - Introduction to Data Science

Digital Engineering for Aerospace, CRT
Program Code: DEA.S.CRT • Credit Hours: 30
Description
The Digital Engineering for Aerospace One-Year Technical Certificate introduces the concept and importance of digital engineering for the aerospace industry. Digital engineering related benefits, challenges, tools, and best practices relevant to aerospace applications are explored.
Career Opportunities
The application of digital engineering knowledge and best practices, complimented by technical knowledge, requires Unmanned Aerial Systems (UAS), Advanced Air Mobility (AAM), and broader aerospace industry focuses that are driven by rapid advances in technology and regulation. Students completing this certificate will be prepared for success as they seek to establish and grow their own ventures or support an established organization.
Program Requirements
- AVT 1130 - Basic Aviation Electricity I
- AVT 1300 - Digital Engineering Aerospace Tools
- AVT 1301 - Digital Engineering Aerospace Applications
- BIS 1010 - Digital Thread Data Management
- CIT 1010 - Digital Thread Cyber Security
- ENG 1101 - English Composition I
- ISE 1401 - Introduction to Digital Thread Technology
- ISE 1402 - Digital Thread Enabled Manufacturing
- MAN 1010 - Digital Thread Enhanced Logistics
- MAT 1470 - College Algebra

- MET 1131 - Personal Computer Applications for Engineering Technology OR
- MET 1161 - Software Tools for Engineering Technology

Digital Marketing, CRT
Program Code: MRK.S.CRT • Credit Hours: 30
Description
Digital Marketing professionals are essential in helping businesses and organizations establish and cultivate a strong Internet presence. Students will develop a basic understanding of critical components of a digital marketing campaign such as marketing technologies, advertising and public relations, sales fundamentals and lead generation, customer engagement and social media, as well as marketing segmentation tools. Students will have the opportunity to learn new media theories and marketing approaches while gaining hands on experience with digital marketing tools.
Career Opportunities
Digital marketing specialists have opportunities for marketing communications, technical and management positions at all levels of virtually every type of business including small and medium-sized businesses, advertising agencies, global corporations, non-profit organizations, and even government agencies.
Program Requirements
- CSC 1350 - Web Site Development with HTML & CSS OR
- VIS 1310 - History & Theory of Web Design

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR

- COM 2225 - Small Group Communication

- ENG 1131 - Business Writing
- MAN 1107 - Foundations of Business

- MRK 2100 - Foundations of Marketing OR
- MRK 2101 - Principles of Marketing Management

- MRK 2135 - Digital Marketing
- MRK 2230 - Social Media & Consumer Engagement
- MRK 2236 - Consumer Behavior
- MRK 2250 - Digital Marketing Analytics

Choose one marketing elective from the following:

- MRK 2102 - Principles of Advertising OR
- MRK 2145 - Principles of Retailing OR
- MRK 2225 - Sales Fundamentals OR
- COM 2201 - Introduction to Mass Communication OR
- COM 2286 - Public Relations Principles

Energy Technology, CRT
Program Code: ENRGY.S.CRT • Credit Hours: 30-31
Description
This program is intended for students who are interested in an entry-level position in the field of energy services. This program consists of HVAC, energy analysis and management, energy services and renewable energies courses.
Career Opportunities
Energy technicians who can perform energy audits and test structures for energy efficient characteristics are in increasing demand.
Program Requirements

- CAT 1111 - Mechanical Systems Print Reading
- CAT 1601 - Building Electric & Controls
- EGV 1100 - Sustainability in the Built Environment
- EGV 1101 - Alternate & Renewable Energy Sources
- EGV 1251 - Introduction to Energy Management Principles
- EGV 1301 - Sustainable Architecture
- EGV 1401 - Weatherization & Building Performance Training
- EGV 2700 - Energy Management Technology Internship
- HVA 1201 - Basic HVAC Systems with Cooling
- HVA 1221 - Heating Systems
- HVA 1261 - HVAC Loads & Distribution for Small Buildings

Entrepreneurship, CRT
Program Code: ENT.S.CRT • Credit Hours: 33
Description
This certificate prepares existing or potential entrepreneurs in a wide variety of small business functions. In addition to traditional management courses, the following key areas are emphasized for entrepreneurs: financial plan development, marketing plan development and business plan development.
Career Opportunities
Students completing this certificate can expect to be prepared to begin their own businesses or to work in larger companies in an entrepreneurial role.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication OR
- COM 2286 - Public Relations Principles
- ENG 1131 - Business Writing
- ENT 2140 - Small Business Finance
- ENT 2160 - Business Plan Development
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAN 2144 - Negotiation Techniques
- MAN 2150 - Management & Organizational Behavior
- MRK 2220 - Small Business Marketing

- MRK 2100 - Foundations of Marketing OR
- MRK 2101 - Principles of Marketing Management OR
- MRK 2135 - Digital Marketing

Fine Art Photography, CRT
Program Code: PHOT.S.CRT • Credit Hours: 30
Description
The Fine Art Photography Certificate is designed for the student seeking a career as a fine artist. The certificate serves as a stand-alone program of study for individuals wishing to open photography studios or as a complementary base for students intending to complete the Associate of Arts, Art degree and continue their studies at four-year colleges and universities. The certificate ensures students gain a strong visual knowledge of current and historical photographic mediums. Students are exposed to studio photography, studio lighting techniques, alternative processes, darkroom-based and digital photography. This program maintains a strong foundation in film-based processes and darkroom printing techniques. The student will learn to operate small format 35mm, medium format 120, large format manual film cameras as well as digital camera operation. Basic computer imaging techniques will also be addressed.
Career Opportunities
The Fine Art Photography Certificate prepares students to open their own photography studios or to transition into the Associate of Arts, Art degree program, where upon completion, they may continue their studies at four-year colleges, universities, or standalone art schools.
Program Requirements

- ART 1161 - Black & White Darkroom Photography I
- ART 1162 - Black & White Darkroom Photography II
- ART 1170 - Alternative Photographic Processes
- ART 1171 - Studio Photography
- ART 1175 - Computer Photography
- ART 2235 - History of Photography
- ART 2265 - Digital Color Photography
- ART 2294 - Photography Portfolio Development
- CHE 1011 - Chemistry in Modern Life for General Education AND
- CHE 1051 - Lab for Chemistry in Modern Life for General Education

- MAT 1110 - Math for Technologists OR
- MAT 1130 - Mathematics in Health Sciences OR
- MAT 1445 - Quantitative Reasoning

Food Service Management, CRT
Program Code: FSM.S.CRT • Credit Hours: 35
Description
The Food Service Management certificate program combines classroom instruction and laboratory experience in food preparation and service for the restaurant and hotel/lodging industry.
Career Opportunities
The Food Service Management certificate program is designed to provide the initial knowledge for a student to begin at a management trainee level within a corporate or franchise food service operation. With further training

and experience, the student should be able to accept more responsibility at a store manager's level.

Program Prerequisite(s)

- HMT 1107 - Sanitation & Safety

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- ENG 1101 - English Composition I
- HMT 1101 - Basic Culinary Skills
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1110 - Menu Planning & Table Service Practicum
- HMT 1112 - Food Principles & Basic Preparation
- HMT 2225 - Hospitality & Tourism Supervision
- HMT 2226 - Hospitality Purchasing & Negotiations
- MAT 1125 - Math for the Culinary Arts & Baking & Pastry Arts Professional
- PSY 1100 - General Psychology OR
- SOC 1145 - Introduction to Cultural Anthropology

Health Information Management Technician, CRT

Program Code: HIMT.S.CRT • Credit Hours: 30

Description

The Health Information Management Technician certificate prepares students to work in a medical office setting. This certificate will focus on preparing students for an entry-level office position in a medical facility where basic electronic health record technology, medical terminology, medicolegal principles and revenue-cycle principles are utilized. A grade of "C" or higher is required in all courses to receive the certificate.

Career Opportunities

Healthcare record scanners, record clerks, receptionists, medicolegal technicians, patient-registration clerks, long-term care HIM positions, hospice HIM positions, insurance companies and healthcare facilities clerk.

Program Requirements

- BIO 1121 - Human Anatomy & Physiology I
- BIO 1222 - Human Anatomy & Physiology II
- BIS 1221 - Specialized Computer Applications for Health Information Management
- HIM 1101 - Medical Terminology
- HIM 1110 - Health Information Processing
- HIM 1165 - Drug Classification for Coding
- HIM 1201 - Introductory Medical Office Coding
- HIM 1204 - Medicolegal & Ethics in Healthcare Records
- HIM 2145 - Health Information Resource Management
- HIM 2165 - Healthcare Data in Reimbursement
- HIM 2233 - Healthcare Information Systems

Histotechnology Post Associate Certificate, CRT

Program Code: HT.S.CRT • Credit Hours: 32

Description

The one-year post-associate degree certificate program in Histotechnology (HT) prepares students to enter the workforce as Histotechnicians. In this profession, graduates will be specialized clinical laboratory professionals who work in a hospital laboratory setting processing patient tissue samples onto microscopic slides for pathologists to examine for diagnostic or research purposes.

To enroll in this program, students must possess an associate degree from an accredited institution. This certificate program includes open enrollment courses (general education and division-specific) and limited-enrollment program-specific courses. Open enrollment courses can be completed before starting the limited-enrollment portion. Students are allowed up to three attempts to successfully complete all required general education courses. Withdrawals (W) or failures (grades D or F) are considered an attempt. After three unsuccessful attempts, students are no longer eligible to enter or continue in the program. Important Note: Students under the age of 18 may face restrictions when enrolling in certain Health Sciences programs. If you are under 18, please contact the program director or department chair to discuss your eligibility for enrollment.

Accreditation

Accreditation with the National Accrediting Agency for Clinical Laboratory Science (NAACLS) is currently in process.

Career Opportunities

Histology Technicians have a unique combination of theoretical and technical skills that make them employable in a number of job environments including hospital laboratories, clinics, research laboratories, industry, sales, technical support, administration and education. Employment of clinical laboratory technologists and technicians is projected to grow 5 percent from 2022 to 2032, faster than the average for all occupations. About 24,000 openings for clinical laboratory technologists and technicians are projected each year, on average, over the decade. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire. Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Clinical Laboratory Technologists and Technicians, at https://www.bls.gov/ooh/healthcare/clinical-laboratory-technologists-and-technicians.html (visited September 14, 2023).

Program Pre-requisite(s)

- ALH 1101 - Introduction to Healthcare Delivery AND
- BIO 1121 - Human Anatomy & Physiology I AND
- CHE 1111 - Introduction to Chemistry I AND
- CHE 1151 - Lab for Introduction to Chemistry I AND
- Associate degree or higher from regionally accredited institution AND
- Minimum GPA of 2.7 AND
- Pass a criminal background check AND
- Students cannot be colorblind for this certificate AND
- Vaccines required for practicum

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- BIO 1121 - Human Anatomy & Physiology I
- BIO 1222 - Human Anatomy & Physiology II
- CHE 1111 - Introduction to Chemistry I AND
- CHE 1151 - Lab for Introduction to Chemistry I
- CLT 2720 - Histology Techniques
- CLT 2723 - Lab for Histology Techniques
- CLT 2730 - Special Staining in Histology
- CLT 2733 - Lab for Special Staining in Histology
- CLT 2740 - Histology Topics I
- CLT 2743 - Lab for Histology Topics I
- CLT 2910 - Histology Topics II
- CLT 2913 - Lab for Histology Topics II
- CLT 2990 - Histology Practicum
- MAT 1450 - Introductory Statistics

Hospitality Leadership and Administration, CRT

Program Code: HLA.S.CRT • Credit Hours: 30

Description

The Hospitality Leadership and Administration one-year certificate is designed for those desiring to become a supervisor in hospitality operations. This one year certificate will benefit those interested in

hospitality supervision, the calculations of cost control, front of the house menu planning and dining, POS systems, and more. There will also be other opportunities to obtain additional certificates through the National Restaurant Associations Managed First program.

Career Opportunities

This certificate provides career opportunities in the businesses of Hospitality Operations such all segments of food and restaurant industry, meeting & event planning, and lodging operations.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1110 - Menu Planning & Table Service Practicum
- HMT 1125 - Beverage Management
- HMT 2215 - Hospitality Cost Controls
- HMT 2225 - Hospitality & Tourism Supervision
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

HVAC Light Commercial & Residential Service, CRT

Program Code: LCHS.S.CRT • Credit Hours: 30-31

Description

This program is intended for entry-level students or residential service technicians desiring careers as light commercial HVAC service technicians. This program is a hands-on troubleshooting and service program geared to the light commercial HVAC industry including convenience stores, restaurants, strip malls and any other type of small business concern. Students learn the basics of heating, cooling, distribution and control of these HVAC systems. The hands-on component uses the types of equipment installed in the field.

Career Opportunities

Students find work as service technicians, control technicians, or performing installation work for commercial and residential contractors.

Program Requirements

- CAT 1111 - Mechanical Systems Print Reading
- CAT 1601 - Building Electric & Controls
- CAT 2431 - OSHA Construction Standards
- COM 2211 - Effective Public Speaking
- HVA 1100 - Introduction to HVAC Technology & Controls OR
- MAT 1110 - Math for Technologists
- HVA 1201 - Basic HVAC Systems with Cooling
- HVA 1221 - Heating Systems
- HVA 1241 - HVAC Installation Techniques & Practices
- HVA 1261 - HVAC Loads & Distribution for Small Buildings
- HVA 1401 - HVAC Mechanical & Electrical Troubleshooting
- MET 1131 - Personal Computer Applications for Engineering Technology
- HVAC Light Commercial & Service Elective **-- 2 Cr. Hrs.** (options listed below)

HVAC Electives

- CAT 1201 - Construction Methods & Materials
- CAT 1401 - Construction Cost Estimating
- CAT 1741 - Residential Electrical Systems
- CIT 1411 - Introduction to Networks
- EGV 1100 - Sustainability in the Built Environment
- EGV 1251 - Introduction to Energy Management Principles
- EGV 1301 - Sustainable Architecture
- EGV 1401 - Weatherization & Building Performance Training
- EGV 2700 - Energy Management Technology Internship
- HVA 2700 - HVACR Engineering Technology Internship
- HVA 1800 series courses (See an advisor for more information)

Industrial & Systems Process Improvement, CRT

Program Code: QCT.S.CRT • Credit Hours: 32-33

Description

This certificate prepares students to apply basic industrial and systems engineering tools along with process improvement tools and techniques to make continuous improvement changes in any process or service.

Career Opportunities

This certificate is geared both to students who desire an entry-level position in the area of industrial and systems engineering and to skilled workers desiring upgrade training.

Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- COM 2211 - Effective Public Speaking
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1120 - Problem Solving & Continuous Improvement
- ISE 1130 - Lean Operations & Continuous Improvement
- ISE 1300 - Fundamentals of Dimensional Metrology
- ISE 2100 - Lean Leadership, Teamwork & Management
- ISE 2210 - Methods Engineering
- ISE 2220 - Applied Statistics for Process Control & Improvement
- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

Industrial Internet of Things Technician, CRT

Program Code: IIOT.S.CRT • Credit Hours: 33

Description

This certificate provides the knowledge and basic skills needed to work in the automation industry as an entry-level support technician for Industrial Internet of Things (IIoT). In addition to advanced manufacturing and logistics warehousing, a growing number of IoT devices are created for consumer use, including connected automotive vehicles, home automation devices, wearable technology, connected health, and appliances with remote monitoring capabilities. Students who complete this certificate learn IIoT fundamentals, automation computer hardware, software, data management, and networking. Theoretical aspects are supported and supplemented by hands-on lab work to gain in-depth knowledge and necessary technical skills.

Career Opportunities

This certificate program will provide the entry level education and training necessary to operate, program, diagnose, and repair micro-controller based IIOT devices and PLC based IIOT industrial machines. Graduates will be qualified to work for original equipment/system suppliers, consultants/third party support, as well as, equipment/system end users. All courses within certificate may be applied towards a Bachelor Applied Science degree in Internet of Things, a high demand, high paying field.

Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CIT 2640 - Network Security
- CSC 1140 - Information Systems Analysis & Design
- CSC 2165 - Database Management
- EET 1120 - Introduction to DC & AC Circuits
- EET 1198 - Digital Technology
- EET 2261 - Microprocessors
- EET 2281 - Programmable Logic Controllers
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- EGR 2261 - Engineering Problem Solving using "C" & "C++"

Industrial Robot Technician, CRT

Program Code: IRT.S.CRT • Credit Hours: 30

Description

This certificate provides the knowledge and skills required to meet the needs for technicians in industries that either provide robots systems for sale or use robots in their production facilities.

Career Opportunities

This certificate program will provide the education and training necessary to operate, program, diagnose, and repair industrial robots. Graduates will be qualified to work for original equipment/ system suppliers as well as equipment/system end users.

Program Requirements

- EET 1120 - Introduction to DC & AC Circuits
- EET 1139 - Electrical Machinery
- EET 1166 - Industrial Machine Wiring
- EET 2281 - Programmable Logic Controllers
- EGR 1106 - Basic Mechanical & Electrical Skills
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- EGR 1144 - Sensors & Vision Systems
- EGR 1217 - Fluid Power & Control
- EGR 2231 - Troubleshooting of Automated Systems
- EGR 2250 - Electromechanical Repair
- EGR 2252 - Teach Pendant Robot Programming

Law Enforcement, CRT

Program Code: CJLES.S.CRT • Credit Hours: 33

Description

This certificate prepares the learner for future training and education in the field of law enforcement. The certificate enhances law enforcement professional skills and knowledge. It may assist the student in performing well in future civil service examinations for employment or promotion. All courses in this certificate apply toward the Associate of Applied Science degree in Law Enforcement, if desired.

Career Opportunities

A broad range of career opportunities are available in the area of criminal justice/law enforcement including those in court systems, court administration, patrol, victim services, investigation, and probation/parole.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1103 - Constitutional Law & Evidentiary Procedures
- CJS 1105 - Criminal Law
- CJS 1110 - Interrogation, Documentation & Testimony
- CJS 1125 - Policing
- CJS 2111 - Ethics & Professionalism in Criminal Justice
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- PSY 1100 - General Psychology
- SOC 1101 - Introduction to Sociology

Legal Nurse Consultant, CRT

Program Code: LNC.S.CRT • Credit Hours: 33

Description

The Legal Studies program educates students with practical assignments in a "simulated law office" environment. All student work demonstrates the professional, ethical, and technology concepts they will use in the legal field. All full-time faculty are licensed attorneys. The objective of the Legal Nurse Consultant Certificate is to prepare the registered nurse to perform legal analysis of health care issues as well as prepare them for litigation preparation on medical malpractice and personal injury cases. Building on the nurse's education and clinical experience, the program will provide the practical skills and legal knowledge necessary to function in the legal arena. Additionally, instructors will ensure that nurses who take the program understand the role of the Legal Nurse Consultant in the greater community and what is involved in working as a consultant. This certificate is intended to enhance the attractiveness of an already obtained Nursing degree by providing students with practical skills needed to work in the legal field. All students are required to complete an attorney-supervised internship for hands-on experience using their practical skills. A grade of "C" or higher is required in all courses to remain in the program. Established in 1978, the Sinclair Legal Studies Program was the first paralegal program in the area, and the first in the area to be approved by the American Bar Association. Sinclair Legal Studies graduates hold a degree from an ABA-Approved program at a fully-accredited Ohio college. Students must take at least nine credits of the equivalent of legal specialty courses through synchronous instruction.

Career Opportunities

LNCs combine nursing expertise with legal knowledge to advise attorneys, and others, on matters involving medical malpractice, personal injury, product liability, workers' compensation, healthcare licensure investigations, and other healthcare related cases. Legal Nurse Consultants can find themselves in positions where they: review and analyze medical records, screen for record tampering, interview clients, conduct research and summarize medical literature, evaluate liabilities and damages, assist with discovery and depositions, prepare exhibits and render informed opinions to attorneys on the delivery of health care and its outcomes for specific cases, assist in the selection of expert witnesses as needed, and serve as expert witnesses in cases involving nursing standards of care or related matters.

Program Requirements

- PAR 1101 - Introduction to Legal Studies
- PAR 1102 - Legal Technology
- PAR 1103 - Litigation
- PAR 1201 - Legal Research & Writing
- PAR 1202 - Advanced Legal Technology
- PAR 1203 - Advanced Litigation
- PAR 2301 - Advanced Legal Research & Writing
- PAR 2401 - Legal Studies Internship
- HIM 1101 - Medical Terminology
- HIM 1160 - Medical Office Coding Concepts
- BIS 1221 - Specialized Computer Applications for Health Information Management
- HIM 1204 - Medicolegal & Ethics in Healthcare Records
- Legal Studies Elective **6 Cr. Hr(s).** (see options below)

Legal Studies Electives

- CJS 1105 - Criminal Law
- LAW 1101 - Business Law
- LAW 1102 - Consumer Law
- LAW 1104 - Employment Law
- MHT 1101 - Introduction to Mental Health Services
- PAR 2302 - Family Law
- PAR 2303 - Probate Law
- RES 1201 - Real Estate Law

Legal Studies Post Baccalaureate Certificate, CRT
Program Code: PAR.S.CRT • Credit Hours: 34
Description
The Legal Studies Program educates students with practical assignments in a "simulated law office" environment. All student work demonstrates the professional, ethical, and technology concepts they will use in the legal field. All full-time faculty are licensed attorneys. Student learning is supported by experienced paralegals who serve as team teachers. This certificate is intended to enhance the attractiveness of an already obtained bachelor's degree by providing students with practical skills needed to work in the legal field. All paralegal students are required to complete an attorney-supervised internship for hands-on experience using their paralegal skills. A grade of "C" or higher is required in all courses to remain in the program. Established in 1978, the Sinclair Paralegal Program was the first paralegal program in the area, and the first in the area to be approved by the American Bar Association. Sinclair paralegal graduates hold a degree from an ABA-Approved program at a fully-accredited Ohio college. Students must take at least nine credits of the equivalent of legal specialty courses through synchronous instruction.
Career Opportunities
Sinclair led the way with the first paralegal program in the Miami Valley in 1978, and it became the first to earn approval from the American Bar Association. Nearly a thousand graduates of Sinclair's Legal Studies Program now work in large and small law firms, the business world, courts, and government agencies. Under the supervision of a lawyer, a professional paralegal may perform such interesting duties as investigating cases, interviewing clients and witnesses, preparing legal documents, and legal research. These responsibilities are carried out in a variety of legal fields, such as criminal law, probate, family law, litigation, and real estate. Employment opportunity reports for program graduates are encouraging. Completion of the Legal Studies Program does not authorize a graduate to practice law as an attorney, or to give legal advice.
Program Prerequisite(s)
- *Approval of Department AND*
- *Students must have obtained a bachelor's degree with a GPA of 2.0 or higher from an accredited institution to be eligible to pursue this certificate.*

Program Requirements
- PAR 1101 - Introduction to Legal Studies
- PAR 1102 - Legal Technology
- PAR 1103 - Litigation
- PAR 1201 - Legal Research & Writing
- PAR 1202 - Advanced Legal Technology
- PAR 1203 - Advanced Litigation
- PAR 2301 - Advanced Legal Research & Writing
- PAR 2302 - Family Law
- PAR 2303 - Probate Law
- PAR 2401 - Legal Studies Internship
- RES 1201 - Real Estate Law
- Legal Studies Elective **6 Cr. Hr(s).** (see options below)

Legal Studies Electives
- CJS 1105 - Criminal Law
- LAW 1102 - Consumer Law
- LAW 1104 - Employment Law

Mechanical Drafter, CRT
Program Code: MEDRAFT.S.CRT • Credit Hours: 34-35
Description
The Mechanical Drafter certificate familiarizes students to the basics of the industrial design process, industry terminology, general practices, and latest versions of computer-aided drafting software. All courses are part of the Mechanical Engineering Technology associate degree.
Career Opportunities
Professionals with basic mechanical engineering and software design skills are in demand by mechanical design firms.
Program Requirements
- CAM 1109 - Fundamentals of Tooling & Machining
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I

- CAM 1107 - Introduction to Mechanical Drafting with CAD OR
- MAN 2110 - Introduction to Project Management OR
- MET 1151 - Guitar Manufacturing using Science, Technology, Engineering, & Mathematics (STEM) Concepts OR
- MET 2700 - Mechanical Engineering Technology Internship OR
- PHY 1141 - College Physics I

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- MET 1111 - Preparatory Math for Engineering Technology
- MET 1231 - Introduction to Engineering Design Using 3D CAD
- MET 2281 - Engineering Technology Professional Practice
- MET 1301 - SolidWorks Basics
- OT36 Social and Behavioral Sciences Elective **3 Cr. Hr(s).**

Mechanical Problem Solver, CRT
Program Code: MEPROB.S.CRT • Credit Hours: 30-31
Description
The Mechanical Problem Solver certificate will prepare students with the fundamentals of mechanical engineering technology to begin working in industry. All courses are part of the Mechanical Engineering Technology AAS degree program.
Career Opportunities
The mechanical problem solver certificate prepares students for entry-level hands-on mechanical jobs in manufacturing, mechanical engineering, or related fields.
Program Requirements
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- MET 1111 - Preparatory Math for Engineering Technology
- MET 1161 - Software Tools for Engineering Technology

- MET 1231 - Introduction to Engineering Design Using 3D CAD OR
- MET 1301 - SolidWorks Basics

- MET 2151 - Material Science
- MET 2201 - Statics
- PHY 1141 - College Physics I

Medical Assistant, CRT

Program Code: MAS.S.CRT • Credit Hours: 37

Description

Medical assistants are multi-skilled professionals who assist physicians with the administrative and clinical aspects of patient care. This certificate is designed to be completed in three (3) semesters on a full-time basis. The certificate consists of open enrollment courses (general education and division specific) and program specific courses with limited enrollment. The open enrollment courses may be taken prior to entry into the limited enrollment courses. To qualify for entry to limited enrollment courses, please see the Applicant Information packet located on the webpage. A cumulative GPA of 2.0 is required, as well as a grade of C or higher in all certificate courses. The student will be required to complete 210 hours of unpaid supervised practicum during their third semester of the certificate. Note: Healthcare Professional CPR, health certificate, immunizations, student health insurance, and background check must be completed prior to enrolling in the practicum component of the curriculum. The graduate is eligible to sit for a national exam to become a credentialed medical assistant.

Accreditation

Sinclair Community College's Medical Assistant certificate program is accredited the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs, 9355 113th Street N., #7709, Seminole, FL 33775.

Career Opportunities

Currently medical assisting is one of the fastest growing occupations in the United States with an expected increase in potential jobs by as much as 23% through 2028 (US Bureau of Labor Statistics, Sept. 4, 2019). Options for individuals seeking medical services and treatment: urgent care, surgicare and ambulatory care centers, as well as health maintenance organizations (HMO's), multi-physician group practices and medical specialty clinics have opened new career opportunities.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 1140 - Fundamentals of Disease Processes
- ALH 2201 - Survey of Drug Therapy
- BIO 1107 - Human Biology OR
- BIO 1121 - Human Anatomy & Physiology I
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology
- HIM 1160 - Medical Office Coding Concepts
- MAS 1102 - Clinical Medical Assisting I
- MAS 1192 - Lab for MAS 1102
- MAS 1103 - Clinical Medical Assisting II
- MAS 1193 - Lab for MAS 1103
- MAS 1110 - Administrative Medical Assisting
- MAS 2201 - Clinical Medical Assisting III
- MAS 2291 - Lab for MAS 2201
- MAS 2210 - Medical Billing Specialist
- MAS 2220 - MAS Practicum

Ohio Peace Officer Basic Training Academy Professional, CRT

Program Code: BPA.S.CRT • Credit Hours: 32

Description

This program provides the Ohio Peace Officer training required by the State of Ohio for new Ohio law enforcement officers. Additionally, this program is designed specifically for cadets who wish to pursue a career in law enforcement, and the training provided enhances one's ability to successfully receive a certificate of completion from the State of Ohio. This program is the foundation for graduates to further their educational pursuits and is limited to those persons who are officially enrolled in the Sinclair Community College basic training academy. Graduates of this program shall receive certificates of completion from the Ohio Attorney General's office indicating they have completed basic training and are certified to become commissioned law enforcement officers for Ohio agencies.

Career Opportunities

Local and state law enforcement agencies as well as private investigation and personal protection agencies.

Program Prerequisite(s)

Physical fitness assessment, fingerprint check, oral interview and college level ready for English.

Program Requirements

- CJS 2280 - Basic Peace Officer Training I
- CJS 2281 - Basic Peace Officer Training II
- ENG 1101 - English Composition I
- PSY 1100 - General Psychology OR
- SOC 1101 - Introduction to Sociology

Paramedic, CRT

Program Code: EPST.S.CRT • Credit Hours: 33-34

Description

Paramedics are essential members of the health care team who provide time-sensitive care to patients. These individuals take the emergency department to people's homes, to highways and to other remote locations. Paramedics bring life-saving equipment and knowledge to bear in an effort to reduce patient's suffering and to save lives. Students will use lecture, laboratory and real-world exposure to emergencies to learn the skills needed to care for the sick and injured in the out-of-hospital environment. The program is offered to provide students with variability and flexibility in scheduling. For more information, contact the EMS department at 937-512-5338 for an entrance application packet.

Career Opportunities

Within the greater Miami Valley area, EMS professionals are hired by fire departments, private EMS and hospitals. These agencies typically hire entry personnel based on the candidates state licensures/certifications.

Program Prerequisite(s)

- Approval of Department AND
- Valid State of Ohio EMT Certification AND
- BIO 1107 - Human Biology OR
- BIO 1121 - Human Anatomy & Physiology I OR
- BIO 1141 - Principles of Anatomy & Physiology I

Program Requirements

- EMS 2100 - Applied Anatomy, Physiology & Pathophysiology for Emergency Medical Services Provider
- EMS 2105 - Paramedic 1: Lecture
- EMS 2110 - Paramedic 1: Laboratory
- EMS 2125 - Paramedic 2: Lecture
- EMS 2130 - Paramedic 2: Laboratory
- EMS 2150 - Paramedic 3: Lecture
- EMS 2155 - Paramedic 3: Laboratory
- EMS 2160 - Paramedic 3: Clinical
- EMS 2175 - Paramedic 4: Lecture
- EMS 2180 - Paramedic 4: Field Experience
- EMS 2200 - Paramedic 5: Integration / Refresher Lecture

- EMS 2205 - Paramedic 5: Integration / Refresher Laboratory
- EMS 2135 - Paramedic 2: Clinical OR
- EMS 2136 - Paramedic 2a: Clinical AND
- EMS 2137 - Paramedic 2b: Clinical

Personal Computers in Business, CRT
Program Code: PCB.S.CRT • Credit Hours: 30
Description
This one-year certificate is intended for those who want to update their knowledge of software applications and personal computer technology. Students will learn how to use personal computers for business administration, decision support and financial applications.
Career Opportunities
Employment opportunities include paraprofessional positions in information technology, customer service and personal computer software application troubleshooting.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- BIS 1201 - Keyboarding & Document Formatting
- BIS 1220 - Word Processing Software
- BIS 1230 - Spreadsheet Software
- BIS 1260 - Database Software
- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1131 - Business Writing
- MAN 1107 - Foundations of Business OR
- MAN 2150 - Management & Organizational Behavior

Polysomnography, CRT
Program Code: PSG.S.CRT • Credit Hours: 35-36
Description
A Polysomnographic Technologist performs overnight, daytime, or home sleep studies, polysomnograms, on people with suspected sleep disorders. They work under the general supervision of a physician or designee. The polysomnographic technologist responsibilities include, but not limited to recording and analyzing related data and report their technical findings to the physician to aid in rendering a medical decision. The foundation principles of the Polysomnography certificate are geared toward the specialties of sleep, medicine, respiratory, neurology and behavioral sciences. The program includes a non-paid, supervised practicum to provide students the "hands-on" clinical experience at an SCC affiliated healthcare facility. Requires Professional Healthcare CPR; background check; immunizations prior to NDT 1891 - Polysomnography Practicum.
Accreditation
Sinclair Community College's Polysomnography Certificate is accredited by the Commission on Accreditation of Allied Health Education Program (CAAHEP: https://www.caahep.org/Home.aspx). The Committee on Accreditation for Education in Polysomnographic Technologist Education (CoA-PSG) and CAAHEP's Board of Directors recognized the program's substantial compliance with the nationally established accreditation standards. Commission on Accreditation of Allied Health Education Programs, 9355 113th St. N, #7709 Seminole, FL 33775 Phone: 727-210-2350 Fax: 727-210-2354
Career Opportunities
Kettering Health Network, Premier and Dayton Children's hospital have all expressed the need for RPSGT prepared individuals. Average salary per year for a Polysomnographic Technician in Ohio is $55,310 as of October 30, 2019, but the range typically falls between $49,730 and $61,437. Polysomnographic Technician Salary in Ohio | Salary.com
Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- BIO 1121 - Human Anatomy & Physiology I
- BIO 1222 - Human Anatomy & Physiology II
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology
- MAT 1130 - Mathematics in Health Sciences OR
- MAT 1450 - Introductory Statistics

- NDT 1421 - Intermediate Polysomnography
- NDT 1425 - Lab for Intermediate Polysomnography
- NDT 1430 - Advanced Polysomnography
- NDT 1435 - Lab for Advanced Polysomnography
- NDT 1801 - Seminar for Polysomnography Practicum
- NDT 1891 - Polysomnography Practicum
- NDT 2550 - Fundamentals of Polysomnography
- NDT 2585 - Lab for Polysomnography
- NDT 2460 - Neurophysiology of Electroencephalography/Sleep Disorders

Pre-Actuarial Science, CRT
Program Code: ACTU.S.CRT • Credit Hours: 30
Description
Students will complete all first and second-year technical courses required for bachelor's programs in Actuarial Science. This coursework is aligned with the recommendations of the Society of Actuaries (SOA) for students preparing to take the SOA professional qualifying exams. See soa.org for more information.
Career Opportunities
Actuaries work for insurance companies and other financial institutions that use mathematical models to quantify expected gains and losses in selling consumer financial products and in making investments. Students who complete this certificate program will be well on their way to pursuing career opportunities as actuaries, financial advisers, or statistical consultants.
Program Requirements

- ACC 1210 - Introduction to Financial Accounting
- ACC 1220 - Introduction to Managerial Accounting OR
- CSC 1111 - Introduction to Problem Solving & Computer Programming OR
- MAT 2600 - Applied Statistics
- ECO 2160 - Principles of Macroeconomics
- ECO 2180 - Principles of Microeconomics
- MAT 2270 - Calculus & Analytic Geometry I
- MAT 2280 - Calculus & Analytic Geometry II
- MAT 2290 - Calculus & Analytic Geometry III
- MAT 2320 - Linear Algebra

Recovery Service Support, CRT
Program Code: SWS.S.CRT • Credit Hours: 36
Description
This certificate can assist graduates in providing client services in a wide variety of fields such as psychology, rehabilitation, social work, and family support. In addition, students may assist social workers with developing, organizing, and conducting programs to prevent and resolve problems relevant to substance abuse, human relationships, rehabilitation, and dependent care. This certificate is especially pertinent to students who may have dealt with personal and family problems and want to use their

experience, knowledge, and passion to help others avoid the mistakes they made, which lead them to prison.

Career Opportunities

Someone who completes the Recovery Service Support certificate may be employable at a number of social service agencies, in the role of a case aide or monitor. Job duties may include transportation, visitation monitoring, school enrollment, detention monitoring etc. A student who continues with their education can achieve a degree in the Community and Public Service AAS or an AA Social Work with additional coursework.

Program Requirements

- BIS 1400 - Customer Service
- CJS 1106 - Transition Skills
- CJS 2200 - Human Relations, Mediation & Conflict Resolution
- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary
- MHT 2138 - Ethical Issues in the Helping Professions
- PSY 1100 - General Psychology
- SOC 1101 - Introduction to Sociology
- SOC 1115 - Sociology of Marriage & Family
- SOC 2205 - Social Problems
- SWK 1206 - Introduction to Social Work
- SWK 1213 - Introduction to Social Welfare
- SWK 2207 - Anti-Oppressive Social Work

Remote Sensing in the Built Environment, CRT

Program Code: RSBE.S.CRT • Credit Hours: 31

Description

Students gain practical and theoretical knowledge of remote sensing technologies and their applications in surveying, civil engineering, architecture, construction management, HVAC, energy management, and other built environment disciplines. The program emphasizes the integration of geospatial technologies, data analysis, and visualization tools to address challenges in the built environment.

Career Opportunities

The demand for UAV (Unmanned Aerial Vehicle) pilots and technicians in built environment professions, such as construction, surveying, building inspection, civil engineering, architecture and sustainability, is experiencing significant growth. This trend is driven by the increasing adoption of drone technology across various industries. UAVs assist with land surveys, building assessments, energy monitoring, and more, allowing pilots and technicians to gather field data for use in a variety of contexts.

Program Requirements

- AVT 1101 - Introduction to Unmanned Aerial Systems
- AVT 1103 - Remote Pilot Ground School
- AVT 1120 - Electro-Optical & Infrared Data Analysis
- AVT 1122 - Synthetic Aperture Radar & Light Detection & Ranging Data Analysis
- CAT 1100 - Introduction to the Built Environment
- CAT 1301 - Civil Construction CAD
- CAT 1501 - Fundamentals of Surveying & Mapping
- CAT 2301 - Land Development Design in Civil 3D
- CAT 2501 - GPS & GIS for Engineering Technology Professionals
- CAT 2561 - Route Surveying with Construction Applications
- GEO 1107 - Introduction to Geographic Information Systems (GIS)
- MAT 1200 - Technical Mathematics

Residential Real Estate Renovation and Resale, CRT

Program Code: RERR.S.CRT • Credit Hours: 30

Description

This program is designed for entrepreneurial individuals seeking to purchase, renovate, and resell residential properties. Students study business practices related to real estate and construction. Courses help develop hands-on skills applicable to residential renovation work, including carpentry, electrical, and HVAC work. Construction jobsite safety is emphasized. Graduates of this program possess skills necessary for residential real estate acquisition, renovation, and resale.

Career Opportunities

Graduates have hands-on skills applicable to residential renovation work, including carpentry, electrical, and HVAC work, along with construction jobsite safety is emphasized. Graduates possess skills necessary for residential real estate acquisition, renovation, and resale.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ENT 2140 - Small Business Finance

- CAT 1201 - Construction Methods & Materials
- CAT 1401 - Construction Cost Estimating
- CAT 2431 - OSHA Construction Standards
- Construction Electives **5 Cr. Hr(s).** (see options below)

- ENG 1101 - English Composition I OR
- ENG 1131 - Business Writing

- RES 1101 - Real Estate Principles
- RES 1201 - Real Estate Law
- RES 1302 - Real Estate Investment: Analysis & Financing
- RES 1501 - Real Estate Finance & Appraisal

Construction Electives

- CAT 1101 - Architectural Graphics I
- CAT 1111 - Mechanical Systems Print Reading
- CAT 1121 - Architectural Graphics II
- CAT 1131 - Introduction to Revit MEP
- CAT 1141 - Reading Architectural Drawings
- CAT 1201 - Construction Methods & Materials
- CAT 1205 - Construction Engineering Technology
- CAT 1211 - Construction Materials Testing
- CAT 1241 - Building Systems
- CAT 1300 - Introduction to CAD for Applications in Civil Engineering Technology
- CAT 1301 - Civil Construction CAD
- CAT 1341 - Architectural Design I
- CAT 1401 - Construction Cost Estimating
- CAT 1431 - OSHA Construction Standards 10 Hour
- CAT 1501 - Fundamentals of Surveying & Mapping
- CAT 1600 - Introduction to Construction Techniques
- CAT 1601 - Building Electric & Controls
- CAT 1701 - Construction Craft Skills/Concrete
- CAT 1721 - Structural Framing Systems
- CAT 1741 - Residential Electrical Systems
- CAT 1761 - Interior & Exterior Finishes
- CAT 1781 - Construction Project
- CAT 2101 - Architectural Design II
- CAT 2201 - Architectural Visualization
- CAT 2301 - Land Development Design in Civil 3D
- CAT 2401 - Construction Project Management
- CAT 2411 - Commercial Building Code

- CAT 2421 - Soil Mechanics
- CAT 2425 - Introduction to Structural Analysis & Design
- CAT 2431 - OSHA Construction Standards
- CAT 2501 - GPS & GIS for Engineering Technology Professionals
- CAT 2531 - Advanced Surveying & Mapping
- CAT 2561 - Route Surveying with Construction Applications
- CAT 2571 - NSPS Certified Survey Technician Preparation
- CAT 2610 - Stakeholders & Participants for Design & Construction Projects
- CAT 2620 - Construction Documents, Legal Requirements, & Project Delivery
- CAT 2630 - Architectural Practice Project Deliverables & Contractual Obligations
- CAT 2640 - Construction Project Change Management
- CAT 2435 - Construction Credentials
- CAT 2581 - Legal Principles for Surveyors
- CAT 2700 - Architectural Technology Internship
- CAT 2701 - Civil Engineering Technology Internship
- CAT 2702 - Construction Management Technology Internship
- CAT 2741 - Current Topics in Architecture
- CAT 2780 - Architectural Technology Capstone
- CAT 2781 - Civil Engineering Technology Capstone
- CAT 2782 - Construction Management Technology Capstone
- EGV 1100 - Sustainability in the Built Environment
- EGV 1101 - Alternate & Renewable Energy Sources
- EGV 1251 - Introduction to Energy Management Principles
- EGV 1301 - Sustainable Architecture
- EGV 1401 - Weatherization & Building Performance Training
- EGV 1501 - Environmental Assessment & Analysis
- EGV 2101 - Solar Photovoltaic Design & Installation
- EGV 2151 - Solar Thermal Systems
- EGV 2201 - Electrical Lighting & Motors
- EGV 2251 - Energy Control Strategies
- EGV 2301 - Commercial & Industrial Assessment
- EGV 2501 - Waste Management
- EGV 2700 - Energy Management Technology Internship
- EGV 2701 - Environmental Engineering Technology Internship
- EGV 2780 - Energy Management Technology Capstone
- HVA 1201 - Basic HVAC Systems with Cooling
- HVA 1221 - Heating Systems
- HVA 1241 - HVAC Installation Techniques & Practices
- HVA 1261 - HVAC Loads & Distribution for Small Buildings
- HVA 1301 - Air & Water Distribution Systems
- HVA 1352 - Psychrometrics, Health & Comfort in HVAC
- HVA 1401 - HVAC Mechanical & Electrical Troubleshooting
- HVA 2251 - Primary HVAC Equipment Operation & Selection
- HVA 2351 - HVAC Systems & Controls
- HVA 2700 - HVACR Engineering Technology Internship
- HVA 2751 - HVAC-R Operations & Best Practices
- HVA 2780 - HVACR Engineering Technology Capstone Project
- MAT 1110 - Math for Technologists
- MAT 1120 - Business Mathematics
- MAT 1200 - Technical Mathematics
- MAT 1445 - Quantitative Reasoning
- MAT 1450 - Introductory Statistics
- MAT 1455 - Introduction to Data Science
- MAT 1460 - Mathematics for Business Analysis
- MAT 1470 - College Algebra
- MAT 1570 - Analytic Geometry & Trigonometry
- MAT 1580 - Precalculus
- MAT 2160 - Calculus for Business & Economics
- MAT 2170 - Business Statistics I
- MAT 2180 - Business Statistics II
- MAT 2215 - Mathematics for Machine Learning & Artificial Intelligence
- MAT 2270 - Calculus & Analytic Geometry I
- MAT 2280 - Calculus & Analytic Geometry II
- MAT 2290 - Calculus & Analytic Geometry III
- MAT 2310 - Elementary Differential Equations
- MAT 2320 - Linear Algebra
- MAT 2330 - Differential Equations & Linear Algebra
- Most CAT, EGV, HVA, and college-level MAT courses will count toward electives. Consult an advisor for courses not on the list.

Retail Manager, CRT
Program Code: RMG.S.CRT • Credit Hours: 33
Description
The Retail Management certificate is a business program where students learn the key skills needed for retail management success. The Retail Management certificate gives students more of the basic tools needed to be a successful supervisor or manager in any business or industry, including retail, hospitality, manufacturing and service industries. This certificate enables students to further build and develop their skills toolbox that will enable them to be successful in the workplace. Additionally, students with justice-involved backgrounds will gain the necessary tools to obtain viable employment in a growing field..
Career Opportunities
The Retail Manager technical certificate takes the Retail Management certificate one step further by providing students with the necessary skills to start or advance their career in the retail industry. Students will gain a greater understanding of the "why principles" thus enabling them to find their niche within the broad spectrum of retail careers..
Program Requirements

- ACC 1100 - Survey of Accounting
- BIS 1120 - Introduction to Software Applications
- BIS 1400 - Customer Service

- ENG 1131 - Business Writing OR
- MAN 2150 - Management & Organizational Behavior

- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAN 2101 - Introduction to Supervision
- MAN 2140 - Human Resource Management
- MAN 2275 - Retail Management Capstone
- MRK 2100 - Foundations of Marketing
- MRK 2220 - Small Business Marketing

Semiconductor Maintenance Technician, CRT
Program Code: SMT.S.CRT • Credit Hours: 37
Description
The Semiconductor Maintenance Technician certificate provides the knowledge and skill required for installing, maintaining, and troubleshooting modern industrial machinery, including but not limited to

the machinery used in the semiconductor fabrication industry. Students will learn to solve practical maintenance problems, read and interpret mechanical drawings and interpret maintenance publications. Students will learn to use and maintain the clean rooms and vacuum systems needed in the microchip industry. They will also learn general industrial techniques in machine wiring, the use of programmable logic controllers, fluid power and control, and troubleshooting automated systems.

Career Opportunities

Students who complete this program can work as Industrial Maintenance and/or Mechatronics Technicians in a variety of industries and will be particularly well-prepared to work in micro-electronics industries such as semiconductor manufacturing.

Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- EET 1120 - Introduction to DC & AC Circuits
- EET 1139 - Electrical Machinery
- EET 1166 - Industrial Machine Wiring
- EET 2103 - Introduction to Vacuum System Technology
- EET 2281 - Programmable Logic Controllers
- EGR 1106 - Basic Mechanical & Electrical Skills
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- EGR 1144 - Sensors & Vision Systems
- EGR 1217 - Fluid Power & Control
- EGR 2205 - Integrated Circuit (IC) Fabrication Techniques
- EGR 2231 - Troubleshooting of Automated Systems
- ISE 1207 - Introduction to Manufacturing

Sports Management, CRT

Program Code: SMAN.S.CRT • Credit Hours: 33

Description

This certificate is designed to prepare students for careers in the field of sport and recreation management. Sports Management provides a solid foundation in sport related business. This certificate contains an embedded Coaching short-term certificate. Course work includes sports management, coaching, and leadership along with management, marketing, communication, business law, finance, and accounting. Students are prepared to enter a sports management profession.

Career Opportunities

Students will have the opportunity to develop knowledge and relationships that lead to employment in one of Ohio's over 1,600 fitness centers and recreational sports centers. Students will have the foundational industry knowledge and business contacts necessary to pursue internships and careers.

Program Requirements

- ACC 1100 - Survey of Accounting
- COM 2286 - Public Relations Principles
- ENG 1131 - Business Writing
- ENT 2140 - Small Business Finance
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAN 1114 - Introduction to Sports Management
- MAN 2144 - Negotiation Techniques
- MAN 2414 - Foundations of Coaching
- MAN 2415 - Coaching & Leadership
- MRK 2220 - Small Business Marketing

Supply Chain Management, CRT

Program Code: SCMC.S.CRT • Credit Hours: 30

Description

Students gain a basic understanding of supply chain management processes to prepare them for a new position or to update the skills of those currently employed in a supply chain management role.

Career Opportunities

SCM specialists have opportunities for management positions at all levels in virtually every type of business, throughout small and medium-sized businesses, corporations, industries, nonprofit organizations and government agencies.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2225 - Small Group Communication
- ENG 1131 - Business Writing
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- MAN 1106 - Introduction to Radio Frequency Identification
- MAN 1157 - Management Applications of Radio Frequency Identification Technology

- MAN 2101 - Introduction to Supervision OR
- MAN 2140 - Human Resource Management
- MAN 2110 - Introduction to Project Management
- MAN 2144 - Negotiation Techniques
- MAN 2159 - Supply Chain Management Concepts & Applications
- MAT 1120 - Business Mathematics OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

Supply Chain Manager, CRT

Program Code: SMC.S.CRT • Credit Hours: 34

Description

This certificate takes the Supply Chain Technician STC one step further by preparing students with background issues in skills such as customer service and supervision by addressing the basic principles of management through an assessment of skills and an analysis of situational factors that lead to the development of creative approaches to supervision. This certificate contains foundational courses that apply towards AAS in Supply Chain Management.

Career Opportunities

Upon completion of this certificate, students will be prepared to work as an entry-level supervisor in the field of logistics, purchasing, and warehousing.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- BIS 1400 - Customer Service

- COM 2206 - Interpersonal Communication OR
- PSY 1100 - General Psychology OR
- SOC 1101 - Introduction to Sociology

- CJS 1106 - Transition Skills

- ENG 1131 - Business Writing OR
- MAN 2150 - Management & Organizational Behavior

- MAN 1106 - Introduction to Radio Frequency Identification
- MAN 1107 - Foundations of Business
- MAN 2101 - Introduction to Supervision
- MAN 2140 - Human Resource Management
- MAN 2144 - Negotiation Techniques

- MAN 2159 - Supply Chain Management Concepts & Applications
- MAT 1120 - Business Mathematics

Surveying, CRT
Program Code: SUR.S.CRT • Credit Hours: 33-34
Description
Certificate develops the skills needed to become employed as technicians for surveying or civil engineering firms.
Career Opportunities
Surveying technicians assist professional surveyors in surveying for construction and land transfer activities.
Program Requirements

- CAT 1300 - Introduction to CAD for Applications in Civil Engineering Technology
- CAT 1501 - Fundamentals of Surveying & Mapping
- CAT 2431 - OSHA Construction Standards
- CAT 2501 - GPS & GIS for Engineering Technology Professionals
- CAT 2531 - Advanced Surveying & Mapping
- CAT 2561 - Route Surveying with Construction Applications
- CAT 2571 - NSPS Certified Survey Technician Preparation
- CAT 2581 - Legal Principles for Surveyors
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- MAT 1200 - Technical Mathematics OR
- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus
- OT36 Social and Behavioral Sciences Elective **3 Cr. Hr(s).**

Tool Maker, CRT
Program Code: CAMTM.S.CRT • Credit Hours: 30
Description
This certificate in tool making provides the student with the technical and hands-on experience required by employers in both an entry and apprenticeship level. This program will provide experience in safety, advanced manual machining, drafting and design, Computer Numerical Control (CNC) and conversational programming, welding and metal joining, measurement tools and techniques, and other instruction and experience needed within this trade. This program is available to anyone and works well with the apprenticeship model or those that need to work and learn at the same time.
Career Opportunities
The Tool Maker certificate gives the student the technical skills and abilities needed by someone entering this career field either independently or as an apprentice. This program is designed to compliment a full-time apprenticeship or the student that is required to work full-time while seeking a career in the precision machining industry.
Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining
- CAM 1110 - Advanced Machine Operations
- CAM 1116 - Fundamentals of Computer Numerical Control Operations
- CAM 1180 - Welding & Metal Joining I
- CAM 1214 - Computer Numerical Control Mill Programming
- CAM 2114 - Jig & Fixture Design
- CAM 2145 - Shop Floor Programming
- ISE 1300 - Fundamentals of Dimensional Metrology
- MAT 1110 - Math for Technologists

Transportation Construction Inspection Level 2, CRT
Program Code: TCIL2.S.STC • Credit Hours: 32
Description
This certificate prepares students to take the NICET (National Institute for Certification in Engineering Technologies) Level 2 certification for Highway Construction Inspection. Requires successful completion of Transportation Construction Inspection Level 1 short term certificate (TCIL1.S.STC) prior to enrolling.
Career Opportunities
New internships will be available to students participating in this program due to the federal infrastructure bill. Occupations include Construction Inspector, Highway Inspector, and Inspector.
Program Requirements

- CAT 1201 - Construction Methods & Materials
- CAT 1211 - Construction Materials Testing
- CAT 1401 - Construction Cost Estimating
- CAT 1501 - Fundamentals of Surveying & Mapping
- CAT 2401 - Construction Project Management
- CAT 2421 - Soil Mechanics
- CAT 2431 - OSHA Construction Standards
- CAT 2610 - Stakeholders & Participants for Design & Construction Projects
- CAT 2620 - Construction Documents, Legal Requirements, & Project Delivery
- CAT 2630 - Architectural Practice Project Deliverables & Contractual Obligations
- CAT 2640 - Construction Project Change Management
- MAT 1200 - Technical Mathematics

UAS Entrepreneurship, CRT
Program Code: UASENT.S.CRT • Credit Hours: 33
Description
This certificate integrates technical Unmanned Aerial Systems (UAS) curriculum with business and entrepreneurship courses. There is a need in the Unmanned Aerial Systems (UAS) industry for entrepreneurial technicians who have the knowledge and skills to apply advanced technology and intellectual property (IP) in a variety of high-tech applications. Related to UAS, this includes aircraft, sensors, avionics, software, data analytics, and other advanced technologies.
Career Opportunities
There are many opportunities in the Unmanned Aerial Systems (UAS) industry, both for those seeking to develop their own business or those hired as employees of an existing firm. In either case, the application of entrepreneurial knowledge and best practices, complimented by technical knowledge, is required in a competitive UAS industry that is driven by rapid advances in technology and applications. Students completing this certificate will be prepared for success as they seek to establish and grow their own ventures or support an established organization.
Program Requirements

- AVT 1101 - Introduction to Unmanned Aerial Systems
- AVT 1104 - UAS Standards, Regulations & Law
- AVT 1109 - UAS Remote Sensing & Analysis
- AVT 1158 - Aerospace Spatial Visualization
- AVT 2150 - Crew Resource Management for UAS
- ENG 1101 - English Composition I
- ENT 2140 - Small Business Finance
- ENT 2160 - Business Plan Development
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAT 1470 - College Algebra

- MET 1131 - Personal Computer Applications for Engineering Technology
- MRK 2220 - Small Business Marketing

Unmanned Aerial Systems, CRT
Program Code: UAS.S.CRT • Credit Hours: 32-34
Description
The Unmanned Aerial Systems One-year Technical Certificate prepares students with the foundational knowledge and skills related to Unmanned Aerial System technology, tools, and applications needed to support industry as a pilot/operator, visual observer, ancillary ground crew member, or data analyst while following applicable laws, regulations, and standards governing operations in the National Airspace System. Students may choose one of the four specialization options including Precision Agriculture, First Responders, Geographic Information Systems, or Aerial Sensing Data Analysis.
Career Opportunities
The rapid growth of the Unmanned Aerial Systems industry has created many new and expanded career opportunities for those pursuing a career in civil and commercial applications of the technology. Major opportunities exist in the areas of Precision Agriculture, First Responders, Geographic Information Systems, and Aerial Sensing Data Analysis. There is current and expanding industry demand for personnel with capabilities in Unmanned Aerial System operations, maintenance, data analysis.
Program Requirements

- AVT 1101 - Introduction to Unmanned Aerial Systems
- AVT 1103 - Remote Pilot Ground School
- AVT 1104 - UAS Standards, Regulations & Law
- AVT 1109 - UAS Remote Sensing & Analysis
- AVT 1110 - Private Pilot Ground School
- AVT 1130 - Basic Aviation Electricity I
- AVT 1158 - Aerospace Spatial Visualization
- AVT 2150 - Crew Resource Management for UAS
- AVT 2151 - UAS Operations I
- ENG 1101 - English Composition I
- MAT 1470 - College Algebra
- MET 1131 - Personal Computer Applications for Engineering Technology

- AVT 1120 - Electro-Optical & Infrared Data Analysis AND
- AVT 1121 - Multispectral & Hyperspectral Data Analysis AND
- AVT 1122 - Synthetic Aperture Radar & Light Detection & Ranging Data Analysis AND
- AVT 1123 - Acoustic & CBRNE Data Analysis AND
- GEO 1107 - Introduction to Geographic Information Systems (GIS)
  OR
- AVT 1108 - UAS First Responder Applications AND
- CJS 1101 - Introduction to Criminal Justice Science AND
- CJS 1155 - Homeland Security Issues & Administration AND
- EMS 1100 - Emergency Medical Responder Lecture & Laboratory
  OR
- AVT 1114 - Geospatial Information for UAS AND
- CAT 1501 - Fundamentals of Surveying & Mapping AND
- GEO 1107
  OR
- AVT 1112 - UAS Precision Agriculture AND
- AGR 1160 - Introduction to Agriculture Science AND
- AGR 1300 - Agronomy AND
- AGR 1503 - Agricultural Economics

Urban and Community Agriculture, CRT
Program Code: UCA.S.CRT • Credit Hours: 31
Description
The Urban and Community Agriculture Certificate will equip students with basic knowledge of plant science that is used for the growth, development, and utilization of cultivated plants. This knowledge will allow the students to propagate plants, implement sustainable landscape design, understand the science of soil, and will ultimately enable the student to operate and manage a greenhouse.
Career Opportunities
This certificate will provide the skills for growing sustainable food in urban areas and communities.
Program Requirements

- AGR 1160 - Introduction to Agriculture Science
- AGR 1201 - Horticulture I
- AGR 1202 - Science of Soil
- AGR 1203 - Trees & Shrubs
- AGR 1204 - Plant Propagation
- AGR 1205 - Greenhouse Management
- AGR 1206 - Horticulture II
- AGR 1207 - Greenhouse Applications
- AGR 1208 - Sustainable Landscape Design
- AGR 1209 - Greenhouse Management Capstone
- ENT 2140 - Small Business Finance

Welding, Metal Joining, & Fabrication, CRT
Program Code: CAMWMF.S.CRT • Credit Hours: 33.5
Description
Based on an Industry need this certificate meets specific needs in precision Welding, Metal Joining and Fabrication techniques that will align and work in conjunction with student and industry needs. This certificate will help students already working in industry and allow others to build skills that will help with entry level employment.
This certificate program contains the Welding and Metal Joining (CAMWM.S.STC) embedded certificate which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate, please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
The student successfully completing this certificate will have the necessary skills and knowledge to design, build, weld, and repair in a wide variety of situations which will be an addition to current skills or allow entry into many manufacturing careers which desire non-certified welders. These careers can range from entry level to higher level positions in Machine repair, Die and Mold repair, Metal Fabrication, Tool and Die shops, general repair shops, and general manufacturing.
Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining
- CAM 1191 - MIG Welding and Flux-Cored Arc Welding
- CAM 1192 - Stick Welding (Shielded Metal Arc Welding)
- CAM 1193 - TIG (GAS Tungsten Arc Welding)
- CAM 1194 - Weldability of Metals
- CAM 2114 - Jig & Fixture Design
- CAM 2145 - Shop Floor Programming
- ISE 1300 - Fundamentals of Dimensional Metrology
- MAT 1110 - Math for Technologists

Additive Design Specialist, STC
Program Code: ADS.S.STC • Credit Hours: 10

Description
This certificate will introduce students to additive design and manufacturing using 3D modeling software and 3D printers.
Career Opportunities
This certificate provides students with the basic skills needed to work as a technician in rapid prototyping using 3D design, 3D printing, and post processing
Program Requirements

- MET 1231 - Introduction to Engineering Design Using 3D CAD OR
- MET 1301 - SolidWorks Basics
- MET 1401 - Additive Design & Printing
- MET 1431 - Additive Manufacturing Post Process

Advanced Air Mobility Maintenance Technician, STC
Program Code: AAMMT.S.STC • Credit Hours: 16
Description
The Advanced Air Mobility Maintenance Technician short-term technical certificate prepares students for entry-level technician positions supporting Unmanned Aerial Systems (UAS) and Advanced Air Mobility (AAM) airframe, powerplant, and supporting subsystem maintenance. The certificate includes training on various fixed-wing and vertical-takeoff-and-landing (VTOL) UAS designs, as well as emerging electric vertical take-off and landing (eVTOL) AAM aircraft. It also provides an opportunity for experienced traditional aviation maintenance technicians to become familiar with the requirements specific to UAS and AAM technologies.
Career Opportunities
The Dayton region is well-positioned for continued growth and development in the Unmanned Aerial Systems (UAS), Advanced Air Mobility (AAM), and broader aerospace industry. Major companies have selected the region for manufacturing and maintenance capability expansion, including in support of the emerging electric vertical take-off and landing (eVTOL) aircraft sector, with projections indicating that thousands of local and regional jobs will be created in the coming years. This program aligns to the key industry sector of Aerospace & Aviation and Advanced Mobility as described by JobsOhio, with average starting salaries ranging from $50,000-$75,000.
Program Requirements

- AVT 1109 - UAS Remote Sensing & Analysis
- AVT 1130 - Basic Aviation Electricity I
- AVT 2221 - UAS Sensors & Systems
- AVT 2280 - Introduction to UAS Maintenance
- AVT 2281 - Advanced Air Mobility Airframe Maintenance
- AVT 2282 - Advanced Air Mobility Powerplant Maintenance
- AVT 4210 - Advanced UAS Maintenance

Aerial Sensing Data Analytics, STC
Program Code: UASDTA.S.STC • Credit Hours: 18
Description
The Aerial Sensing Data Analytics Short-Term Technical Certificate provides an introduction to unmanned aerial systems (UAS) technologies, applications, and regulatory and legal considerations. The program prepares students for entry level positions as analysts of aerially collected electro-optical (EO) and infrared (IR), multi-and hyperspectral (MSI/HSI), synthetic aperture radar (SAR), light detection and ranging (LiDAR), acoustic, and chemical, biological, radiological, nuclear, and explosives (CBRNE) data.
Career Opportunities
The Aerial Sensing Data Analytics Short-Term Technical Certificate will produce graduates who will serve the immediate Dayton area, broader region, and nationally. Graduates of certificate program will contribute to filling the current and growing need for data analysts that can process, interpret, present, and make decisions based on a variety of unmanned and manned aircraft collected data types. Positions exist in start-ups and existing established firms, with growth expected for the foreseeable future. The Association for Unmanned Vehicle Systems International estimates that there will be 100,000 new jobs related to unmanned aerial systems created by 2025.
Program Requirements

- AVT 1101 - Introduction to Unmanned Aerial Systems
- AVT 1104 - UAS Standards, Regulations & Law
- AVT 1109 - UAS Remote Sensing & Analysis
- AVT 1120 - Electro-Optical & Infrared Data Analysis
- AVT 1121 - Multispectral & Hyperspectral Data Analysis
- AVT 1122 - Synthetic Aperture Radar & Light Detection & Ranging Data Analysis
- AVT 1123 - Acoustic & CBRNE Data Analysis
- AVT 1158 - Aerospace Spatial Visualization
- AVT 2150 - Crew Resource Management for UAS
- GEO 1107 - Introduction to Geographic Information Systems (GIS)

Agribusiness, STC
Program Code: AGR.S.STC • Credit Hours: 16
Description
The agribusiness short-term certificate will introduce students to the agriculture industry and prepare them for entry into the agriculture workforce. Graduates of this certificate will be skilled in the foundations of business, agriculture, agricultural economics and agronomy.
Career Opportunities
Potential employment in agriculture includes entry-level positions in the following: agricultural technician, farm operations, agronomy, agricultural finance and accounting, retail sales and licensed pest control.
Program Requirements

- AGR 1160 - Introduction to Agriculture Science
- AGR 1300 - Agronomy
- BIS 1120 - Introduction to Software Applications
- ENG 1101 - English Composition I
- MAN 1107 - Foundations of Business

Aircraft Dispatcher, STC
Program Code: ADSP.S.STC • Credit Hours: 24
Description
The Aircraft Dispatcher certificate provides students with the theory and practical knowledge necessary to enter a career in the aviation industry as an aircraft dispatcher.
Career Opportunities
Career opportunities are available in airline and corporate aviation.
Program Requirements

- AVT 1105 - Orientation to Aviation
- AVT 1110 - Private Pilot Ground School
- AVT 1119 - Aviation Meteorology
- AVT 1141 - Principles of Aviation Leadership
- AVT 2146 - Introduction to Airline Operations
- AVT 2157 - Aircraft Performance I
- AVT 2158 - Aircraft Performance II
- AVT 2159 - Canadair Regional Jet (CRJ) Aircraft Systems
- AVT 2166 - Practical Dispatch Applications
- AVT 2167 - Instrument Flight Rules (IFR) Navigation & Planning
- AVT 2168 - Dispatcher Oral Preparation
- MET 1131 - Personal Computer Applications for Engineering Technology

Airline Flight Attendant, STC

Program Code: AFAS.S.STC • Credit Hours: 12

Description

The Airline Flight Attendant certificate provides students with the basic theory of airline travel with an understanding of the policies, procedures and means of compliance with Federal Aviation Regulations. Students explore the business of air commerce and develop the skills of a travel professional. Includes exploration of communications, safety and security, air travel, customer service, airline operations and crew resource management. This program develops the knowledge and skills required to serve as a flight attendant and to enter a career in the aviation industry.

Career Opportunities

Career opportunities are available in airline and corporate aviation.

Program Requirements

- AVT 1102 - Orientation to Inflight Services
- AVT 1148 - Aircrew Emergency Management
- AVT 1151 - Crew Survival & Rescue Techniques
- AVT 2146 - Introduction to Airline Operations

Appalachian Studies, STC

Program Code: HUM.S.STC • Credit Hours: 16

Description

The short-term technical certificate is designed for students who are planning on using Appalachian Studies to enhance their careers in a variety of disciplines such as: Sociology, Social Work, Education, Government, Health Care, and Public Safety (i.e., fire and police work). The student who pursues this short-term technical certificate will use the certificate to supplement their professional development.

Career Opportunities

This certificate enhances careers in Sociology, Social Work, Education, Government, Health Care, Public Safety and related fields.

Program Requirements

- HUM 1141 - Appalachian History & Culture
- HUM 1142 - Native American History

- SOC 1101 - Introduction to Sociology OR
- SOC 1145 - Introduction to Cultural Anthropology

- REL 2255 - People & Religion OR
- SOC 1108 - Appalachian Families OR
- SOC 2210 - Cultural Humility for Working with Youth

- GEO 1206 - Appalachian Environment OR
- HIS 1101 - United States History I OR
- HIS 1102 - United States History II OR
- HIS 2215 - Survey of African History OR
- HIS 2218 - History of Ohio

- SCC 1101 - First Year Experience

Artificial Intelligence (AI)/Autonomous Systems, STC

Program Code: UASAI.S.STC • Credit Hours: 23

Description

This short-term certificate in Artificial Intelligence (AI)/Autonomous Systems, which is fully embedded within the Bachelor of Applied Science degree in Unmanned Aerial Systems, gives the student the in-depth knowledge they need to transform large amounts of data into actionable decisions. The program and its curriculum focus on how complex inputs - such as vision, sensor data, robotics, and huge databases - can be used to make decisions or enhance human capabilities. The curriculum includes coursework in aviation technology, computer science, math and statistics, robotics, computational modeling, machine learning and symbolic computation. The program includes courses from the Aviation Technology, Computer Science, and Mathematics Departments.

Career Opportunities

AI / ML Scientist and Engineers rank among the top emerging jobs, their roles have grown over 650% since 2012, job growth in the next decade is expected to outstrip growth during the previous decade, creating 11.5M jobs by 2026, according to the U.S. Bureau of Labor Statistics. Based on the assets, capabilities, and resources focused on UAS / AVT technologies, the Dayton region and the State of Ohio are in a unique position to further secure their status as a destination of choice for this expertise. The region continues to transition from automotive/heavy manufacturing to high growth industries integral to UAS / AVT including sensors, robotics, advanced data analytics and management, and advanced materials and manufacturing. The Dayton Development Coalition and the State of Ohio are dedicating significant resources to support growth related to UAS / AVT. Building upon the leadership role that Wright-Patterson Air Force Base is taking in UAS, coupled with Ohio's aviation heritage and strong aerospace industry, Sinclair's UAS program will continue to benefit the students, institution, and the region. And will further strengthen the regional capabilities related to UAS / AVT and advance their commercial integration at the local, state, and national levels.

Program Requirements

- AVT 2240 - Human Factors in Aviation
- AVT 3300 - Artificial Intelligence (AI) in Aviation
- AVT 3400 - Human Sensation & Perception in Aviation
- AVT 4215 - Autonomous Systems in Aviation
- AVT 4220 - Human Autonomy Teaming in Aviation
- CSC 2266 - Python for Data Analytics
- MAT 1455 - Introduction to Data Science

Automotive Electric Vehicle Service Technician, STC

Program Code: EV.S.STC • Credit Hours: 11

Description

TThe Automotive Electric Vehicle Service Technician credential prepares automotive technicians to upskill, service, diagnose, and repair electric vehicles. It also prepares technicians for their Automotive Service Excellence (ASE) L3 Light Duty Hybrid/Electric Specialist exam.

Career Opportunities

Students earning this credential will be prepared to work for independent repair facilities and dealerships that service and repair electric vehicles.

Program Requirements

- AUT 1114 - Automotive Electrical/Electronic Systems I
- AUT 2214 - Automotive Electrical/Electronic Systems II
- AUT 2230 - Hybrid Electric Vehicle Systems
- AUT 2231 - Automotive Electric Vehicle Systems

Automotive High Performance, STC

Program Code: AHPC.S.STC • Credit Hours: 25

Description

This short-term certificate provides in-depth, hands-on experiences in various areas of high-performance engines, an ideal choice to supplement a degree-seeking student wishing to specialize in the engine and fuel induction areas. The program is also designed to prepare students for the ASE (Automotive Service Excellence) engine machinist series. Courses are dedicated to specific areas of engine development: engine blocks, cylinder head and valve train, assembly and dynamometer testing. Fuel systems for performance engines are covered as well.

Career Opportunities

Career opportunities are available in positions for automotive service technicians in dealerships, independent shops, motor sports businesses and automotive machine shops. In addition, graduates are also employed as service managers, parts managers, sales representatives or motor sports specialist.

Program Prerequisite(s)

- AUT 1108 - Automotive Engine Systems OR
- AUT 1115 - Automotive Engine Performance I

Program Requirements

- AUT 1108 - Automotive Engine Systems
- AUT 1115 - Automotive Engine Performance I
- AUT 2221 - High Performance Engine Blocks & Heads
- AUT 2222 - High Performance Engine Assembly & Dyno Testing
- AUT 2224 - High Performance Fuel Induction Systems

Automotive Maintenance & Light Repair, STC
Program Code: MLR.S.STC • Credit Hours: 14
Description
This certificate provides the skills and training needed to earn an entry-level position at an automotive maintenance repair facility. Courses included in the certificate will prepare students to pass the Automotive Service Excellence Maintenance and Light Repair Certification (ASE G1) test.
Career Opportunities
Career opportunities are available in positions for automotive maintenance technicians in dealerships, independent shops and maintenance repair facilities. In addition, graduates are also employed as service managers, shop foremen, parts managers, sales representatives or automotive instructors.
Program Requirements

- AUT 1102 - Introduction to Automotive Service
- AUT 1114 - Automotive Electrical/Electronic Systems I
- AUT 1116 - Automotive Steering & Suspension Systems
- AUT 1146 - Automotive Heating Ventilation & Air Conditioning Systems
- AUT 1165 - Automotive Brake Systems

Automotive Service Consultant and Advising, STC
Program Code: AUTS.S.STC • Credit Hours: 4
Description
The automotive service consultant short term certificate prepares for the C1 ASE Automobile Service Consultant Certificate test and the role as a service consultant/advisor in automotive repair facility.
Career Opportunities
Students can obtain gainful employment as service consultants/ advisors at automotive repair facilities. Students are encouraged to take their C1 ASE exam Automobile Service Consultant Certification test to help secure employment.
Program Requirements

- AUT 1102 - Introduction to Automotive Service
- AUT 1111 - Automotive Service Consulting & Advising

Bakery Specialist, STC
Program Code: BPSE.S.STC • Credit Hours: 19
Description
The Bakery Specialist short-term certificate program is designed to provide students the knowledge and skills necessary to be employed in a commercial retail bakery after completion.
Career Opportunities
A student completing this short-term certificate will be eligible for a position as a baker in retail grocery baking departments or as a baker in an independent bakery.
Program Requirements

- HMT 1102 - Kitchen Chemistry
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1126 - Baking I, II, & Barista Basics
- HMT 2110 - Pastry & Confectionary
- HMT 2126 - Cake Production & Cake Decoration

Basic Baking and Fundamentals, STC
Program Code: BBF.S.STC • Credit Hours: 13
Description
This short-term certificate focuses on the science of baking as well as basic techniques using ingredients such as flour, leaveners, salt, sugar, dairy, fats, extracts, spices and other add-ins such as vanilla extract, chocolate chips, etc.
Career Opportunities
This certificate provides career opportunities in businesses of bakeries and tortilla manufacturing, food and beverage stores, restaurants and other eating places, pretzel shops, and the opportunity to be self-employed.
Program Requirements

- HMT 1102 - Kitchen Chemistry
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1126 - Baking I, II, & Barista Basics
- HMT 2201 - Food Service Equipment, Design & Maintenance

Basic Drawing, STC
Program Code: DRWG.S.STC • Credit Hours: 9
Description
This short-term certificate provides basic proficiency in freehand drawing. The student will draw with a variety of materials including charcoal, pastel and ink. The student will be able to render three-dimensional items on a two-dimensional surface and will be able to demonstrate proficiency in value, contour and perspective. This certificate will provide the student with a broad range of styles and historic sources for his or her work, whether the individual is a graphic designer or freelance illustrator.
Career Opportunities
The Art department strives to provide students with high quality education experiences in the visual arts, and the short-term certificate in Basic Drawing prepares students to enhance their freehand drawing skills - especially professionals working in the fields of graphic design or freelance illustration.
Program Requirements

- ART 1111 - Drawing I
- ART 1112 - Drawing II
- ART 1121 - Beginning Painting I OR
- ART 2111 - Intermediate Drawing I OR
- ART 2216 - Life Drawing & Anatomy I OR
- ART 2221 - Intermediate Painting-Observation & Concept OR
- ART 2222 - Intermediate Painting - The Figure

Basic Preparation of Food, STC
Program Code: BFP.S.STC Credit Hours: 9
Description
This short-term certificate focuses on sanitation, knife skills, sauce making, food grade commercial equipment, and butchery.
Career Opportunities
This certificate provides career opportunities in the businesses of Food Trucks, Restaurants, College & University Food outlets, as well as Hospital Food outlets, Grocery Stores, etc., and the opportunity to be self-employed.
Program Requirements

- HMT 1101 - Basic Culinary Skills
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 2201 - Food Service Equipment, Design & Maintenance
- HMT 2207 - Butchery & Fish Management

Basic Quality, STC
Program Code: IBQ.S.STC • Credit Hours: 18-20

Description

This certificate provides the student with the basics of drafting and blueprint reading while developing AutoCAD techniques, and learning software applications that will be used throughout a career in quality. Covering various measurement techniques involving shop measuring instruments; correct use and care. Students learn the application of Geometric Dimensioning and Tolerancing (GD&T) principles along with the Coordinate Measuring Machine (CMM) which also gives the student an Industry Recognized credential from Hexagon Intelligence for PC-DMIS for CMM 111 software. Basic Quality will prepare the student and give them the skills to improve customer relations, measure products, and processes, analyze current process control and capability and define and audit the quality management system. This certificate meets the needs of a student looking to enter many areas where the needs of basic quality knowledge are required to obtain an entry-level position.

Career Opportunities

This certificate is a great opportunity for entry level employment in the quality control field or as an addition to other fields that will boost career opportunities by the addition of quality techniques. In addition the student will earn an Industry Recognized Certificate in OPT 1113 - Coordinate Measurement from Hexagon Manufacturing Intelligence for "PC-DMIS for CMM 111".

Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1120 - Problem Solving & Continuous Improvement
- ISE 1300 - Fundamentals of Dimensional Metrology
- ISE 1313 - Coordinate Measurement

- MAT 1470 - College Algebra OR
- MAT 1580 - Precalculus

Black Studies, STC

Program Code: AFRE.S.STC • Credit Hours: 15

Description

Designed for students who are planning on using Black Studies to enhance their knowledge and career in Social Work, Public Education, Urban Planning, Management, Business Administration, Nursing, or any other field in which racial sensitivity is important.

Career Opportunities

This certificate enhances careers in Social Work, Public Education, Urban Planning and related fields.

Program Requirements

Choose 5 of 7 of the following courses -- 15 Cr. Hrs.

- AFR 1100 - African American Studies
- AFR 2100 - Generational Trauma
- HIS 1105 - African-American History
- HIS 2215 - Survey of African History
- LIT 2234 - Literature of Africa, Asia, & Latin America
- LIT 2236 - African American Literature
- PSY 1160 - Black Psychology

Business Operations Systems Support, STC

Program Code: BOSS.S.STC • Credit Hours: 19

Description

Students completing this certificate will have the written and oral communication skills, as well as the computer skills, needed to effectively support computer operations for small, medium or large companies. These skills apply equally well to an entry-level help desk support position. Technical course work emphasizes operating systems and troubleshooting skills.

Career Opportunities

Employment opportunities in IT include entry-level positions such as help desk support, PC network technicians, IT technicians, enterprise network technicians and network administrators.

Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CIT 1500 - A+ Hardware & Software

- CIT 1510 - Windows Client Operating System OR
- CIT 2550 - Linux Operating System

- COM 2206 - Interpersonal Communication OR
- COM 2225 - Small Group Communication

- ENG 1101 - English Composition I

Call Center/Customer Service, STC

Program Code: CC.S.STC • Credit Hours: 17-19

Description

This certificate is designed for those interested in working in a customer service center, help desk, call center, or medical scheduling environment. All students will learn customer service skills and telephone techniques, as well as software applications and keyboarding. Students then choose an area of focus to strengthen industry-specific knowledge in general call center, IT help desk, health care, or medical office.

Career Opportunities

Since 2008, Sinclair has actively participated in the Dayton region's Contact Center Alliance (CCA), a group of over 50 area employers with call centers ranging from 5 to 2,000 employees. This alliance forecasts double digit growth over the next three years.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- BIS 1201 - Keyboarding & Document Formatting
- BIS 1400 - Customer Service
- COM 2206 - Interpersonal Communication
- HIM 1101 - Medical Terminology AND
- BIS 2180 - Medical Office Simulation
  OR
- ALH 1102 - Basic Healthcare Practices & Medical Scribe AND
- HIM 1101 - Medical Terminology AND
- MAS 1110 - Administrative Medical Assisting
  OR
- CIT 1107 - Introduction to Operating Systems AND
- CIT 1130 - Network Fundamentals
  OR
- BIS 1230 - Spreadsheet Software
- MAN 1107 - Foundations of Business
  OR
- BIS 1230 - Spreadsheet Software AND
- MAN 2150 - Management & Organizational Behavior
  OR
- BIS 1260 - Database Software AND
- MAN 2150 - Management & Organizational Behavior

CDA Preparation Certificate, STC

Program Code: CDA.S.STC • Credit Hours: 9

Description

This certificate includes three ECE courses which serve as the preparation courses for the completion of the CDA (Childhood Development Associate) certificate. These three courses provide the required content knowledge and development of the CDA portfolio. Successful completion

of these courses and passage of required on-site observation will enable students to obtain the CDA certificate through the Council of Professional Recognition (CDA Council). A grade of C or better is required in all courses.

Career Opportunities

The CDA certificate is the entry level credential required for childcare professionals. As of July 2020 the state of Ohio will require a minimum of a CDA certificate. Given the current severe shortage of qualified workers in childcare and preschool settings, the job market is very favorable.

Program Requirements

- ECE 1400 - Introduction to Early Childhood Education CDA Preparation
- ECE 1401 - Introductory Child Development CDA Preparation
- ECE 1402 - Healthy & Safe Environments CDA Preparation

Certified Production Technician, STC

Program Code: CPT.S.STC • Credit Hours: 8

Description

This certificate covers a wide array of skills and knowledge required in manufacturing such as safety, processes and production, measurement and quality practices, and maintenance awareness. Each of the four areas allows the student to earn a certificate for that area which leads to the Manufacturing Skill Standards Council Certified Production Technician certificate. This certificate is an Industry Recognized Certificate and is approved by the Ohio Department of Higher Education. Upon completion students will be eligible for entry-level manufacturing positions where they can demonstrate these skills and knowledge in a manufacturing setting.

Career Opportunities

Employers are actively seeking the Manufacturing Skill Standards Council (MSSC) Certified Production Technician (CPT) credential holders as people that have already shown an aptitude for manufacturing along with a desire to obtain entry level jobs. This 8 credit hour certificate may be one of the best investments in education leading to gainful employment available today.

Program Requirements

- ISE 1201 - Introduction to Manufacturing Safety
- ISE 1202 - Quality Practices & Measurement for Manufacturing
- ISE 1203 - Manufacturing Processes & Production
- ISE 1204 - Maintenance Awareness for Manufacturing

Chemical Dependency Counseling, STC

Program Code: CDC.S.STC • Credit Hours: 12

Description

This series of courses is designed to meet the 180 clock hours of chemical dependency specific education required by the Ohio Chemical Dependency Professionals Board to apply for licensure. It is for individuals who have previously earned or are in the process of earning at least an Associate degree in behavioral science.

Career Opportunities

According to the Department of Labor, employment of social and human service assistants is projected to grow 22 percent from 2018 to 2028, much faster than the average for all occupations.

Program Prerequisite(s)

Approval of Department

Program Requirements

- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary
- MHT 1236 - Assessment & Diagnosis of Substance Use Disorders
- MHT 2137 - Treatment Techniques in Substance Use Disorders
- MHT 2235 - Family Dynamics of Addiction

Chemical Dependency Counselor Assistant (CDCA) Preliminary, STC

Program Code: CDCA.S.STC • Credit Hours: 3

Description

This one course certificate meets the educational requirements for the CDCA: Chemical Dependency Counselor Assistant Preliminary. Within this course, the following topics will be discussed: theories and fundamentals of addictive illness and physical/mental effects of psychoactive drugs; dynamics of substance related and addictive disorders on persons, families and society; knowledge of disease concept, stigmas, identification, assessment, trends in treatment and relapse process. Students will also develop insights, challenge biases and identify personal and professional issues and will learn elements of professional/ethical behaviors.

Career Opportunities

According to the Department of Labor, employment of social and human service assistants is projected to grow 22 percent from 2018 to 2028, much faster than the average for all occupations.

Program Requirements

- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary

Chemical Dependency Counselor Assistant (CDCA) Renewable, STC

Program Code: CDCAII.S.STC • Credit Hours: 2

Description

This one course certificate meets the educational requirements for the CDCA Renewable credential with the Ohio Chemical Dependency Professionals Board. Content includes: addiction and treatment knowledge, individual and group counseling, evaluation, service coordination, documentation and professionalism.

Career Opportunities

According to the Department of Labor, employment of social and human service assistants is projected to grow 13 percent from 2018 to 2028, much faster than the average for all occupations.

Program Requirements

- MHT 2130 - Fundamentals of Addiction Counseling CDCA Renewable

Clinical Lab Assistant, STC

Program Code: SP.S.STC • Credit Hours: 13-14

Description

The Clinical Lab Assistant certificate prepares students for entry-level employment in the clinical laboratory setting performing specimen collection, quality assurance and other techniques fundamental to specimen processing. The program is designed to develop knowledge and understanding of medical terminology, lab rules and regulations, and universal precautions for a clinical laboratory.

Note: For students under age 18 there may be restrictions on participating in certain Health Science programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Career Opportunities

Employment opportunities exist for certificate completers in hospital laboratories, research laboratories, pharmaceutical companies and biotechnology companies.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery

- BIO 1107 - Human Biology OR
- BIO 1121 - Human Anatomy & Physiology I OR
- BIO 1141 - Principles of Anatomy & Physiology I
- CLT 1113 - Clinical Phlebotomy
- CLT 1114 - Clinical Phlebotomy Practice
- CLT 1200 - Introduction to Clinical Laboratory
- CLT 1203 - Lab for Introduction to Clinical Laboratory
- HIM 1101 - Medical Terminology

Clinical Phlebotomy, STC
Program Code: CPST.S.STC • Credit Hours: 6
Description
This certificate is intended to provide entry-level competency to students seeking employment in the area of phlebotomy in health care settings. This certificate is also intended to provide expanded competencies and proficiencies to practicing health care professionals and students enrolled in health science programs. The students will be required to complete 105 hours of unpaid practicum during CLT 1114 - Clinical Phlebotomy Practice. Students who complete this course will receive a certificate of completion.
Note: For students under age 18 there may be restrictions on participating in certain Health Science programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.
Career Opportunities
Completers will be able to obtain positions as phlebotomists in hospital laboratories, outpatient clinics and private medical laboratories.
Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- CLT 1113 - Clinical Phlebotomy
- CLT 1114 - Clinical Phlebotomy Practice

Coaching, STC
Program Code: COA.S.STC • Credit Hours: 6
Description
The short-term certificate in Coaching is designed to provide the foundational knowledge that is essential for coaching any sport. Coaches help athletes master new skills, enjoy competing with others and develop self-esteem. The certificate includes topics in coaching and leadership, sportsmanship, coaching diverse athletes, behavior management, sport first aid, drugs in sport, and the games approach to coaching.
Career Opportunities
Students with a Coaching certificate will find career opportunities in the school and community setting including youth organizations, recreation centers, YMCAs and city parks and recreation organizations.
Program Requirements

- MAN 2414 - Foundations of Coaching
- MAN 2415 - Coaching & Leadership

Computed Tomography, STC
Program Code: CT.S.STC • Credit Hours: 5
Description
This short-term certificate in Computed Tomography (CT) is designed to provide radiographers certified by the American Registry of Radiologic Technologists (ARRT) with didactic and clinical education in computed tomography. Didactic courses focus on CT principles while clinical courses provide students with real-life experience and development of hands-on skills needed to pursue employment in computed tomography.
Career Opportunities
Completion of this short-term certificate program can lead to employment in comprehensive hospitals, suburban or rural outpatient centers, surgery centers, etc. as a Computed Tomography Technologist.
Program Prerequisite(s)
Approval of Department
Program Requirements

- RAT 2640 - Computed Tomography Practicum
- RAT 2640 - Computed Tomography Practicum
- RAT 2641 - Principles of Computed Tomography

Computer Aided Manufacturing Basic Machining Skills, STC
Program Code: CAMBMS.S.STC • Credit Hours: 12
Description
This short term certificate (STC) is designed to enhance the machining skills of students who have taken machining courses in high school or to allow individuals with little or no experience in machining to quickly obtain a certificate which may in turn qualify them for an entry level position in a machining company. Course work is focused on introductory levels of manual machining and basic operation of CNC machines. This STC is the first half of the Computer Numerical Control Technology short term certificate and will provide students with a milestone of completion and the ability to continue their education up to and including a two year Associate of Applied Science degree in CNC operations.
Career Opportunities
Students who complete this certificate will become eligible for employment at an introductory level in the high tech field of machining. All courses contained within this certificate may be applied towards a degree in CNC operation; a high demand, high paying field.
Program Requirements

- CAM 1109 - Fundamentals of Tooling & Machining
- CAM 1116 - Fundamentals of Computer Numerical Control Operations
- ISE 1300 - Fundamentals of Dimensional Metrology
- MAT 1110 - Math for Technologists

Computer Aided Manufacturing Precision Machining, STC
Program Code: CAMPM.S.STC • Credit Hours: 18
Description
This certificate is designed to provide basic precision machining skills to workers entering the field of manual machining. It is the first half of the Advanced Precision Machining Certificate and is provided for students who are wishing to enter the workforce with the minimum skill level required to become an effective machinist. All courses in this short-term certificate will lead to an AAS degree in Computer Aided Manufacturing Precision Machining. Course work focuses on basic machining skills necessary to operate manual lathes, mills, and grinders.
Career Opportunities
Prepares individuals for entry level positions in precision machining (manual lathes, mills, grinders).
Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining
- CAM 1110 - Advanced Machine Operations
- CAM 1111 - Advanced Machine Operations II
- ISE 1300 - Fundamentals of Dimensional Metrology
- MAT 1110 - Math for Technologists

Computer Numerical Control Technology, STC
Program Code: CNC.S.STC • Credit Hours: 24
Description
The Computer Numerical Control (CNC) Technology short-term certificate program is designed for individuals who are looking to upgrade their current manufacturing skills along with students who are interested in pursuing entry-level careers in the area of CNC machining. Coursework is focused primarily in the area of CNC lathe and mill operation, setup and programming. The courses included in this short-term certificate apply directly to the associate degree in Computer Aided Manufacturing, CNC Technology option.
Career Opportunities
Prepares individuals for basic entry level jobs in CNC manufacturing.
Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining
- CAM 1116 - Fundamentals of Computer Numerical Control Operations
- CAM 1214 - Computer Numerical Control Mill Programming

- CAM 2145 - Shop Floor Programming
- CAM 2204 - Computer Numerical Control Lathe Programming
- ISE 1300 - Fundamentals of Dimensional Metrology
- MAT 1110 - Math for Technologists

Construction Administration, STC
Program Code: CADM.S.STC • Credit Hours: 8
Description
This program is designed for experienced construction industry personnel to improve their construction administration skills. Students will receive training to help them understand construction from an administrative perspective, including an understanding of various project delivery methods, contractual obligations and responsibilities, the financial aspects of construction, change management, and the skills necessary to deal with the diverse population of the industry. Upon completing this program, personnel will be qualified to move into construction administration positions in the industry.
Career Opportunities
Upon completing this program, craftspeople will be qualified to move into construction administration positions within the construction industry.
Program Requirements

- CAT 2610 - Stakeholders & Participants for Design & Construction Projects
- CAT 2620 - Construction Documents, Legal Requirements, & Project Delivery
- CAT 2630 - Architectural Practice Project Deliverables & Contractual Obligations
- CAT 2640 - Construction Project Change Management

Construction Supervisor, STC
Program Code: CNTS.S.STC • Credit Hours: 19
Description
This program is designed for experienced craftspeople of the construction industry to improve their supervisory and leadership skills. Students will receive training to help them understand the building construction industry from a management perspective, including an understanding of building materials and components, the financial aspects of building construction and the management skills necessary to deal with the diverse population of the industry. Heavy emphasis will be placed on safety. Upon completing this program, craftspeople will be qualified to move into management positions in the construction industry.
Career Opportunities
Upon completing this program, craftspeople will be qualified to move into management positions within the construction industry.
Program Requirements

- CAT 1111 - Mechanical Systems Print Reading
- CAT 1141 - Reading Architectural Drawings
- CAT 1201 - Construction Methods & Materials
- CAT 1211 - Construction Materials Testing
- CAT 1401 - Construction Cost Estimating
- CAT 2401 - Construction Project Management
- CAT 2411 - Commercial Building Code
- CAT 2431 - OSHA Construction Standards

Construction Technician, STC
Program Code: CNTC.S.STC • Credit Hours: 20
Description
The purpose of this certificate is to develop knowledgeable construction workers with basic skills in construction. With a combination of classroom education, practical lab exercises and co-op internships, students will exit this certificate program with a solid introduction into carpentry, concrete finishing and residential electrical systems.
Career Opportunities
Entry-level construction workers are in continuous demand for residential and commercial construction.
Program Requirements

- CAT 1701 - Construction Craft Skills/Concrete
- CAT 1721 - Structural Framing Systems
- CAT 1741 - Residential Electrical Systems
- CAT 1761 - Interior & Exterior Finishes
- CAT 1781 - Construction Project
- CAT 2431 - OSHA Construction Standards OR
- CAT 2702 - Construction Management Technology Internship

Continuous Process Improvement, STC
Program Code: CTIM.S.STC • Credit Hours: 12
Description
This short-term certificate promotes technical communication skills and teamwork, project management skills, lean manufacturing and continuous improvement skills, application of quality principles, statistics and probability theories, and problem-solving skills as they relate to process improvement. This program reflects the underlying skills necessary for the successful application of six sigma methodologies and provides practice in measuring and improving processes that suffer from quality, throughput, and waste problems. The courses in this short-term certificate apply directly to the Industrial & Systems Engineering Technology (OPTIO.S.AAS) degree.
Career Opportunities
This program reflects the underlying skills necessary for the successful application of six sigma and lean methodologies. A typical title for an employee with these skills is Process Improvement Specialist.
Program Requirements

- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1130 - Lean Operations & Continuous Improvement
- ISE 2220 - Applied Statistics for Process Control & Improvement
- ISE 2240 - Six Sigma: Green Belt

Corrections Officer, STC
Program Code: CJCO.S.STC • Credit Hours: 24
Description
This certificate is designed to provide the student with the basic skills necessary for entry-level employment as a corrections officer. All courses can be applied to the Associate of Applied Science Degree in Corrections.
Career Opportunities
The Corrections Officer Certificate will prepare students for a broad range of careers in local and state correctional facilities in addition to private prison corporations.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1105 - Criminal Law
- CJS 1110 - Interrogation, Documentation & Testimony
- CJS 1165 - Corrections OR
- CJS 1197 - Corrections Full Service Jails/Basic Correction Officer Academy
- CJS 2111 - Ethics & Professionalism in Criminal Justice
- CJS 2200 - Human Relations, Mediation & Conflict Resolution
- ENG 1101 - English Composition I

CPA Exam Eligibility: Accounting Component, STC
Program Code: CPAACC.S.STC • Credit Hours: 24
Description
In order to be eligible to sit for the CPA examination in the state of Ohio, a candidate must have 24 semester hours of business courses plus 30 semester hours of accounting courses. This certificate is designed for the

student to obtain the accounting courses to sit for the CPA exam. It will provide the pathway for a student who has earned a business bachelor's degree to transition to a career in accounting. If a student has a non-business bachelor's degree, they will also need to complete the CPA Exam Eligibility: Business Component certificate.

Career Opportunities

Employment opportunities in addition to accounting firms, exist in private business and industry as well as not-for profit and governmental organizations. Positions available to graduates include staff accountant, cost accountant, payroll accountant, auditor, tax accountant and financial analyst.

Program Prerequisite

- *Students must have obtained a bachelor's degree to be eligible to pursue this certificate.*

Program Requirements

- ACC 1510 - Computerized Accounting Systems
- ACC 2101 - Intermediate Accounting I
- ACC 2102 - Intermediate Accounting II
- ACC 2211 - Cost Accounting
- ACC 2212 - Managerial Accounting & Finance
- ACC 2321 - Federal Taxation
- ACC 2435 - Auditing
- ACC 2322 - Advanced Taxation OR
- ACC 2510 - Advanced Accounting

Critical Care Paramedic STC

Program Code: CCP.S.STC• Credit Hours: 6

Description

This two-course series explores the technologically challenging area of critical care paramedicine. Graduate paramedics can increase their skills and knowledge related to the care of cardiac, pulmonary, traumatic, and other medical patients. Students will learn advanced diagnostics, invasive monitoring, and advanced pharmacology. These skills are essential as a critical care paramedic.

Accreditation

There are no accreditation requirements for this program. Individuals can take the Critical Care Paramedic - Certified test.
https://www.ibscertifications.org

Career Opportunities

Critical care paramedics (CCP) are providing care for patients in rural ED / ICUs who need transferred to urban high level medical facilities. Patients also come from the 911 system. These 911 patients tend to be of higher acuity than the 911 system can manage. CCPs can work on ground or air-based ambulances. Systems that employee CCPs are typically accredited. These accrediting bodies require employed CCPs demonstrate current knowledge through certification testing. The information presented within EMS 2300 and EMS 2305 prepares the student for this certification.

Program Requirements

- EMS 2300 - Critical Care Paramedic 1
- EMS 2305 - Critical Care Paramedic 2

Customer Service Specialist, STC

Program Code: CUS.S.STC • Credit Hours: 3

Description

This one course certificate is designed for those seeking employment within a call center environment or those interested in improving their customer service skills and telephone techniques. Call centers have become quite sophisticated with effective measures for productivity. Students will learn how a call center operates and how the productivity measures are used.

Program Requirements

- BIS 1400 - Customer Service

Data and Information Management, STC

Program Code: DIM.S.STC • Credit Hours: 18

Description

Business analytics is expanding across industries as data is being used to inform business decisions. Students will learn to use various software applications to extract, prepare and visualize data to make business decisions.

Career Opportunities

Prepares students for entry-level business analytics positions requiring knowledge, setup, and usage of business intelligence and business solutions.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- BIS 1230 - Spreadsheet Software
- BIS 1260 - Database Software
- CSC 1160 - Introduction to Data Literacy
- CSC 2265 - Data Visualization with Tableau
- MAT 1120 - Business Mathematics

Data Fundamentals, STC

Program Code: DF.S.STC • Credit Hours: 23

Description

This short term certificate provides the fundamental skills needed to prepare the IT professional for careers in data analytics. Students will have the ability to mine, organize, analyze, and visualize data in a way that is meaningful to organizations. All courses in this short-term certificate apply to the Data Analytics degree.

Career Opportunities

Opportunities include positions such as Data Engineer, Data Analyst, Business Intelligence Analyst, Data Manager, Visualization Analyst, and Business Systems Analyst.

Program Requirements

- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 2165 - Database Management
- CSC 2265 - Data Visualization with Tableau
- CSC 2266 - Python for Data Analytics
- CSC 2268 - Structured Query Language (SQL) Programming
- CSC 2269 - Data Analytics Theory & Solutions
- MAT 1455 - Introduction to Data Science

Deaf Studies, STC

Program Code: ASL.S.STC • Credit Hours: 18

Description

Students completing this certificate will obtain valuable knowledge regarding Deaf Culture and American Sign Language. This certificate shows a conversational level of American Sign Language skill. Students seeking another degree or certificate may find this credential allows them to highlight additional language skills. This certificate does not teach interpreting nor is the holder of this certificate qualified as an ASL-English Interpreter. A grade of C or better is required in all ASL courses.

Career Opportunities

Students may pair the Deaf Studies Short Term Certificate with any field in which they interact with people. As the third most used language in the United States, American Sign Language is beneficial to any individual in any career field. Students will be able to use the skills learned during the Deaf Studies Short Term Certificate courses to communicate directly with Deaf/deaf/Hard of Hearing/DeafBlind/DeafDisabled users of American Sign Language.

Program Requirements

- ASL 1101 - Orientation to Deafness
- ASL 1111 - Beginning American Sign Language I
- ASL 1112 - Beginning American Sign Language II

- ASL 1228 - Intermediate American Sign Language I
- ASL 1229 - Intermediate American Sign Language II
- ENG 1101 - English Composition I

Dental Assisting, STC

Program Code: DAS.S.STC • Credit Hours: 17

Description

The student will be introduced to the fundamentals of working in a dental office as a chair-side dental assistant. Concepts and techniques of basic equipment, four-handed dentistry, oral evacuation, instrument identification, and proper use are discussed. Introduction to dental specialties are discussed. Oral examination, charting, medical and dental histories, sterilization, lab, and infection control procedures are emphasized. You are encouraged to complete Cardiopulmonary Resuscitation for the Health Care Provider (or ALH 1130 - Basic Life Support Training for Healthcare Provider) prior to entry to the Dental Assisting program. However, you can take it the first semester. Note: ALH 1130 will be waived for anyone with proof of American Heart Association Healthcare Provider Basic Life Support, see Academic Advising. Upon completion of this short-term certificate the graduate will be eligible to sit for the American Medical Technologies RDA examination. Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Career Opportunities

Career options may vary according to state practice act restrictions. Dental assistants have a variety of career opportunities in a wide range of employment settings, including private practice, specialty practice, hospitals, HMOs, community health programs, school systems, dental product research, military bases, and secondary education settings.

Program Prerequisite(s)

- ALH 1130 - Basic Life Support Training for Healthcare Provider AND
- Approval of Department AND
- GPA of 2.0 or Higher AND
- Completion of SCC Distance Learning Course AND
- Completed Program Application

Program Requirements

- ALH 1130 - Basic Life Support Training for Healthcare Provider
- COM 2206 - Interpersonal Communication
- DAS 1102 - Introduction to Dental Assisting Terminology
- DAS 1104 - Dental Assisting Techniques & Materials I
- DAS 1105 - Lab Dental Assisting Techniques & Materials I
- DAS 1204 - Dental Assisting Techniques & Materials II
- DAS 1205 - Lab Dental Assisting Techniques & Materials II
- DAS 1108 - Dental Assisting Office Management
- DAS 1206 - Dental Assisting Radiography
- DAS 1207 - Lab Dental Assisting Radiography

Design Processes, STC

Program Code: VISDP.S.STC • Credit Hours: 20

Description

This certificate provides an introduction to the design process including hand sketching, development of thumbnails, digital illustration and imaging, page layout; and, composition techniques to support a variety of entry-level design positions. Students will be exposed to the latest version of the Adobe products.

Career Opportunities

Students will be able to obtain entry-level positions in the field of print/graphic design.

Program Requirements

- VIS 1100 - Design Foundations
- VIS 1140 - Design Processes I
- VIS 1150 - Design Processes II
- VIS 1220 - Typographic Design
- VIS 1250 - Print Production

Dietary Manager, STC

Program Code: DMST.S.STC • Credit Hours: 16

Description

Graduates of the Dietary Manager (DM) Program are trained food service professionals in retail and food service management within health care and community institutions. They understand basic nutritional needs of clients and work in partnership with dietetic technicians and dietitians, who offer specialized nutritional expertise. Approved by the Association of Nutrition and Food Professionals (ANFP), the curriculum includes 13 semester credit hours of classroom instruction, 3 semester credit hours of food lab instruction, and 210 hours of management and clinical directed practice coordinated by a Registered Dietitian Nutritionist (RDN). A minimum of 25 clinical directed practice hours are directly-supervised by a RDN. Students are required to complete these field experiences at area community, food service and healthcare facilities. As an integral member of the healthcare and food service management teams, dietary managers are responsible for maintaining cost/profit objectives, purchasing goods and services for the nutrition department and supervising staff. Students of Sinclair's Dietary Manager Program are eligible to become pre-professional members of the Association of Nutrition & Food service Professionals (ANFP), a nationally recognized organization that can be reached at PO Box 3610, St. Charles, IL 60174, 1-800-323-1908, www.anfponline.org. This specially designed program enables students to enjoy benefits of ANFP membership while attending school. Graduates are eligible for professional ANFP membership. Benefits include networking, professional growth, educational enrichment, and developing leadership skills. Completion of the DM Program and successfully passing a national credentialing exam will enable graduates to become Certified Dietary Managers, Certified Food Protection Professionals (CDM, CFPPs) in accordance with the Certifying Board for Dietary Managers at https://www.cbdmonline.org/. The DM Program at Sinclair is fully approved by the Association of Nutrition and Food service Professionals (ANFP). Students must pass all DM certificate program courses with a letter grade of "C" or better. The Sinclair nutrition and dietetics programs are open to those age 16 and older.

Career Opportunities

Graduates of Sinclair's Dietary Manager program can find employment in nutrition and dietary departments in hospitals, long-term care facilities, day care centers, school food service systems, correctional institutions and other noncommercial food service settings. Dietary managers may work as food service directors, assistant food service directors, supervisors, clinical care professionals, multi-department managers, high-level administrators in large service organizations, consultants or entrepreneurs.

Program Requirements

- DIT 1105 - Exploration of the Nutrition & Dietetics Profession
- DIT 1630 - Nutrition Through the Lifecycle
  (Students should see an advisor for a waiver for the DIT 1525 prerequisite.)
- DIT 2101 - Dining Assistant Dietary Aide
- DIT 2505 - Food Science Introductory Foods Lab
- DIT 2510 - Institutional Food Safety & Quantity Food Systems
- DIT 2515 - Foodservice Systems Supervised Practice
- DIT 2735 - Foodservice Retail Business Management & Mid-Program Assessment
- DIT 2740 - Retail Business Management Supervised Practice

Digital Marketing Analytics, STC

Program Code: DMA.S.STC • Credit Hours: 18

Description
The Digital Marketing Analytics Short-Term Certificate is designed to introduce, develop and reinforce basic digital marketing analytics skills and technical applications. Graduates learn how to monitor digital campaigns, collect metrics, and report findings using Google Analytics and other industry-relevant digital analysis applications. The ten-year occupational outlook for digital marketing specialists shows an anticipated 24% growth potential. All courses in this certificate can be applied to the Associate of Applied Science in Digital Marketing.
Career Opportunities
Students obtaining the Digital Marketing Analytics Certificate will be able to work in any size organization that is using digital marketing and social media marketing. The certificate is not only for individuals that are new to the field of marketing, but to those individuals that are already working in the field, and want to update their skill set to include digital marketing analytics.
Program Requirements

- MRK 2100 - Foundations of Marketing OR
- MRK 2101 - Principles of Marketing Management

- MRK 2135 - Digital Marketing
- MRK 2230 - Social Media & Consumer Engagement
- MRK 2236 - Consumer Behavior
- MRK 2250 - Digital Marketing Analytics

- CSC 1350 - Web Site Development with HTML & CSS OR
- VIS 1310 - History & Theory of Web Design

Digital Systems, STC
Program Code: DS.S.STC • Credit Hours: 12
Description
This short-term certificate offers knowledge and basic skills to work in the electronics industry as an entry-level support technician for digital systems. Courses provide knowledge about basic electrical measurement techniques, prototype assembly of electrical circuits, digital logic, Boolean algebra and basic digital systems. Theoretical aspects are supported and supplemented by hands-on lab work to gain in-depth knowledge and lab skills. The courses in this certificate lead into an associate degree in Electronics Engineering Technology at Sinclair.
Career Opportunities
Provides opportunity to work as a support technician in the digital electronic field.
Program Requirements

- EET 1150 - DC Circuits
- EET 2261 - Microprocessors
- EET 1131 - Digital Electronics

Digital Thread Engineering Technology, STC
Program Code: DTET.S.STC • Credit Hours: 16
What is the program about?
The Digital Thread Engineering Technology short-term technical certificate prepares students for entry-level positions requiring an ability to identify and effectively utilize digital thread and engineering tools related to manufacturing, logistics, data management, and cyber security.
Career Opportunities
There is a rapidly growing need for technicians with experience in digital thread engineering technology. Students that complete this program will be well positioned to enter or advance in positions focused digital thread technologies, including those related to technician level manufacturing, logistics, data management, cyber security. Requirements for these skills are prevalent and growing in positions in government, industry, and academic organizations, both locally and nationally. Additionally, students completing the program will be prepared to pursue additional certificate and degree programs to further enhance their capabilities and skills.
Program Requirements

- BIS 1010 - Digital Thread Data Management
- CIT 1010 - Digital Thread Cyber Security
- ISE 1401 - Introduction to Digital Thread Technology
- ISE 1402 - Digital Thread Enabled Manufacturing
- MAN 1010 - Digital Thread Enhanced Logistics

- MET 1131 - Personal Computer Applications for Engineering Technology OR
- MET 1161 - Software Tools for Engineering Technology

Dining Assistant, STC
Program Code: DAST.S.STC • Credit Hours: 1
Description
The Dining Assistant Program is a State of Ohio approved training course which provides practical skill development in feeding techniques and working with populations with self-feeding difficulties with a focus on the elderly. The program is designed to ensure that Dining Assistants have a basic understanding of the nutritional needs of long term care residents, communications and interactions involving the residents and staff, as well as behavior challenges and safety procedures involving residents.
Career Opportunities
Students successfully completing the Dining Assistant short term certificate program will be eligible to apply for feeding assistant positions within the nutrition departments of long term care facilities in the state of Ohio.
Program Requirements

- DIT 2101 - Dining Assistant Dietary Aide

East Asian Studies, STC
Program Code: EAS.S.STC • Credit Hours: 17
Description
This short-term East Asian Studies Certificate is an interdisciplinary program consisting of five courses on East Asian history, language, culture, and business in the global context. The program is designed to provide students with in-depth study and training in the listed areas to complement their major field of study. The program prepares students for multiple academic and career paths with useful skills and worldly perspectives.
Career Opportunities
Upon completion of the East Asian Studies certificate program, students will gain proficiency in East Asian history and Chinese or Japanese language with intercultural and international business skills. Students will be able to pursue careers in the following capacities: Employment in multicultural and international corporations, work at a local company related to East Asia like Fuyao Inc. or Honda Inc., be part of the foreign services, military service, judicial system, or in language translation, work as a consultant in fields like international politics, financial advisor for Asian markets, international marketing specialist, teaching at schools or universities or become a politician or a community leader.
Program Requirements

- CHN 1101 - Elementary Chinese I AND
- CHN 1102 - Elementary Chinese II
  OR
- JPN 1101 - Elementary Japanese I AND
- JPN 1102 - Elementary Japanese II
- COM 2245 - Intercultural Communication
- HIS 2217 - Survey of East Asian History
- MAN 1110 - International Business

Electrical Construction, STC
Program Code: EETEC.S.STC • Credit Hours 16-20
Description

This short-term certificate will fulfill the needs of the electrical construction industry for educating and training electricians in the Dayton and Cincinnati area.

Career Opportunities

Completion of the Electrical Construction certificate prepares the student for work as an electrician.

Program Requirements

Complete one of the Electrical Construction sequences below:

- CAT 1827 - NCCER Electrical Construction Level 1A
- CAT 1828 - NCCER Electrical Construction Level 1B
- CAT 1837 - NCCER Electrical Construction Level 2A
- CAT 1838 - NCCER Electrical Construction Level 2B
- CAT 1847 - NCCER Electrical Construction Level 3A
- CAT 1848 - NCCER Electrical Construction Level 3B
- CAT 1857 - NCCER Electrical Construction Level 4A
- CAT 1858 - NCCER Electrical Construction Level 4B

OR

- CAT 1861 - Electrical Construction 1A
- CAT 1862 - Electrical Construction 1B
- CAT 1863 - Electrical Construction 2A
- CAT 1864 - Electrical Construction 2B
- CAT 1865 - Electrical Construction 3A
- CAT 1866 - Electrical Construction 3B
- CAT 1867 - Electrical Construction 4A
- CAT 1868 - Electrical Construction 4B

Electrocardiography, STC

Program Code: ELST.S.STC • Credit Hours: 2

Description

This program is intended to provide expanded skills among health care professionals as well as current Health Sciences students to increase marketability for employment. Electrocardiography (ECG) Technicians operate equipment that records and measures heart activity. These measurements are used to assist cardiologists and other physicians in diagnosing and treating cardiac (heart) and peripheral vascular (blood vessel) problems. Students who complete this program will receive a Short-Term Technical Certificate in Electrocardiography. Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Career Opportunities

Electrocardiography Technician.

Program Requirements

- ALH 1110 - Principles of Electrocardiography

Emergency Medical Responder, STC

Program Code: EMR.S.STC • Credit Hours: 2

Description

Emergency Medical Responders (EMR's) are personnel, typically not found within the healthcare setting, who as part of their job have to care for the sick and injured before an ambulance arrives. These individuals are educated to stabilize patients using very limited amounts of medical equipment. Police officers, safety officers, and others who would be expected to arrive at the scene of an injury or illness before the ambulance could benefit from this education. Students will use lecture and laboratory environments to learn the skills needed to care for patients. For more information, contact the EMS department at (937) 512-5338 for an entrance application packet.

Accreditation

This program is accredited by the Ohio Department of Public Safety, Division of Emergency Medical Services. Graduates of this program are eligible to take the National Registry of Emergency Medical Technicians EMR examination. Contact the EMS office at Sinclair Community College for additional information about accreditation or national testing.

Career Opportunities

EMRs education can be used as within firefighting, police or safety officer roles. Most companies/departments will not hire a person who is solely an EMR. The purpose of this education is to augment the skills of those who may need to care for the sick and injured before the ambulance arrives.

Program Requirements

- EMS 1100 - Emergency Medical Responder Lecture & Laboratory

Emergency Medical Technician, STC

Program Code: EBST.S.STC • Credit Hours: 7

Description

Emergency Medical Technicians (EMTs) are essential members of the health care team who provide time sensitive care to patients. These individuals take the emergency department to people's homes, to highways and to other remote locations. EMTs bring life-saving equipment and knowledge to bear in an effort to reduce patient's suffering and to save lives. Students will use lecture, laboratory and real world exposure to emergencies to learn the skills needed to care for the sick and injured in the out-of-hospital environment. The program is offered to provide students with variability and flexibility in scheduling. For more information, contact the EMS department at 937-512-5338 for an entrance application packet.

Career Opportunities

Within the greater Miami Valley area, EMS professionals are hired by fire departments, private EMS and hospitals. These agencies typically hire entry personnel based on the candidates state licensures/certifications - not whether the candidate is degreed. When local departments are hiring full-time employees, many of them are looking for paramedic/firefighters.

Program Requirements

- EMS 1150 - Emergency Medical Technician: Lecture
- EMS 1155 - Laboratory for Emergency Medical Technician

Energy and Sustainability Technician, STC

Program Code: EST.S.STC • Credit Hours: 8-9

Description

This short-term certificate is intended for students who are interested in an entry-level position in the energy and sustainability technician field. The student will have the opportunity to earn their OSHA-10 card and have the potential to sit This short-term certificate is intended for students who are interested in an entry-level position in the energy and sustainability technician field. The student will have the opportunity to earn their OSHA-10 card and have the potential to sit for the LEED Green Associate exam and Building Analyst exam by the Building Performance Institute (BPI).

Career Opportunities

Career opportunities for students completing this short-term certificate include entry-level building positions as laborers, technicians, installers, operators, inspectors, and data collectors.

Program Requirements

- CAT 1431 - OSHA Construction Standards 10 Hour
- EGV 1100 - Sustainability in the Built Environment
- EGV 1401 - Weatherization & Building Performance Training

- CAT 1100 - Introduction to the Built Environment OR
- EGV 2700 - Energy Management Technology Internship (2 credit hours minimum)

Entrepreneurship and Business Foundations, STC

Program Code: EBP.S.STC • Credit Hours: 24

Description

This certificate prepares existing or potential entrepreneurs in a wide variety of small business functions. In addition to a traditional management course, the following key areas are emphasized for

entrepreneurs: financial plan development, marketing plan development and business plan development.

Career Opportunities

Students completing this certificate can expect to be prepared to begin their own business or to work in larger companies in an entrepreneurial role.

Program Requirements

- BIS 1120 - Introduction to Software Applications

- COM 2206 - Interpersonal Communication OR
- SOC 1101 - Introduction to Sociology OR
- PSY 1100 - General Psychology

- ENG 1131 - Business Writing OR
- MAN 2150 - Management & Organizational Behavior

- ENT 2140 - Small Business Finance
- ENT 2160 - Business Plan Development
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MRK 2220 - Small Business Marketing

Expanded Functions for Dental Auxiliaries, STC

Program Code: EFDA.S.STC • Credit Hours: 13

Description

The Expanded Functions Dental Auxiliary (EFDA) Certificate is designed to prepare graduates for positions in private practice dental offices, dental clinics, federal, state and municipal health facilities. The Ohio State Dental Board allows Certified Dental Assistants, Registered Dental Assistants, and Registered Dental Hygienists to enroll in this training. Emphasis is placed on sealants, amalgam restorations, composite restorations and temporary restorations. Students will receive instruction and hands-on experience in restorative dentistry as it relates to expanded functions in Ohio. Once the training is complete, the student must take a state written and practical exam to demonstrate proficiency in placement of dental restorations. Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll.

Career Opportunities

The Expanded Functions Dental Auxiliary Profession offers opportunities with excellent income and flexible scheduling. While most EFDAs work in general and specialty dental offices, alternative career opportunities are available. These include public health departments, community programs and clinics, teaching institutions, consumer advocate and consulting.

Program Prerequisite(s)

Approval of Department

Program Requirements

- EFD 1102 - Dental Anatomy for Dental Auxiliaries
- EFD 1202 - Expanded Functions for Dental Auxiliaries I
- EFD 1203 - Lab for Expanded Functions for Dental Auxiliaries I
- EFD 1302 - Expanded Functions for Dental Auxiliaries II
- EFD 1303 - Lab for Expanded Functions for Dental Auxiliaries II

Facility Management and Decarbonization, STC

Program Code: FMDE.S.STC • Credit Hours: 17

Description

Students are prepared for careers in facility management with a specialization in decarbonization strategies. Emphasis on HVAC systems as a critical component of energy efficiency and carbon reduction in buildings. Students learn sustainable building practices, energy management, renewable energy integration, and the implementation of decarbonization technologies in HVAC systems.

Career Opportunities

Graduates of this program can pursue careers such as Facility Manager, HVAC Decarbonization Specialist, Energy Auditor, Sustainability Coordinator, or Building Operations Manager.

Program Requirements

- EGV 1100 - Sustainability in the Built Environment
- EGV 1251 - Introduction to Energy Management Principles
- EGV 2251 - Energy Control Strategies
- EGV 2301 - Commercial & Industrial Assessment
- HVA 1201 - Basic HVAC Systems with Cooling
- HVA 1221 - Heating Systems

Family Advocate, STC

Program Code: FAMA.S.STC • Credit Hours: 18

Description

A short-term certificate competency based, task-specific training for Head Start Family Specialists, Family Service Specialists and Family Workers whose job it is to provide the support services which are needed by families to enhance the quality of their family life. Courses in this curriculum will focus on achieving proficiency in the following areas: social work core knowledge, values, skills; social work ethics and theory, interviewing and documentation; group/organization and micro-level methodologies; collaboration and advocacy; understanding family dynamics, barriers to self-sufficiency, conflict resolution, cultural and social diversity issues, the relationship between social problems and institutional responses; aid in the development of beginning computer skills.

Career Opportunities

This certificate enhances career opportunities in agencies and organizations that provide a wide variety of social services.

Program Requirements

- COM 2206 - Interpersonal Communication
- SOC 1101 - Introduction to Sociology
- SOC 1115 - Sociology of Marriage & Family
- SWK 1206 - Introduction to Social Work
- SWK 1213 - Introduction to Social Welfare
- SWK 2207 - Anti-Oppressive Social Work

Fast Track Programming, STC

Program Code: FTPA1.S.STC • Credit Hours: 18

Description

This certificate assures that individuals are equipped with current software development skills. It is intended either for experienced programmers looking to update their skill set or for people wishing to make a career change into the Information Technology field. The certificate focuses on the latest software development languages and approaches, object-oriented concepts, and database theory.

Career Opportunities

Employment opportunities in IT include entry-level positions such as software developers, web developers, help desk analysts, network administrators, user support specialists, network security analysts, and network engineers.

Program Requirements

- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 1140 - Information Systems Analysis & Design
- CSC 1202 - C++ Software Development OR
- CSC 2266 - Python for Data Analytics OR
- CSC 2207 - Data Structures & Algorithms
- CSC 2165 - Database Management
- CSC 2212 - Java Software Development I
- CSC 2217 - Java Software Development II

Fire Department Company Officer, STC

Program Code: FCO.S.STC • Credit Hours: 5

Description

Develop management, supervision and leadership skills that company-grade officers need to manage and command multi-company fire situations. This certificate meets the objectives of the National Fire Protection Association (NFPA) Standard 1021, Fire Officer Professional Qualifications Level II.

Accreditation

Fire Officer I and II are accredited by the National Board on Professional Firefighter Qualifications Board.

Program Prerequisite(s)

- *Approval of Department AND*
- *Certified Ohio Firefighter AND*
- *At least three years active duty experience.*

Program Requirements

- FST 2251 - Fire Officer I
- FST 2252 - Fire Officer II

Fire Department Executive Officer, STC

Program Code: FEO.S.STC • Credit Hours: 6

Description

Develop management, supervision and leadership skills required by upper-level executive-grade officers. These skills are needed to effectively manage fire protection and emergency services in today's complex fire service environment and command complex multi-company and multi-jurisdictional emergency incidents. This certificate meets objectives of the National Fire Protection Association (NFPA) Standard 1021, Fire Officer Professional Qualifications Levels III and IV.

Program Prerequisite(s)

Approval of Department

Program Requirements

- FST 2253 - Fire Officer III
- FST 2254 - Fire Officer IV

Firefighter EMT, STC

Program Code: FEMT.S.STC • Credit Hours: 19

Description

This program provides training as outlined by the Ohio Division of Emergency Medical Services (state accrediting body) for Firefighter I, Firefighter II and Emergency Medical Technician. Sinclair Community College complies with all requirements as outlined by the Ohio Division of Emergency Medical Services. Successful students will be eligible to sit for state certification testing and eventually be eligible to become licensed/certified as a Firefighter I, Firefighter II, and EMT.

Accreditation

Fire Officer I and II are accredited by the National Board on Professional Firefighter Qualifications Board.

Career Opportunities

Students completing this program will find career opportunities in fire departments, private EMS agencies, and hospitals.

Program Prerequisite(s)

Approval of Department

Program Requirements

- EMS 1150 - Emergency Medical Technician: Lecture
- EMS 1155 - Laboratory for Emergency Medical Technician
- FST 1102 - Firefighter I AND
- FST 1103 - Firefighter II Transition AND
- FST 1442 - Emergency Vehicle Operator
  OR
- FST 1104 - Firefighter II AND
- FST 1442 - Emergency Vehicle Operator

Food Production Specialist, STC

Program Code: FPS.S.STC • Credit Hours: 28

Description

The Food Production Specialist Certificate combines classroom instruction and laboratory experience in food preparation and service for the restaurant and catering industry.

Career Opportunities

Employment opportunities after completing the Food Production Specialist Certificate and Bakery Specialist or Pastry Specialist include: short order cook, fast food cook, food preparation worker, baker, pastry cook, and galley cook.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- CJS 1106 - Transition Skills
- ENG 1131 - Business Writing OR
- MAN 2150 - Management & Organizational Behavior
- HMT 1101 - Basic Culinary Skills
- HMT 1102 - Kitchen Chemistry
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1112 - Food Principles & Basic Preparation
- HMT 2215 - Hospitality Cost Controls
- MAT 1120 - Business Mathematics

Food Truck and Street Foods, STC

Program Code: FTSF.S.STC • Credit Hours: 15

Description

Food Trucks and Street Foods have moved into the epicurean spot light in recent years and have moved from the fad stage into the newest and hottest food trend sweeping across America and beyond. In this short-term certificate students will learn how to set-up and design a food truck operation as well as the requirements for food booths and mobile food stations.

Career Opportunities

Street Food & Food Trucks are ready-to-eat food or drink sold by a vendor, in a street or other public place, such as at a market or fair. It is often sold from a portable food booth, food cart, or food truck and meant for immediate consumption. Students will learn all the steps to creating a profitable operation of a street foods meals.

Program Prerequisite(s)

- HMT 1101 - Basic Culinary Skills AND
- HMT 1107 - Sanitation & Safety

Program Requirements

- HMT 1101 - Basic Culinary Skills
- HMT 1107 - Sanitation & Safety
- HMT 1112 - Food Principles & Basic Preparation
- HMT 1129 - Restaurant Desserts
- HMT 2203 - Street Foods & Food Trucks

General Aviation Maintenance, STC

Program Code: GAM.S.STC • Credit Hours: 23

Description

The General Aviation Maintenance certificate provides foundational knowledge and skills required by the Federal Aviation Administration (FAA) for the Aviation Maintenance Technician (AMT) student. To become an AMT, two ratings are required, the Airframe (A) and the Powerplant (P); this is commonly referred to as an "A&P Certificate". The GAM.S.STC, the Airframe Maintenance (AAM.S.CRT) and Powerplant Maintenance (PPAM.S.STC) certificates are needed to qualify the student to become an AMT. Students will learn to apply mathematics and physics, read and interpret aircraft drawings, conduct ground operations and servicing of aircraft, interpret maintenance publications, interpret FAA

regulations, make correct and legal aircraft record entries, perform weight and balance calculations, understand basic electricity, understand makeup of materials used in aircraft manufacture, understand aircraft fasteners, inspect welds, inspect for aircraft deterioration (corrosion) and understand and perform aircraft repair methods. Students will learn to apply the knowledge and skills they have learned with extensive hands-on training in the aviation maintenance lab. Sinclair is an FAA-approved Aviation Maintenance Technician School (AMTS) under Part 147.

Career Opportunities

The Aviation industry is experiencing a pressing shortage of aviation mechanics. In its most recent pilot and technician outlook report, issued in 2020, Boeing estimated that 739,000 new technicians would be needed worldwide during the next 20 years, much of it due to the large number of recent and upcoming retirements in the field...that includes 192,000 new technicians needed in North America.

Program Requirements

- AVT 1113 - Drawings for Aviation
- AVT 1116 - Regulations for Maintenance
- AVT 1118 - Weight & Balance
- AVT 1130 - Basic Aviation Electricity I
- AVT 1132 - Basic Aviation Electricity II
- AVT 1135 - Materials & Processes
- AVT 1213 - Corrosion
- AVT 2143 - Review & Recommendation
- AVT 2237 - Aircraft Inspections

Geographic Information Systems, STC

Program Code: GEOIS.S.STC • Credit Hours: 19

Description

The Geographic Information Systems (GIS) short-term certificate will provide students with both theoretical and practical applications of GIS. The certificate will cover the foundational concepts in GIS, including the principles of cartography and GIS, database management and analysis, data acquisition, and manipulation of georeferencing and geocoding.

Career Opportunities

Students completing this certificate may obtain an entry level position with state and local government, business, non-profit organizations, and the Defense Industry.

Program Requirements

- CSC 2165 - Database Management
- GEO 1107 - Introduction to Geographic Information Systems (GIS)
- GEO 1209 - Map Design & Visualization
- GEO 2210 - Advanced Spatial Analysis
- MAT 1450 - Introductory Statistics

Geospatial Technology Analyst, STC

Program Code: GSTA.S.STC • Credit Hours: 22

Description

The Geospatial Technology Analyst short-term certificate will provide students with both theoretical and practical applications of Geographic Information Systems (GIS). The certificate will cover the foundational concepts in GIS, database management and analysis, data acquisition, and manipulation of georeferencing and geocoding.

Career Opportunities

This certificate is designed for those students who seek to enhance their job-related skills in becoming a GIS analyst. The U.S. Department of Labor Employment and Training Administration (DOLETA), for example, cites an annual growth rate of approximately 35 percent for the geospatial technology industry. Students completing the certificate will have the technical skill set in GIS required to perform a variety of entry level positions in a variety of arenas, including, regional and local government agencies, business, and community organizations.

Program Requirements

- AVT 1120 - Electro-Optical & Infrared Data Analysis OR
- AVT 1121 - Multispectral & Hyperspectral Data Analysis

- CSC 2165 - Database Management
- CSC 2266 - Python for Data Analytics
- CSC 2268 - Structured Query Language (SQL) Programming
- GEO 1107 - Introduction to Geographic Information Systems (GIS) OR
- GEO 1215 - Introduction to Remotely Sensed Imagery OR
- EET 1121 - UAS Remote Sensing & Analysis AND
- EET 1158 - Aerospace Spatial Visualization
- GEO 2210 - Advanced Spatial Analysis

Geospatial Technology Programming Specialist, STC

Program Code: GST.S.STC • Credit Hours: 20

Description

Students learn advanced applications in geographical information system software, ArcGIS; programming skills; how to design and implement websites; design and administer relational databases; query databases using SQL.

Career Opportunities

Graduates of this degree will be able to build upon already existing programming skills to find employment in government and within private industry employing computer programmers with general GIS skills and knowledge such as: Database Developer or Software Applications Programmer. According to the Bureau of Labor and Statistics (www.bls.gov). As a result of rapid employment growth over the 2008 to 2018 decade, job prospects for computer software engineers should be excellent.

Program Requirements

- CSC 1350 - Web Site Development with HTML & CSS
- CSC 2165 - Database Management
- CSC 2266 - Python for Data Analytics
- CSC 2268 - Structured Query Language (SQL) Programming
- GEO 1107 - Introduction to Geographic Information Systems (GIS)
- GEO 2210 - Advanced Spatial Analysis

Global Studies, STC

Program Code: GSC.S.STC • Credit Hours: 24-25

Description

The Global Studies Certificate provides students seeking a multicultural credential an opportunity to earn a short-term certificate that is completely aligned with a variety of AA degrees. Sinclair students with the desire to acquire knowledge and analytical skills in political, social, historical, scientific, linguistic, economic and cultural aspects are well suited for pursuing this certificate.

Career Opportunities

Designed for students who are planning on using Global Studies to enhance their careers in: global cultural industries in music, film, sports, and consumer life; global environmental management; global health; global marketing; human justice organizations; international governance; international humanitarian service; international development agencies; international business; mass communication; travel, tourism and international hospitality management; and United States government offices and agencies. The student who pursues this short-term technical certificate would plan to use this to supplement their professional development or to strengthen a major for which Global Studies is a strong base.

Program Requirements

- SCC 1101 - First Year Experience

- SOC 1145 - Introduction to Cultural Anthropology

- GEO 1101 - Global Forces, Local Diversity OR
- GEO 1102 - Earth's Physical Environment OR
- GEO 1201 - World Regional Geography: People, Places & Globalization
- Language Electives **8 Cr. Hr(s).**

- HIS 1101 - United States History I OR
- HIS 1111 - Western Civilization I OR
- HIS 1112 - Western Civilization II OR
- HIS 2215 - Survey of African History OR
- HIS 2216 - Survey of Latin American History OR
- HIS 2217 - Survey of East Asian History OR
- HUM 1125 - Introduction to the Humanities OR
- PHI 2205 - Introduction to Philosophy
- PLS 2200 - Political Life, Systems & Issues OR
- PLS 2220 - International Relations OR
- PLS 2860 - Model UN/International Issues

- REL 1111 - Eastern Religions OR
- REL 1112 - Western Religions

Greenhouse Technician, STC
Program Code: GHT.S.STC • Credit Hours: 16
Description
The Greenhouse Technician Certificate will equip students with basic knowledge of plant science that is used for the growth, development, and utilization of cultivated plants. This knowledge will allow the students to propagate plants, implement sustainable landscape design, understand the science of soil, and will ultimately enable the student to operate and manage a greenhouse.
Career Opportunities
Graduates of the Greenhouse Technician Certificate program are employable as entry-level positions in the nursery, landscape, or agricultural industry. Instruction and practical application of learned skills provide a broad occupational background that appeals to prospective employers.
Program Requirements

- AGR 1160 - Introduction to Agriculture Science
- AGR 1201 - Horticulture I
- AGR 1205 - Greenhouse Management
- AGR 1206 - Horticulture II
- AGR 1207 - Greenhouse Applications
- AGR 1208 - Sustainable Landscape Design

Hospitality Reception and Service Specialist, STC
Program Code: HRSS.S.STC • Credit Hours: 2
Description
This certificate prepares individuals to work in the luxury service environment, while mastering the importance of soft-skills and strategies to resolve some of the most difficult challenges involving high end hospitality clientele.
Career Opportunities
Upon completing this credential, students will have gained the knowledge for entry level employment as a guest relations associate within an upscale hotel, matre d for a fine dining establishment, receptionist at an established travel firm, or sales associate for a convention bureau. Ultimately, this is the first step toward completing a Degree in Hospitality Management.
Program Requirements

- HMT 1105 - Introduction to the Hospitality & Tourism Industry

Human Resource Management, STC
Program Code: HRMT.S.STC • Credit Hours: 18
Description
This certificate provides the opportunity to develop and refine human resources skills. The curriculum covers laws and regulations related to employment, implications of decisions and their effect on business, as well as employee motivation. Also addresses human resource applications in strategic human resource management, workforce planning and employment, human resource development, total compensation and rewards, employee and labor relations, and risk management. Contemporary approach to human resource management using a diagnostic model of internal and external influences.
Career Opportunities
Students completing this certificate will be qualified to apply for Human Resource Specialist positions, in some cases, or will be prepared to further their studies in the human resources area at a four-year institution.
Program Requirements

- BIS 1120 - Introduction to Software Applications
- COM 2206 - Interpersonal Communication
- FIN 2450 - Personal Finance
- MAN 2140 - Human Resource Management
- MAN 2144 - Negotiation Techniques
- MAN 2150 - Management & Organizational Behavior

Industrial Maintenance Technician, STC
Program Code: INDMT.S.STC • Credit Hours: 26-28
Description
The Industrial Maintenance Technician certificate provides the knowledge and skill required for installing, maintaining and troubleshooting modern industrial machinery. Students will learn to solve practical maintenance problems, read and interpret mechanical drawings and interpret maintenance publications.
Career Opportunities
This certificate will provide the necessary background to perform industrial maintenance operations on a wide range of electromechanical equipment.
Program Requirements

- EET 1120 - Introduction to DC & AC Circuits
- EET 1139 - Electrical Machinery
- EET 1166 - Industrial Machine Wiring
- EET 2281 - Programmable Logic Controllers
- EGR 1106 - Basic Mechanical & Electrical Skills
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- EGR 1144 - Sensors & Vision Systems
- EGR 1217 - Fluid Power & Control
- EGR 2231 - Troubleshooting of Automated Systems
- MET 1301 - SolidWorks Basics OR
- CAM 1107 - Introduction to Mechanical Drafting with CAD

Industrial PLC Programming Technician, STC
Program Code: PLC.S.STC • Credit Hours: 8-10
Description
This certificate provides students and working professionals the basic necessary knowledge and skills to operate, program, and diagnose Programmable Logic Controller (PLC) based control systems in advanced manufacturing automation process operations, Original Equipment Manufacturer (OEMs), and logistics/supply chain high-tech warehousing automation operations. This program covers digital fundamentals used in all of today's computers, PLC hardware, PLC ladder logic programming, PLC I/O wiring diagrams, PLC communication architecture, networking, HMIs (Human Machine Interface) in a hands-on learning environment on several different types of PLCs.

Career Opportunities

Graduates will be qualified for entry level work as a PLC technician for original equipment/system suppliers, consultants/third party support, as well as, equipment/system end users. Manufacturing industries that require PLC Programming Technicians include food, pharmaceutical, defense, aerospace, chemical, plastics, steel, metals, paper, textiles, and automotive industries. Graduates typically work in manufacturing process support, maintenance support, engineering support, sales/service support, or consulting functions. All courses within certificate may be applied towards a degree in Automation & Control Technology with Robotics, a high demand, high paying field.

Program Requirements

- EET 1198 - Digital Technology OR
- EET 1131 - Digital Electronics
- EET 2281 - Programmable Logic Controllers
- EET 2282 - Advanced Programmable Logic Controllers

Industrial Robotics & PLC Programming Technician, STC

Program Code: IRPLC.S.STC • Credit Hours: 17-19

Description

This certificate extends the knowledge and skills students learn in the Industrial PLC Programming Technician certificate by teaching students to operate, program, and troubleshoot robotic-cells and control systems used in advanced manufacturing operations, Original Equipment Manufacturer OEMs, logistics/supply chain centers, and automated warehousing operations. This program covers digital fundamentals common to today's computers, basics of automated systems, Robotic Teach Pendant Programming (TPP), Robotic Handling Tool fundamentals, Programmable Logic Controller (PLC) hardware, PLC ladder logic programming, PLC I/O wiring diagrams, PLC communication architecture, networking, Human Machine Interface (HMIs) in a "hands-on" learning environment setting.

Career Opportunities

This certificate program will provide the education and training necessary to operate, program, diagnose, and repair PLC & industrial robots. Graduates will be qualified to work for original equipment/system suppliers, consultants/third party support, as well as, manufacturing and supply/chain logistics warehousing equipment/system end users. All courses within certificate may be applied towards a degree in Automation & Control with Robotics, a high demand, high paying field.

Program Requirements

- EET 1198 - Digital Technology OR
- EET 1131 - Digital Electronics
- EET 2281 - Programmable Logic Controllers
- EET 2282 - Advanced Programmable Logic Controllers
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- EGR 2231 - Troubleshooting of Automated Systems
- EGR 2252 - Teach Pendant Robot Programming

Information Systems Security, STC

Program Code: ISSC.S.STC • Credit Hours: 18

Description

This certificate will help prepare students and working professionals to perform effectively in the Information Assurance area of Information Technology. The courses required for this certificate have been reviewed and validated by the NSA. Students completing the courses outlined here will receive the ISSC Certificate jointly issued by Sinclair Community College and the NSA.. Because the specified content in these courses has been approved, course credit earned by articulated or proficiency cannot be accepted.

Career Opportunities

With the increased awareness of the need for computer and network security in government, industry, and education, there are greatly increased opportunities for students prepared to work in Information Assurance. Students and working professionals completing this certificate will have significantly enhanced opportunities to pursue jobs in the Information Assurance arena within the Federal government, Department of Defense, and private industry.

Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CIT 2510 - Microsoft Windows Server Operating System
- CIT 2550 - Linux Operating System
- CIT 2630 - Securing a Windows Network Environment OR
- CIT 2650 - Ethical Hacker
- CIT 2640 - Network Security

International Business, STC

Program Code: INTB.S.STC • Credit Hours: 18

Description

This certificate allows students to explore content and experiences relevant to employment in multinational firms and Non-Governmental Organizations (NGOs). Students will learn technical information that is applicable to further study in international business as well as direct employment in organizations operating on a global basis.

Career Opportunities

Students will have the opportunity to develop knowledge and relationships that lead to employment in multinational organizations. Students will have the foundational knowledge and business contacts to pursue internship and careers throughout the world, if they so choose.

Program Requirements

- GEO 1201 - World Regional Geography: People, Places & Globalization
- MAN 1107 - Foundations of Business
- MAN 1110 - International Business
- MAN 2150 - Management & Organizational Behavior
- SOC 1145 - Introduction to Cultural Anthropology
- Business Management Elective **3 Cr. Hr(s).** (options listed below)

Business Management Elective

- MAN 2110 - Introduction to Project Management
- MAN 2140 - Human Resource Management
- MAN 2144 - Negotiation Techniques
- MAN 2159 - Supply Chain Management Concepts & Applications
- MAN 2270 - Management Internship
- MAN 2279 - Business Management Capstone
- MRK 2100 - Foundations of Marketing
- MRK 2101 - Principles of Marketing Management
- MRK 2135 - Digital Marketing

Internet of Things Technician, STC

Program Code: IOTT.S.STC • Credit Hours: 19

Description

This short term certificate offers knowledge and basic skills to work in the electronics/programming industry as an entry-level support technician for Internet of Things (IoT). In addition to advanced manufacturing, a growing portion of IoT devices are created for consumer use, including connected vehicles, home automation, wearable technology, connected health, and appliances with remote monitoring capabilities. Micro-controllers are the heart of any IoT device. Graduates learn micro-controller hardware, programming applications, networking, and security. Theoretical aspects

are supported and supplemented by hands-on lab work to gain in-depth knowledge and necessary technical skills.

Career Opportunities

This certificate program will provide the entry level education and training necessary to operate, program, diagnose, and repair micro-controller based Internet of Things (IoT) devices. Graduates will be qualified to work for original equipment/system suppliers, consultants/third party support, as well as, equipment/system end users. This certificate is not only for individuals that are new to the field of IoT, but to those individuals that are already working in the field, and want to update their skill set. All courses within certificate may be applied towards a Bachelor Applied Science degree in Internet of Things, a high demand, high paying field.

Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals OR
- CIT 1411 - Introduction to Networks
- CIT 2640 - Network Security
- EET 1198 - Digital Technology
- EET 2261 - Microprocessors
- EGR 2261 - Engineering Problem Solving using "C" & "C++"

IT Fundamentals, STC

Program Code: ITFN.S.STC • Credit Hours: 18

Description

This certificate provides the fundamental courses needed to prepare for any of the multiple Computer Information Technology programs or areas of specialization. It allows students to experience introductory courses in various disciplines as preparation for their chosen degree objective. All courses in this certificate apply to the various degree programs in Computer Information Technology and Computer Science.

Career Opportunities

Entry level positions in various areas including user support, system administration and network management will be available to students completing this certificate. Many employers are quite willing to provide job specific training to employees already possessing the broad technical experiences in this certificate. Students completing this certificate and a specific Computer Information Technology or Computer Science degree program will be further prepared for specific employment opportunities.

Program Requirements

- BIS 1105 - IT Fundamentals OR
- BIS 1120 - Introduction to Software Applications
- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 1140 - Information Systems Analysis & Design
- CSC 2165 - Database Management

Large Animal Care & Handling, STC

Program Code: LAC.S.STC • Credit Hours: 19

Description

This program is designed to introduce the student to working within the agricultural field and will provide a baseline of business, communication, and animal handling knowledge.

Career Opportunities

Holders of this certificate will be better able to obtain employment, or increase their status as a Farm Worker, Farm Manager, Feed Store Worker, Farm Bureau Representative, or Farm Banking Assistant.

Program Requirements

- AGR 1110 - Introduction to Large Animal Sciences: Handling & Husbandry
- AGR 1111 - Principles of Large Animal Reproduction
- AGR 1112 - Principles of Large Animal Nutrition
- AGR 1113 - Animal Management
- AGR 1160 - Introduction to Agriculture Science
- AGR 1401 - Food Science & Technology
- AGR 1505 - Foundations of Agricultural Marketing

Law Enforcement, STC

Program Code: CJLE.S.STC • Credit Hours: 21

Description

This certificate prepares students for future training and education in the field of law enforcement. This certificate enhances law enforcement professional skills and knowledge. It may assist the student in performing well in future civil service examinations for employment or promotion.

Career Opportunities

A broad range of career opportunities are available in the area of criminal justice and law enforcement including those in court systems, court administration, law enforcement agencies, private investigation agencies, and probation and parole.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1103 - Constitutional Law & Evidentiary Procedures
- CJS 1110 - Interrogation, Documentation & Testimony
- CJS 1105 - Criminal Law
- CJS 1125 - Policing
- CJS 2111 - Ethics & Professionalism in Criminal Justice

Linux Security & Network Essentials, STC

Program Code: LSNE.S.STC • Credit Hours: 12

Description

The Linux Security and Network Essentials short-term certificate is an information technology certificate concentrating on teaching specific skills pertaining to the fundamentals of the Linux operating system, Linux security and network, and data communications.

Career Opportunities

Opportunities include Linux administrators and Linux consultants.

Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals OR
- CIT 1411 - Introduction to Networks
- CIT 2550 - Linux Operating System
- CIT 2640 - Network Security

Magnetic Resonance Imaging, STC

Program Code: MRI.S.STC • Credit Hours: 5

Description

The short term certificate in Magnetic Resonance Imaging (MRI) is designed to provide radiographers certified by the American Registry of Radiologic Technologists (ARRT) with didactic and clinical education in Magnetic Resonance Imaging. Didactic courses focus on current MRI principles while clinical courses provide students with real-life experience and development of hands-on skills needed to pursue employment opportunities MRI.

Career Opportunities

Completion of this short term certificate program can lead to employment in comprehensive hospitals, suburban or rural outpatient centers, surgery centers, etc. as a Magnetic Resonance Imaging Technologist.

Program Prerequisite(s)

Approval of Department

Program Requirements

- RAT 2643 - Principles of Magnetic Resonance Imaging
- RAT 2645 - Magnetic Resonance Imaging Practicum
- RAT 2645 - Magnetic Resonance Imaging Practicum

Mammography, STC

Program Code: MAMMO.S.STC • Credit Hours: 4-6

Description

The short term certificate in Mammography is designed to provide radiographers certified by the American Registry of Radiologic Technologists (ARRT) with didactic and clinical education in Mammography. Didactic courses focus on current Mammography principles while clinical courses provide students with real-life experience and development of hands-on skills needed to pursue employment opportunities Mammography.

Career Opportunities

Completion of this short term certificate program can lead to employment in comprehensive hospitals, suburban or rural outpatient centers, etc. as a Mammographer.

Program Prerequisite(s)

Approval of Department

Program Requirements

- RAT 2647 - Principles of Mammography
- RAT 2649 - Mammography Practicum

Manufacturing Management, STC

Program Code: MM.S.STC • Credit Hours: 18

Description

This short-term certificate provides a manufacturing specific background in organizations, industrial supervision, improvement techniques, quality, teamwork and cost analysis.

Career Opportunities

The purpose of this certificate is to assist individuals in their transition from a technical job (engineer, technician, production worker, etc.) to a managerial position (foreman, supervisor, manager, etc.) in the manufacturing industry.

Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- ISE 2100 - Lean Leadership, Teamwork & Management
- ISE 2208 - Engineering Technology Economics & Cost Analysis
- ISE 1101 - Introduction to Industrial & Systems Engineering Technology
- ISE 1130 - Lean Operations & Continuous Improvement
- MAN 2110 - Introduction to Project Management

Mechanical Software Technician, STC

Program Code: METECH.S.STC • Credit Hours: 16

Description

The Mechanical Software Technician short term certificate introduces students to the field of mechanical engineering including using the latest versions of computer-aided drafting software. All courses are part of the Mechanical Engineering Technology associate degree.

Career Opportunities

Professionals with software skills are in demand by mechanical design firms.

Program Requirements

- CAM 1109 - Fundamentals of Tooling & Machining
- MET 1111 - Preparatory Math for Engineering Technology
- MET 1231 - Introduction to Engineering Design Using 3D CAD OR
- MET 1301 - SolidWorks Basics
- MET 2281 - Engineering Technology Professional Practice
- CAM 1107 - Introduction to Mechanical Drafting with CAD OR
- MET 1151 - Guitar Manufacturing using Science, Technology, Engineering, & Mathematics (STEM) Concepts OR
- MET 2700 - Mechanical Engineering Technology Internship

Mechanical Technician,STC

Program Code: MECHTECH.S.STC • Credit Hours: 20-22

Description

This program will provide the hands-on skills in mechanical engineering technology and manufacturing to begin entry-level technician jobs, with options open in numerous fields and companies.

Career Opportunities

The Mechanical Technician certificate introduces students to basic mechanical engineering concepts and prepares them to work as entry-level technicians in mechanical engineering or related fields.

Program Requirements

- CAM 1109 - Fundamentals of Tooling & Machining
- EET 1120 - Introduction to DC & AC Circuits
- EGR 1106 - Basic Mechanical & Electrical Skills
- MET 1111 - Preparatory Math for Engineering Technology
- MET 2151 - Material Science
- MET 1231 - Introduction to Engineering Design Using 3D CAD OR
- MET 1301 - SolidWorks Basics
  AND
- MET 1401 - Additive Design & Printing OR
- MET 2281 - Engineering Technology Professional Practice OR
- MET 2700 - Mechanical Engineering Technology Internship OR
- MET 1151 - Guitar Manufacturing using Science, Technology, Engineering, & Mathematics (STEM) Concepts

Medical Coding & Billing Specialist, STC

Program Code: MCBS.S.STC • Credit Hours: 24

Description

This certificate prepares students for entry-level coding and billing positions in physician medical offices, medical insurance companies and outpatient billing services. Students will develop skills to accurately determine diagnostic and procedural code number assignments that impact medical reimbursement. Skill sets include application of ICD-10-CM, CPT and HCPCS coding systems; medical terminology; anatomy and physiology and disease processes; processing insurance claims and reimbursement practices. The Medical Billing and Coding Specialist certificate can be completed in the traditional classroom setting or completely online or a combination of both delivery systems. Students must receive a grade of C or higher in all courses in the MCBS.S.STC and have a GPA of 2.0 to receive the certificate.

Career Opportunities

Employment prospects for medical coding and billing specialists are excellent throughout the nation. Career opportunities include: physician medical offices, medical insurance companies and outpatient billing services.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 1140 - Fundamentals of Disease Processes
- BIO 1121 - Human Anatomy & Physiology I
- BIO 1222 - Human Anatomy & Physiology II
- HIM 1101 - Medical Terminology
- HIM 1165 - Drug Classification for Coding

- HIM 1201 - Introductory Medical Office Coding
- HIM 2262 - Advanced Medical Office Coding
- MAS 2210 - Medical Billing Specialist

Micro-Electronics Technician, STC
Program Code: MICRO.S.STC • Credit Hours 18
Description
Course work is designed to rapidly prepare the student for the micro-electronics workforce. Micro-electronics includes the exciting areas of digital electronics and integrated circuit (IC) chips that control everything from consumer devices, automobiles, medical devices, appliances, sensors, aerospace, industrial controls, and state-of-the-art internet of things (IoT) technology. Technicians will be prepared to enter integrated circuit fabrication and design workforce.
Career Opportunities
Chip Fabrication technician, micro-controller programming technician, digital electronics technician, technical support technician, field support technician, consultant.
Program Requirements

- EET 1116 - Electronics Schematics & Fabrication
- EET 1120 - Introduction to DC & AC Circuits
- EET 1198 - Digital Technology
- EGR 2205 - Integrated Circuit (IC) Fabrication Techniques
- MAT 1110 - Math for Technologists
- PHY 1106 - Physics for Technology

Microsoft Certified Solutions Associate, STC
Program Code: MCSA.S.STC • Credit Hours: 18
Description
This certificate and the associated courses will help students prepare for the certification exams needed to earn the designation of Microsoft Certified Solutions Associate (MCSA). This credential and the technical competence, as demonstrated by the certification exams, will help students earn employment in the areas of Network Management, Network Administration, and System Administration.
Career Opportunities
Students completing this short term certificate will be prepared for vendor and/or industry certification exams that are highly desired and valued in the Information Technology field. In turn, these certifications will help prepare students for careers in Network Administration, Network Management, System Administration, and other aspects of computer and network management.
Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1130 - Network Fundamentals
- CIT 2510 - Microsoft Windows Server Operating System
- CIT 2515 - Windows Network Infrastructure
- CIT 2520 - Windows Server Advanced Services
- CIT 2640 - Network Security

Network Engineering Associate, STC
Program Code: NEA.S.STC • Credit Hours: 17
Description
This certificate program will provide the student with state-of-the-art networking skills taught via the Cisco Networking Academy curriculum. The curriculum includes all aspects for an introductory network engineering position. This program is designed to provide the knowledge and skills required to understand and participate in basic networking design, installation, configuration, and troubleshooting corporate network infrastructure. Included in this program are networking theory, Open Systems Interconnection (OSI) model, networking media, physical and logical design, maintaining networking equipment, designing and implementing internet protocol schemas, the basics of all current internal routing protocols, beginning security information, and safety.
Career Opportunities
Employment opportunities in IT include entry-level positions such as network security analyst, network architect, and network engineer.
Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1411 - Introduction to Networks
- CIT 2416 - Routing & Switching Essentials
- CIT 2421 - Scaling Networks
- CIT 2640 - Network Security

Network Engineering Entry Level, STC
Program Code: NEEA.S.STC • Credit Hours: 10
Description
This certificate program will provide the student with networking skills taught via the Cisco Networking Academy curriculum. The Cisco Certified Entry Level Networking Technician (CCENT) designation validates the ability to install, operate, and troubleshoot a small enterprise branch network including basic network security. With the CCENT, a networking professional demonstrates the skills required for entry-level network support positions. The curriculum covers networking fundamentals, wide area network (WAN) technologies, basic security and wireless concepts, routing and switching fundamentals, and configuring simple networks. The CCENT is the first step towards achieving the CCNA designation.
Career Opportunities
This certificate will help prepare students to work in the IT Industry and, specifically, in the networking infrastructure area within medium and large networked organizations. The courses will help prepare students for the Cisco Certified Entry Network Technician (CCENT) exam and designation. This is a valuable credential for those seeking employment in this area.
Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1411 - Introduction to Networks
- CIT 2416 - Routing & Switching Essentials

Network Engineering Security Associate, STC
Program Code: NESA.S.STC • Credit Hours: 16
Description
This certificate will provide the student with state of the art network security skills taught using the Cisco Networking Academy curriculum. This program is designed to provide the knowledge and skills required to understand basic security threats and to configure and manage Cisco devices to provide appropriate network security. Cisco switches, routers, firewalls, and Intrusion Prevention Systems (IPS) methods will be used.
Career Opportunities
Security analysts plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. They may ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. They may also be involved in the response to computer security breaches and viruses.
Program Requirements

- CIT 1107 - Introduction to Operating Systems
- CIT 1411 - Introduction to Networks
- CIT 2418 - Basic Firewall Security
- CIT 2416 - Routing & Switching Essentials
- CIT 2640 - Network Security

New Media, STC
Program Code: NWMED.S.STC • Credit Hours: 17
Description
The New Media Short-Term Certificate is designed to cultivate skills in mass communication and message design, visual communication,

journalism and marketing within the realm of new technologies including blogs, podcasts, video games, video production, websites, and social media platforms such as Facebook, Instagram, YouTube and Twitter. Students will learn valuable marketing skills, hands on visual communication design, and effective message design in mass communication channels through interdisciplinary theory and methodology. Graduates of the certificate will be able to analyze and assess the needs of a client in order to most effectively communicate and engage with their respective publics.

Career Opportunities

The New Media Certificate is built to add to the experience of students new to fields of marketing, communication, visual communication and journalism but is also beneficial to those that are currently working in the field and want to update their skill set to include new media techniques.

Program Requirements

- COM 2201 - Introduction to Mass Communication
- COM 2270 - Communication Internship
- ENG 1101 - English Composition I
- JOU 2101 - Introduction to Journalism
- MRK 2135 - Digital Marketing
- VIS 1140 - Design Processes I

Nurse Aide, STC

Program Code: NAST.S.STC • Credit Hours: 4

Description

Provides education to individuals in the basic skills necessary to provide personal care services and activities under the delegation and supervision of a registered or licensed practical nurse to residents in a long-term care facility.

Chapter 3701-19 of the OAC for the State of Ohio establishes the requirements for Ohio's Nurse Aide Training and Competency Evaluation program. These requirements mandate all NAs working on a regular basis in Ohio's LTCFs must complete an Ohio Department of Health-approved 75-hour TCEP and pass a competency evaluation test conducted by the director.

Career Opportunities

Individuals may work as Nurse Aides; Home Health Care Aides or Patient Care Assistants.

Program Requirements

- ALH 1120 - Nurse Aide Training

Nutrition Associate, STC

Program Code: NA.S.STC • Credit Hours: 4

Description

Graduates of the certificate program create environments where moments of joy, independence, and wellness are promoted as they assist with preparation of food items and serves food to patients and residents within a scheduled time frame. The Nutrition Associate cleans and maintains food service areas, including kitchen and dining room, assists the Nutrition Director or Dietary Manager and/or cook in maintaining inventory and quality control. Maintains clean, neat and safe work environment. Assures that residents diets are followed. Maintains current sanitation audits and highest standards for kitchen cleanliness. Assists as a patient or resident assistant when all dietary duties are finished

Career Opportunities

Career opportunities are abundant in both the Premier and Kettering Health hospital network organizations as well as area long-term care facilities. Nutrition Associates may also pursue employment opportunities in the public school system and correctional facilities.

Program Requirements

- DIT 2101 - Dining Assistant Dietary Aide
- DIT 2510 - Institutional Food Safety & Quantity Food Systems

Ohio Peace Officer Basic Training Academy, STC

Program Code: BAS.S.STC • Credit Hours: 26

Description

This program of study will provide you with the complete Ohio Peace Officer basic officer training required by the State of Ohio for new Ohio law enforcement officers. Taught by state-certified commanders and instructors, the basic academy adheres to the required content, instructional and training standards necessary for individuals to become certified peace officers in the State of Ohio. The basic academy consists of over 700 hours of instruction delivered in 24 weeks of training. The curriculum is intensive and participants must devote significant time and effort to complete the program. Academic, physical fitness, firearms and other demanding skill sets are included in the program. At the conclusion of the training, students are required to take a 200-question written final exam administered by the Attorney General's Office to receive a certificate of completion. Graduates of this program typically seek employment as police officers, sheriff 's deputies, park rangers or other positions in Ohio which require a law enforcement commission. The Sinclair Academy has placed hundreds of graduates in more than 300 law enforcement agencies in Ohio. Entrance into Sinclair's Criminal Justice Training Academy is a competitive process and not all applicants are accepted. The academy is offered in both the Spring and Summer semesters.

Career Opportunities

There are openings in local and state law enforcement agencies as well as private investigation and personal protection agencies.

Program Prerequisite(s)

Physical fitness assessment, fingerprint check, oral interview and college level ready for English.

Program Requirements

- CJS 2280 - Basic Peace Officer Training I
- CJS 2281 - Basic Peace Officer Training II

Ohio Real Estate Sales Associate, STC

Program Code: RESS.S.STC • Credit Hours: 8

Description

This certificate program is designed for the person who is interested in a career in real estate sales. The course work meets the educational requirement of 100 classroom hours for persons to sit for the Ohio real estate license exam: 40 hours of Real Estate Principles and Practices, 40 hours of Real Estate Law, and 20 hours of Real Estate Finance and Appraisal. (Further state requirements must also be satisfied). Seat hour requirements of 100 hours are strictly enforced by state rule. Successful completers will receive the Ohio Real Estate Sales Associate Certificate.

Career Opportunities

The U.S. Bureau of Labor Statistics says "Employment of real estate brokers and sales agents is projected to grow 11 percent from 2012 to 2022, about as fast as the average for all occupations" (Occupational Outlook Handbook).

Program Requirements

- RES 1101 - Real Estate Principles
- RES 1201 - Real Estate Law
- RES 1501 - Real Estate Finance & Appraisal

Organizational Leadership in Business, STC

Program Code: LDR.S.STC • Credit Hours: 6

Description

In this program, students will develop essential leadership and interpersonal skills to thrive in diverse and dynamic workplaces. They will explore effective communication and personality styles, strategies for conflict resolution, and approaches to fostering trust, psychological safety, and emotional intelligence. Students will also learn to apply principles like the Laws of Influence, Timing, and Empowerment to build meaningful connections and inspire others.

Career Opportunities

This certificate can be embedded into our Business Management (GBM.S.AAS) degree, offering recent graduates a pathway to entry-level

employment. It also enables working professionals to enhance their leadership skills, whether they are pursuing a promotion, transitioning to a new role, or aiming to excel in their current position.

Program Requirements

- MAN 1050 - Organizational Leadership I
- MAN 2050 - Organizational Leadership II

Pastry Specialist, STC

Program Code: BPS.S.STC • Credit Hours: 22

Description

The Pastry Specialist Certificate is a one semester, three course certificate that is designed to provide students the knowledge and skills necessary to be employed in a commercial retail bakery with a focus on pastry, confections, cake production and decoration, and candy. This certificate may be obtained after the completion of the Food Production Specialist Certificate.

Career Opportunities

The Pastry Specialist Certificate is a one semester, three course certificate that is designed to provide students the knowledge and skills necessary to be employed in a commercial retail bakery with a focus on pastry, confections, cake production and decoration, and candy.

Program Requirements

- HMT 1102 - Kitchen Chemistry
- HMT 1105 - Introduction to the Hospitality & Tourism Industry
- HMT 1107 - Sanitation & Safety
- HMT 1126 - Baking I, II, & Barista Basics
- HMT 2110 - Pastry & Confectionary
- HMT 2126 - Cake Production & Cake Decoration
- HMT 2218 - Advanced Pastry Skills

Patient Access & Scheduling Coordinator, STC

Program Code: MOR.S.STC • Credit Hours: 14

Description

This certificate prepares students for entry-level employment in the medical office environment performing scheduling, monitoring patient appointments, out-patient procedures, medical and office equipment maintenance, storing supplies and pharmaceuticals. The program is designed to develop knowledge and understanding of medical language and documentation.

Career Opportunities

Options for those who complete the certificate include: urgent care, surgicare and ambulatory care centers, as well as health maintenance organizations (HMOs), multi-physician group practices and medical specialty clinics.

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ENG 1101 - English Composition I
- HIM 1101 - Medical Terminology
- MAS 1110 - Administrative Medical Assisting

Patient Care Technician, STC

Program Code: PCT.S.STC • Credit Hours: 3

Description

The Patient Care Technician certificate prepares students to perform the basic skills necessary to provide personal care services and activities under the delegation and supervision of a registered or licensed practical nurse to patients within an acute care facility. Students will be able to demonstrate basic nursing care and the skills required to promote health and healing for patient, as well as implement nursing care that decreases risks and follows safety procedures.

Career Opportunities

Hospitals; Home Health Aide; Long-term Care Facilities; Rehabilitation Centers.

Program Requirements

- ALH 1121 - Patient Care Technician

Pharmacy Technician, STC

Program Code: PHT.S.STC • Credit Hours: 28-29

Description

This program prepares individuals to perform the technical and specialized skills of a pharmacy technician within retail, mail-order, hospital, nursing homes, and home health care settings. The program is designed to develop knowledge and understanding of basic pharmacology, maintenance of patient records, drug-product preparation and distribution and record-keeping. In order to register for ALH1124, ALH 1125, ALH1182, and ALH 1183, students must possess a high school equivalency certificate or a high school diploma, be 18 years or older, and demonstrate English language proficiency (including reading, writing, and speaking). A portion of this program will involve 80 hours of simulated lab and 210 hours of directed practice within pharmacies. A state and federal background check, immunizations, Healthcare Professional CPR, and proof of personal health insurance will be required prior to starting the directed practice. Upon completion of the program students are eligible to sit for the national Pharmacy Technician Certification Board Examination. A grade of C or better is required in all courses to complete the program.

Accreditation

The Pharmacy Technician Program is accredited by the American Society of Health-System Pharmacists/Accreditation Council for Pharmacy Education (ASHP/ACPE).

Career Opportunities

Pharmacy Technician in retail and mail-order settings, hospital pharmacies, nursing homes and home health care sites.

Prerequisites

Students must possess a high school equivalency certificate or a high school diploma, must be 18 years of age or older, and must demonstrate English language proficiency (including reading, writing, and speaking).

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 1122 - Pharmacy Technician I
- ALH 1123 - Pharmacy Technician II
- ALH 1124 - Pharmacy Technician Directed Practice I
- ALH 1182 - Pharmacy Technician Lab I
- ALH 1183 - Pharmacy Technician Lab II
- BIO 1107 - Human Biology OR
- BIO 1121 - Human Anatomy & Physiology I OR
- BIO 1141 - Principles of Anatomy & Physiology I
- HIM 1101 - Medical Terminology
- MAT 1130 - Mathematics in Health Sciences OR
- MAT 1445 - Quantitative Reasoning OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

Post Associate Certificate in Interior Design, STC

Program Code: INDPG.S.STC • Credit Hours: 11

Description

The certificate will provide an introduction to REVIT, construction drawings, materials and application; and kitchen and bath designs to support additional academic requirements to gain eligibility to take the National Council for Interior Design Qualification (NCIDQ) exam.

Career Opportunities

Students will gain professional status to pursue careers as designers or consultants in design studios, architecture firms or commercial retailers.

Program Prerequisites

- Minimum of an AAS degree in interior design

Program Requirements

- CAT 1121 - Architectural Graphics II
- CAT 2741 - Current Topics in Architecture
- IND 2250 - 3D Modeling
- IND 2280 - Kitchen & Bath Design

Powerplant Aviation Maintenance, STC

Program Code: PPAM.S.STC • Credit Hours: 19

Description

The Powerplant Aviation Maintenance certificate provides the knowledge and skills required by the Federal Aviation Administration (FAA) for the powerplant maintenance technician student. Students will learn to apply all the knowledge and skills in the lab portion.

Career Opportunities

Boeing Commercial Aircraft Company recently predicted 1,000,000 more jobs in aviation in the next 15 years. Airbus of Europe has predicted about 800,000 more jobs in the next 15-20 years. Both predictions are based on anticipated growth in aircraft production and flying passengers. Many mechanics will reach retirement age in the next three years as a result of an interruption of current certificates issued by the FAA. More jet aircraft means more need for mechanics. The general aviation sector already has a shortage of certificated mechanics.

Program Requirements

- AVT 1128 - Powerplant Safety Systems
- AVT 2122 - Ignition & Starting
- AVT 2126 - Reciprocating Engines
- AVT 2129 - Propellers
- AVT 2138 - Engine Fuel & Fuel Metering
- AVT 2219 - Turbine Engines

Processes for Interior Design, STC

Program Code: IND.S.STC • Credit Hours: 24

Description

This certificate provides students with an introduction in the field of interior design. It will include the following introduction to the design process: problem solving techniques, space planning, production selection, ADA compliancy, ergonomics, lighting, color, furniture placement and accessorizing, scaled floor plan, elevation and detail drawings, defining/applying architectural and interior-related materials, estimating/budgeting products, writing specifications; and, presentation skills.

Career Opportunities

This certificate can provide students an opportunity to support entry level interior design positions. Many opportunities exist in retail stores (paint, flooring, lighting, and furniture), home staging, visual merchandising and as an interior designer's assistant.

Program Requirements

- CAT 1101 - Architectural Graphics I
- IND 1180 - History & Theory of Interior Design
- IND 1230 - Residential Design
- IND 1234 - Materials & Textiles
- IND 1240 - Color Theory
- IND 2130 - Non-Residential Design
- IND 2140 - Interior Building Systems & Design

Professional Communication, STC

Program Code: COM.S.STC • Credit Hours: 27

Description

Communication skills are critically important for everyone. Earning a professional communication certificate can be an important key to career success. Completion of the certificate will demonstrate to current and prospective employers that a student recognizes the importance of various communication skills and strategies in a variety of professional settings. The results of a 2011 survey by the National Association of Colleges and Employers showed verbal communication skills as the number one soft skill that employers sought in new college graduates looking to join their organizations.

Career Opportunities

A Professional Communication Certificate can provide opportunities in journalism, speech education, business, industry, government, broadcast media, law, ministry, social services, public relations, or provide valuable communication skills to enrich any career. Enhancing communication skills provides invaluable benefits for all students, regardless of major or career path.

Program Requirements

- COM 2201 - Introduction to Mass Communication
- COM 2206 - Interpersonal Communication
- COM 2211 - Effective Public Speaking
- COM 2220 - Introduction to Communication Theory
- COM 2225 - Small Group Communication
- COM 2230 - Nonverbal Communication
- COM 2245 - Intercultural Communication
- COM 2235 - Principles of Interviewing OR
- COM 2287 - Effective Listening
- COM 2285 - Organizational Communication OR
- COM 2286 - Public Relations Principles

Professional Firefighter, STC

Program Code: PFC.S.STC • Credit Hours: 12

Description

Provides training for full-time, part-time and volunteer firefighters to obtain the certifications necessary to meet the requirements of the National Fire Protection Association Standard 1001, Firefighter I and II. State of Ohio Certification from the Ohio Department of Public Safety and National Board on Fire Service Professional Qualifications.

Accreditation

Fire Officer I and II are accredited by the National Board on Professional Firefighter Qualifications Board.

Career Opportunities

Professional firefighter in the State of Ohio.

Program Prerequisites

- Must have a valid motor vehicle operator's license

Program Requirements

- FST 1102 - Firefighter I AND
- FST 1103 - Firefighter II Transition AND
- FST 1442 - Emergency Vehicle Operator
  OR
- FST 1104 - Firefighter II AND
- FST 1442 - Emergency Vehicle Operator

Professional Writing, STC

Program Code: PRW.S.STC • Credit Hours: 18

Description

The Professional Writing Certificate offers appropriate courses for students and professionals interested in improving their writing, editing and computer skills for a future in professional writing or to enhance their marketability. The certificate is especially useful for those in professional and administrative positions in business, hospitality, health and human services.

Career Opportunities

The Professional Writing Short Term Certificate is a valuable addition to many, if not all, majors at Sinclair. Students completing this certificate will learn writing and communication techniques essential in the workplace. Top jobs for students earning this certificate are in the copywriting,

marketing, finance, grant, hospitality, legal, technical, health and business fields. Current research indicates that employers seek candidates who have expertise in writing in a professional setting, and students completing this certificate will acquire a facility with writing and language use in that environment.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- BIS 1220 - Word Processing Software
- ENG 1101 - English Composition I
- ENG 1131 - Business Writing
- ENG 1199 - Textual Editing
- ENG 2257 - Creative Writing: Nonfiction OR
- JOU 2101 - Introduction to Journalism

Public Administration

Program Code: PUBAM.S.STC • Credit Hours: 18

Description

A short-term certificate in Public Administration engages students in learning political systems, processes, and organizations of governments and non-profit institutions. The study of public administration as a specialty of political science provides one with the concepts, theories, and methods necessary to analyze policy and optimize implementation. These tools serve as an underpinning for a level of civic engagement constructed around critical thinking and cultural literacy, and can be applied in a wide range of careers including government, law, business, international organizations, nonprofits, and teaching.

Career Opportunities

These course serve as an underpinning for a level of civic engagement constructed around critical thinking and cultural literacy, and can be applied in a wide range of careers including government, law, business, international organizations, nonprofits, journalism, and teaching. Additionally, there is an impending shortage of people in civil service careers as the current population is aging out of the workplace. According to the US Bureau of Labor Statistics, there were 575.000 jobs openings in state and local governments alone with only 195.000 qualified hires.

Program Requirements

- COM 2286 - Public Relations Principles
- PHI 2206 - Introduction to Ethics
- PLS 1121 - US Federal Government & Civics
- PLS 1232 - State & Local Government
- PLS 1301 - Public Administration
- PLS 1302 - Public Policy & Practice

Public Service Support, STC

Program Code: SWA.S.STC • Credit Hours: 24

Description

The Public Service Support certificate is the first of three core certifications of the proposed Community & Public Services Associate of Applied Science. Students learn how to provide assistance to Social Work and Social Service Professionals in the field. This certificate includes course work in the fields of sociology, psychology, social work, and human services and behavioral health and is designed to prepare students to work in the helping profession at an entry level position. This certificate prepares students to work with those in need to overcome difficulties and improve their lives. This certificate is especially pertinent to students who may have dealt with personal and family problems and want to use their experience, knowledge, and passion to help others avoid the mistakes they made, which lead them to prison.

Career Opportunities

The Public Service Support certificate is employable at a number of social service agencies, in the role of a case aide or monitor. Job duties may include transportation, visitation monitoring, school enrollment, detention monitoring, and more. A student who continues with their education can achieve their degree in the Community & Public Service AAS or their AA degree in Social Work, with additional coursework

Program Requirements

- BIS 1120 - Introduction to Software Applications OR
- BIS 1400 - Customer Service

- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary
- OT36 Arts and Humanities **3 Cr. Hr.(s)**
- PSY 1100 - General Psychology
- SOC 1101 - Introduction to Sociology
- SOC 1115 - Sociology of Marriage & Family
- SOC 2130 - Sociology of Family Violence
- SWK 1206 - Introduction to Social Work

Public Services Assistant, STC

Program Code: SSA.S.STC • Credit Hours: 21

Description

The Public Services Assistant certificate is designed to provide the tools needed for employment with human service agencies emphasizing the skills of: communication, critical analysis of social problems, mediation, and investigative techniques. The inclusion of Mental Health Technology 1130, Introduction to Addictive Illness, provides an opportunity for the student to secure a Chemical Dependency Certified Assistant Certificate after state mandated criteria is met.

Career Opportunities

The Public Service Assistant certificate is designed to provide the tools needed for employment with human service agencies.

Program Requirements

- BIS 1120 - Introduction to Software Applications OR
- BIS 1400 - Customer Service

- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1106 - Transition Skills
- CJS 2200 - Human Relations, Mediation & Conflict Resolution

- CJS 1165 - Corrections OR
- SOC 2205 - Social Problems OR
- SOC 2130 - Sociology of Family Violence

- CJS 2145 - Correctional Case Management OR
- MHT 2138 - Ethical Issues in the Helping Professions

- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary OR
- PSY 1100 - General Psychology OR
- SOC 1101 - Introduction to Sociology

Radio Frequency Identification (RFID), STC

Program Code: RFID.S.STC • Credit Hours: 6-7

Description

This program is an introduction to the basics of Radio Frequency Identification (RFID) principles with a business or engineering technology orientation. Various RFID technologies, RFID project planning and implementation of basic business solutions or RFID hardware setup, maintenance and troubleshooting will be covered. Emphasis is on a team approach to management and technology aspects of design and implementation of a basic system.

Career Opportunities

There is an ever-increasing use and adaptation of RFID technology in business, manufacturing and the defense industry.
Program Requirements

- EET 2257 - Radio Frequency Identification (RFID) Capstone
- MAN 1157 - Management Applications of Radio Frequency Identification Technology OR
- EET 2157 - Radio Frequency Identification (RFID) Technology

- MAN 1106 - Introduction to Radio Frequency Identification

Re-Entry Preparation, STC
Program Code: REP.S.STC • Credit Hours: 12
Description
The Re-entry Preparation Certificate is a one semester certificate that provides students with the minimum tools needed to reintegrate back into society. This certificate will focus on developing entry level computer skills, interpersonal communication, and the creation of a personal portfolio highlighting the education and skills obtained during incarceration.
Career Opportunities
Students will obtain the basic skills needed to reintegrate back into society. Career opportunities include entry level occupations in all fields of labor. In many cases, students have gained viable vocational skills while incarcerated but are unable to successfully re-enter society because they lack basic computer skills and are unable to effectively create a personal portfolio to highlight those skills. This certificate will focus on developing basic level computer skills, interpersonal communication and the creation of a personal portfolio highlighting the education and skills obtained during incarceration.
Program Requirements

- BIS 1120 - Introduction to Software Applications OR
- BIS 1400 - Customer Service

- CJS 1106 - Transition Skills
- CJS 2200 - Human Relations, Mediation & Conflict Resolution

- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary OR
- PSY 1100 - General Psychology OR
- SOC 1101 - Introduction to Sociology

Real Estate Sales Professional, STC
Program Code: RESPROF.S.STC • Credit Hours: 17
Description
This certificate is designed for the person who is interested in a career in real estate sales. The program includes the educational requirement for persons to sit for the Ohio real estate license exam: 40 hours of Real Estate Principles and Practices, 40 hours of Real Estate Law, and 20 hours of Real Estate Finance and Appraisal. Students will also learn effective communication skills and how to use office applications.
Career Opportunities
A career in real estate can be very rewarding. The U.S. Bureau of Labor Statistics says "Employment of real estate brokers and sales agents is projected to grow 7 percent from 2018 to 2028, about as fast as the average for all occupations" (Occupational Outlook Handbook). Additional careers include positions as title officers and examiners, property managers, and loan officers.
Program Requirements

- BIS 1120 - Introduction to Software Applications

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- RES 1101 - Real Estate Principles
- RES 1201 - Real Estate Law
- RES 1501 - Real Estate Finance & Appraisal

Reimbursement Analyst, STC
Program Code: RMS.S.STC • Credit Hours: 19
Description
The Reimbursement Analyst short-term certificate prepares students to work in a billing office for medical providers. The certificate will focus on preparing students to take the national certification examination to earn the credential Certified Medical Reimbursement Specialist (CMRS) offered by the American Medical Billing Association (AMBA). Students will be expected to complete a practicum experience to obtain this certificate, gaining work and hands-on medical billing skills.
Career Opportunities
The Reimbursement Analyst short-term certificate prepares students to work in a billing office for medical providers. The certificate will focus on preparing students to take the national certification examination to earn the credential Certified Medical Reimbursement Specialist (CMRS) offered by the American Medical Billing Association (AMBA).
Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- BIO 1107 - Human Biology OR
- BIO 1121 - Human Anatomy & Physiology I
- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- HIM 1101 - Medical Terminology
- HIM 1160 - Medical Office Coding Concepts
- MAS 1130 - Reimbursement Specialist Practicum
- MAS 2210 - Medical Billing Specialist
- MAT 1130 - Mathematics in Health Sciences

Retail Business, STC
Program Code: RTB.S.STC • Credit Hours: 12
Description
The Retail Business short-term certificate gives students more of the basic tools needed to be a successful supervisor or manager in any business or industry, including retail, hospitality, healthcare, manufacturing and service industries. This certificate enables students to further build and develop their skills toolbox that will enable them to be successful in the workplace.
Career Opportunities
Individuals who complete this certificate will have gained further knowledge and skills that are crucial to being a successful supervisor. This certificate is the second step in the Retail Management Certificate which is designed to give incumbent retail workers the knowledge and skills required to be eligible for a promotion or raise within their current organization.
Program Requirements

- ACC 1100 - Survey of Accounting
- MAN 2140 - Human Resource Management
- MAN 2150 - Management & Organizational Behavior
- MRK 2100 - Foundations of Marketing

Retail Management, STC
Program Code: RMC.S.STC • Credit Hours: 24
Description
The Retail Management certificate is a business program where students learn the key skills needed for retail management success. The Retail Management certificate gives students more of the basic tools needed to be a successful supervisor or manager in any business or industry, including retail, hospitality, healthcare, manufacturing and service industries. This

certificate enables students to further build and develop their skills toolbox that will enable them to be successful in the workplace.

Career Opportunities

The Retail Management Certificate program was created by experts in the industry to provide relevant knowledge and skills to their workforce. This program has successfully prepared nearly 2,000 graduates for management positions. Employees and employers benefit directly from the higher level of self-confidence and engagement displayed by graduates.

Recently recognized by the White House as part of the Upskill Initiative, the certificate is currently available in a variety of formats including face-to-face, on-line, and in a competency-based model.

The certificate program was established under the direction of the Western Association of Food Chains which includes many of today's leading retailers and wholesalers, and 7,500 + supermarkets. The program also has endorsement from leading organizations including Food Marketing Institute (FMI) and National Grocers Association (NGA). Most recently, the Retail Management Certificate has gained recognition from highly respected entities such as the ACT Foundation, and the U.S. Department of Labor.

Program Requirements

- ACC 1100 - Survey of Accounting
- BIS 1120 - Introduction to Software Applications
- ENG 1131 - Business Writing
- MAN 2101 - Introduction to Supervision
- MAN 2140 - Human Resource Management
- MAN 2150 - Management & Organizational Behavior
- MAN 2275 - Retail Management Capstone
- MRK 2100 - Foundations of Marketing

RN Scrub, STC

Program Code: SRN.S.STC • Credit Hours: 1

Description

This advanced short-term certificate is designed to provide Registered Nurses, who specialize in Perioperative Nursing, the opportunity to learn the technical skills required to perform in the role of the Scrub during surgical intervention. Students will be exposed to the knowledge and skills required to provide assistance to the surgeon performing surgical intervention during the intraoperative period.

Career Opportunities

RN graduates of this short term certificate will be able to increase their role versatility in any facility in which surgical intervention takes place. Many students will already be employed in a surgical facility and completion will allow them to perform in the role of the Circulator or Scrub.

Program Prerequisite(s)

Approval of Department

Program Requirements

- SUT 2500 - RN Scrub

Semiconductor Fundamentals, STC

Program Code: SMF.S.STC • Credit Hours: 17

Description

This certificate prepares students for entry-level work in the semiconductor fabrication industry. The materials, devices, and processing techniques of integrated circuit production, including the use of clean rooms, will be covered. Students will develop basic mechanical and electrical skills needed to service industrial machinery, including the vacuum systems used in the manufacture of microchips. DC and AC circuits, including three-phase power supplies, will be covered, along with mechanical drafting. Students will incorporate the use of computer interfaces in metrology and basic statistical process control and topics in lean manufacturing.

Career Opportunities

This certificate prepares students for entry-level opportunities working for chip manufacturers and their suppliers, as well as other companies that produce micro-electronic boards and components.

Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- EET 1120 - Introduction to DC & AC Circuits
- EET 2103 - Introduction to Vacuum System Technology
- EGR 1106 - Basic Mechanical & Electrical Skills
- EGR 2205 - Integrated Circuit (IC) Fabrication Techniques
- ISE 1207 - Introduction to Manufacturing

Small Business Management, STC

Program Code: SBM.S.STC • Credit Hours: 18

Description

This certificate prepares existing or potential entrepreneurs in a variety of small business functions.

Career Opportunities

Students completing this certificate can expect to be prepared for a management role in an existing small business or begin their own small business.

Program Requirements

- ACC 1100 - Survey of Accounting
- ENG 1131 - Business Writing
- ENT 2140 - Small Business Finance
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MRK 2220 - Small Business Marketing

Social Service, STC

Program Code: SOCS.S.STC • Credit Hours: 27

Description

The Social Service Short-Term Certificate is designed to provide the tools needed for employees and volunteer leaders related to human service agencies and nonprofit organizations emphasizing the skills of: communication, critical analysis of social problems, investigative techniques, an understanding of the bureaucratic social and legal system serving the community and the role of the volunteer.

Career Opportunities

This certificate enhances careers in sociology, social work, education, government, health care, public safety, human services, nonprofit organizations and related fields.

Program Requirements

- COM 2206 - Interpersonal Communication
- ENG 1101 - English Composition I
- MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary
- MHT 2138 - Ethical Issues in the Helping Professions
- SOC 1101 - Introduction to Sociology
- SOC 1115 - Sociology of Marriage & Family
- SWK 1206 - Introduction to Social Work
- SWK 1213 - Introduction to Social Welfare
- SWK 2207 - Anti-Oppressive Social Work

Software Applications for the Professional, STC

Program Code: SA.S.STC • Credit Hours: 18

Description

This certificate provides office staff, managers, professionals and anyone interested in learning software applications and integration with the skills they need for their job. Students will have the opportunity to develop and refine their skills in a variety of current software used in today's work environments.

Career Opportunities

Employment opportunities are available in many types of businesses, including banks, insurance offices, advertising agencies, manufacturing companies, small to large businesses and educational facilities, to name a few.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- BIS 1201 - Keyboarding & Document Formatting
- BIS 1220 - Word Processing Software
- BIS 1230 - Spreadsheet Software
- BIS 1240 - Presentation Software
- BIS 1250 - Specialized Business Software Application
- BIS 1260 - Database Software

Solar Energy Systems & Installation, STC

Program Code: SESI.S.STC • Credit Hours: 20

Description

This certificate prepares students for entry-level careers in the clean energy sector, with a focus on solar photovoltaic (PV) system design, installation, and safety. Coursework includes residential electrical systems, architectural graphics, OSHA construction standards, customer service, and workforce readiness. Graduates will be equipped with practical skills to pursue employment in solar installation, energy efficiency, and related construction fields.

Career Opportunities

Graduates will be prepared for entry-level positions as Solar Photovoltaic Installer, Solar Technician, Energy Efficiency Technician, Weatherization Technician, Electrical Helper or Electrical Apprentice, Building Systems Installer, Construction Laborer (with solar specialization), Customer Service Representative, and Energy/Utilities Sector Field Service Technician (Solar or Electrical).

Program Requirements

- BIS 1120 - Introduction to Software Applications
- BIS 1400 - Customer Service
- CAT 1741 - Residential Electrical Systems
- CAT 2431 - OSHA Construction Standards
- CJS 1106 - Transition Skills
- EGV 1401 - Weatherization & Building Performance Training
- EGV 2101 - Solar Photovoltaic Design & Installation

Sports Nutrition Specialist, STC

Program Code: SNS.S.STC • Credit Hours: 6

Description

The sports nutrition specialist is equipped with the knowledge of evidence-based nutrition principles that include Dietary Guidelines for Americans, Dietary Reference Intakes, USDA Nutrition Guidelines, FDA Nutrition Guidelines, CDC Nutritional Guidelines, MyPlate, National Fruit & Vegetable Consumption Coalition, and the Academy of Nutrition and Dietetics general nutrition guidelines and position papers. The sports nutrition specialist is trained to identify nutrition-related acute and chronic illness as well as disordered eating practices that can then be referred to a nutrition professional. Knowledge of macronutrients and their relationship with exercise and performance are provided. Ergogenic aids, supplements, and fad diets are reviewed for efficacy. The sports nutrition specialist certificate, in conjunction with an accredited personal training credential provides the nutrition knowledge for the trainer to provide general evidence-based nutrition principles to a healthy population as it applies to exercise and performance.

Career Opportunities

The Sports Nutrition Specialist certificate will provide a sports nutrition skill set that can be utilized in the Personal Training and Health Coaching workforce.

Program Requirements

- DIT 1525 - Human Nutrition
- DIT 1825 - Nutrition for Exercise & Sport Science

Supervision Foundations, STC

Program Code: SFD.S.STC • Credit Hours: 9

Description

The Supervision Foundations short-term certificate gives students the basic tools needed to be a successful supervisor in any business or industry, including retail, hospitality, healthcare, manufacturing and service industries. This certificate enables students to begin building their skills toolbox that will enable them to be successful in the workplace.

Career Opportunities

Students completing this short-term certificate can continue with the Retail Management certificate program and be positioned for a promotion or raise in their current position.

Program Requirements

- BIS 1120 - Introduction to Software Applications
- ENG 1131 - Business Writing OR
- MAN 2150 - Management & Organizational Behavior
- MAN 2101 - Introduction to Supervision

Supervisory Skills, STC

Program Code: BSP.S.STC • Credit Hours: 21

Description

The Supervisory Skills certificate is useful to students who need to understand the foundation of supervision, no matter in which discipline they formally study. Engineers, business managers, architects, educators, and many other professionals need to understand how to better supervise employees. This certificate includes coursework that is foundational to understanding business and personnel concepts that will benefit supervisors in any capacity. This certificate is most useful for those who are new to supervision or to those who desire to become supervisors.

Program Requirements

- ACC 1100 - Survey of Accounting OR
- ACC 1210 - Introduction to Financial Accounting
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication
- ECO 1100 - Introduction to Economics OR
- ECO 2160 - Principles of Macroeconomics OR
- ECO 2180 - Principles of Microeconomics
- LAW 1101 - Business Law
- MAN 2101 - Introduction to Supervision
- MAN 2150 - Management & Organizational Behavior
- MRK 2101 - Principles of Marketing Management

Supply Chain Technician, STC

Program Code: SCT.S.STC • Credit Hours: 25

Description

Students gain an understanding of the supply chain system of organizations, people, technology, activities and resources involved in moving a product or service from supplier to customer.

Career Opportunities

Upon completion of this certificate, students will be prepared to work as an entry-level technician in the field of logistics, purchasing, and warehousing.

Program Requirements

- CJS 1106 - Transition Skills

- COM 2206 - Interpersonal Communication OR
- PSY 1100 - General Psychology OR
- SOC 1101 - Introduction to Sociology

- ENG 1131 - Business Writing OR

- MAN 2150 - Management & Organizational Behavior

- MAN 1106 - Introduction to Radio Frequency Identification
- MAN 1107 - Foundations of Business
- MAN 2101 - Introduction to Supervision
- MAN 2144 - Negotiation Techniques
- MAN 2159 - Supply Chain Management Concepts & Applications
- MAT 1120 - Business Mathematics

Surgical Instrument Technician, STC
Program Code: SPT.S.STC • Credit Hours: 13
Description
The Surgical Instrument Technician short-term certificate program will prepare the graduate to work within a health-care facility to ensure medical and surgical supplies, instruments, and equipment are properly cleaned, prepared, processed, stored, and distributed for patient care and surgical use. Knowledge of basic human anatomy, medical terminology, and a combination of sterilization, inventory control, and information technologies are integrated into the curriculum to ensure a safe outcome for all patients. This program combines both lecture, lab, and a practicum to prepare the Sterile Processing Technician student to take the CRCST Exam upon graduation and upon completion of 400 work related hours in a Sterile Processing Department. Hours attained during practicum count as credit toward the 400 work related hours required for CRCST Exam eligibility. Note: For students under age 18 there may be restrictions on participating in certain Health Sciences programs. Any student under age 18 must contact the program director/department chair to discuss whether he or she may enroll. A grade of C or higher is required in all courses.
Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- HIM 1101 - Medical Terminology
- SUT 1100 - Sterile Processing I
- SUT 1200 - Sterile Processing II
- SUT 1207 - Practicum for Sterile Processing II

Tartan TOPS Program, STC
Program Code: CTP.S.STC • Credit Hours: 26
Description
The Tartan TOPS Program (Transition Options in Postsecondary Education) provides and educational/career pathway for students aged 18-24 who have an intellectual disability. This certificate program is a meaningful, academic credential that provides students with the necessary educational supports to learn life and work skills at the post-secondary level. The program uses embedded tutors in inclusive academic classes and provides students with internship opportunities in inclusive work and class-based settings While the first two semesters equip students with the academic skills needed to succeed in a post-secondary environment (including socially), the last two semesters provide the training and employment resources needed for students to become self-sufficient in the workplace and obtain competitive employment. Sinclair is committed to the values of community inclusion and self-determination and promotes the pursuit of postsecondary options that include academic enrichment, competitive employment, social engagement, and independent living for individuals with intellectual disabilities.
Program Requirements

- COM 2206 - Interpersonal Communication
- SCC 1100 - Life Skills I
- SCC 1200 - Life Skills II
- SCC 1300 - Work Skills I
- SCC 1400 - Work Skills II
- SCC 2100 - Inclusive Internship
- Any Course in Catalog **3 Cr. Hr.(s)**

Tax Practitioner, STC
Program Code: TAXP.S.STC • Credit Hours: 15
Description
The Tax Practitioner certificate prepares students for work in the tax preparation field. As tax law changes and grows more complex, more people seek professional tax preparation assistance. The Tax Practitioner certificate covers federal, state and local tax law. The Tax Practitioner certificate will prepare students for the Registered Tax Preparer Exam that the Internal Revenue Service is instituted with the 2012 tax season.
Career Opportunities
Tax preparers may work as employees for companies or work as an independent tax preparer.
Program Requirements

- ACC 1210 - Introduction to Financial Accounting
- ACC 1220 - Introduction to Managerial Accounting
- ACC 1510 - Computerized Accounting Systems
- ACC 2321 - Federal Taxation
- ACC 2322 - Advanced Taxation

Transportation Construction Inspection Level 1, STC
Program Code: TCIL1.S.STC • Credit Hours: 17
Description
This short-term certificate prepares students to take the NICET (National Institute for Certification in Engineering Technologies) Level 1 certification for Highway Construction Inspection.
Career Opportunities
New internships will be available to students participating in this program due to the federal infrastructure bill. Occupations include Construction Inspector, Highway Inspector, and Inspector.
Program Requirements

- CAT 1201 - Construction Methods & Materials
- CAT 1501 - Fundamentals of Surveying & Mapping
- CAT 2431 - OSHA Construction Standards
- CAT 2610 - Stakeholders & Participants for Design & Construction Projects
- CAT 2620 - Construction Documents, Legal Requirements, & Project Delivery
- MAT 1200 - Technical Mathematics

Trauma Informed Care in Education, STC
Program Code: EDU.S.STC • Credit Hours: 12
Description
Trauma Informed Care in Education is a four-course certificate that provides students a foundational understanding of trauma effects on the brain, culturally sensitive approaches, and resources to equip educators in a trauma-informed classroom.
Career Opportunities
This certificate will provide an overview of how adverse childhood experiences impact child development, social emotional development, and how early childhood trauma impacts brain development. The content of the courses in this certificate will aid teachers in preschool through grade 12 in assessing and addressing the needs of children who have experienced trauma and will provide strategies to develop a trauma-sensitive classroom environment. Additionally, the certificate will examine historical and current racial, ethnic, gender, sexual orientation, linguistic, and social class stereotypes and biases as related to youth in the United States and globally.
Program Requirements

- EDU 2101 - Introduction to Early Childhood Trauma
- EDU 2102 - Understanding the Brain & Trauma
- EDU 2103 - Trauma-Informed Classrooms
- SOC 2210 - Cultural Humility for Working with Youth

UAS First Responders, STC
Program Code: UASFR.S.STC • Credit Hours: 16
Description
The UAS First Responders Short-Term Technical certificate prepares students for entry level positions in the Unmanned Aerial Systems (UAS) industry by providing foundational knowledge, skills and proficiency in UAS theory, capabilities and scenario based objectives related to the first responder industry.
Career Opportunities
The demand for Unmanned Aerial Systems is increasing at a phenomenal rate. A shift in military strategies and the demand for use in the private sector as well as other government agencies has fueled an industry which is estimated to explode to over $80 billion in the next decade. With local government agencies and First Responder personnel in need of new technological options for fast and safe mission execution. The Dayton region and its Educational Institutions are primed to take advantage of the opportunity as industry leaders.
Program Requirements

- AVT 1101 - Introduction to Unmanned Aerial Systems
- AVT 1104 - UAS Standards, Regulations & Law
- AVT 1108 - UAS First Responder Applications
- AVT 1109 - UAS Remote Sensing & Analysis
- AVT 1158 - Aerospace Spatial Visualization
- AVT 2150 - Crew Resource Management for UAS
- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1155 - Homeland Security Issues & Administration
- EMS 1100 - Emergency Medical Responder Lecture & Laboratory

UAS for Geographic Information Systems, STC
Program Code: UASGIS.S.STC • Credit Hours: 16
Description
The UAS for GIS (Geographic Information Systems) Short-Term Technical certificate prepares students for entry level positions as GIS analysts in the Unmanned Aerial Systems (UAS) industry by providing foundational knowledge and skills involving GIS technologies and UAS technology.
Career Opportunities
The Unmanned Aerial System platform capabilities include but are not limited to aerial mapping and remote sensing for geographic information systems. The private sector as well as governmental demands for Unmanned Aerial System personnel in geospatial information and remote sensing applications are in high demand.
Program Requirements

- AVT 1101 - Introduction to Unmanned Aerial Systems
- AVT 1104 - UAS Standards, Regulations & Law
- AVT 1109 - UAS Remote Sensing & Analysis
- AVT 1114 - Geospatial Information for UAS
- AVT 1158 - Aerospace Spatial Visualization
- AVT 2150 - Crew Resource Management for UAS
- CAT 1501 - Fundamentals of Surveying & Mapping
- GEO 1107 - Introduction to Geographic Information Systems (GIS)

UAS Precision Agriculture, STC
Program Code: UASAG.S.STC • Credit Hours: 16
Description
The UAS Precision Agriculture Short-Term Technical Certificate prepares students for entry level positions in the Unmanned Aerial Systems (UAS) industry by providing foundational knowledge and skills involving Precision Agriculture and UAS Technology.
Career Opportunities
Precision Agriculture is expected to be 80% of the UAS market over the next decade. Industry projections and demands indicate that the UAS precision agriculture market will be one of the five industries that benefit first from FAA rules and regulation changes. With agriculture being the number one industry in the state of Ohio and contributing 107 billion dollars a year to the Ohio economy. Agricultural industry needs in drought management, disease detection, watering, and spraying pesticides make UAS an intelligent and affordable option.
Program Requirements

- AGR 1160 - Introduction to Agriculture Science
- AGR 1300 - Agronomy
- AGR 1503 - Agricultural Economics
- AVT 1101 - Introduction to Unmanned Aerial Systems
- AVT 1104 - UAS Standards, Regulations & Law
- AVT 1109 - UAS Remote Sensing & Analysis
- AVT 1112 - UAS Precision Agriculture
- AVT 1158 - Aerospace Spatial Visualization
- AVT 2150 - Crew Resource Management for UAS

Veterinary Assistant, STC
Program Code: VET.S.STC Credit Hours: 19
Description
This certificate program will prepare the student to work within the veterinary hospital, assisting the veterinary technician (nurse) and veterinarian (doctor) with animal care by learning and practicing professionalism, client service, animal behavior and restraint, assisting in veterinary medical procedures, laboratory protocols and collection and preparation of samples, surgical suite care and preparation of animals, and anesthetic monitoring for the stable patient. Students will be offered the opportunity to become Fear Free (R) certified during this program. This certificate will focus on the care of small animals (dogs and cats), but students interested in large animal or exotic animal care may be able to be placed in a suitable clinic in which to gain that experience.
Career Opportunities
A Veterinary Assistant is a vital member of the medical/patient-care team in a veterinary hospital. Veterinary Assistants do not need to be certified in the state of Ohio in order to work in a veterinary practice, but this program is designed to create a professional, well-trained, experienced employee who will be able to fit into a variety of practices. The veterinary profession lacks sufficient paraprofessionals in this region, the state of Ohio, and the nation - additional trained staff can help to alleviate the stress on current workers. Veterinary assistants are also valuable in other animal-related fields, such as kennel-worker, groom, animal trainer, and animal care-giver (petsitter).
Program Requirements

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**
- PSY 1100 - General Psychology
- VET 1000 - Introduction to Veterinary Medicine
- VET 1102 - Topics in Veterinary Technology
- VET 1107 - Topics in Veterinary Medicine Laboratory
- VET 2005 - Veterinary Terminology & Ethics
- VET 2008 - Veterinary Assisting Laboratory
- VET 2108 - Veterinary Technical Practice I

Video Production, STC
Program Code: VID.S.STC • Credit Hours: 22
Description

This certificate introduces students to the basics of video production, including lighting & cinematography and audio production. Students will learn the design process, appropriate applications and video and audio equipment to create quality videos.

Career Opportunities

There are several positions to fill in the digital video production profession. You could work in television, advertising, or news reporting. You also could apply your skills in education, government, or business industries. Within these settings, you could hold entry-level positions in a variety of positions, such as a video editor, camera operator, audio editor, or live stream operator. As well, there are freelance opportunities.

Program Requirements

- VIS 1100 - Design Foundations
- VIS 1140 - Design Processes I
- VIS 1410 - History & Theory of Video Production
- VIS 1420 - Video Production
- VIS 1430 - Lighting & Cinematography
- VIS 1440 - Sound Design

Web Design, STC

Program Code: WEB.S.STC • Credit Hours: 21

Description

This short-term certificate introduces students to the basics of web coding and design, including conceptualizing, designing, developing, and maintaining websites. Students will learn a variety of web design concepts and digital design applications.

Career Opportunities

Students successfully completing this short-term certificate will have the necessary skills to apply for entry level work in the field of web design and development for businesses, government and design agencies.

Program Requirements

- CSC 1350 - Web Site Development with HTML & CSS
- VIS 1100 - Design Foundations
- VIS 1140 - Design Processes I
- VIS 1310 - History & Theory of Web Design
- VIS 1320 - User Experience/User Interface
- VIS 1330 - Web Design

Web Programming, STC

Program Code: WW1.S.STC • Credit Hours: 18

Description

The Web Programming certificate is designed to provide an individual with current web development skills. It focuses on techniques for developing web-based distributed applications using standard languages and protocols such as HTML, JavaScript, CSS, XML, PHP, and ASP.NET. It is designed for experienced software developers to update their skills and for individuals wishing to make a career change into the Information Technology field. The certificate focuses on web application development in a client/server networked environment.

Career Opportunities

Today the world wide web dominates much of our daily lives and there is considerable need for those with the skills needed to create, deploy, and maintain web content. Nearly every retailer of any size uses dynamic web content to display and sell their products. Other businesses and industries have similar need to host dynamic content regarding their organizations on the web. Those with the skills to manage these sites will have significant opportunities ahead.

Program Requirements

- CSC 1111 - Introduction to Problem Solving & Computer Programming
- CSC 1350 - Web Site Development with HTML & CSS
- CSC 2165 - Database Management
- CSC 2212 - Java Software Development I
- CSC 2222 - ASP.NET with C#
- CSC 2250 - Web Site Development with PHP

Welding and Metal Joining, STC

Program Code: CAMWM.S.STC • Credit Hours: 16.5

Description

This certificate in welding and metal joining contains in-depth hands-on labs which will include MIG or TIG or Stick use along with other types of metal joining options and instruction to include sheet metal layout, shearing, bending, riveting, brazing and spot welding. Welding safety, personal protection equipment, and special welding tools will be taught in-depth and used by the students within the lab setting. The other courses within the certificate offer an introduction to the manufacturing processes used in the tooling, machining, the welding industry, a focus on blueprint reading, design using AutoCAD, various measurement techniques and the mathematics necessary to solve applications in welding and manufacturing technology.

Career Opportunities

This in-depth training will ready students for entry level positions in Machine repair, Die and Mold repair, Metal Fabrication, Tool and Die shops, general repair shops and general manufacturing.

Program Requirements

- CAM 1107 - Introduction to Mechanical Drafting with CAD
- CAM 1109 - Fundamentals of Tooling & Machining

- CAM 1191 - MIG Welding and Flux-Cored Arc Welding OR
- CAM 1192 - Stick Welding (Shielded Metal Arc Welding) OR
- CAM 1193 - TIG (GAS Tungsten Arc Welding)

- ISE 1300 - Fundamentals of Dimensional Metrology
- MAT 1110 - Math for Technologists

Workforce Readiness, STC

Program Code: WFR.S.STC • Credit Hours: 6

Description

The Workforce Readiness certificate will provide students skills to help returning citizens overcome reentry and employment barriers. .

Career Opportunities

This certificate will start students on the path of workforce readiness.

Program Requirements

- BIS 1400 - Customer Service
- CJS 1106 - Transition Skills

Associate of Individualized Study, AIS

Program Code: AIS.S.AIS • Credit Hours: 60

Description

The Associate of Individualized Study (AIS) degree is open to any student who wishes to design an interdisciplinary degree program using liberal arts or combining liberal arts with technical areas of study. As an alternative, part of the student's degree requirements may incorporate credit awarded through articulation agreements with community education providers or a combination of both. The student may focus specifically on education for individual development and enrichment or may design a curriculum that allows for employment or continuation into selected four-year degree programs. Note: This program requires an approved AIS application. Please contact plaprograms@sinclair.edu to complete the process. When applying for admission to Sinclair, select the Associate of Arts (LA.S.AA) degree. Upon your AIS application being approved, you will be moved into this program of study.

Program Requirements

- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I

- OT36 Mathematics Elective **3 Cr. Hr(s).**

  Choose a course from two of the following three OT36 areas:
  - OT36 Arts and Humanities Elective **3 Cr. Hr(s).**
  - OT36 Natural and Physical Sciences Elective **3 Cr. Hr(s)**.
  - OT36 Social and Behavioral Sciences Elective **3 Cr. Hr(s)**

- **AIS Concentration 30 Cr. Hr(s).**
- **AIS Related Electives 15 Cr. Hr(s).**

Associate of Technical Study, ATS
Program Code: ATS.S.ATS • Credit Hours: 60
Description
The Associate of Technical Study (ATS) degree is open to any student whose technical degree goals cannot be accomplished through enrollment in one of Sinclair's existing technical degree programs. The student may design a degree which combines two or more technical areas into a unique education plan. As an alternative, part of the student's degree requirements may incorporate credit awarded through articulation agreements with community education providers, or a combination of both. In all cases, faculty members assist the student in planning the most appropriate course of study for the individual. Note: This program requires an approved ATS application. Please contact plaprograms@sinclair.edu to complete the process. When applying for admission to Sinclair, select the Associate of Arts (LA.S.AA) degree. Upon your ATS application being approved, you will be moved into this program of study.
Program Requirements
- COM 2211 - Effective Public Speaking
- ENG 1101 - English Composition I
- OT36 Mathematics Elective **3 Cr. Hr(s).**

  Choose a course from two of the following three OT36 areas:
- OT36 Arts and Humanities Elective **3 Cr. Hr(s).**
- OT36 Natural and Physical Sciences Elective **3 Cr. Hr(s)**.
- OT36 Social and Behavioral Sciences Elective **3 Cr. Hr(s)**

- **ATS Concentration 30 Cr. Hr(s).**
- **ATS Related Electives 15 Cr. Hr(s).**

Aviation Technology/Professional Pilot, BAS
Program Code: AVTP.S.BAS Credit Hours 124-127
Description
The Bachelor of Applied Science (BAS) degree in Aviation Technology/Professional Pilot is designed to enhance the technical skills of students who have earned an associate degree in Aviation Technology/Professional Pilot at Sinclair Community College, or who wish to pursue a complete bachelors degree. Students may choose either fixed wing (single engine and multi-engine) or helicopter pilot certifications. The program has received Federal Aviation Administration (FAA) authorization to certify graduates of the fixed wing track to apply for a restricted privileges airline transport pilot (RATP) certificate with reduced hours. Students also have the option to choose an elective course track which leads to the FAA Aircraft Dispatcher (ADX) certificate in addition to the required pilot certificates. Enrollment in this program is limited and students must complete a competitive application process and obtain a Federal Aviation Administration (FAA) 2nd class medical certificate prior to being admitted. The curriculum in the Professional Pilot program is rigorous and students must maintain full time status and take the required courses in the degree template each semester. Part time students will be admitted on a space available basis. Students must meet with an academic advisor prior to each semester to verify their course selection. Students must maintain a minimum of a 2.5 GPA. In addition to standard tuition fees, there are additional course and lab fees for each of the flight labs in the program. The flight lab fees are structured to cover the costs associated with the minimum flying hours required for each FAA certificate. Any additional flying time costs beyond the FAA minimums covered by the flight lab fee must be borne by the student. See the Department for the latest course and flight lab fee costs.
This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify Registration and Student Records at studentrecords@sinclair.edu.
Career Opportunities
Career opportunities are available in airline, corporate and general aviation. Projected overall employment growth of airline and commercial pilots from 2014 to 2024 is 5% with 10% projected employment growth of commercial pilots from 2014 to 2024, faster than the average for all occupations. Expected job growth of 2,337 jobs in Nonscheduled Air Transportation within this sector (2012-2022). Five of the 25 most concentrated occupations in Aerospace require a bachelor's degree at entry.
Program Requirements
- AVT 1105 - Orientation to Aviation

  Fixed Wing Courses:
- AVT 1110 - Private Pilot Ground School AND
- AVT 1124 - Private Pilot Flight Lab - Airplane Single Engine AND
- AVT 1170 - Instrument Pilot Ground School AND
- AVT 1224 - Instrument Pilot Flight Lab - Airplane Single Engine AND
- AVT 1254 - Flight Simulator Instruction AND
- AVT 2250 - Commercial Pilot Ground AND
- AVT 2258 - Flight Instructor Ground AND
- AVT 2263 - Commercial Pilot Flight Lab - Airplane Single Engine AND
- AVT 2269 - Flight Instructor Flight Lab - Airplane Single Engine OR

  Helicopter Courses:
- AVT 1111 - Helicopter Private Pilot Ground AND
- AVT 1126 - Private Pilot Flight Lab - Rotorcraft Helicopter AND
- AVT 1171 - Helicopter Instrument Pilot Ground AND
- AVT 1255 - Helicopter Flight Simulator Instruction AND
- AVT 1226 - Instrument Pilot Flight Lab - Rotorcraft Helicopter AND
- AVT 2251 - Helicopter Commercial Pilot Ground AND
- AVT 2259 - Helicopter Flight Instructor Ground AND
- AVT 2265 - Commercial Pilot Flight Lab - Rotorcraft Helicopter AND
- AVT 2271 - Flight Instructor Flight Lab - Rotorcraft Helicopter
- AVT 1119 - Aviation Meteorology
- AVT 1140 - Introduction to Business Aviation
- AVT 1141 - Principles of Aviation Leadership
- AVT 1245 - Aviation Law
- AVT 2125 - Developments in Aviation I
- AVT 2146 - Introduction to Airline Operations
- AVT 2167 - Instrument Flight Rules (IFR) Navigation & Planning
- AVT 2211 - Advanced Navigation Science
- AVT 2240 - Human Factors in Aviation
- AVT 2242 - Aircraft Accident Investigation I

- AVT 2247 - Aerodynamics & Flight Mechanics I

- AVT 2266 - Multi Engine Flight Lab AND
- AVT 2275 - Instrument Flight Instructor Ground AND
- AVT 2277 - Instrument Flight Instructor Flight Lab - Airplane Single Engine
  OR
- AVT 2267 - Helicopter External Load Flight Lab AND
- AVT 2276 - Helicopter Instrument Flight Instructor Ground AND
- AVT 2278 - Instrument Flight Instructor Flight Lab - Rotorcraft Helicopter
- AVT 2700 - Aviation Internship
- AVT 3125 - Developments in Aviation II
- AVT 3150 - Crew Resource Management
- AVT 3241 - Aircraft Systems
- AVT 3247 - Aerodynamics & Flight Mechanics II
- AVT 3300 - Artificial Intelligence (AI) in Aviation OR
- AVT 3400 - Human Sensation & Perception in Aviation AND
- AVT 3242 - Aircraft Accident Investigation II AND
- AVT 4290 - Aviation Senior Capstone Project
  OR
- AVT 2157 - Aircraft Performance I AND
- AVT 2158 - Aircraft Performance II AND
- AVT 2159 - Canadair Regional Jet (CRJ) Aircraft Systems AND
- AVT 2166 - Practical Dispatch Applications AND
- AVT 2168 - Dispatcher Oral Preparation

- AVT 4146 - Advanced Airline Operations & Training
- AVT 4152 - Advanced Flight Simulator Instruction
- AVT 4153 - Advanced Airline Flight Operations
- AVT 4160 - System Safety in Aviation
- AVT 4170 - Airport Operations
- COM 2211 - Effective Public Speaking
- ECO 2160 - Principles of Macroeconomics
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- OT36 Arts and Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- OT36 Social and Behavioral Sciences Elective (not from PLS) **3 Cr. Hr(s).**
- PHY 1141 - College Physics I
- PHY 1142 - College Physics II
- PLS 1121 - US Federal Government & Civics

Health Sciences, BAS

Program Code: HS.S.BAS • Credit Hours: 121

Description

The Bachelor of Applied Science degree in Health Sciences provides students with a general degree in the health science field that includes specialization in one of three concentrations: Leadership/Management, Education, or Community and Global Health. This program will provide a pathway for associate degree holders to complete a bachelor's degree while working in the field. A grade of "C" or better is required in all courses.

Program Prerequisites

- An associate degree from an accredited program in a healthcare field
- 2.5 minimum GPA
- Program application

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery

- ALH 1140 - Fundamentals of Disease Processes OR
- ALH 2220 - Pathophysiology

- ALH 3101 - The U.S. Healthcare System & Ethical Considerations
- ALH 3102 - Cultural Competence
- ALH 3103 - Informatics for Healthcare Professionals
- ALH 3301 - Community & Global Population Health & Epidemiology
- ALH 3430 - Interprofessional Healthcare Team Practice
- ALH 4430 - Health Science Capstone/Senior Project
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- MAT 1450 - Introductory Statistics
- MHT 1120 - Trauma-Informed Healthcare
- OT36 Arts and Humanities Elective **6 Cr. Hr(s).** (from at least two disciplines)
- OT36 Natural and Physical Sciences Elective **from BIO, CHE, and/or PHY 6 Cr. Hr(s).**
- OT36 Any Group Elective **6 Cr. Hr(s).**
- PLS 1121 - US Federal Government & Civics
- PSY 1100 - General Psychology
- SOC 1101 - Introduction to Sociology

- COM 2206 - Interpersonal Communication OR
- COM 2211 - Effective Public Speaking OR
- COM 2225 - Small Group Communication

Choose one concentration (2 courses) from:

- Community and Global Health Concentration (ALH 4101 AND ALH 4105) OR
- Education Concentration (ALH 4107 AND ALH 4302) OR
- Leadership/Management Concentration (ALH 4110 AND ALH 4310)

Choose 6 credits from the following Completion Electives: (Note: Students may take additional concentration courses to use as completion electives)

- COM 2245 - Intercultural Communication
- HIM 1204 - Medicolegal & Ethics in Healthcare Records
- HUM 1130 - Humanity & the Challenge of Technology
- HUM 1131 - The Search for Utopia
- MAN 2150 - Management & Organizational Behavior
- PHI 2206 - Introduction to Ethics
- SOC 2205 - Social Problems

- Heath Sciences BAS Technical Electives **43 Cr. Hr(s).**

Internet of Things, BAS

Program Code: IST.S.BAS • Credit Hours: 120-121

Description

The Bachelor of Applied Science in Internet of Things is ideally suited to address present and future needs in manufacturing and other industries. The program focuses on training individuals in technologies related to connected devices, particularly in industrial settings. Graduates will gain the technical and robotic skills needed to effectively integrate new devices into an existing technology infrastructure, and just as critically, will gain the skills to do so in a secure way (Cyber). The program is especially well-suited to those interested in pursuing careers as mechatronics engineering technologists, using their combined computer science and engineering skills to work with smart technologies such as robots and manufacturing equipment. The Internet of Things program graduate will be able to understand and service/maintain Advanced Manufacturing, High Tech Warehousing, Smart Consumer Devices, Household Appliances, Automotive computer systems, and Medical Devices through the process of automation and data acquisition, providing cybersecurity, movement of data to the cloud, and data analytics/visualization, and eventually to support the business systems where intelligent decisions can be made.

Career Opportunities

Careers this degree serves include consumer markets, medical devices, defense industry, industrial high tech manufacturing automation & warehousing/logistics, and the robotics industry. Multiple regional employers have indicated that this is a growing need for them as they deploy more interconnected devices in advanced manufacturing, warehousing, and production. Per EMSI, the number of monthly postings seeking applicants with expertise in the greater Dayton area has grown steadily and rapidly, from 35 in September of 2016 to 249 in May of 2021. Cyber technicians specializing in the micro-controller consumer markets of automotive, appliances, medical devices, defense industry, industrial high tech manufacturing automation & warehousing/logistics, and the robotics industry. Graduates will be able to work in all areas having to do with the Internet-of-Things, from programming to engineering hardware installations, networking, security, troubleshooting and repair. Sixty percent of these regionally posted IOT jobs require a bachelor's degree.

Program Requirements

- CIT 1107 - Introduction to Operating Systems

- CIT 1130 - Network Fundamentals OR
- CIT 1411 - Introduction to Networks

- CSC 1140 - Information Systems Analysis & Design
- CSC 2165 - Database Management
- CSC 2265 - Data Visualization with Tableau
- CSC 2266 - Python for Data Analytics
- CSC 2267 - Advanced Python for Data Analytics
- CIT 2428 - IoT Architecture
- CIT 2545 - Cloud Infrastructure
- CIT 2640 - Network Security
- CIT 4101 - Advanced IoT
- CIT 4102 - Cloud Native & IoT

- CIT 4170 - Internet of Things (IoT) Internship OR
- CIT 4178 - Internet of Things (IoT) Clients Advanced Capstone

- COM 2211 - Effective Public Speaking
- EET 1120 - Introduction to DC & AC Circuits
- EET 1198 - Digital Technology
- EET 2261 - Microprocessors
- EET 2281 - Programmable Logic Controllers
- EET 2282 - Advanced Programmable Logic Controllers
- EGR 1105 - Soldering Fundamentals
- EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
- EGR 2202 - Introduction to Communications Principles
- EGR 2252 - Teach Pendant Robot Programming
- EGR 2261 - Engineering Problem Solving using "C" & "C++"
- EGR 3303 - Advanced Programmable Logic Controllers II
- EGR 4101 - Modern Communication Systems
- EGR 4120 - Advanced Microprocessors
- EGR 4150 - Modern Robotics
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II
- MAT 1455 - Introduction to Data Science

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- OT36 Social & Behavioral Sciences Elective (not from PLS) **3 Cr. Hr(s).**
- OT36 Arts & Humanities Elective (must be from two discplines) **6 Cr. Hr(s).**

- PHY 1141 - College Physics I
- PHY 1142 - College Physics II
- PLS 1121 - US Federal Government & Civics

Unmanned Aerial Systems, BAS

Program Code: UAS.S.BAS Credit Hours 120-124

Description

This Bachelor of Applied Science (BAS) degree in Unmanned Aerial Systems (UAS) is designed to fill a growing workforce need by developing the technical skills of students and prepare them for jobs in this high demand industry. The degree provides a foundational understanding of UAS mission planning, advanced flight operations, hands-on maintenance, laws and regulations, data analytics, sensor operations and technology integration and testing in support of diverse industries. These include precision agriculture, infrastructure inspection, aerial mapping and surveying, first response, logistics, security, and other emerging applications that will continue to develop as the industry grows. Students will prepare for and conduct unmanned flights similar to those commonly performed in the industry observing Federal Aviation Administrations (FAA) regulations that govern UAS operations.

Career Opportunities

More than 100,000 new jobs in UAS related fields are predicted nationwide by 2025. A technical baccalaureate degree in Unmanned Aerial Systems (UAS) will prepare the graduate to work in a variety of roles including UAS operations, maintenance, data analysis, sensor operations, technology integration and testing, and basic manufacturing in support of diverse industries including precision agriculture, infrastructure inspection, aerial mapping and surveying, first response, logistics, security, and other emerging applications that will continue to develop as the industry grows.

Program Requirements

- AVT 1101 - Introduction to Unmanned Aerial Systems
- AVT 1103 - Remote Pilot Ground School
- AVT 1104 - UAS Standards, Regulations & Law
- AVT 1109 - UAS Remote Sensing & Analysis
- AVT 1110 - Private Pilot Ground School
- AVT 1119 - Aviation Meteorology

- AVT 1130 - Basic Aviation Electricity I
- AVT 1158 - Aerospace Spatial Visualization
- AVT 1246 - Air Traffic Control Communications
- AVT 2150 - Crew Resource Management for UAS
- AVT 2151 - UAS Operations I
- AVT 2221 - UAS Sensors & Systems
- AVT 2240 - Human Factors in Aviation
- AVT 2279 - Unmanned Aerial Systems Project
- AVT 2280 - Introduction to UAS Maintenance
- AVT 2700 - Aviation Internship

Choose one UAS track from:

- AVT 1120 - Electro-Optical & Infrared Data Analysis AND
- AVT 1121 - Multispectral & Hyperspectral Data Analysis AND
- AVT 1122 - Synthetic Aperture Radar & Light Detection & Ranging Data Analysis AND
- AVT 1123 - Acoustic & CBRNE Data Analysis AND
- GEO 1107 - Introduction to Geographic Information Systems (GIS)

OR

- AVT 1108 - UAS First Responder Applications AND
- CJS 1101 - Introduction to Criminal Justice Science AND
- CJS 1155 - Homeland Security Issues & Administration AND
- EMS 1100 - Emergency Medical Responder Lecture & Laboratory

OR

- AVT 1114 - Geospatial Information for UAS AND
- CAT 1501 - Fundamentals of Surveying & Mapping AND
- GEO 1107 - Introduction to Geographic Information Systems (GIS)

OR

- AVT 1112 - UAS Precision Agriculture AND
- AGR 1160 - Introduction to Agriculture Science AND
- AGR 1300 - Agronomy AND
- AGR 1503 - Agricultural Economics

OR

- AVT 4215 - Autonomous Systems in Aviation AND
- CSC 2266 - Python for Data Analytics AND
- MAT 1455 - Introduction to Data Science

OR

- AVT 1115 - Introduction to UAS Entrepreneurship AND
- AVT 2115 - UAS Entrepreneurship Capstone AND
- MAN 1107 - Foundations of Business AND
- LAW 1101 - Business Law

OR

- AVT 1116 - Regulations for Maintenance AND
- AVT 1132 - Basic Aviation Electricity II AND
- AVT 2281 - Advanced Air Mobility Airframe Maintenance AND
- AVT 2282 - Advanced Air Mobility Powerplant Maintenance

- AVT 3100 - Contemporary Technical, Legal & Regulatory Issues in UAS
- AVT 3151 - UAS Operations II
- AVT 3152 - UAS Operations II Lab
- AVT 3200 - UAS Logistics
- AVT 3300 - Artificial Intelligence (AI) in Aviation
- AVT 3400 - Human Sensation & Perception in Aviation
- AVT 3500 - UAS Design Concepts
- AVT 4151 - Unmanned Systems Mission Planning
- AVT 4210 - Advanced UAS Maintenance
- AVT 4220 - Human Autonomy Teaming in Aviation
- AVT 4270 - UAS Internship II
- AVT 4279 - Unmanned Aerial Systems Senior Project
- COM 2211 - Effective Public Speaking
- ECO 2160 - Principles of Macroeconomics
- ENG 1101 - English Composition I

- MAT 1470 - College Algebra AND
- MAT 1570 - Analytic Geometry & Trigonometry OR
- MAT 1580 - Precalculus

- MET 1131 - Personal Computer Applications for Engineering Technology
- OT36 Any Group **3 Cr. Hr(s).**
- OT36 Arts and Humanities Elective (from two or more disciplines) **6 Cr. Hr(s).**
- OT36 Social and Behavioral Sciences Elective (not from PLS) **3 Cr. Hr(s).**
- PHY 1141 - College Physics I
- PHY 1142 - College Physics II
- PLS 1121 - US Federal Government & Civics
- Unmanned Aerial Systems Electives -- **7 Cr. Hr(s).** (options listed below)

Unmanned Aerial Systems Electives

- AGR 1160 - Introduction to Agriculture Science
- AGR 1300 - Agronomy
- AVT 1108 - UAS First Responder Applications
- AVT 1112 - UAS Precision Agriculture
- AVT 1114 - Geospatial Information for UAS
- AVT 1115 - Introduction to UAS Entrepreneurship
- AVT 1116 - Regulations for Maintenance
- AVT 1120 - Electro-Optical & Infrared Data Analysis
- AVT 1121 - Multispectral & Hyperspectral Data Analysis
- AVT 1122 - Synthetic Aperture Radar & Light Detection & Ranging Data Analysis
- AVT 1123 - Acoustic & CBRNE Data Analysis
- AVT 1132 - Basic Aviation Electricity II
- AVT 1300 - Digital Engineering Aerospace Tools
- AVT 1301 - Digital Engineering Aerospace Applications
- AVT 2115 - UAS Entrepreneurship Capstone
- AVT 2281 - Advanced Air Mobility Airframe Maintenance
- AVT 2282 - Advanced Air Mobility Powerplant Maintenance
- AVT 2283 - Advanced Air Mobility Aircraft & Systems Design
- AVT 2284 - Advanced Air Mobility Aircraft Retirement and Disposal
- AVT 4215 - Autonomous Systems in Aviation
- CAT 1501 - Fundamentals of Surveying & Mapping
- CSC 2266 - Python for Data Analytics
- CJS 1101 - Introduction to Criminal Justice Science
- CJS 1155 - Homeland Security Issues & Administration
- EMS 1100 - Emergency Medical Responder Lecture & Laboratory

- GEO 1107 - Introduction to Geographic Information Systems (GIS)
- LAW 1101 - Business Law
- MAN 1107 - Foundations of Business
- MAT 2215 - Mathematics for Machine Learning & Artificial Intelligence

Nursing, BSN

Program Code: NUR.S.BSN • Credit Hours: 120-121

Description

The Bachelor of Science in Nursing degree is designed to fill a workforce need by optimizing the practice of registered nurses (RN) who have earned an associate degree in nursing. This RN to BSN completion degree builds upon students' previous nursing education as well as experience working as a registered nurse. Coursework contributes to a robust understanding of leadership in evidence-based, culturally responsive nursing care to promote health, prevent disease, and improve health outcomes in individuals and populations. Students must have graduated from an accredited pre-licensure nursing program and hold a valid, unencumbered, U.S. RN license.

Career Opportunities

The bachelor's degree in nursing augments the foundational nursing degree to enhance clinical practice and improve outcomes for nurses working in direct patient care as well as nurses in leadership and management roles in which the minimum degree requirement is a bachelor's degree in nursing. The deficit of nurses without a bachelor's degree in nursing in the Dayton region is over 700.

Prerequisites

- Students must have graduated from a nationally accredited pre-licensure nursing program and hold a valid, unencumbered, U.S. RN license.
- Students with a dismissed standing from Sinclair Community College are required to complete Sinclair's readmission policy steps and be readmitted to the college prior to applying for the BSN program. Contact Academic Advising to learn more.

Program Accreditation Information

The Baccalaureate nursing program at Sinclair Community College located in Dayton, Ohio is accredited by:
Accreditation Commission for Education in Nursing (ACEN)
3390 Peachtree Road NE, Suite 1400
Atlanta, GA 30326
(404) 975-5000

The most recent accreditation decision made by the ACEN Board of Commissioners for the Baccalaureate nursing program is Initial Accreditation.
View the public information disclosed by the ACEN regarding this program on the ACEN website.

Program Prerequisites

- Graduated from a nationally accredited pre-licensure nursing program and hold a valid, unencumbered, U.S. RN license
- Program application

Program Requirements

- ALH 1101 - Introduction to Healthcare Delivery
- ALH 2202 - General Pharmacology
- ALH 2220 - Pathophysiology
- BIO 1141 - Principles of Anatomy & Physiology I
- BIO 1242 - Principles of Anatomy & Physiology II
- BIO 2205 - Microbiology

- CHE 1111 - Introduction to Chemistry I OR
- CHE 1211 - General Chemistry I

- COM 2206 - Interpersonal Communication
- DIT 1525 - Human Nutrition
- ENG 1101 - English Composition I
- ENG 1201 - English Composition II

- MAT 1130 - Mathematics in Health Sciences OR
- OT36 Mathematics Elective **3 Cr. Hr(s).**

- MAT 1450 - Introductory Statistics
- NSG 1200 - Introduction to Nursing
- NSG 1400 - Health & Illness I: Foundational Concepts in Nursing
- NSG 1450 - Professional Nursing I: Introduction to the Role of the Professional Nurse
- NSG 1600 - Health & Illness II: Health & Wellness Concepts
- NSG 1650 - Professional Nursing II: Healthcare System Concepts
- NSG 2400 - Health & Illness III: Health & Wellness Concepts
- NSG 2450 - Professional Nursing III: Leadership & Management of Care
- NSG 2600 - Concept Synthesis
- NSG 3101 - Nursing Theory
- NSG 3103 - Nursing Evidence-Based Practice
- NSG 4101 - Community Nursing
- NSG 4102 - Cultural Competency
- NSG 4103 - Informatics for the Professional Nurse
- NSG 4104 - Advanced Health Assessment & Health Promotion
- NSG 4110 - Nursing Leadership
- NSG 4120 - RN to BSN Capstone
- OT36 Arts and Humanities Elective (at least two disciplines) **6 Cr. Hr(s).**
- PLS 1121 - US Federal Government & Civics
- PSY 1100 - General Psychology
- PSY 2200 - Lifespan Human Development
- SOC 1101 - Introduction to Sociology

Course Descriptions
This portion of the catalog provides information about the courses offered at Sinclair Community College. A brief description of each course is provided. For details regarding the additional information included with each course, see below.

Course Numbering
Each section begins with a subject followed by a three letter prefix which identifies the subject area of the course. The number identifies the level. Courses that begin with a zero are developmental in nature. Credits earned in developmental courses will not apply to the overall program hours. Courses in the 1000 series are usually considered first-year courses, courses in the 2000 series are usually considered second-year courses, courses in the 3000 series are considered third-year courses, while courses in the 4000 series are considered fourth-year courses.

Credit Hours
The number of semester credits for each course is indicated after the course title. Note that the number of credits for a course does not necessarily equal the number of hours that the course meets in one week. The actual number of hours per week varies by modality and will be reflected in the course schedule.

Prerequisites
Prerequisites, if any, are listed at the end of each course description in italics. Prerequisites are established by each department to ensure that the student has an adequate and sufficient background to enroll in the course and achieve success in that course. If there are no prerequisites listed, none are required for the course.

Co-requisites
Sometimes courses must be taken concurrently. If this is the case the courses are designated as co-requisites. For example, a biology lecture course and its associated lab course must be taken simultaneously. Lab information is usually noted. Co-requisites, if any, are listed at the end of the course description in italics.

Repeatable
An "R" indicates the course may be repeated for additional credit. These courses will be counted in the cumulative GPA each time the course is taken.
NOTE: Courses described in this catalog are those approved by Sinclair Community College at the time of publication. Inclusion of a course description does not obligate the College to offer the course in any given semester or academic year.

Accounting

ACC 1100 - Survey of Accounting
3 Cr. Hr(s).
Survey of financial accounting for non-accounting majors. Accounting concepts, financial statements, internal control, cash, and payroll.

ACC 1210 - Introduction to Financial Accounting
3 Cr. Hr(s).
An introduction to preparation and use of accounting reports for business entities; focus on uses of accounting for external reporting, emphasizing accounting as a provider of financial information. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 0050 OR MAT 1120

ACC 1220 - Introduction to Managerial Accounting
3 Cr. Hr(s).
An introduction to the use of accounting information by managers. Topics include the use of accounting information for planning and control, performance evaluation, decision-making and the statement of cash flows, along with financial statement analysis. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): ACC 1210

ACC 1510 - Computerized Accounting Systems
3 Cr. Hr(s).
This course uses general ledger software and spreadsheets to record, report and analyze accounting information.
Prerequisite(s): (ACC 1100 OR ACC 1210) AND BIS 1120

ACC 2101 - Intermediate Accounting I
3 Cr. Hr(s).
Development of accounting standards, conceptual framework of financial accounting. Review of the accounting cycle, preparation of income statement, statement of owner's equity, balance sheet, statement of cash flows and additional reporting issues. Time value of money, current asset and current liability accounting and reporting. It is strongly recommended that you complete ACC 1510 prior to registering for ACC 2101. However ACC 1510 may be taken concurrently.
Prerequisite(s): ACC 1220

ACC 2102 - Intermediate Accounting II
3 Cr. Hr(s).
Transaction analysis and financial reporting for long-term assets, long-term liabilities and stockholder's equity.
Prerequisite(s): ACC 2101 with a grade of C or better

ACC 2211 - Cost Accounting
3 Cr. Hr(s).
Application of cost accounting concepts and techniques to complex problems in manufacturing accounting and service firms. It is strongly recommended that you complete ACC 1510 prior to registering for ACC 2211. However ACC 1510 may be taken concurrently.
Prerequisite(s): ACC 1220

ACC 2212 - Managerial Accounting & Finance
3 Cr. Hr(s).
This course uses accounting and finance concepts to effectively analyze and manage business finances.
Prerequisite(s): ACC 1220

ACC 2270 - Accounting Internship
This course is repeatable.

1-4 Cr. Hr(s).
Students will secure a work site in the field of accounting and prepare and complete appropriate accounting learning outcomes for the work site. The accounting learning outcomes must be approved by the work site supervisor and the chairperson of the Accounting Instruction Department or full-time accounting faculty/work site coordinator. Internship hours vary based on credit hours.
Prerequisite(s): ACC 2102

ACC 2321 - Federal Taxation
3 Cr. Hr(s).
Introductory course including the basic tax model, personal gross income, personal deductions and credits, property transactions, special tax computations and introduction to corporate taxation.

ACC 2322 - Advanced Taxation
3 Cr. Hr(s).
Course covers tax research, federal, state and local business income tax returns and preparation of information returns, tax filings for trusts, estates and nonprofit organizations, and the reporting of advanced tax compliance issues for individual and business tax returns.
Prerequisite(s): ACC 2321

ACC 2435 - Auditing
3 Cr. Hr(s).
Review of accounting information systems and an overview of auditing. Covers internal controls and system documentation, transaction processing and databases, professional standard and ethics. Review of legal liability, audit evidence, risk evaluation and audit planning, audit procedures and audit reports.
Prerequisite(s): ACC 2101

ACC 2510 - Advanced Accounting
3 Cr. Hr(s).
Review of different accounting areas, including investment accounting, consolidation accounting, governmental accounting and partnership accounting. Review of International Accounting Financial Standards.
Prerequisite(s): ACC 2102 with a grade of C or better

African American Studies

AFR 1100 - African American Studies
3 Cr. Hr(s).
Social science introduction to the origins, relevance and scope of African American Studies. Topics include African American history, religion, sociology, politics, economics and psychology within a multicultural context.

AFR 2100 - Generational Trauma
3 Cr. Hr(s).
This course will provide students with a foundational understanding of the intergenerational transmission of trauma, with a focus on the experiences of people within the African diaspora. Students will gain insight into biological and environmental determinants of generational trauma and explore symptoms, prevention, and treatment strategies. TRIGGER WARNING: Please be advised that this course will involve discussions and materials that address sensitive and potentially distressing topics such as systemic oppression, discrimination, mental health issues, various forms of abuse, violence, and personal and collective trauma. These discussions may evoke strong emotional reactions and memories. Accordingly, be sure to prioritize your well-being and take necessary self-care steps. Should you need support, consider reaching out to mental health professionals or utilizing Sinclair's Counseling Services.

Agriculture

AGR 1110 - Introduction to Large Animal Sciences: Handling & Husbandry
3 Cr. Hr(s).
Introduction to Large Animal Sciences will provide the student with knowledge and practical experience of safe handling practices and husbandry management for various farm animal species. Specifically, students will learn about animal contributions to our society, production systems, animal breeding, nutrition, and contemporary agriculture issues today.

AGR 1111 - Principles of Large Animal Reproduction
3 Cr. Hr(s).
The course will provide students with in-depth information on the physiological mechanisms controlling the reproductive processes in production animals. Students will understand comparative differences in the anatomy, function, and regulation of male and female reproductive systems. Students will also learn key concepts in reproduction as it applies to animal management systems.
Prerequisite(s): (AGR 1110 OR VET 1120) AND Restricted to Majors

AGR 1112 - Principles of Large Animal Nutrition
3 Cr. Hr(s).
The course will discuss the fundamentals of animal nutrition and feedstuffs dealing with principles of digestion, absorption, assimilation and utilization of nutrients, balancing of rations, and feeding of livestock.
Prerequisite(s): AGR 1110 OR VET 1120

AGR 1113 - Animal Management
3 Cr. Hr(s).
Students will apply knowledge of production animal care to enhance animal growth and selection of breeding stock. Topics will include nutrition principles, feed utilization, animal welfare, facility selection and management, herd populations, and management practices. Throughout the course, students will develop management plans reflecting practices for care and legal compliance.
Prerequisite(s): AGR 1110, AGR 1111, AGR 1112

AGR 1160 - Introduction to Agriculture Science
1 Cr. Hr(s).
This class is an overview of Agriculture Industry. Guest lecture presentations, field trips, career research, and industry personnel interviews provide students with real-world examples of the skills and abilities necessary to compete in the world of Agriculture Science.

AGR 1201 - Horticulture I
3 Cr. Hr(s).
An overview of the horticulture profession, including its role and importance throughout history, current trends, and career opportunities, will be covered. Particular attention is given to horticulture crops, plant classification, use, and the interrelationships between environment, plant growth, and plant development. Two classroom, two lab hours per week.

AGR 1202 - Science of Soil
3 Cr. Hr(s).
Soil as part of natural and managed ecosystems and landscapes. Solid, liquid, and gas phases and their interactions in the soil. Water, gas and heat movement in soil. Soil biology. Plant nutrient acquisition and use. Soil development, management and use. Two classroom, two lab hours per week.
Prerequisite(s): AGR 1201

AGR 1203 - Trees & Shrubs
3 Cr. Hr(s).
Emphasizes the growth process in production of fruits, vegetables, flowers, lawns, trees, and shrubs. Studies include planning, preparation and care of home grounds. Fundamental concepts in plant identification, growth, culture, landscape and design are also studied. Two classroom, two lab hours per week.
Prerequisite(s): AGR 1201

AGR 1204 - Plant Propagation
3 Cr. Hr(s).
This course will familiarize the student with methods of increasing plant numbers and producing a marketable product. Topics include growth structures, media, plant culture, sexual and asexual reproduction, grafting, and nursery management. Practical greenhouse and field experience included. Two classroom, two lab hours per week.
Prerequisite(s): AGR 1201

AGR 1205 - Greenhouse Management
3 Cr. Hr(s).
This course is designed to prepare students to manage a greenhouse operation. Students in this class will learn to produce various ornamental and food crops. An understanding of structures, crop selection, and growing systems will be explored. Two classroom, two lab hours per week.
Prerequisite(s): AGR 1201

AGR 1206 - Horticulture II
3 Cr. Hr(s).
This course will allow students to apply knowledge of plant growth in field containers, pot-in-pot methods while integrating acquired

plant production methods. Students will use binomial nomenclature of trees, flowers and turf grasses to accurately label and classify plant product. Two classroom, two lab hours per week.
Prerequisite(s): AGR 1201

AGR 1207 - Greenhouse Applications
3 Cr. Hr(s).
This course will give hands on practical experience in greenhouse employment. One classroom, four lab hours per week.
Prerequisite(s): AGR 1206

AGR 1208 - Sustainable Landscape Design
3 Cr. Hr(s).
This course will assess the design problems/situations, the development of solutions and the communication of those solutions to the client through the design. Specific topics include designing for ecosystem maintenance/enhancement, introduction to using color in landscape designs and rendering section/elevation views. Two classroom, two lab hours per week.
Prerequisite(s): AGR 1206

AGR 1209 - Greenhouse Management Capstone
3 Cr. Hr(s).
This course is the culminating course in the greenhouse management certificate. This course combines the knowledge obtained in AGR 1201 through AGR 1208 resulting in an applicable working understanding of how to manage a greenhouse in today's economy. Two classroom, two lab hours per week.
Prerequisite(s): AGR 1206

AGR 1300 - Agronomy
3 Cr. Hr(s).
Crop growth and development, pesticide safety and application, properties of the soil, and conservation practices of Ohio's row crops are all covered in detail in this engaging curriculum dealing with the form and function of the crops that shape agriculture in Ohio, and the practices that we as agriculturalists take daily to keep them healthy and pertinent in society.

AGR 1400 - Agriculture Internship
3 Cr. Hr(s).
Agricultural Internship provides an opportunity for students to apply concepts learned to learning in a professional setting. Twenty-one practicum hours per week.
Prerequisite(s): Approval of Department

AGR 1401 - Food Science & Technology
3 Cr. Hr(s).
This course provides an in-depth exploration of the principles of food science and the role of technology in modern food production, processing, and safety. Students will examine the chemical, biological, and physical properties of food and how processing techniques and environmental factors influence these. Topics include food preservation methods, food safety protocols, biotechnology applications in food, and emerging trends in sustainable food production. Through laboratory activities and case studies, students will gain hands-on experience in food analysis and the use of technology to improve food quality and shelf life. The course also covers the regulatory aspects of food production, emphasizing the importance of food security and global supply chains. Two classroom, two lab hours per week.

AGR 1500 - Foundations of Agricultural Business
3 Cr. Hr(s).
An introductory class with the elements of business, identifying organizational structures, and the application of management skills while developing business plans, financial reports and strategic goals for new ventures or existing businesses. Learners will use marketing concepts to evaluate the marketing environment and develop a marketing plan with marketing channels, product approaches, promotion and pricing strategies. Throughout the course, students will apply concepts of ethics and professionalism while implications of business regulations will be identified.

AGR 1501 - Agricultural Finance for Small Business
3 Cr. Hr(s).
This course provides students with a comprehensive understanding of financial management principles tailored to small-scale agricultural enterprises. Emphasizing the unique financial challenges and opportunities faced by small farms and agri-businesses, the course covers key topics such as financial planning, budgeting, cash flow management, investment analysis, and risk management. Students will learn to develop financial strategies that enhance profitability and sustainability in agricultural operations, explore sources of financing specific to the agricultural sector, and analyze case studies on small farm finance management. By the end of the course, students will be equipped to make informed financial decisions, navigate loan and credit systems, and understand tax implications and regulatory requirements specific to the agriculture industry.

AGR 1502 - Agricultural Law
3 Cr. Hr(s).
This course provides an in-depth exploration of legal principles and issues that impact the agricultural sector. Students will gain a comprehensive understanding of the U.S. legal system and learn how to navigate legal materials relevant to agriculture. Key topics covered include torts, nuisance and trespass, contracts, and real and personal property law. The course will also explore specialized areas such as landlord-tenant law, secured transactions, estate planning, farm transition, and family law with a focus on health and end-of-life care. Additionally, students will examine water law, business entities, and animal law, along with emerging legal frameworks in organic, sustainable, and urban agriculture. The course covers the legal implications of genetically modified organisms, intellectual property law, food safety, and criminal law, while also addressing important topics such as pesticide regulations, conservation and environmental law, labor laws, taxation, international trade, and federal farm programs. By the end of the course, students will be equipped with the legal knowledge necessary to navigate complex agricultural issues, protect their business interests, and ensure compliance with relevant regulations. This course is ideal for those pursuing careers in agricultural management, policy, or law.

AGR 1503 - Agricultural Economics
3 Cr. Hr(s).
Introductory course on the basic principles of agricultural economics. Principles of supply and demand, resource economics, production optimization, price elasticity, market price determination, competitive versus noncompetitive market models, and agricultural public policy. These principles are applied to agriculture and the role of agriculture in the United States and world economies.

AGR 1504 - Management & Supervision in Agriculture
3 Cr. Hr(s).
Through case studies, students will analyze real-world agribusiness issues such as sustainability, innovation, workforce diversity, and global market strategies. The course also emphasizes the application of managerial problem-solving, decision-making, and communication techniques critical for effective leadership in agribusiness. Practical tools like quality management, operations planning, and technology integration are introduced to prepare students for supervisory roles in the rapidly evolving field of

agribusiness. By the end of the course, students will gain essential knowledge and skills to effectively lead agribusiness operations, manage teams, and make strategic decisions that enhance business performance and sustainability in the agriculture sector.

AGR 1505 - Foundations of Agricultural Marketing
3 Cr. Hr(s).
This course introduces students to the fundamental principles of agricultural marketing, focusing on how agricultural products move from farm to consumer. Students will explore the various components of marketing, including market analysis, product pricing, distribution channels, promotion strategies, and consumer behavior, all within the context of the agricultural industry. Emphasis will be placed on both traditional and emerging markets, as well as the impact of global trade, technology, and sustainability on agricultural marketing. By the end of the course, students will be able to develop effective marketing plans for agricultural products, understand the role of market trends and supply chains, and apply marketing strategies to enhance profitability and sustainability. This course is ideal for students pursuing careers in agricultural business, management, or entrepreneurship.

AGR 1601 - Understanding Natural Resources
3 Cr. Hr(s).
This introductory course is designed to give students a profound understanding of natural resources and their management. It begins with an exploration of various natural resources, such as soil, water, forests, fish, and wildlife. The course places a strong emphasis on the importance of these resources in sustaining life and their changing utility over time, a crucial aspect for any future natural resource manager. Students will also learn about the history of conservation in the United States, including early wildlife management practices, the evolution of forestry, and soil and water conservation efforts. The course introduces key concepts in natural resource management, focusing on the nature and classification of resources, ecological principles, and sustainable use. Topics include resource renewal, preservation, and balancing multiple uses, as well as practical discussions on soil erosion control, rangeland management, solid waste disposal, wetland preservation, and land-use planning. Students will delve into the water cycle, water pollution, purification processes, and air quality management by studying water and air resources. The course also covers forest management, fire control, fisheries, and wildlife conservation. Here, the focus is on maintaining ecological balance and preserving species, key aspects of effective natural resource management. In addition to natural resource topics, the course explores careers in conservation, forestry, fisheries, wildlife, and energy management, providing students with insights into various employment opportunities within these fields. With a strong emphasis on practical application, students will engage in discussion questions, review questions, and hands-on activities to deepen their understanding and prepare them for careers in natural resource management. Two classroom, two lab hours per week.

Allied Health

ALH 1101 - Introduction to Healthcare Delivery
2 Cr. Hr(s).
Orientation to the health care delivery system, including history, economics, medical/legal issues, professionalism, ethics, sociological aspects and wellness concepts. Orientation to the use of technology in the health care system will also be provided, including user interfaces, telecommunications and networks. The development of health care team skills, including critical thinking and problem-solving strategies and multicultural health care perspectives, will be presented. One classroom, three lab hours per week.

ALH 1102 - Basic Healthcare Practices & Medical Scribe
3 Cr. Hr(s).
Orientation to safe and effective basic health care practice including medical scribe, community health worker, patient assessment and documentation, infection control, body mechanics, and environmental safety considerations. Two classroom, two lab hours per week.

ALH 1103 - Test Taking Strategies
This course is repeatable.

1 Cr. Hr(s).
This course provides strategies and techniques to maximize individual test performance through prioritized learning and focused study time for the Health Sciences programs. Test-taking strategies and techniques are presented using simulated testing situations. Techniques learned will help improve thinking and discrimination skills to enhance test performance.
Prerequisite(s): Restricted to majors.

ALH 1105 - Overview of Holistic Health
2 Cr. Hr(s).
Holistic models of health and wellness; value of integrating holistic models in traditional healthcare settings; overview of specific holistic health models such as aromatherapy, reflexology, guided imagery, supplements, and neuro linguistic programming; efficacy data; indications and contraindications.

ALH 1107 - Core Concepts of Public Health
3 Cr. Hr(s).
The course will introduce core concepts of public health, including analytical methods, biomedical basis of public health, social and behavioral factors in health, environmental issues, medical care and public health and the future of public health.

ALH 1110 - Principles of Electrocardiography
2 Cr. Hr(s).
Principles of electrocardiography, including equipment operation, recording and troubleshooting, as well as fundamental principles of the cardiovascular physiology and basic ECG interpretation. Students will also gain knowledge and skills to provide CPR for victims of all ages and will practice CPR in a team setting. Students will receive an American Heart Association Basic Life Support for Healthcare Provider card upon successful completion of skills. One classroom, three lab hours per week. A simulated clinical rotation will be completed during the course.

ALH 1120 - Nurse Aide Training
4 Cr. Hr(s).
Provide education to individuals in the basic skills necessary to provide personal care services and activities, under the delegation and supervision of a registered or licensed practical nurse, to residents in a long-term care facility. Three classroom, three clinical lab hours per week.
Prerequisite(s): MAT 0050 AND Approval of Division Advisor AND background check, health certificate and student health insurance will be required to complete the clinical portion of the course

ALH 1121 - Patient Care Technician
3 Cr. Hr(s).
This course will provide a supplement to nurse aide training and provide students with the knowledge and skills required for care of the patient within an acute care facility as a Patient Care Technician. Three classroom, one lab, and one clinical hour per week.
Prerequisite(s): ALH 1120 OR Documented current work as State Tested Nurse Aide AND background check, health certificate and

student health insurance will be required to complete the clinical portion of the course

ALH 1122 - Pharmacy Technician I
5 Cr. Hr(s).
This course is the first of two core courses in the Pharmacy Technician Program and will help prepare students for the Pharmacy Technician Certification Board Exam. Course content includes the duties and responsibilities of the pharmacy technician, as well as the mathematical components and the pharmacology foundation necessary to become a successful pharmacy technician. Scope of pharmacy practice including handling of infectious and hazardous waste, interpersonal skills and beginning pharmacology and dose calculations.
Prerequisite(s): DEV 0035 AND (MAT 0100 or MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445. MAT 1445). The math corequisite may be taken concurrently with ALH 1122

ALH 1123 - Pharmacy Technician II
5 Cr. Hr(s).
This course is the second of two core courses in the Pharmacy Technician Program and will continue to help prepare students for the Pharmacy Technician Certification Board Exam. Course content will continue to include the duties and responsibilities of the pharmacy technician, as well as the mathematical components and the pharmacology foundations necessary to become a successful pharmacy technician. Additional skills learned will include sterile compounding, non-sterile compounding and inventory control. Course contains a simulated directed practice.
Prerequisite(s): ALH 1122 AND ALH 1124 AND (MAT 1130 OR MAT 1445) with a grade of C or better in ALH 1122 or Permission of instructor if repeating ALH 1123 AND Must possess a high school equivalency certificate or a high school diploma, be 18 years or older, demonstrate English language proficiency (including reading, writing, and speaking)
Corequisite(s): ALH 1183

ALH 1124 - Pharmacy Technician Directed Practice I
2 Cr. Hr(s).
This course will provide the students with real world experience in a pharmacy (i.e. retail pharmacy). Students will be provided with a valuable learning experience and potential contacts and/or references for employment. This course will also provide the student with additional review for the Pharmacy Technician Certification Board Exam. Students will complete 105 hours of non-paid, supervised directed practice in a retail pharmacy. A background check, proof of personal health insurance, Healthcare Provider BLS, and a completed health physical with proof of immunizations will be required prior to attending the directed practice.
Prerequisite(s): ALH 1182 with a grade of C or better AND Approval of department

ALH 1125 - Pharmacy Technician Directed Practice II
2 Cr. Hr(s).
This course will provide students with real world experience in a pharmacy (i.e. hospital pharmacy). Students will be provided with a valuable learning experience and potential contacts and/or references for employment. This course will also provide students with additional review for the Pharmacy Technician Certification Board Exam. Students will complete 105 hours of non-paid, supervised directed practice in a hospital pharmacy. A background check, proof of personal health insurance, Healthcare Provider BLS, and a completed health physical with proof of immunizations will be required prior to attending the directed practice.
Prerequisite(s): ALH 1122 AND ALH 1124 ANDALH 1182 AND ALH 1183 AND Approval of department

ALH 1130 - Basic Life Support Training for Healthcare Provider
This course is repeatable.

1 Cr. Hr(s).
The American Heart Association (AHA) Basic Life Support for Healthcare Providers (BLS-HCP) is designed to train participants to save lives of victims in cardiac arrest through high-quality cardiopulmonary resuscitation (CPR). This course prepares healthcare professionals (those currently working in a healthcare setting or potential for working in a healthcare setting) to know how to perform CPR in both in- and out-of-hospital settings. The course includes adult, child, and infant rescue techniques, administration of the AED, and first aid. Those who successfully complete the course will receive an AHA Heartsaver First Aid Provider Card and AHA BLS for Healthcare Provider card, valid for two years.

ALH 1132 - Heartsaver First Aid, CPR & AED
This course is repeatable.

1 Cr. Hr(s).
The American Heart Association (AHA) Heartsaver First Aid with Cardiopulmonary Resuscitation (CPR) and Automated or Automatic External Defibrillator (AED) course is designed for the individuals who are not working or planning to work within a healthcare environment. The course provides students with training in basic first aid procedures, including the first aid skills recommended by OSHA, CPR and AED. Students who complete the course qualify for the AHA Heartsaver First Aid with CPR and AED course completion card.

ALH 1140 - Fundamentals of Disease Processes
3 Cr. Hr(s).
Pathological changes associated with the most commonly occurring diseases of each body system. Correlates changes with patient's response, diagnostic studies, and treatment modalities.
Prerequisite(s): BIO 1107 OR BIO 1121 OR BIO 1141

ALH 1182 - Pharmacy Technician Lab I
2 Cr. Hr(s).
This is a laboratory course designed to provide pharmacy technician students with simulations to practice a variety of pharmacy technician's activities and responsibilities, such as product preparation, inputting prescriptions, calculations, pharmacy tools, and equipment. One classroom, three lab hours per week.
Corequisite(s): ALH 1122

ALH 1183 - Pharmacy Technician Lab II
2 Cr. Hr(s).
This is a laboratory course designed to provide pharmacy technician students with simulations to practice a variety of pharmacy technicians activities and responsibilities, such as product preparation, sterile compounding, non-sterile compounding, inputting prescriptions, calculations, pharmacy tools, and equipment. One classroom, three lab hours per week.
Prerequisite(s): ALH 1122 AND ALH 1124 AND ALH 1182
Corequisite(s): ALH 1123

ALH 2201 - Survey of Drug Therapy
2 Cr. Hr(s).
Overview of the conventional drug classes presenting only the more commonly prescribed preparations primarily emphasizing common effects and indications for use.
Prerequisite(s): BIO 1107 OR BIO 1121 OR BIO 1141

ALH 2202 - General Pharmacology
3 Cr. Hr(s).
General principles of drug absorption, distribution, metabolism, actions and effects presented according to conventional drug classification with emphasis on the prototype of each class; for registered nursing and

medical assistant technology students but may be of interest to other allied health students or general studies students majoring in biological sciences.
Prerequisite(s): BIO 1121 OR BIO 1141 OR BIO 2211

ALH 2220 - Pathophysiology
3 Cr. Hr(s).
Study of human disease using a system approach emphasizing abnormal physiological processes that result in the signs and symptoms of each disorder.
Prerequisite(s): BIO 1107 OR BIO 1121 OR BIO 1141 OR BIO 2211

ALH 3101 - The U.S. Healthcare System & Ethical Considerations
3 Cr. Hr(s).
Survey of the current U.S. healthcare system in relationship with delivery, organization, financing, and outcomes. Exploring the connection between the healthcare professional and ethical issues affecting healthcare.
Prerequisite(s): SOC 1101 AND ALH 3102 AND Must have associate degree in Healthcare AND Restricted to majors

ALH 3102 - Cultural Competence
3 Cr. Hr(s).
Explores cultural effect on health and illness, and analyzes the learner's attitude, knowledge, and value of diverse populations. Emphasis on heightened cultural awareness for the healthcare professional providing care and applying knowledge to identify at risk cultural groups to influence health promotion and disparity reduction within these groups.
Prerequisite(s): Must have associate degree in Healthcare AND Restricted to majors AND Completion of 6 credit hours in OT36 CHE, BIO, and/or PHY

ALH 3103 - Informatics for Healthcare Professionals
3 Cr. Hr(s).
Discusses the healthcare professional's role and professional responsibility in utilizing health information systems (HIS). The course addresses the use of HIS and technology to support patient care and to enhance safe, effective, and quality patient outcomes. Ethical, legal, cultural, and financial issues surrounding information systems are also explored.
Prerequisite(s): MAT 1450 AND ALH 3102 AND Must have associate degree in healthcare AND Restricted to majors

ALH 3301 - Community & Global Population Health & Epidemiology
3 Cr. Hr(s).
Survey of the healthcare needs and healthcare delivery within the context of the changing demography of the United States. Covers the methods and principles of epidemiological investigation focusing on both infectious and non-infectious diseases to support study of global health and well-being of individuals across the lifespan.
Prerequisite(s): ALH 3102 AND MAT 1450 AND SOC 1101 AND Must have associate degree in healthcare AND Restricted to majors

ALH 3430 - Interprofessional Healthcare Team Practice
3 Cr. Hr(s).
Survey of conceptual styles of interprofessional practice in community, healthcare, and educational settings. Exploration of healthcare concentrations and preparation for capstone/senior project and career planning.
Prerequisite(s): ALH 3102 AND MHT 1120 AND Must have associate degree in healthcare AND Restricted to majors

ALH 4101 - Community Health Perspectives
3 Cr. Hr(s).
Evaluate patterns of health in community and global human populations. Analyze contributing factors of poor health outcomes including access to healthcare, genetics, lifestyle, and habitat. Identify and evaluate regional health promotion programs. Plan health outcomes for a select population.
Prerequisite(s): ALH 3430 AND Must have associate degree in healthcare AND Restricted to majors

ALH 4105 - Advanced Health Assessment & Health Promotion
3 Cr. Hr(s).
The theory and practice of health assessment and health promotion within the community and global framework across the life span. Assessment of patient's health status for health promotion, health protection, and disease prevention. Concepts, theories, and research on human development and genetics; prevention of disease, detection of risk factors.
Prerequisite(s): ALH 3430 AND Must have associate degree in healthcare AND Restricted to majors

ALH 4107 - Academic Healthcare Educator
3 Cr. Hr(s).
Review attributes and responsibilities of the healthcare educator in the various academic roles of a healthcare program. Compare and contrast learning theories pertinent to healthcare education. Discuss aspects of program development, evaluation, and quality improvement. Identify educational practice changes driven by evidence-based findings in the academic setting.
Prerequisite(s): ALH 3430 AND Must have associate degree in healthcare AND Restricted to majors

ALH 4110 - Healthcare Leadership & Roles
3 Cr. Hr(s).
Focus is on leadership and management roles of healthcare professionals. The course emphasizes leadership concepts as they relate to the ethical decision-making process in implementing high quality healthcare, healthcare team coordination, and the leadership/management process in diverse multicultural healthcare settings.
Prerequisite(s): ALH 3430 AND Must have associate degree in healthcare AND Restricted to majors

ALH 4302 - Healthcare Instructional Development & Pedagogy
3 Cr. Hr(s).
Introduce the basic principles of instructional design and implementation, as well as types of healthcare learners in a variety of healthcare settings.
Prerequisite(s): ALH 3430 AND Must have associate degree in healthcare AND Restricted to majors

ALH 4310 - Concepts of Quality Management & Leadership in Healthcare
3 Cr. Hr(s).
Survey of concepts related to management and leadership within healthcare. Explore the theoretical foundations and application of quality improvement methods, tools and strategies needed to increase organizational effectivenes
Prerequisite(s): ALH 3430 AND Must have associate degree in healthcare AND Restricted to majors

ALH 4430 - Health Science Capstone/Senior Project
3 Cr. Hr(s).
The capstone course is a culminating educational experience that allows students to demonstrate and apply mastery of program outcomes and promotes the application of knowledge acquired in the Bachelor of Applied Science in Health Sciences degree curriculum with previous knowledge and experience to identify and implement a scholarly project. The project must address the analysis of, and strategies to address improvements in, community and global health, leadership/management, and/or

educational practices with the assessment of one's knowledge and experience regarding the healthcare professional's role in healthcare settings. One classroom, fourteen practicum hours per week.
Prerequisite(s): Must have associate degree in healthcare AND Completion of 3 or more credits in 4000-level course (minimum of one concentration course) AND Restricted to majors

American Sign Language

ASL 1101 - Orientation to Deafness
3 Cr. Hr(s).
Study the culture of the American Deaf community. Issues raised include the relationship between language and culture, the history of deaf education, the Deaf President Now revolution and the collective goals and values of the Deaf community. Gain an understanding of the effects of hearing loss by way of basic audiology, speech pathology and the anatomy of the ear. We will also address access to services for the Deaf, hard-of-hearing, and Deaf-Blind consumers.

ASL 1102 - Interpreting Theory & Best Practices
3 Cr. Hr(s).
An in-depth examination of the multiple facets that constitute effective interpreting. These include communication theory, cognitive processing skills, cultural adjustments, contextual and situational factors, expansion techniques, controlling legislation and ethics and best practices. Various interpreting settings are examined, with special emphasis on educational interpreting, interpreter licensure and the national interpreting evaluation process.
Prerequisite(s): ASL 1101 AND ASL 1112

ASL 1111 - Beginning American Sign Language I
3 Cr. Hr(s).
This course provides a foundation for non-signers to study American Sign Language (ASL) and learn about deaf culture. It includes principles, methods and techniques for communicating with deaf individuals who sign. Focusing on development of receptive and expressive sign skills, manual alphabet, numbers, sign vocabulary, syntax, grammar and culture.

ASL 1112 - Beginning American Sign Language II
3 Cr. Hr(s).
Continue to study American Sign Language (ASL) grammatical structure, vocabulary, fingerspelling, use of signing space, conversational regulators and introductory aspects of deaf culture.
Prerequisite(s): ASL 1111 AND ENG 1101

ASL 1228 - Intermediate American Sign Language I
3 Cr. Hr(s).
Express abstract concepts in ASL using appropriate grammatical structure, signing space, vocabulary, fingerspelling and nonmanual markers. The course also features continued development of conversational regulators and aspects of deaf culture.
Prerequisite(s): ASL 1112

ASL 1229 - Intermediate American Sign Language II
3 Cr. Hr(s).
Expands ability to express abstract concepts in American Sign Language (ASL), further develops vocabulary and receptive and expressive fluency. Read and discuss topics related to deaf culture. Deaf community interaction required.
Prerequisite(s): ASL 1101 AND ASL 1228 AND ENG 1101

ASL 2201 - Interpreting I
3 Cr. Hr(s).
An introduction to the theories and models of interpreting, cognitive process techniques, interpreting logistics and strategies, as well as the code of professional conduct and all aspects of confidentiality. Two classroom hours, two lab hours per week. Student may repeat course up to three (3) times to achieve a passing grade. Two classroom, two lab hours per week.
Prerequisite(s): ASL 1101 AND ASL 1228

ASL 2202 - Interpreting II
3 Cr. Hr(s).
Students further develop and demonstrate mastery of advanced interpreting principles and techniques. Classroom activities include platform interpreting, team interpreting and application of the Registry of Interpreters for the Deaf (RID) Code of Professional Responsibility to a variety of interpreting situations. Two classroom, two lab hours per week. Students may repeat course up to three (3) times to achieve a passing grade.
Prerequisite(s): ASL 1229 AND ASL 2201 AND ENG 1201

ASL 2203 - Interpreting III
3 Cr. Hr(s).
Students will demonstrate proficiency in both simultaneous and consecutive interpreting while executing the necessary techniques, principles, and models to effectively interpret between source and target languages. Two classroom, two lab hours per week.
Prerequisite(s): ASL 2202 AND ASL 2231

ASL 2207 - Role of the Interpreter
3 Cr. Hr(s).
This course will address how setting, register and preferred language mode of clients impacts the role of the interpreter. During weekly in-class role plays, students will employ interpreting techniques learned in other advanced interpreting courses as well as elements of the Demand-Control Schema.
Prerequisite(s): ASL 1102 AND ASL 2203 AND ASL 2231

ASL 2212 - Specialized Interpreting I
2 Cr. Hr(s).
A study of interpreting in settings with specialized vocabulary such as medical, technical, and employment. Practice and performance of the vocabulary used in these settings is designed to increase student's comfort and skills for interpreting in these specialized settings. One classroom, two lab hours per week.
Prerequisite(s): ASL 1102 AND ASL 1229 AND ASL 2201 AND Restricted to Majors

ASL 2213 - Specialized Interpreting II
3 Cr. Hr(s).
A study of interpreting in legal, mental health, sexuality, and substance abuse settings. The course will focus on the comprehension and sign production of the unique and specialized vocabulary used in these settings. Two classroom, two lab hours per week.
Prerequisite(s): ASL 2207 AND ASL 2212 AND Restricted to Majors
Corequisite(s): ASL 2261

ASL 2231 - Linguistics of ASL
3 Cr. Hr(s).
The first advanced course in the study of American Sign Language (ASL) is an intensive study of the linguistic structure of English and American Sign Language (ASL). Students explore the syntactic similarities and differences between the two languages and learn how to find functional equivalence between the two languages.
Prerequisite(s): ASL 1229 AND ASL 2201 AND ENG 1201

ASL 2236 - Transliterating & Signing Modalities
3 Cr. Hr(s).
Course includes practice in Signing Exact English II (SEE II), transliterating and various signing modalities used in special settings or by various special populations such as deaf-blind or individual with other disabilities. Students will focus on transliterating

signed/spoken English in educational and technical situations and develop specialized vocabulary in areas typically utilizing transliterators.
Prerequisite(s): ASL 2202 AND ASL 2231

ASL 2261 - Practicum I
3 Cr. Hr(s).
Students are required to complete 150 hours of socialization in the deaf community, interpreting and observation at an off-campus setting under the supervision of a mentor. Weekly seminar provides opportunities to synthesize on-site experiences with instructor and peers. Two classroom, seven practicum hours per week.
Prerequisite(s): ASL 2207 AND Restricted to Majors
Corequisite(s): ASL 2213

ASL 2262 - Practicum II
3 Cr. Hr(s).
Students are required to attend weekly seminar class and complete 150 hours of interpreting/observation and socialization at off-campus settings under the supervision of a mentor(s). Two classroom, seven practicum hours per week.
Prerequisite(s): ASL 2261 AND Restricted to Majors

ASL 2300 - Educational Interpreting
3 Cr. Hr(s).
This course presents an overview of educational interpreting with a focus on the K-12 setting. Topics include: the role of the educational interpreter, deafness and other disabilities, the Individualized Educational Plan (IEP) process and the Ohio Department of Education's (ODE) Educational Interpreter Guidelines and licensure process.
Prerequisite(s): ASL 2202 AND ASL 2231 AND Restricted to Majors

Art

ART 1101 - 2-D Foundations
3 Cr. Hr(s).
The study of composition/visual elements with color theory applied to utilizing design principles (using line, shape, texture, value and color) and color psychology emphasizing the Josef Albers color theories in a studio setting with emphasis on hands-on learning. Six studio hours per week.

ART 1102 - 3-D Foundations
3 Cr. Hr(s).
Basic foundation studio course dealing with methods, materials, principles of organization and elements of design applied to the third dimension. Six studio hours per week.

ART 1110 - Visual Literacy - Introduction to Art & Art Media
3 Cr. Hr(s).
Emphasis on the language of art, exposure to many different art forms, formulative ideas about what is viewed and exploration of specific media.
This course has no textbook costs.

ART 1111 - Drawing I
3 Cr. Hr(s).
Studio drawing develops visual skills relative to the drawing process, with emphasis on traditional as well as contemporary problems on representation and composition. Six studio hours per week. It is strongly recommended that you complete ART 1101 prior to registering for ART 1111. However ART 1101 may be taken concurrently.

ART 1112 - Drawing II
3 Cr. Hr(s).
Personal expression developed through a variety of two-dimensional media, cubistic techniques, gestural and figure studies. Six studio hours per week.
Prerequisite(s): ART 1111

ART 1121 - Beginning Painting I
3 Cr. Hr(s).
Studio painting with an emphasis on color, form and space in compositional design. Introduction to personal expression and modern applications. Six studio hours per week.
Prerequisite(s): ART 1111

ART 1122 - Beginning Painting II
3 Cr. Hr(s).
Personal expression with instruction in 20th-century techniques and concepts. Complex problems in color and composition. Six studio hours per week.
Prerequisite(s): ART 1121

ART 1131 - Sculpture I
3 Cr. Hr(s).
Introduces basic principles of sculpture and expands personal definitions and interpretations of contemporary three-dimensional art. Introduces methods of sculpture with clay, wood, plaster and other materials for constructing three-dimensional art work. Six studio hours per week.
Prerequisite(s): ART 1102

ART 1132 - Sculpture II
3 Cr. Hr(s).
Develop complex visual principles of sculpture and develop a personal expression of individual style in interpretations of contemporary three-dimensional art. Six studio hours per week.
Prerequisite(s): ART 1131

ART 1133 - Figurative Sculpture
3 Cr. Hr(s).
Study of the human anatomy of the head and figure as applied to three-dimensional form. Six studio hours per week.
Prerequisite(s): ART 1131

ART 1141 - Ceramics I
3 Cr. Hr(s).
Introduces basic principles of ceramic construction techniques and glazing, and expands personal definitions and interpretations of contemporary three-dimensional art. Introduces methods hand building, wheel throwing, and glazing demonstrated through a variety of functional and sculptural projects. Six studio hours per week.

ART 1142 - Ceramics II
3 Cr. Hr(s).
Materials and processes of ceramic art for the beginning student; hand building and wheel-throwing and glazing demonstrated through a variety of functional and sculptural projects. Six studio hours per week.
Prerequisite(s): ART 1141

ART 1161 - Black & White Darkroom Photography I
3 Cr. Hr(s).
An introduction to the art and technique of black and white photography. Photographic shooting, processing and printing are stressed. Students to supply their own adjustable camera, (35mm or 120) film and print paper. Six studio hours per week.

ART 1162 - Black & White Darkroom Photography II
3 Cr. Hr(s).
Intermediate course in black and white photography. Further introduction and application of the tools/techniques of photographic art with emphasis on artistic portfolio development. Students shoot a minimum of 15 rolls of film to satisfy the portfolio project. Film and correct contact sheets must be included in the working portfolio. Six studio hours per week.
Prerequisite(s): ART 1161

ART 1170 - Alternative Photographic Processes
3 Cr. Hr(s).
Principles and theories of alternative photographic processes used for print production including cyanotype, Van Dyke Brown, gum, palladium, salt printing, and wet-plate collodion process. Six studio hours per week.
Prerequisite(s): ART 1161

ART 1171 - Studio Photography
3 Cr. Hr(s).
Mechanics and aesthetics of photography in a studio environment covering a range of subjects and emphasizing lighting techniques and equipment as well as use of all camera formats and digital media. Six studio hours per week.
Prerequisite(s): ART 1161

ART 1175 - Computer Photography
3 Cr. Hr(s).
Techniques for transforming photographic images through use of computers and digital cameras. Use of a computer to create fine art digital images. Advanced PhotoShop techniques including layers, color correction, masking and special effects. Students will be challenged to address learning outcomes in their work to demonstrate creative process and critical thinking. Six studio hours per week.
Prerequisite(s): ART 1161

ART 2111 - Intermediate Drawing I
3 Cr. Hr(s).
Definition of a personal expression through the drawing process; traditional and modern approaches to drawing the figure, still life, and other contemporary subjects. Six studio hours per week.
Prerequisite(s): ART 1112

ART 2112 - Intermediate Drawing II
3 Cr. Hr(s).
Emphasis on the technical process and the language of drawing; a variety of media and techniques focusing on personal expression. Six studio hours per week.
Prerequisite(s): ART 2111

ART 2141 - Intermediate Ceramics
3 Cr. Hr(s).
Exploration of the vessel and sculpture as a means of communication, through content and expression. Incorporation of contemporary concepts and styles of art. Six studio hours per week.
Prerequisite(s): ART 1142

ART 2216 - Life Drawing & Anatomy I
3 Cr. Hr(s).
Figure drawing with a foundation in anatomical study. Emphasis on proportion as well as design with an application towards mood and expression. Six studio hours per week.
Prerequisite(s): ART 1111

ART 2217 - Life Drawing & Anatomy II
3 Cr. Hr(s).
Advanced figure drawing with a foundation in anatomical study. Development of mood and content through form and topic. Six studio hours per week.
Prerequisite(s): ART 2216

ART 2221 - Intermediate Painting-Observation & Concept
3 Cr. Hr(s).
Art as a means of communication, through content and expression. Incorporation of contemporary concepts and styles of art. Six studio hours per week.
Prerequisite(s): ART 1122

ART 2222 - Intermediate Painting - The Figure
3 Cr. Hr(s).
The figure as the subject of study and how it has been used academically and expressively. Six studio hours per week.
Prerequisite(s): ART 1122

ART 2230 - Art History: Ancient through Medieval Periods
3 Cr. Hr(s).
Art history from early cave paintings through the Medieval period of Western civilization.

ART 2231 - Art History: Renaissance through Contemporary Periods
3 Cr. Hr(s).
Art history from the early Italian Renaissance through the contemporary period.
Prerequisite(s): ART 2230 Note: Non ART majors and transient students may complete the Art History survey courses (ART 2230 and ART 2231) out of sequence.

ART 2235 - History of Photography
3 Cr. Hr(s).
Historical survey of photography as an art form from its beginnings in the 1830's until the present day; developments in photographic processes, artistic trends, and study of major photographic artists.

ART 2236 - History of Women Artists
3 Cr. Hr(s).
A history of women artists from the Middle Ages to the present day, with emphasis on the history of style, and on women's historical roles.

ART 2237 - History of American Art
3 Cr. Hr(s).
Art history of the United States from the pre-colonial to contemporary periods.

ART 2238 - History of African Art
3 Cr. Hr(s).
History of African art from ancient to contemporary periods.

ART 2239 - History of Asian Art
3 Cr. Hr(s).
Art history focusing on major cultural styles of Indian, Chinese, and Japanese art from ancient through contemporary periods, including the styles and specific work of major artists.

ART 2265 - Digital Color Photography
3 Cr. Hr(s).
An introduction to the technique of digital color photography, printing techniques, the presentation of digital prints and various camera and computer techniques will be employed to enhance the print. Student will supply own digital Single-lens Reflex (SLR) camera. Six studio hours per week.
Prerequisite(s): ART 1161 AND ART 1175 (if ART major) OR VIS 1140 (if VIS major)

ART 2269 - Printmaking I
3 Cr. Hr(s).
Examines the philosophy, history and techniques of multiple image preparation including woodcut and intaglio processes. Six studio hours per week.
Prerequisite(s): ART 1111 OR ART 1161 OR VIS 1100 OR VIS 1110 OR VIS 1140

ART 2270 - Fine Art Internship
1 Cr. Hr(s).
Practicum providing student with experience in organizing and hanging art exhibits, assisting in studios or working in arts administration. Seven practicum hours per week.
Prerequisite(s): Approval of Department

ART 2279 - Printmaking II
3 Cr. Hr(s).
Exploration of color printing in relief, intaglio, lithographic, and monotype processes. Six studio hours per week.
Prerequisite(s): ART 2269

ART 2280 - Intermediate Printmaking I
3 Cr. Hr(s).
Examines an advanced use of combined

processes, mixed-media, and interdisciplinary approaches to image-making in printmaking. Six studio hours per week.
Prerequisite(s): ART 2279

ART 2281 - Intermediate Printmaking II
3 Cr. Hr(s).
Focused development of individualized concepts and independent expression in printmaking with intensive concentration on selected processes. Six studio hours per week.
Prerequisite(s): ART 2280

ART 2285 - Printmaking - Monotype
3 Cr. Hr(s).
Variety of image-making techniques to explore monotype printing methods in black-and-white and color. Six studio hours per week.
Prerequisite(s): ART 2269

ART 2294 - Photography Portfolio Development
This course is repeatable.

2 Cr. Hr(s).
One-on-one instruction regarding the student's final graduating photography portfolio. Instructor will meet with the student during final term of study to help the student compose his or her final graduating portfolio. Student may repeat course up to three times to achieve a passing grade. Failure to satisfactorily complete this course will make the student ineligible for the Fine Art Photography Certificate program. One classroom, five directed-practice hours per week.
Prerequisite(s): Restricted to Majors AND student must complete 28 semester hours of coursework prior to enrolling in ART 2294. Course should be completed during the final terms of study.

ART 2295 - Graduation Portfolio Development & Exhibition
1 Cr. Hr(s).
The student will write an artist statement and an art-related resume, attend lectures and demonstrations on professional presentation of artwork, take quality promotional images of his/her artwork and select a portfolio of his/her original artwork for graduation exhibition.
Prerequisite(s): 50 credit hours earned; 24 of which must be in ART

Astronomy

AST 1111 - The Solar System
3 Cr. Hr(s).
Patterns and movements of celestial objects; history of astronomy; gravity, light, and matter; various types of telescopes; origins of the solar system; properties of planets and their moons; asteroids, comets, meteoroids and space exploration. Students must sign up for concurrent lab sections.
This course has no textbook costs.
Prerequisite(s): MAT 0100 or MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445 OR MAT 1450
Corequisite(s): AST 1117

AST 1112 - Stars, Galaxies & the Universe
3 Cr. Hr(s).
Properties and evolution of stars including the Sun; black holes and other stellar remnants; Milky Way and other galaxies; origin and fate of the universe. Students must sign up for concurrent lab sections.
This course has no textbook costs.
Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445
Corequisite(s): AST 1118

AST 1117 - Lab for the Solar System
1 Cr. Hr(s).
Laboratory and field activities to supplement The Solar System. Three lab hours per week.
This course has no textbook costs.
Corequisite(s): AST 1111

AST 1118 - Lab for Stars, Galaxies & the Universe
1 Cr. Hr(s).
Lab and field activities to supplement Stars, Galaxies & the Universe. Three lab hours per week.
This course has no textbook costs.
Corequisite(s): AST 1112

Automotive Technology

AUT 1100 - Consumer Automotive
2 Cr. Hr(s).
Language of automotive systems and functions. Students will perform a series of activities related to vehicle maintenance such as oil change, chassis lubrication, safety inspections, ignition tune-up, cooling system testing, brake inspections and evaluation of a used vehicle. Basic hands tools are required. One classroom, three lab hours per week.

AUT 1102 - Introduction to Automotive Service
This course is repeatable.

0.5 - 2 Cr. Hr(s).
Work assignment practices that are necessary for beginning automotive service technicians. Hand tool usage, correcting wind noise and water leaks, oil changes, tire rotations and balancing, new vehicle prep, used car inspection. Eye protection and hand tools are required. One classroom, three lab hours per week.

AUT 1108 - Automotive Engine Systems
4 Cr. Hr(s).
Engine operation, nomenclature, measurements and tolerances, including service and overhaul procedures. Cooling, lubrication and valve train systems are discussed. Basic engine machining practices are covered. Basic hand tools are required for the course.

AUT 1111 - Automotive Service Consulting & Advising
2 Cr. Hr(s).
Introduction to service department as it pertains to a service consultant or service advisor at automotive repair facility. Skill development for intake of vehicle, preparing repair order, communicating with customer and selling of labor and parts.

AUT 1114 - Automotive Electrical/Electronic Systems I
3 Cr. Hr(s).
Comprehension of Ohm's law, basic electrical circuits, digital meter usage, batteries, starting and charging system operation. Diagnosis of wire harness repair procedures and service. One classroom, six lab hours per week.

AUT 1115 - Automotive Engine Performance I
4 Cr. Hr(s).
Operation and service of fuel injection systems. Testing and evaluation of emission controls, on-board diagnostic systems and engine condition. Basic hand tools required. Two classroom, six lab hours per week.
Prerequisite(s): AUT 1114

AUT 1116 - Automotive Steering & Suspension Systems
3 Cr. Hr(s).
Steering system diagnosis and service including front and rear suspension components, wheel and tire and front and rear wheel alignment. Basic hand tools are required. One classroom, six lab hours per week.

AUT 1142 - Automotive Manual Transmission & Driveline
3 Cr. Hr(s).
Theory and operation of clutch, manual transmission and transaxle, rear axle, limited slip differential, drive shaft, universal joint, four- wheel drive/all-wheel drive, diagnosis

and repair. Basic hand tools required. One classroom, six lab hours per week.

AUT 1146 - Automotive Heating Ventilation & Air Conditioning Systems
3 Cr. Hr(s).
Theory and operation of automotive heating and air-conditioning systems. Includes lab activity in diagnosis, service and repair procedures. Basic hand tools required. One classroom, six lab hours per week.

AUT 1165 - Automotive Brake Systems
3 Cr. Hr(s).
Theory and operation of hydraulic braking systems, drum brake, disc brake and power assist diagnosis and service. One classroom, six lab hours per week.

AUT 1170 - Automotive Internship I
This course is repeatable.

2 Cr. Hr(s).
Students work in the field at an approved automotive service business. The credit that is earned for the internship is applied toward degree requirements. Students prepare and submit reports online and are evaluated by the course instructor as well as their on-site supervisor. Twenty internship hours per week.
Prerequisite(s): Approval of Department

AUT 1171 - Automotive Internship II
This course is repeatable.

2 Cr. Hr(s).
Students work in the field at an approved automotive service business. The credit that is earned for the internship is applied toward degree requirements. Students prepare and submit reports online and are evaluated by the course instructor as well as their on-site supervisor. Students will practice service procedures on steering and suspension, electrical systems and engines following their second semester. Twenty co-op hours per week.
Prerequisite(s): Approval of Department

AUT 1172 - Automotive Internship III
This course is repeatable.

2 Cr. Hr(s).
Students work in the field at an approved automotive service business. The credit that is earned for the internship is applied toward degree requirements. Students prepare and submit reports online and are evaluated by the course instructor as well as their on-site supervisor. Students will practice service procedures on engine performance, manual transmissions and axles following their third semester. Twenty co-op hours per week.
Prerequisite(s): Approval of Department

AUT 1173 - Automotive Internship IV
This course is repeatable.

2 Cr. Hr(s).
Students work in the field at an approved automotive service business. The credit that is earned for the internship is applied toward degree requirements. Students prepare and submit reports online and are evaluated by the course instructor as well as their on-site supervisor. Students will practice service procedures on automatic transmissions and air-conditioning systems following their fourth semester. Twenty co-op hours per week.
Prerequisite(s): Approval of Department

AUT 2214 - Automotive Electrical/Electronic Systems II
4 Cr. Hr(s).
Advanced electrical/electronic system diagnosis and troubleshooting of starting and charging systems, lighting systems, dashboard instrumentation, body control and accessory circuits. SRS system operation, testing and diagnosis. AC and DC motor theory, operation and diagnosis. Schematic utilization. Diagnose serial data bus communication and module systems. Two classroom, six lab hours per week.
Prerequisite(s): AUT 1114

AUT 2215 - Automotive Engine Performance II
4 Cr. Hr(s).
Advanced diagnosis and repair of computer controlled fuel delivery, fuel injection, ignition, emission systems and proper use of advanced engine performance diagnostic equipment. Basic handtools required.
Prerequisite(s): AUT 1115

AUT 2221 - High Performance Engine Blocks & Heads
6 Cr. Hr(s).
High-performance engine building plan development. Disassembly, cleaning and inspection of components. Reconditioning/modification of components. Preparation of components prior to final/trial assembly. Three classroom, nine lab hours per week.
Prerequisite(s): AUT 1108 OR Approval of Department

AUT 2222 - High Performance Engine Assembly & Dyno Testing
6 Cr. Hr(s).
High-performance engine block and cylinder head final assembly. Finished engine assembly is dynamometer tested for performance output. Three classroom, nine lab hours per week.
Prerequisite(s): AUT 1108 OR Approval of Department

AUT 2224 - High Performance Fuel Induction Systems
3 Cr. Hr(s).
Performance rebuilding and tuning of Holley carburetors. Introduction to the operation and performance application of electronic fuel injection. Introduction to superchargers, turbochargers and nitrous oxide. Engine performance evaluation and tuning utilizing engine and chassis dynamometers. Basic hand tools required. One and one-half classroom, four and one-half lab hours per week.
Prerequisite(s): AUT 1115

AUT 2230 - Hybrid Electric Vehicle Systems
2 Cr. Hr(s).
Hybrid vehicle safety, theory and operation of automotive hybrid high voltage systems, batteries, charging systems, drivetrain components and emission systems. One classroom, three lab hours per week.
Prerequisite(s): AUT 2214

AUT 2231 - Automotive Electric Vehicle Systems
2 Cr. Hr(s).
Electric vehicle safety, theory and operation, service and diagnosis of automotive high voltage systems, batteries, charging systems, drivetrain components, and thermal management systems. One classroom, three lab hours per week.
Prerequisite(s): AUT 2230

AUT 2240 - Automotive Diesel Systems
2 Cr. Hr(s).
This course provides content on light duty diesel applications in automobiles. Students will receive instruction on theory and operation, maintenance, service, repair, and diagnostic skills of diesel engines, fuel systems, exhaust systems, induction, and emission systems. One classroom, three lab hours per week.
Prerequisite(s): AUT 2214

AUT 2241 - Automatic Transmission Systems
4 Cr. Hr(s).
Theory and operation of automotive transmissions and transaxle systems. Lab experience in the overhaul and service of automatic transmissions and transaxles including mechanical, hydraulic and electronic systems diagnostics and testing.

AUT 2250 - Automotive Service Operations
8 Cr. Hr(s).
Actual experience in the laboratory with diagnosis, repair, use of manuals, customer relations, safety, communications, supervision and delegation of work. Automotive service facility and operation consideration. Basic hand tools required. Four classroom, twelve lab hours per week.
Prerequisite(s): AUT 1108 AND AUT 1114 AND AUT 1115 AND AUT 1116 AND AUT 1146 AND AUT 1165 OR Approval of Department

Aviation Technology

AVT 1101 - Introduction to Unmanned Aerial Systems
2 Cr. Hr(s).
Foundations of unmanned aerial systems (UAS), including history, elemental systems including payloads, data links, ground support equipment, classes of UAS, categories, applications, mission planning and control, and launch/recovery systems.

AVT 1102 - Orientation to Inflight Services
2 Cr. Hr(s).
Provides students with the knowledge of the duties and responsibilities of flight attendants, inflight service procedures, safety briefing announcements, customer service skills, airline terminology, airline schedules, airport identifiers and airline flight attendant interview techniques.

AVT 1103 - Remote Pilot Ground School
1 Cr. Hr(s).
The application of unmanned aerial systems (UAS) for commercial and civil purposes requires an understanding of contemporary technical, legal and regulatory issues. This course provides the foundational knowledge to take the FAA-mandated Part 107 Remote Pilot exam to operate as a commercial UAS pilot.

AVT 1104 - UAS Standards, Regulations & Law
1 Cr. Hr(s).
This course reviews the current legal considerations of unmanned aerial system (UAS) operations, provides an outlook on future considerations, and informs students on existing and trending UAS related standards and regulations.

AVT 1105 - Orientation to Aviation
2 Cr. Hr(s).
Overview of aviation career specialties required for successful entry into aviation industry-related fields. Evaluation of career interests relative to the market for aviation opportunities. Guest lecturers and site visits will be used to illustrate the broad spectrum of aviation occupations available.

AVT 1106 - Airframe Safety Systems
2 Cr. Hr(s).
Aircraft safety systems will cover the following: chemical and electric/pneumatic ice and rain protection systems, fire warning and extinguishing systems, landing gear and throttle safety warning systems, aural warning systems and troubleshooting and repair of wiring for these systems. One classroom, two lab hours per week.

AVT 1107 - Fuel Systems
3 Cr. Hr(s).
Inspection, operational checkout and repair of fuel systems and components to include tanks, transfer pumps, indicating systems and fuel heating; leak detection, identification and repair; proper servicing and regulatory compliance. Two classroom, three lab hours per week.

AVT 1108 - UAS First Responder Applications
1 Cr. Hr(s).
Students will learn the fundamental principles of Unmanned Aerial Systems (UAS) technologies, capabilities, regulations, legal responsibilities, cost and benefit consideration for potential use in law enforcement, fire, rescue, emergency medical and disaster response applications.

AVT 1109 - UAS Remote Sensing & Analysis
1 Cr. Hr(s).
This course introduces the foundations of remote sensing and data analysis. Students will acquire knowledge of the characteristics of various sensors and remote sensing applications applicable to civil unmanned aerial system (UAS) operations. Emphasis is placed on data acquisition and processing.

AVT 1110 - Private Pilot Ground School
3 Cr. Hr(s).
Prepares students with the knowledge necessary to successfully complete the Federal Aviation Administration (FAA) Private Pilot knowledge exam. Topics include pilot training, aircraft systems, aerodynamic principles, safety of flight, air traffic control procedures, weather theory, weather hazards and conditions, federal aviation regulations, aircraft performance, weight and balance principles and navigation procedures.
Prerequisite(s): Approval of Department

AVT 1111 - Helicopter Private Pilot Ground
3 Cr. Hr(s).
Prepares students with the knowledge necessary to successfully complete the Federal Aviation Administration (FAA) Private Pilot knowledge exam. Topics include pilot training, aircraft systems, aerodynamic principles, safety of flight, air traffic control procedures, weather theory, weather hazards and conditions, federal aviation regulations, aircraft performance, weight and balance principles and navigation procedures.
Prerequisite(s): Approval of Department

AVT 1112 - UAS Precision Agriculture
2 Cr. Hr(s).
This course describes the current state of Unmanned Aerial Systems and related technologies as they may be applied to precision agriculture. Students will determine the commercial viability of Unmanned Aerial System applications in precision agriculture and will review current regulatory and operational considerations for their use. One classroom, two lab hours per week.

AVT 1113 - Drawings for Aviation
2 Cr. Hr(s).
Knowledge and skill development in using and making aircraft drawings, graphs and wiring diagrams; drawing symbols, electrical schematics, drawing repairs and alterations to industry and Federal Aviation Administration (FAA) standards; aviation performance charts and graphs, aviation gas laws, force and motion, work and power, energy and weight, mass and matter that affect aircraft performance. One classroom, two lab hours per week.

AVT 1114 - Geospatial Information for UAS
2 Cr. Hr(s).
This course defines common terms used in the Geographic Information System (GIS) community, explains common geospatial applications, compares and contrasts the difference between data and information, and presents how to evaluate data from multiple sources in terms of usefulness, accuracy and potential uses. In addition to examining sources of data, the course also discusses production methods and analysis procedures for geospatial data as they relate to unmanned aerial system (UAS) operations. A fundamental grounding is also provided in the technical aspects to underpin geospatial data and key geospatial technologies that support Unmanned System operations. One classroom, two lab hours per week.

AVT 1115 - Introduction to UAS Entrepreneurship
2 Cr. Hr(s).
Provides students with an introduction to the principles of entrepreneurship and how they can leverage UAS technologies and applications to create or expand a successful business. Lectures, case studies, and experiential learning are used to develop critical thinking and interpersonal skills.

AVT 1116 - Regulations for Maintenance
3 Cr. Hr(s).
This course provides the aviation mechanic with critical knowledge in the following areas: FAA regulations, airworthiness directives, mechanics' privileges, legal aircraft record entries, maintenance publications, repair manuals, wiring diagrams, structural repair manuals, Air Transport Association (ATA) numbering system and human factors. Two classroom, two lab hours per week.

AVT 1118 - Weight & Balance
3 Cr. Hr(s).
This course covers aviation maintenance performance calculations to include theory of aircraft weight and balance encompassing documentation, weighing the aircraft, locating the center of gravity, adverse center of gravity checks, large aircraft weight and balance computations and determination of ballast requirements. Two classroom, three lab hours per week.

AVT 1119 - Aviation Meteorology
2 Cr. Hr(s).
Prepares students with the knowledge necessary to comprehend the fundamentals of meteorology, analyze weather factors, hazards and in-flight weather conditions and weather conditions as they relate to aircraft and flight performance using aviation meteorology charts and internet weather resources.

AVT 1120 - Electro-Optical & Infrared Data Analysis
2 Cr. Hr(s).
Introduces the foundations of electro-optical and infrared data analysis. Students will acquire knowledge of the characteristics of electro-optical and infrared sensors, data, and remote sensing applications applicable to civil unmanned aerial system operations. Emphasis is placed on data processing. One classroom, two lab hours per week.

Prerequisite(s): Competency-Based Education (CBE) prerequisite training and approval to register if offered in the CBE format

AVT 1121 - Multispectral & Hyperspectral Data Analysis
2 Cr. Hr(s).
Introduces the foundations of multispectral and hyperspectral data analysis. Students will acquire knowledge of the characteristics of multispectral and hyperspectral sensors, data, and remote sensing applications applicable to civil unmanned aerial system operations. Emphasis is placed on data processing. One classroom, two lab hours per week.
Prerequisite(s): Competency-Based Education (CBE) prerequisite training and approval to register if offered in the CBE format

AVT 1122 - Synthetic Aperture Radar & Light Detection & Ranging Data Analysis
2 Cr. Hr(s).
Introduces the foundations of synthetic aperture radar and light detection and ranging data analysis. Students will acquire knowledge of the characteristics of synthetic aperture radar and light detection and ranging sensors, data, and remote sensing applications applicable to civil unmanned aerial system operations. Emphasis is placed on data processing. One classroom, two lab hours per week.
Prerequisite(s): Competency-Based Education (CBE) prerequisite training and approval to register if offered in the CBE format

AVT 1123 - Acoustic & CBRNE Data Analysis
1 Cr. Hr(s).
Introduces the foundations of acoustic and chemical, biological, radiological, nuclear, and explosives data analysis. Students will acquire knowledge of the characteristics of acoustic and chemical, biological, radiological, nuclear, and explosives sensors, data, and remote sensing applications applicable to civil unmanned aerial system operations. Emphasis is placed on data processing.
Prerequisite(s): Competency-Based Education (CBE) prerequisite training and approval to register if offered in the CBE format

AVT 1124 - Private Pilot Flight Lab - Airplane Single Engine
2 Cr. Hr(s).
Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Private Pilot Certificate with an Airplane Category and Single Engine Land Class Rating. The course is conducted under 14 CFR Part 61. Topics include familiarization with the training aircraft, flight maneuvers, maximum performance takeoff and landing procedures, attitude control by instrument reference, solo flight, night flying, cross country operations and navigation procedures. Course Performance Standards require 50 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee, a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): Approval of Department
Corequisite(s): AVT 1111

AVT 1126 - Private Pilot Flight Lab - Rotorcraft Helicopter
2 Cr. Hr(s).
Prepares students to obtain the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Private Pilot Certification with a rotorcraft helicopter class rating. The course is conducted under 14 CFR Part 61.Topics include familiarization with the training aircraft, flight maneuvers, takeoff and landing procedures, solo flight, night flight, cross country operations and navigation procedures. Course Performance Standards require 40 hours of flight time and 100% completion of the syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): Approval of Department
Corequisite(s): AVT 1111

AVT 1128 - Powerplant Safety Systems
2 Cr. Hr(s).
Troubleshooting of electrical wiring and connections on instruments, legal repairs allowed on instruments by Airframe and Powerplant (A&P) mechanics, different types of fire protection systems, different extinguishing agents used, Auxiliary Power Unit (APU) use, inspection, operation, removal, and replacement of APUs requiring servicing and troubleshooting and unducted fan engines. Two classroom, two lab hours per week.

AVT 1130 - Basic Aviation Electricity I
2 Cr. Hr(s).
Basic electrical principles to include the following: electron theory, alternating and direct current (AC and DC) circuits,

production of electricity, batteries, Ohm's Law, resistance, DC power calculations, load analysis, electrical load circuits, series, parallel, and compound circuits, and AC and DC motors. One classroom, two lab hours per week.

AVT 1132 - Basic Aviation Electricity II
2 Cr. Hr(s).
Advanced basic electrical principles to include the following: electron theory, complex alternating and direct current (AC & DC) circuits, electrical laws (Ohm's Law, Kirchhoff's Law, Watt's Law, Faraday's Law, Lenz's Law), resistance, inductance, capacitance, load analysis, AC & DC power calculations, integrated circuits, complex circuit analysis, transformers, digital logic, binary numbers, schematic drawings. One classroom, two lab hours per week.
Prerequisite(s): AVT 1130

AVT 1133 - Instruments/Communications
3 Cr. Hr(s).
Inspection, removal and installation of flight instruments and controls to include gyroscopic and magnetic instruments, pitot-static lines, wiring and legal repairs by mechanics. Communications equipment operation, inspection, removal and installation of radios, antennas, coax cables, wave guides and next generation of combination instrument/communication equipment to include GPS/satellite communication. Two classroom, three lab hours per week.

AVT 1135 - Materials & Processes
4 Cr. Hr(s).
Selection and proper use of nondestructive inspection techniques and equipment; basic heat treatments, identification and selection of correct aircraft hardware. Inspection of welds and precision measurements. Tube bending, cutting and flaring, high-pressure (MS) flareless fittings, repair of rigid lines, identification of fluid lines, fabrication of high and low pressure hose lines, bulkhead fittings. Two classroom, six lab hours per week.

AVT 1136 - Sheet Metal
4 Cr. Hr(s).
Identification and selection of sheet metal types; inspection, cleaning, preparation, forming, layout, bending, cutting, dimpling, countersinking, drilling, installing special fasteners and rivets in sheet metal. Fabrication of sheet metal projects is required. Two classroom, six lab hours per week.

AVT 1140 - Introduction to Business Aviation
2 Cr. Hr(s).
Overview of International Civil Aviation Organization (ICAO) definitions of aviation activities; definition of business and private aviation, reasons for using business aviation, the actual costs of use versus airlines and other modes of transportation, differences from job opportunities in other areas of aviation, opportunities for specific kinds of jobs from architect to aero engineering, discussions with professionals from the field.

AVT 1141 - Principles of Aviation Leadership
2 Cr. Hr(s).
Strategic planning in business aviation operations, relationship among management, flight crews, corporate business aviation flight department employees and those external to the flight department, including fixed based operators (FBOs); team building, decision making, communication with the corporate business aviation flight department.

AVT 1148 - Aircrew Emergency Management
4 Cr. Hr(s).
Provide students with the knowledge of the duties and responsibilities of airline crew during emergency operations which will include smoke/fire, first aid, evacuations/ditchings, decompressions, security and hazardous materials.

AVT 1151 - Crew Survival & Rescue Techniques
3 Cr. Hr(s).
Overview of the psychology of survival, post-crash survival techniques, prioritization and necessities, survival physiology in the emergency environment, clothing protection and improvised shelter, signaling, air and ground search and rescue, survival kits and emergency equipment and survival skills. Includes winter, desert, jungle, water, hostile territories and extended in-plane hostage survival.

AVT 1158 - Aerospace Spatial Visualization
2 Cr. Hr(s).
This course provides a basic overview of remote sensing, highlights the need for space astronomy, describes the composition of the space environment, and principles of black/white and color aerial photography and videography. This course highlights the need for space astronomy and exploring the composition of the space environment. Students will learn the fundamentals of black-and-white and color photography, as well as the importance and diverse applications of aerial photography, videography, ground control, and land mapping. In addition, the course covers visual image interpretation and the principles of thermal radiation used in thermal sensing. It also examines the history of remote sensing from space, highlighting the U.S. Landsat program's operations & contributions, introduces digital image processing, classification, and microwave sensing principles & applications. One classroom, two lab hours per week.

AVT 1170 - Instrument Pilot Ground School
3 Cr. Hr(s).
Basic nonvisual cockpit instrument reference education, including principles of basic attitude instrument flight and limitations of flight instruments, instrument flight procedures for departure, en-route and arrival operations, federal aviation regulations, weather factors and emergency situations.
Prerequisite(s): AVT 1110 AND AVT 1124 AND Approval of Department

AVT 1171 - Helicopter Instrument Pilot Ground
3 Cr. Hr(s).
Basic nonvisual cockpit instrument reference education, including principles of basic attitude instrument flight and limitations of flight instruments, instrument flight procedures for departure, en-route and arrival operations, federal aviation regulations, weather factors and emergency situations.
Prerequisite(s): AVT 1111 AND AVT 1126 AND Approval of Department

AVT 1213 - Corrosion
2 Cr. Hr(s).
Causes of corrosion, the chemical process, types of corrosion, locations susceptible to corrosion, detecting corrosion, removing and treating corrosion, cleaning of the interior and exterior of the airplane, and paint removal and protection of bare surfaces and finishing materials application techniques and practices. One classroom, two lab hours per week.

AVT 1214 - Cabin Atmospheric Control
3 Cr. Hr(s).
Inspection, operation, troubleshooting, repair and service of the following items: heating, cooling, air conditioning, pressurization, air cycle machines and gaseous oxygen systems and aircraft pneumatic systems. Two classroom, three lab hours per week.

AVT 1218 - Utility Systems
5 Cr. Hr(s).
Hydraulic aircraft systems, introduction to landing gear systems, development of repair and inspection skills, critical thinking and

development of analysis used in troubleshooting, and repair of hydraulic systems and landing gear. Two classroom, six lab hours per week.

AVT 1224 - Instrument Pilot Flight Lab - Airplane Single Engine
2 Cr. Hr(s).
Prepares students with the skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Instrument Pilot Certificate. The course is conducted under 14 CFR Part 141.Topics include attitude instrument flying, instrument navigation, holding patterns, instrument approaches and instrument cross-country flight including instrument flight rules en-route procedures. Course Performance Standards require 35 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): Approval of Department AND Student must hold Private Pilot Certificate
Corequisite(s): AVT 1170 AND AVT 1254

AVT 1226 - Instrument Pilot Flight Lab - Rotorcraft Helicopter
2 Cr. Hr(s).
Prepares students with the skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Instrument Pilot certificate with a rotorcraft helicopter Class Rating. The course is conducted under 14 CFR Part 141. Topics include attitude instrument flying, instrument navigation, holding patterns, instrument approaches and instrument cross country flight including instrument flight rules en-route procedures. Course Performance Standards require 40.5 hours of flight time 100% completion of the syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): AVT 1111 AND AVT 1126 AND Approval of Department AND Student must hold Private Pilot-Rotorcraft Certificate
Corequisite(s): AVT 1171 AND AVT 1255

AVT 1245 - Aviation Law
2 Cr. Hr(s).
Prepares students with knowledge of the origins of aviation law, legal terminology and a general understanding of aviation industry laws, legislation and court decisions affecting the aviation community.

AVT 1246 - Air Traffic Control Communications
1 Cr. Hr(s).
Overview of the history of air traffic control, air traffic control tower procedures, radar systems, radar separation, radio communications and techniques, flight plan clearances, traffic management and emergency procedures and priority handling.

AVT 1254 - Flight Simulator Instruction
1 Cr. Hr(s).
Prepares students with the knowledge and practice necessary to successfully control an aircraft solely by reference to flight instruments. Topics include full and partial panel reference, accuracy and proficiency in flying holding patterns and instrument approach procedures and recovery from unusual attitudes and spatial disorientation scenarios. Contact the Department for the current course fee.
Prerequisite(s): AVT 1110 and AVT 1124 Approval of Department
Corequisite(s): AVT 1170 AND AVT 1224

AVT 1255 - Helicopter Flight Simulator Instruction
1 Cr. Hr(s).
Prepares students with the knowledge and practice necessary to successfully control a helicopter solely by reference to flight instruments. Topics include full and partial panel reference, accuracy and proficiency in flying holding patterns and instrument approach procedures and recovery from unusual attitudes and spatial disorientation scenarios. Various other helicopter flight profiles and procedures are also covered. Contact the Department for the current course fee.
Prerequisite(s): Approval of Department

AVT 1300 - Digital Engineering Aerospace Tools
3 Cr. Hr(s).
Introduces digital engineering tools and technologies relevant to the aerospace industry through lectures, case studies, and hands-on exercises. Two classroom, two lab hours per week.

AVT 1301 - Digital Engineering Aerospace Applications
3 Cr. Hr(s).
Introduces the role and importance of digital engineering, explores challenges for using digital engineering technologies, and identifies best practices for digital engineering applications that are currently in use and emerging in the aerospace industry.

AVT 2115 - UAS Entrepreneurship Capstone
2 Cr. Hr(s).
Provides students with a real-world design challenge during which they will develop their own UAS related business concepts or explore a provided scenario. Tasks include market analysis, business case and plan development, creation of a business proposal, and delivery of a presentation as is common for those pursuing venture capital or other investment opportunities. One classroom, two lab hours per week.
Prerequisite(s): AVT 1115

AVT 2121 - Assembly & Rigging
3 Cr. Hr(s).
This course covers proper adjustment of cables and torque tubes, proper alignment of primary and secondary control surfaces, proper inspection and alignment of landing gear components and associated controls, correct alignment of all structures in both fixed wing and rotary wing aircraft. Two classroom, three lab hours per week.

AVT 2122 - Ignition & Starting
3 Cr. Hr(s).
This course covers magneto removal, inspection, repair and installation; internal and external magneto timing; inspection, repair and installation of powerplant wiring and ignition harnesses. Two classroom, three lab hours per week.

AVT 2125 - Developments in Aviation I
2 Cr. Hr(s).
Provides pilots and other aviation professionals with an in-depth understanding of how aviation technology has evolved. This course begins with the earliest balloon flights, the invention of the airplane and covers all of the subsequent technology developments through the end of WWII.

AVT 2126 - Reciprocating Engines
4 Cr. Hr(s).
This course covers reciprocating engine removal, engine configurations, firing order, inspections, critical parts measurement, use of overhaul manual, powerplant troubleshooting, installation and repair, engine ice protection and induction system, superchargers,

turbochargers, exhaust system inspection. Two classroom, six lab hours per week.

AVT 2129 - Propellers
2 Cr. Hr(s).
Removal, inspection, repair, dressing and installation of propellers. Propeller pitch, angle of attack and forces. Metal, wood and composite propellers. Variable pitch propellers including constant speed, reversing, feathering and ground adjustable propellers. Propeller systems including governors, ice control and auxiliary systems. Propeller storage and return to service. Propeller certificate data. One classroom, two lab hours per week.

AVT 2132 - Airframe Electrical Systems
4 Cr. Hr(s).
Electrical distribution, controls, switches, transformers and solid-state devices. Use of electrical measuring devices in troubleshooting and testing circuits. Repair of wiring and terminal ends. Use of electrical schematics and wiring diagrams to troubleshoot systems and trace electrical signals. Two classroom, six lab hours per week.

AVT 2138 - Engine Fuel & Fuel Metering
3 Cr. Hr(s).
Fuel system components for turbine and reciprocating engines, carburetor adjustment and overhaul, installation and removal of carburetors, repair of fuel metering components, repair and installation of fuel system components, inspection, adjustment and servicing of engine fuel metering system components. Two classroom, three lab hours per week.

AVT 2139 - Induction/Exhaust/Cooling
2 Cr. Hr(s).
Powerplant ice protection, reciprocating engine induction system, superchargers, turbochargers, heat exchangers, turbine engine inlet designs, exhaust system inspection, repair, removal, and installation, and thrust reversers. One classroom, three lab hours per week.

AVT 2143 - Review & Recommendation
2 Cr. Hr(s).
This course provides the aviation mechanic with critical review for the required Federal Aviation Administration (FAA) knowledge exams in the following areas under Part 147 Appendixes B, C and D: General, Airframe, and Powerplant aviation maintenance subjects with hands-on review in preparation for oral and practical exams. This course should not be taken prior to the student's last semester in the aviation maintenance program.
Prerequisite(s): Approval of Department

AVT 2146 - Introduction to Airline Operations
3 Cr. Hr(s).
An introduction to the structure of an airline, including the functions of the operational control center, airline marketing, maintenance control, fleet planning and scheduling, dispatch release, airline operating certificates and specifications, Part 121 Federal Aviation Regulations and an understanding of the principles and concepts of crew and dispatcher resource management (CRM) through interactive discussion and scenario analysis as it relates to aircraft dispatchers and airline flight crews.

AVT 2150 - Crew Resource Management for UAS
1 Cr. Hr(s).
Provides students with an introduction to the principles and concepts of crew resource management (CRM) through interactive discussion and scenario based analysis as it relates to UAS operations and the challenge of optimizing the human/machine interface and accompanying flight operations. Discussion and scenario based activities include CRM markers, principles and concepts of CRM, team building, information transfer, problem solving, risk management and decision making, communications process, conflict resolution and maintaining situational awareness when dealing with UAS automated systems.
Prerequisite(s): Restricted to Majors

AVT 2151 - UAS Operations I
3 Cr. Hr(s).
This course consists of lecture, simulator instruction and flight operation demonstration specific to an unmanned aerial system (UAS). Lecture will cover topics in UAS: aerodynamic theory, operations theories and techniques, platform categories, sensors and payloads, technical documents and processes of automation. Students will observe and participate in flight operations on various UAS platforms. Two classroom, two lab hours per week.
Prerequisite(s): AVT 1101 AND AVT 1104 AND AVT 2150 AND Possession of FAA Part 107 Remote Pilot certificate required OR Possession of FAA TRUST certificate required

AVT 2157 - Aircraft Performance I
2 Cr. Hr(s).
Principles of advanced aerodynamics, high-speed flight, takeoff, enroute and landing jet aircraft performance. Operational factors affecting aircraft performance in aircraft dispatch.
Corequisite(s): AVT 1119

AVT 2158 - Aircraft Performance II
2 Cr. Hr(s).
Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Aircraft Dispatcher Certificate. Topics include DC-9, B-727, B-737 and BE-1900 weight and balance and advanced transport category aircraft performance calculations.
Prerequisite(s): AVT 2157

AVT 2159 - Canadair Regional Jet (CRJ) Aircraft Systems
1 Cr. Hr(s).
Prepares students with the knowledge necessary to successfully complete the Federal Aviation Administration (FAA) Aircraft Dispatcher Practical exam. Topics include theory of Canadair Regional Jet (CRJ) aircraft systems, including minimum equipment and configuration deviation list items and their application to aircraft dispatch applications.
Prerequisite(s): Approval of Department

AVT 2166 - Practical Dispatch Applications
3 Cr. Hr(s).
In-depth coverage of joint Aircraft Dispatcher/Pilot responsibilities and dispatch functions including communications, operational control, fuel planning, flight planning, aircraft weight and balance, abnormal and emergency situations, weather, NOTAMs (Notices to Airmen) and airport facilities as they relate to flight planning. At the completion of the course, students will be prepared for the FAA Aircraft Dispatcher (ADX) practical examination. Age Restrictions: To be eligible for an ADX certificate, a person must be at least 23 years of age. Individuals who are at least 21 years of age may take the ADX knowledge and practical tests. Individuals who pass the practical test prior to reaching 23 years of age are not entitled to the certificate itself but will be issued a Letter of Aeronautical Competency. Upon reaching 23 years of age, the FAA will issue the ADX certificate.
Prerequisite(s): AVT 1110 AND AVT 1119 AND AVT 2157 AND AVT 2158 AND AVT 2159 AND AVT 2167 AND Approval of Department AND FAA age restrictions apply
Corequisite(s): AVT 1105 AND AAVT 1141 AND AVT 2146 AND AVT 2168 AND MET 1131

AVT 2167 - Instrument Flight Rules (IFR) Navigation & Planning

2 Cr. Hr(s).
Principles of aeronautical charts, national airspace system, aircraft navigation instruments, navigational systems and global differences in navigational operations. Air traffic control procedures and pilot responsibilities as they relate to enroute operations, terminal area and radar operations; including instrument departure and approach procedures.
Prerequisite(s): AVT 1119

AVT 2168 - Dispatcher Oral Preparation
1 Cr. Hr(s).
Preparation for the Federal Aviation Administration (FAA) Aircraft Dispatcher Certificate through an in-depth understanding of regulations, meteorology, navigation, aircraft systems, communications, air traffic control, emergency and abnormal procedures and practical dispatch applications. At the completion of the course, students will be prepared for the FAA Aircraft Dispatcher oral examination. Age Restrictions: To be eligible for an ADX certificate, a person must be at least 23 years of age. Individuals who are at least 21 years of age may take the ADX knowledge, oral and practical tests. Individuals who pass the practical test prior to reaching 23 years of age are not entitled to the certificate itself but will be issued a Letter of Aeronautical Competency. Upon reaching 23 years of age, the FAA will issue the ADX certificate.
Prerequisite(s): AVT 1110 AND AVT 1119 AND AVT 2157 AND AVT 2158 AND AVT 2159 AND AVT 2167 AND Approval of Department AND FAA age restrictions apply
Corequisite(s): AVT 1105 AND AVT 1141 AND AVT 2146 AND MET 1131

AVT 2211 - Advanced Navigation Science
2 Cr. Hr(s).
Study of advanced navigational systems used in commercial and corporate flight operations. Global Positioning Systems (GPS), Flight Management Systems (FMS) and automated flight planning programs will be demonstrated and practiced. Study of long range navigational procedures.
Prerequisite(s): AVT 1170 AND Approval of Department

AVT 2219 - Turbine Engines
4 Cr. Hr(s).
Physics of gas turbine engines, engine types, engine inlet designs, thrust reversers, engine exhaust designs, production of thrust, engine sections, types of accessories, engine operations, maintenance requirements, inspections, repair of electrical connections, troubleshooting electrical and pneumatic systems and testing/trimming of engines. Two classroom, six lab hours per week.

AVT 2221 - UAS Sensors & Systems
4 Cr. Hr(s).
Course will provide students a foundational understanding encompassing all elements of an unmanned aerial system (UAS). Students will be provided the knowledge and necessary skill set to support UAS application. Three classroom, three lab hours per week.
Prerequisite(s): AVT 1130 OR EET 1120

AVT 2236 - Non-Metallic Structures
3 Cr. Hr(s).
This course covers composites, different types of composite glass, repair of composite structures, wood structures, types of wood used in aircraft, defects in wood, proper repair of fabric and wood structures, types of fabrics used to cover aircraft structures, sewing, lacing and finishing, and the required inspection of fabrics on aircraft. Two classroom, three lab hours per week.

AVT 2237 - Aircraft Inspections
3 Cr. Hr(s).
Conduct an annual/100-hour inspection for a complete aircraft including the airframe, engine and related components. Perform necessary servicing related to an annual inspection and check for airworthiness directives, service bulletins and compliance with manufacturer's directives. Operation, servicing, hand communications, aircraft movement and airport operations safety. Two classroom, three lab hours per week.

AVT 2240 - Human Factors in Aviation
3 Cr. Hr(s).
Provides pilots and other aviation professionals with an in-depth knowledge of human performance capabilities and limitations and their relationship with aircraft systems operation. Automation and human errors, fatigue, diet, motivation and learning, training principles, human sensory capabilities and limitations, supervisory control and Crew Resource Management (CRM) are among the topics this course will address.

AVT 2242 - Aircraft Accident Investigation I
3 Cr. Hr(s).
Provides pilots and other aviation professionals with an understanding of techniques used by investigators to identify causes of accidents and how to make recommendations to reduce the likelihood of recurrence and reduce the consequences.

AVT 2247 - Aerodynamics & Flight Mechanics I
3 Cr. Hr(s).
Properties of the Standard Atmosphere. Applies basic physics conservation concepts to incompressible, low-speed aerodynamics to develop analytical equations for lift and drag. Develops methods for basic aircraft performance analysis to include maximum angle and rate of climb, cruise and gliding flight. Discusses basic static and dynamic stability requirements.
Prerequisite(s): PHY 1141 AND MAT 1580 OR (MAT 1470 AND MAT 1570)

AVT 2250 - Commercial Pilot Ground
3 Cr. Hr(s).
Prepares fixed-wing students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate with an Airplane Category and Single Engine Land Class Rating. Topics include federal aviation regulations applicable to commercial pilot operations, airspace, flight information, meteorology, aeronautical decision making, Visual Flight Rules (VFR) cross-country flight planning and navigation.
Prerequisite(s): AVT 1110 AND AVT 1170 AND AVT 1224 AND Approval of Department

AVT 2251 - Helicopter Commercial Pilot Ground
3 Cr. Hr(s).
Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate for Helicopter pilots. Topics include federal aviation regulations applicable to commercial pilot operations, airspace, flight information, meteorology, aeronautical decision making, Visual Flight Rules (VFR) cross-country flight planning and navigation.
Prerequisite(s): AVT 1171 AND AVT 1226 AND Approval of Department

AVT 2258 - Flight Instructor Ground
3 Cr. Hr(s).
Prepares students with the knowledge necessary to complete the Federal Aviation Administration (FAA) Fundamentals of Instruction (FOI) and Flight Instructor Airplane (FIA) knowledge exams. Topics include foundations of learning, communication process, the fundamentals of instruction, flight instructor responsibilities and professionalism, development of lesson plans and evaluations, logbook endorsements and review of private and commercial pilot

aeronautical knowledge areas as it pertains to the FAA Certified Flight Instructor, Airplane-Single Engine Land category and class.
Prerequisite(s): AVT 2250 AND AVT 2263 AND Approval of Department
Corequisite(s): AVT 2269

AVT 2259 - Helicopter Flight Instructor Ground
3 Cr. Hr(s).
Prepares students with the knowledge necessary to complete the Federal Aviation Administration (FAA) Fundamentals of Instruction (FOI) and Flight Instructor Helicopter (FIH) knowledge exams. Topics include foundations of learning, communication process, the fundamentals of instruction, flight instructor responsibilities and professionalism, development of lesson plans and evaluations, logbook endorsements and review of private and commercial pilot aeronautical knowledge areas as it pertains to the FAA Certified Flight Instructor, Rotorcraft Helicopter Class Rating.
Prerequisite(s): AVT 2251 AND AVT 2265 AVT 2271 AND Approval of Department AND Student must hold an FAA Commercial Pilot-Rotorcraft-Helicopter certificate
Corequisite(s): AVT 2271

AVT 2263 - Commercial Pilot Flight Lab - Airplane Single Engine
3 Cr. Hr(s).
Prepares students with the aeronautical knowledge, skills and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate with an Airplane Category and Single Engine Land Class Rating. The course is conducted under 14 CFR Part 141. Topics include familiarization with the complex training aircraft, commercial flight maneuvers, simulated emergency procedures, maximum performance takeoff and landing procedures and extended cross-country flight operations. Course Performance Standards require 120 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Nine lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): AVT 1170 AND AVT 1224 AND MAT 1470 OR MAT 1580 Approval of Department AND Student must hold Instrument Pilot Certificate
Corequisite(s): AVT 2250

AVT 2264 - Commercial Pilot Single Engine Additional Rating
3 Cr. Hr(s).
Prepares students with the aeronautical knowledge, skills and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate with an Airplane Category and Single Engine Land Class Rating. The course is conducted under 14 CFR Part 141. Topics include familiarization with the complex training aircraft, commercial flight maneuvers, simulated emergency procedures, maximum performance takeoff and landing procedures and extended cross-country flight operations. Course Performance Standards require 120 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Nine lab hours per week.
Prerequisite(s): Approval of Department

AVT 2265 - Commercial Pilot Flight Lab - Rotorcraft Helicopter
3 Cr. Hr(s).
Prepares students with the aeronautical knowledge, skills and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate with a rotorcraft helicopter Class Rating. The course is conducted under 14 CFR Part 141. Topics include familiarization with Commercial flight maneuvers, simulated emergency procedures, maximum performance takeoff and landing procedures and extended cross-country flight operations. Course Performance Standards require 115 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Nine lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): AVT 1171 AND AVT 1226 AND MAT 1470 AND MAT 1570 OR MAT 1580 AND Approval of Department AND Private and Instrument Pilot Rotorcraft-Helicopter certificate
Corequisite(s): AVT 2251

AVT 2266 - Multi Engine Flight Lab
1 Cr. Hr(s).
Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Commercial Pilot Certificate with an Airplane Category and Multi Engine Land Class Rating. The course is conducted under 14 CFR Part 141. Topics include multi-engine aircraft systems, aerodynamics, flight maneuvers, single-engine operations, maximum performance takeoff and landing procedures, attitude control by instrument reference during single engine operations and single engine emergency procedures. Course Performance Standards require 15 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Two lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): AVT 1224 AND AVT 2263 AND FAA Commercial Pilot certificate AND Approval of Department

AVT 2267 - Helicopter External Load Flight Lab
2 Cr. Hr(s).
This course will introduce the student to the commercial world of the external load operation, what it is, the tasks involved, maneuvers, equipment, and emergency procedures. The objectives of the course are to have a good understanding of the different types of external loads, the equipment used, maneuvers used, emergencies, the rules and regulations of FAR 133, and draw up a site plan that is suitable for the FAA.
Prerequisite(s): AVT 2251 AND FAA Commercial Pilot certificate AND Approval of department

AVT 2269 - Flight Instructor Flight Lab - Airplane Single Engine
2 Cr. Hr(s).
Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Certified Flight Instructor Pilot Certificate with an Airplane Category and Single Engine Land Class Rating. The course is conducted under 14 CFR Part 141. Topics include the fundamentals of instruction as it pertains to the training aircraft, flight maneuvers, maximum performance takeoff and landing procedures, attitude control by instrument reference, solo flight, night flying, cross-country operations and navigation procedures. Course Performance Standards require 30 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a

course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): AVT 2250 AND AVT 2263 AND MAT 1470 AND MAT 1570 OR MAT 1580 Approval of Department AND Student must hold Commercial Pilot Certificate
Corequisite(s): AVT 2258

AVT 2271 - Flight Instructor Flight Lab - Rotorcraft Helicopter
2 Cr. Hr(s).
Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Certified Flight Instructor Pilot Certificate with rotorcraft helicopter class rating. The course is conducted under 14 CFR Part 141. Topics include the fundamentals of instruction as it pertains to the training helicopter, flight maneuvers, maximum performance takeoff and landing procedures, attitude control by instrument reference, night flying, cross-country operations and navigation procedures. Course Performance Standards require 25 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Six lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): AVT 2251 AND AVT 2265 AND MAT 1470 AND MAT 1570 OR MAT 1580 AND Approval of Department AND Student must hold Commercial Pilot-Helicopter/Rotorcraft Certificate
Corequisite(s): AVT 2259

AVT 2275 - Instrument Flight Instructor Ground
1 Cr. Hr(s).
Prepares students with the knowledge necessary to complete the Federal Aviation Administration (FAA) Certified Flight Instructor Instrument Airplane (AIH) knowledge exam. Topics include flight instructor responsibilities and professionalism, development of instrument flight lesson plans and evaluations, instrument pilot logbook endorsements and review of instrument pilot aeronautical knowledge areas as it pertains to the FAA Certified Flight Instructor Instrument Airplane certificate.
Prerequisite(s): AVT 2258 AND AVT 2269 AND Approval of Department AND Students must hold the FAA Certified Flight Instructor Airplane rating
Corequisite(s): AVT 2277

AVT 2276 - Helicopter Instrument Flight Instructor Ground
1 Cr. Hr(s).
Prepares students with the knowledge necessary to complete the Federal Aviation Administration (FAA) Certified Flight Instructor Instrument Helicopter (FIH) knowledge exam. Topics include flight instructor responsibilities and professionalism, development of instrument flight lesson plans and evaluations, instrument pilot logbook endorsements and review of instrument pilot aeronautical knowledge areas as it pertains to the FAA Certified Flight Instructor Instrument Helicopter certificate.
Prerequisite(s): AVT 2251 AND AAVT 2265 AND Approval of Department AND Student must hold an FAA Commercial Pilot-Rotorcraft-Helicopter certificate
Corequisite(s): AVT 2278

AVT 2277 - Instrument Flight Instructor Flight Lab - Airplane Single Engine
1 Cr. Hr(s).
Prepares students with the aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Certified Flight Instructor Pilot Certificate with rotorcraft helicopter class rating. The course is conducted under 14 CFR Part 141. Topics include the fundamentals of instruction as it pertains to the training helicopter, flight maneuvers, maximum performance takeoff and landing procedures, attitude control by instrument reference, night flying, cross-country operations and navigation procedures. Course Performance Standards require 25 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Three lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): AVT 2258 AND AVT 2269 AND Approval of Department AND Student must hold Certified Flight Instructor Certificate
Corequisite(s): AVT 2275

AVT 2278 - Instrument Flight Instructor Flight Lab - Rotorcraft Helicopter
1 Cr. Hr(s).
Prepares students with aeronautical knowledge, skill and experience necessary to meet the requirements for a Federal Aviation Administration (FAA) Certified Flight Instructor Instrument Pilot certificate with rotorcraft - helicopter class rating. The course is conducted under 14 CFR Part 141. Topics include the fundamentals of instruction as it pertains to the instrument pilot certificate, instrument flight maneuvers, instrument scanning techniques, instrument fundamentals, attitude control by instrument reference, cross country instrument flight, and instrument approach procedures. Course Performance Standards require 15 hours of flight time and 100% completion of the course syllabus requirements. Additional fees including a course fee and a flight lab fee as well as other out-of-pocket expenses apply. Contact the Department for the current listing of these fees and expenses. Three lab hours per week. Students must be available to fly additional training flight lessons or make-up lessons at times outside of the scheduled lab hours.
Prerequisite(s): AVT 2259 AND AVT 2271 AND Approval of Department AND Commercial, Instrument and Instructor Pilot Rotorcraft-Helicopter certificates
Corequisite(s): AVT 2276

AVT 2279 - Unmanned Aerial Systems Project
3 Cr. Hr(s).
Demonstration of command and control simulations of unmanned aerial system (UAS) operations, including mission planning, decision making, data management, avionics, sensors, communications, and situational awareness during UAS operations. One classroom, four lab hours per week.
Prerequisite(s): Approval of Department

AVT 2280 - Introduction to UAS Maintenance
2 Cr. Hr(s).
This course will concentrate on the repair of the components of unmanned aerial systems (UAS). Students will develop knowledge in operator maintenance, composites, fuel systems, communication and instrumentation systems, rigging and assembly, and trouble shooting of UAS and their respective components. This course prepares students with the knowledge to determine and identify the technical problems associated with UAS. One classroom, two lab hours per week.
Prerequisite(s): AVT 1130 OR EET 1120

AVT 2281 - Advanced Air Mobility Airframe Maintenance
2 Cr. Hr(s).
Provides an introduction to the inspection, basic repair, and general maintenance tasks for Advanced Air Mobility (AAM) aircraft airframes, avionics and flight controls, radios and communications systems, ground control stations, and other major non-propulsion subsystems. One classroom, two lab hours per week.

AVT 2282 - Advanced Air Mobility Powerplant Maintenance
2 Cr. Hr(s).
Provides an introduction to the inspection, basic repair, and general maintenance tasks for Advanced Air Mobility (AAM) aircraft batteries, motors, propellers, and associated propulsion related subsystems. One classroom, two lab hours per week.

AVT 2283 - Advanced Air Mobility Aircraft & Systems Design
2 Cr. Hr(s).
Introduces Advanced Air Mobility (AAM) aircraft and systems design concepts, tools, and considerations, including current and emerging design approaches meeting current and future operational requirements and application capabilities. One classroom, two lab hours per week.

AVT 2284 - Advanced Air Mobility Aircraft Retirement and Disposal
2 Cr. Hr(s).
Introduces Advanced Air Mobility (AAM) aircraft retirement and disposal considerations, best practices, and regulation. Decision criteria, procedures, and methods for the safe removal and reuse or disposal of aircraft components and systems are explored. One classroom, two lab hours per week.

AVT 2290 - Principles of Aviation Management
3 Cr. Hr(s).
This course is an introduction to the principles of aviation management. Aviation management involves managing airline, airport, or other businesses pertaining to aviation or the aerospace industry by carrying out the day-to-day operations of an airport, fixed-base operator or airline. Students will gain insight as to the complexity of all the different roles and responsibilities of the aviation manager. Students will also become familiar with the different components of the aviation industry, including, but not limited to, aviation safety, airport security, and aviation's obligation to the public sector.

AVT 2700 - Aviation Internship 1 - 2 Cr. Hr(s).
Supervised work experience related to the students' major or career program to develop new skills and professional work experience which will enhance marketability and networking. Note: UAS students should have their FAA Part 107 certificate prior to enrolling in this course. Internship hours vary based on credit hours.
Prerequisite(s): Approval of Department

AVT 3100 - Contemporary Technical, Legal & Regulatory Issues in UAS
3 Cr. Hr(s).
The application of unmanned aerial system (UAS) for commercial and civil purpose requires an understanding of contemporary technical, legal and regulatory issues. This course builds on a foundational knowledge obtained in prerequisite courses by developing an expanded view of application specific guidance augmented by case studies and scenarios.
Prerequisite(s): AVT 1101 AND AVT 1104

AVT 3125 - Developments in Aviation II
2 Cr. Hr(s).
Provides pilots and other aviation professionals with an in-depth understanding of how aviation technology has evolved. Covers the time period beginning with the development of jet aircraft and their sophisticated flight systems to the development of space flight and modern unmanned systems.

AVT 3150 - Crew Resource Management
3 Cr. Hr(s).
Understanding of cognitive and interpersonal skills and mental processes used by the flight crew. Topics include situational awareness, planning, decision-making, workload management, adaptability, teamwork, communications, and advanced aircraft automation integration, constituting the traditional crew resource management markers.
Prerequisite(s): AVT 2240

AVT 3151 - UAS Operations II
1 Cr. Hr(s).
This course builds on the knowledge and skills developed in prerequisite unmanned aerial system (UAS) courses to develop an understanding of advanced UAS operations. The course includes knowledge relating to proper implementation of safety risk mitigation, crew resource management, procedures, mission planning, and data management to enable successful execution of fixed-wing and vertical-takeoff-and-landing operations.
Prerequisite(s): AVT 2151 AND AVT 2280 AND Possession of FAA Part 107 Remote Pilot certificate required AND Restricted to Majors
Corequisite(s): AVT 3152

AVT 3152 - UAS Operations II Lab
2 Cr. Hr(s).
This is a companion course to AVT 3151 in which students will gain advanced hands-on training with a variety of UAS vehicles via a lab format. This course builds on the knowledge and skills developed in prerequisite unmanned aerial system (UAS) courses to develop an understanding of advanced UAS operations. The course includes proper implementation of safety risk mitigation, crew resource management, procedures, mission planning, and data management to enable successful execution of fixed-wing and vertical-takeoff-and-landing operations. Four lab hours per week.
Prerequisite(s): AVT 2151 AND AVT 2280 AND Possession of FAA Part 107 Remote Pilot certificate required AND Restricted to Majors
Corequisite(s): AVT 3151

AVT 3200 - UAS Logistics
3 Cr. Hr(s).
The capability of unmanned aerial systems (UAS) to support airborne cargo delivery and inventory control and continues to be advanced. This course reviews current and future applications, technologies, regulations, processes, and other considerations related to UAS logistical support with focuses on aerial cargo delivery, inventory, distribution system support.
Prerequisite(s): AVT 2151 AND AVT 2280

AVT 3241 - Aircraft Systems
3 Cr. Hr(s).
A study of basic systems common to transport category aircraft. Topics include aircraft structures, emergency equipment, electrical, hydraulics, pneumatics, fuel, flight controls, landing gear, powerplant, pressurization and air conditioning and how they are related to the Federal Aviation Regulations.
Prerequisite(s): AVT 1170

AVT 3242 - Aircraft Accident Investigation II
3 Cr. Hr(s).
Building upon skills and knowledge learned in Aircraft Accident Investigation I, the student will expand into areas of accident site field investigation and demonstrate the ability to study what they observe and make conclusions

based upon the evidence seen.
Prerequisite(s): AVT 2242

AVT 3247 - Aerodynamics & Flight Mechanics II
3 Cr. Hr(s).
Advanced Aerodynamics is studied in this course, students will examine current flight applications and problems. Specifically, this includes transonic, supersonic, and hypersonic aerodynamics, principles of aircraft stability and control, and operational strength considerations. Emphasis is placed on the applications of the rapidly changing technological innovations in aerodynamics and the solutions to the problems created by these advances. Use the wind tunnel and set up and perform experiments with various airfoils. Two classroom, two lab hours per week.
Prerequisite(s): AVT 2247

AVT 3300 - Artificial Intelligence (AI) in Aviation
3 Cr. Hr(s).
Introduction to the main foundational concepts and techniques used in Artificial Intelligence (AI); including decision making, planning, machine learning, and perception. Includes a range of real-world applications in which AI is currently used in aeronautical and aerospace systems.
Prerequisite(s): MAT 1470 AND MAT 1570

AVT 3400 - Human Sensation & Perception in Aviation
3 Cr. Hr(s).
Examines how the human senses transform stimulus patterns of physical energy into the neural codes that become our perceptions of the world. Vision, audition, smell, taste, touch, balance, and phenomena common to all sensory modalities, such as feature enhancement, inhibition, adaptation, and stages of neural coding will be studied. This course will provide a basis for the understanding of these perceptual capabilities as components in Artificial Intelligence in aviation/aerospace systems.
Prerequisite(s): AVT 2240

AVT 3500 - UAS Design Concepts
4 Cr. Hr(s).
Unmanned Aerial Systems (UAS) applications have resulted in an array of designs. This course reviews considerations that influence UAS design and includes an analysis of applications and requirements to inform the development of a proposed preliminary UAS design proposal. Includes aerodynamic, structural and sensor design considerations. Two classroom, four lab hours per week.
Prerequisite(s): AVT 2151 AND AVT 2280 AND PHY 1142

AVT 4146 - Advanced Airline Operations & Training
3 Cr. Hr(s).
Advanced study of airline operations and training procedures with emphasis on training targeted at what a new-hire pilot would experience during Part 121 initial aircraft training, to include cockpit flows, checklist usage, and flight management systems indoctrination.
Prerequisite(s): AVT 2211 OR Approval of Department

AVT 4151 - Unmanned Systems Mission Planning
3 Cr. Hr(s).
This course provides an in-depth exploration of UAS mission planning for a variety of commercial and civil applications. Includes a review of considerations, resources, and tools that will be used to create UAS flight plans that meet mission requirements while maintaining safety, following regulations, and considering commercial viability. One classroom, four lab hours per week.
Prerequisite(s): AVT 3151 AND Approval of Department

AVT 4152 - Advanced Flight Simulator Instruction
2 Cr. Hr(s).
Practical application of airline flight procedures for the advanced pilot including air traffic control communications, flight planning, advanced instrument flight procedures, and normal and abnormal flight procedures. Students will fly typical airline flight profiles in the Airbus A320 flight simulator.
Prerequisite(s): AVT 1254 AND AVT 2211 AND AVT 2263 AND Approval of Department
Corequisite(s): AVT 4153

AVT 4153 - Advanced Airline Flight Operations
2 Cr. Hr(s).
Introduction to advanced airline flight operations procedures in the Airbus A320. Students will learn typical procedures for preflight planning and dispatch release, the use of checklists, preflight cockpit flows, the use of flight management systems, air traffic control communications, flight planning, crew coordination, advanced instrument flight procedures and normal and abnormal flight procedures. This course prepares students for the practical application of this knowledge in the co-requisite course AVT 4154, Advanced Flight Simulator Instruction, where students will fly the Airbus A320 flight simulator.
Prerequisite(s): AVT 1254 AND AVT 2211 AND AVT 2263 OR AVT 2265 AND Approval of Department
Corequisite(s): AVT 4152

AVT 4160 - System Safety in Aviation
3 Cr. Hr(s).
Advanced system safety management and the structured processes for recognizing the role of the flight crew and flight operations management in accident prevention, safety promotion, institution of a just safety culture, and the methods of assessing risk before a system fails.
Prerequisite(s): AVT 2242 AND AVT 3242

AVT 4170 - Airport Operations
3 Cr. Hr(s).
A study of airport management and government regulatory requirements under Part 139 including but not limited to, construction and maintenance of runways, taxiways, and ramps, noise abatement procedures, security, Notice to Airmen generation, and environmental impact studies.
Prerequisite(s): AVT 2240

AVT 4210 - Advanced UAS Maintenance
3 Cr. Hr(s).
This course builds on the knowledge and skills developed in previous UAS maintenance courses. Topics include safety procedures, operator and depot level maintenance procedures, composite repair, fuel systems, data link and instrumentation systems, rigging and assembly, reliability testing and trouble shooting of UAS and their respective components. One classroom, four lab hours per week.
Prerequisite(s): AVT 2280

AVT 4215 - Autonomous Systems in Aviation
3 Cr. Hr(s).
Introduction to Autonomous Systems. Surveys the fundamentals of autonomous aircraft system operations, from sensors, controls, and automation to safety procedures, human factors and Human Autonomy Teaming (HAT). Presents the latest major commercial uses of UAS, and manned aircraft that will be going from 2-pilot operations to 1-pilot operations to unmanned operations. Research and design an Autonomous System, build it, and test it.
Prerequisite(s): AVT 3300 AND AVT 3400 AND CSC 2266 AND MAT 2215

AVT 4220 - Human Autonomy Teaming in Aviation

3 Cr. Hr(s).
The field of human-autonomy teaming (HAT) is fast becoming a significant area of research, especially in aviation. The basic objective is to create natural and effective interactions between people and machines. HAT is highly interdisciplinary, bringing together methodologies and techniques from robotics, artificial intelligence, human-computer interaction, cognitive psychology, neuroscience, neuroergonomics, education, and other fields. The topics covered will include technologies that enable human-machine interactions, the psychology of interaction between people and machines, how to design and conduct HAT studies, and real-world applications such as assistive machines.
Prerequisite(s): AVT 3300 AND AVT 3400

AVT 4270 - UAS Internship II
2 Cr. Hr(s).
This course provides a senior supervised work experience related to aviation and unmanned aerial systems (UAS) major and career focuses. Students will apply knowledge and skills while gaining professional work experience, which will enhance marketability and networking. Note: Students should have their FAA Part 107 certificate prior to enrolling in this course. Twenty internship hours per week.
Prerequisite(s): AVT 2700 AND AVT 3300 AND Approval of Department

AVT 4279 - Unmanned Aerial Systems Senior Project
4 Cr. Hr(s).
This course provides a senior capstone project experience. Areas of focus that may be incorporated into the student designed project include but are not limited to entrepreneurial business plan development, application focused UAS flight operations, data analytics, and system and component design, prototyping, and testing. Two classroom, four lab hours per week.
Prerequisite(s): AVT 3500 AND Approval of Department

AVT 4290 - Aviation Senior Capstone Project
3 Cr. Hr(s).
Concludes the Bachelor of Applied Science degree where the student develops an aeronautical project that draws on all phases of aviation studies in the degree program. Working with their instructor and industry partners, students will develop a subject of research, evaluate data, and complete a project in a specific area of aviation study. Areas of focus that may be incorporated into the student designed project includes but are not limited to flight operations, aeronautical system and component design, prototyping, testing, artificial intelligence and autonomous systems. Two classroom, two lab hours per week.
Prerequisite(s): Approval of Department

Biology

BIO 1101 - Body Structure & Function
3 Cr. Hr(s).
Basic anatomy and physiology background for medical personnel emphasizing basic principles of body structure and function.

BIO 1104 - HIV/AIDS
2 Cr. Hr(s).
Basic understanding and function of the human immune system and the effects of viruses (HIV/AIDS) on the human immune system.

BIO 1107 - Human Biology
3 Cr. Hr(s).
The survey course studying the structure and function of the human body. Topics include introductory terminology, cytology, the integumentary system, the skeletal system, the muscular system, the nervous system, the endocrine system, the cardiovascular system, (blood, heart and blood vessels), the lymphatic system, the respiratory system, the digestive system, the urinary system and the reproductive system. Two classroom, two lab hours per week.
Prerequisite(s): MAT 0050 OR MAT 1120 OR MAT 1130
Corequisite(s): BIO 1108

BIO 1108 - Lab for Human Biology
0 Cr. Hr(s).
The lab component of a survey course that studies the structure and function of the human body. Lab work topics include histology, cytology and the anatomy of the skeleton, muscles, nervous system structures, blood components, the heart, blood vessels and structures within the respiratory, digestive, urinary and male and female reproductive systems. Summarization is achieved through the dissection of a preserved fetal pig.
Corequisite(s): BIO 1107

BIO 1111 - General Biology I
4 Cr. Hr(s).
This course is designed as the first in a series of two general education science courses. Covers basic chemistry and biochemistry; cellular and molecular biology. Three classroom, two lab hours per week.
Prerequisite(s): MAT 0600 OR MAT 0100 OR MAT 1130
Corequisite(s): BIO 1117

BIO 1117 - Lab for General Biology I
0 Cr. Hr(s).
The lab for this course is the first in a series of two general education science courses. Covers laboratory exercises relevant to basic chemistry and biochemistry; cellular and molecular biology.
Corequisite(s): BIO 1111

BIO 1121 - Human Anatomy & Physiology I
3 Cr. Hr(s).
The first course in a two-semester sequence studying the structure and function of the human body. Topics include introductory terminology, biochemistry, cytology, the integumentary system, the skeletal system, the muscular system, the nervous system and the endocrine system. Two classroom, two lab hours per week.
Prerequisite(s): MAT 0050 OR MAT 1120 OR MAT 1130

BIO 1133 - Introduction to Environmental Science & Sustainability
3 Cr. Hr(s).
This course is designed to be an introduction to concepts in environmental science and sustainability. The topics covered include human impacts on the planet and its resources, policy development, and sustainability.

BIO 1141 - Principles of Anatomy & Physiology I
4 Cr. Hr(s).
The first course in a two-semester sequence studying the structure and function of the human body. Topics include introductory terminology, biochemistry, cells, the integumentary system, the skeletal system, the muscular system, the nervous system and the endocrine system. Three classroom, two lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1130
Corequisite(s): BIO 1147

BIO 1147 - Lab for Principles of Anatomy & Physiology I
0 Cr. Hr(s).
Lab for the first course in a two semester sequence studying the structure and function of the human body.
Corequisite(s): BIO 1141

BIO 1171 - Principles of Biology I
5 Cr. Hr(s).
The first course of a two-semester university-parallel sequence for biology and science

majors. Topics include scientific method; chemical and biochemical foundations; cell structure, function and reproduction; cellular respiration, photosynthesis, Mendelian genetics, chromosomal genetics, molecular genetics, protein synthesis, gene regulation, genomes, viruses and biotechnology. Three classroom, six lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600

BIO 1211 - General Biology II
4 Cr. Hr(s).
This course is designed as the second in a series of two general education science courses. Covers evolution, biodiversity and ecology. Three classroom, two lab hours per week.
Prerequisite(s): BIO 1111
Corequisite(s): BIO 1217

BIO 1217 - Lab for General Biology II
0 Cr. Hr(s).
This second lab is in a series of two general education science courses. Covers laboratory exercises relevant to evolution, biodiversity and ecology.
Corequisite(s): BIO 1211

BIO 1222 - Human Anatomy & Physiology II
3 Cr. Hr(s).
The second course in a two-semester sequence studying the structure and function of the human body. Topics include the cardiovascular system, the lymphoid system, immunity, the digestive system, the urinary system and the reproductive system. Two classroom, two lab hours per week.
Prerequisite(s): BIO 1121

BIO 1242 - Principles of Anatomy & Physiology II
4 Cr. Hr(s).
The second course in a two-semester sequence studying the structure and function of the human body. Topics include the cardiovascular system, the respiratory system, the digestive system, metabolism, the urinary system, fluid and electrolyte balance, acid-base balance and the reproductive system. Three classroom, two lab hours per week.
Prerequisite(s): BIO 1141
Corequisite(s): BIO 1248

BIO 1248 - Lab for Principles of Anatomy & Physiology II
0 Cr. Hr(s).
Lab for the second course in a two-semester sequence studying the structure and function of the human body.
Corequisite(s): BIO 1242

BIO 1272 - Principles of Biology II
5 Cr. Hr(s).
The second course of a two-semester university-parallel sequence for biology and science majors. Topics include Darwinian evolution, evolution of populations, origin of species, history of life on Earth, phylogeny and systematics, prokaryotes, protists, plants, fungi, animals and ecology. Three classroom, six lab hours per week.
Prerequisite(s): BIO 1171

BIO 2205 - Microbiology
4 Cr. Hr(s).
Morphology and physiology of microorganisms and selected human parasites, mechanisms of disease production, host responses, spread of infectious diseases. Three classroom, three lab hours per week.
Prerequisite(s): BIO 1107 OR BIO 1111 OR BIO 1141 OR BIO 1121 OR BIO 1171 OR LPN Diploma
Corequisite(s): BIO 2206

BIO 2206 - Lab for Microbiology
0 Cr. Hr(s).
Students carry out aseptic techniques; simple and special staining procedures; methods utilized for culturing, isolation and identification of bacteria (known and unknown); molecular genetic and immunological methods dealing with microbes. Also, exercises involving eukaryotic microbes (fungi, protozoa and helminths) are conducted.
Corequisite(s): BIO 2205

BIO 2211 - Human Physiology
4 Cr. Hr(s).
Essentials of human physiology for students who have previous course work in human anatomy and physiology. Topics include biochemistry, cell physiology and physiology of the major organ systems. Three classroom, three lab hours per week.
Prerequisite(s): BIO 1107 OR BIO 1111 OR BIO 1141 OR CHE 1111 OR LPN Diploma
Corequisite(s): BIO 2212

BIO 2212 - Lab for Human Physiology
0 Cr. Hr(s).
Corequisite(s): BIO 2211

BIO 2222 - Evolution
3 Cr. Hr(s).
Emphasis on Charles Darwin, speciation, fossils, radiometric dating, natural selection, mutations, macroevolution, mass extinctions, coevolution, sexual reproduction, human evolution and religious issues.

BIO 2225 - Ecology
4 Cr. Hr(s).
General concepts in ecology and application to current environmental issues. Focus on evolutionary ecology, populations, communities, ecosystems and global ecology. Field experiences and lab techniques emphasizing data collection, analysis and interpretation. Three classroom, three lab hours per week.
Prerequisite(s): BIO 1111 OR BIO 1171 OR GEO 1102

BIO 2235 - Genetics
4 Cr. Hr(s).
Fundamental principles, concepts and techniques of genetics. Lab work includes basic methods of genetic research and analysis. Three classroom, two lab hours per week.
Prerequisite(s): BIO 1111 OR BIO 1171
Corequisite(s): BIO 2236

BIO 2236 - Lab for Genetics
0 Cr. Hr(s).
Lab for Genetics.
Corequisite(s): BIO 2235

Biotechnology

BTN 1110 - Biotechnology & Bioethics
3 Cr. Hr(s).
Introduction to the major fields in biotechnology and the basic science involved in understanding those fields.

BTN 1120 - Laboratory Safety & Regulatory Compliance
2 Cr. Hr(s).
Introduction to lab safety culture, precautionary labels, Material Safety Data Sheets, using personal protective equipment, handling lab equipment safely, handling , storing and disposing of chemicals safely, using emergency equipment as well as safety planning.

BTN 1130 - Biological Reagents Preparation
3 Cr. Hr(s).
Basic understanding and overview of chemical grades of reagents used in biological research with an emphasis on chemical formulas and preparation of biological media and reagents. Two classroom, three lab hours per week.
Prerequisite(s): BTN 1120 AND MAT 1470 AND (CHE 1111 OR CHE 1211) AND Restricted to Majors
Corequisite(s): BTN 1131

BTN 1131 - Lab for Biological Reagents Preparation

0 Cr. Hr(s).
Corequisite(s): BTN 1130

BTN 1140 - Cell Culture
4 Cr. Hr(s).
Introduction to cell culturing techniques. Two classroom, four lab hours per week.
Prerequisite(s): BIO 1111 AND BTN 1130 AND Restricted to Majors
Corequisite(s): BTN 1141

BTN 1141 - Lab for Cell Culture
0 Cr. Hr(s).
Prerequisite(s): Restricted to Majors
Corequisite(s): BTN 1140

BTN 1201 - Biotechnology Careers
2 Cr. Hr(s).
Discover career opportunities, develop a resume/cover letter and increase interviewing skills for the biotechnology industry.
Prerequisite(s): BTN 1110 AND Restricted to Majors

BTN 2210 - Protein Purification & Analysis
4 Cr. Hr(s).
Introduction to protein purification, isolation quantification and analysis. Two classroom, four lab hours per week.
Prerequisite(s): BIO 1111 AND BTN 1130 AND Restricted to Majors
Corequisite(s): BTN 2211

BTN 2211 - Lab for Protein Purification & Analysis
0 Cr. Hr(s).
Fundamental principles, concepts, and techniques of protein purification techniques. Lab work includes basic methods of protein research and analysis.
Corequisite(s): BTN 2210

BTN 2220 - Microbiology & Fermentation Methods
3 Cr. Hr(s).
Introduction to fermentation and microbial metabolism. Two classroom, three lab hours per week.
Prerequisite(s): BIO 1111 AND BTN 1130 AND Restricted to Majors
Corequisite(s): BTN 2221

BTN 2221 - Lab for Microbiology & Fermentation Methods
0 Cr. Hr(s).
Introduction into fermentation and microbial metabolism within the laboratory setting.
Corequisite(s): BTN 2220

BTN 2230 - Molecular Biology Techniques
4 Cr. Hr(s).
Structure and function of macromolecules and their interactions in DNA replication, DNA cloning and genetic engineering techniques analysis, introduction to public domain DNA and protein sequence databases, use of software and internet resources for database searching. Two classroom, four lab hours per week.
Prerequisite(s): BIO 1111 AND BTN 1130 AND Restricted to Majors
Corequisite(s): BTN 2231

BTN 2231 - Lab for Molecular Biology Techniques
0 Cr. Hr(s).
Structure and function of protein and nucleic acids, DNA replication mechanisms, DNA cloning, genetic engineering techniques, use of plasmids, nucleic acid analysis by electrophoresis, Southern hybridization, DNA amplification and sequencing, introduction to public domain DNA and protein sequence databases, use of software and internet resources for database searching.
Corequisite(s): BTN 2230

BTN 2700 - Biotechnology Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students work at an approved biotechnology industry site and will earn credits toward degree requirements for their work experiences. Students already working may apply to use that experience to meet internship requirements. Students prepare and submit reports and/or projects describing their industry experience and are evaluated by the course instructor as well as their on-site supervisor. Ten work hours per week per credit hour.
Prerequisite(s): BTN 1120

Business Information Systems

BIS 1010 - Digital Thread Data Management
3 Cr. Hr(s).
Provides an introduction to digital thread related data management requirements, challenges, and best practices. The course explores the data sources and acquisition methods, as well as data storage, retrieval and analysis solutions throughout the lifecycle of a manufactured product.

BIS 1105 - IT Fundamentals
3 Cr. Hr(s).
This course is designed for students who are interested in Information Technology but have limited technical knowledge of computing systems at the fundamental level. Students will explore foundational concepts related to computer hardware and software, networking, databases, programming, Information Systems, and data security.

BIS 1120 - Introduction to Software Applications
3 Cr. Hr(s).
Use word processing, spreadsheet, database and presentation software applications to create reports, spreadsheets, databases and presentations for business and other applications.

BIS 1201 - Keyboarding & Document Formatting
3 Cr. Hr(s).
Students will learn and develop "touch" keyboarding skills, including the ten-key numeric keypad. By the end of the course, students must perform keyboarding speed and accuracy on three-minute timed writings at a minimum of 30 wpm with three or fewer errors. Students will learn to use word processing software to format and produce reports, letters, memos, and other business documents. Traditional testing (proctored or in Testing Center) is used in all online sections.

BIS 1220 - Word Processing Software
3 Cr. Hr(s).
Beginning to advanced word processing software concepts including editing, formatting, desktop publishing design and editing techniques, document control and automation.
Prerequisite(s): BIS 1120 OR BIS 1221

BIS 1221 - Specialized Computer Applications for Health Information Management
3 Cr. Hr(s).
Introduces students to personal computer concepts including hardware, system software, application software, and the Internet. Learn the components of computer systems and develop a broad understanding of computer hardware and emerging technologies. Students will be introduced to Office application software (word processing, spreadsheets, presentation software, and databases,) and specific features of those applications for medical reports, narrating presentations, Autofilters, form creation and software integration will be applied.

BIS 1230 - Spreadsheet Software
3 Cr. Hr(s).
Students will learn techniques to properly manage large and multi-sheet spreadsheets, use spreadsheets to arrange and manage data,

develop advanced spreadsheet formulas and functions, perform "What-If" analysis using spreadsheet tools and design and create end-user spreadsheet applications.
Prerequisite(s): BIS 1120 OR BIS 1221

BIS 1240 - Presentation Software
2 Cr. Hr(s).
Beginning to advanced presentation software techniques including editing and formatting presentations, fundamentals of effective presentations, transitions, animations, multimedia content, advanced navigation tools and master and template modification.
Prerequisite(s): BIS 1120 OR BIS 1221

BIS 1250 - Specialized Business Software Application
1 Cr. Hr(s).
Introduction to a specialized business software application such as MS SharePoint, MS Outlook, etc., that will provide an overview of the application's features and common uses.

BIS 1260 - Database Software
3 Cr. Hr(s).
Students will learn to design and manage databases using the relational model, use database objects to manage data including data integrity, data analysis and reporting, learn to derive useful information from raw data using functions and querying techniques, and create end-user database applications.
Prerequisite(s): BIS 1120 OR BIS 1221

BIS 1400 - Customer Service
3 Cr. Hr(s).
Introduction to concepts of customer service. Topics to include: face-to-face and phone-based communication with customers, professionalism and workplace behavior, decision making, problem solving, conflict resolution and negotiation skills, use of emerging technologies, role-play scenarios, case studies and preparation for career advancement.

BIS 1600 - Data Management & Visualization
3 Cr. Hr(s).
In today's business environment, the need to work effectively and efficiently with data is critical. This course primarily focuses on using spreadsheet software to acquire data from various sources, transform that data into useful information and create analytical tools in the form of powerful visualizations that will enhance business intelligence.
Prerequisite(s): BIS 1120

BIS 2170 - BIS Capstone
3 Cr. Hr(s).
Analyze business problems and apply critical-thinking skills and software knowledge and communication skills learned in previous classes to solve problems and perform work-related tasks.
Prerequisite(s): Approval of Department

BIS 2180 - Medical Office Simulation
3 Cr. Hr(s).
Basic principles of office support, bookkeeping, record-keeping and reporting responsibilities pertinent to the medical office and health care agencies.
Prerequisite(s): BIS 1120 AND HIM 1101

BIS 2270 - Business Information Systems Internship
3 Cr. Hr(s).
Students will work in a technical or software support capacity for a cooperating organization for 20 hours per week (300 hours total) during a semester. Responsibilities are established by the worksite supervisor, and students will use the listed responsibilities to develop learning outcomes and identify action steps that are approved by the worksite supervisor and internship faculty member. Students will be evaluated by their worksite supervisor at the middle and end of the semester. Students will complete online academic work weekly including reading, completing hands-on projects/assessments, and posting journal entries over various topics related to employment preparation and skills.. Recommended prerequisites: BIS 1220, BIS 1230, BIS 1250 and BIS 1260. One classroom, twenty internship hours per week.
Prerequisite(s): Approval of Department

Business Information Technology

BIT 0010 - Computer Fundamentals
3 Cr. Hr(s).
This hands-on class focuses on the components of a personal computer, an introduction to the Windows environment, and use of the mouse and understanding icons, buttons, and menus. Also includes file management including creating directories, copying and moving files, and changing and enhancing desktop features. The Internet and Sinclair's Learning Management System will be explored. Students with little or no current computer skills will find this fundamental course helpful. Note: As with all courses that begin with a zero, this course is developmental in nature. Credits earned in developmental courses will not apply to the overall program hours.

Chemistry

CHE 1011 - Chemistry in Modern Life for General Education
4 Cr. Hr(s).
A one semester university-parallel course in Chemistry designed specifically to fulfill a general education requirement for students who do not anticipate completing a science or engineering degree. Core concepts of chemistry including matter, physical and chemical properties, elements, compounds, chemical reactions, acids/bases, solutions and energy are interwoven with well-recognized concepts including genetics, forensics, cooking/baking, climate change and air pollution. Three classroom, two lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130
Corequisite(s): CHE 1051

CHE 1051 - Lab for Chemistry in Modern Life for General Education
0 Cr. Hr(s).
Laboratory safety, measurement using lab equipment, density, data analysis and graphing, properties of gases, color and the visible spectrum, the greenhouse effect, chemical reactions and stoichiometry, acids and bases, water hardness, forensics and experimental design.
Corequisite(s): CHE 1011

CHE 1111 - Introduction to Chemistry I
4 Cr. Hr(s).
An introductory survey course for students pursuing health science degrees or who have not previously taken high school chemistry. Topics include matter and measurement, atoms and molecules, chemical reactions, energy changes, atomic structure and bonding, acid/base chemistry, chemical kinetics, and organic chemistry. Three classroom hours, two lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445
Corequisite(s): CHE 1151

CHE 1121 - Introduction to Chemistry II
4 Cr. Hr(s).
The second half of an introductory survey course for students pursuing health science degrees or biotechnology. Topics include organic functional groups, biomolecules, enzymes, body fluids and the metabolism of carbohydrates, proteins and lipids. Three classroom, three lab hours per week.
Prerequisite(s): CHE 1111
Corequisite(s): CHE 1161

CHE 1151 - Lab for Introduction to Chemistry I

0 Cr. Hr(s).
Corequisite(s): CHE 1111

CHE 1161 - Lab for Introduction to Chemistry II
0 Cr. Hr(s).
Corequisite(s): CHE 1121

CHE 1211 - General Chemistry I
5 Cr. Hr(s).
A university-parallel course in chemistry for the science major. The first half of a comprehensive first-year survey of chemistry. Topics include the basics of matter, atoms and molecules, chemical reactions, bonding, molecular geometry and gases. Students registering for this course should have previously taken high school chemistry or equivalent. Four classroom hours, three lab hours per week.
Prerequisite(s): MAT 0300 OR MAT 1450 OR MAT 1470 OR MAT 1570 OR MAT 1580 OR MAT 2270 OR MAT 2280 OR MAT 2290
Corequisite(s): CHE 1251

CHE 1221 - General Chemistry II
5 Cr. Hr(s).
The second half of a university-parallel course in chemistry for the science or engineering major. Topics include liquids and solids, solutions, chemical reaction kinetics, chemical equilibrium, acid/base chemistry, electrochemistry, representative metals, metalloids and non-metals and organic chemistry. Four classroom hours, three lab hours per week.
Prerequisite(s): CHE 1211
Corequisite(s): CHE 1261

CHE 1251 - Lab for General Chemistry I
0 Cr. Hr(s).
Corequisite(s): CHE 1211

CHE 1261 - Lab for General Chemistry II
0 Cr. Hr(s).
Corequisite(s): CHE 1221

CHE 2111 - Organic Chemistry I
5 Cr. Hr(s).
The study of alkanes, stereochemistry, alkyl halides, organometallic compounds, alkenes, alkynes, aromatic hydrocarbons and spectroscopic methods of organic analysis. Four classroom, three lab hours per week.
Prerequisite(s): CHE 1221
Corequisite(s): CHE 2151

CHE 2121 - Organic Chemistry II
5 Cr. Hr(s).
The study of alcohols, ethers, epoxides, aldehydes, ketones, carboxylic acids, derivatives of carboxylic acids, enolates, carbanions, amines, polycyclic and heterocyclic aromatic compounds, pericyclic reactions, and polymers. Four classroom, three lab hours per week.
Prerequisite(s): CHE 2111
Corequisite(s): CHE 2161

CHE 2151 - Lab for Organic Chemistry I
0 Cr. Hr(s).
Lab for CHE 2111.
Corequisite(s): CHE 2111

CHE 2161 - Lab for Organic Chemistry II
0 Cr. Hr(s).
Lab for CHE 2121.
Corequisite(s): CHE 2121

CHE 2781 - Methods & Practice of Teaching Science in Secondary Schools
3 Cr. Hr(s).
This course provides the framework for the development of methods and pedagogy for the effective teaching of science content in secondary schools. Designed to immerse the future teacher in the areas of problem solving, science in everyday life, scientific methods, process-oriented learning, scientific inquiry and integrating technology. The development of pedagogical content knowledge as it pertains to the teaching and learning of science is emphasized. Various assessment strategies are introduced including using data to improve student achievement.
Prerequisite(s): BIO 1107 AND CHE 1121 AND MAT 1430 AND PHY 1100

Chinese

CHN 1100 - Conversational Chinese I
3 Cr. Hr(s).
A foundation for gaining knowledge about Chinese culture and basic phrases related to simple spoken Chinese, including travel situations.

CHN 1101 - Elementary Chinese I
4 Cr. Hr(s).
Foundation for understanding, speaking, reading and writing Chinese. Work outside of class and/or in the language laboratory is required.

CHN 1102 - Elementary Chinese II
4 Cr. Hr(s).
This Elementary Chinese II class intends to help students reach a basic level of Chinese proficiency in listening, speaking, reading, and writing in the cultural context. This course will focus on essential speaking and writing skills while helping students develop contextual readings and listening competencies.
Prerequisite(s): CHN 1101 with a grade of C or better

CHN 1105 - Conversational Chinese II
3 Cr. Hr(s).
Develops the conversational skills to a greater degree of complexity and covering more situations. Promotes free expression in Chinese within more specific and complex cultural contents.
Prerequisite(s): CHN 1100

CHN 2201 - Intermediate Chinese I
3 Cr. Hr(s).
This intermediate Chinese class intends to help students reach a higher level of Chinese proficiency in speaking, listening, reading, and writing in the cultural context. While continuing to enhance speaking and listening skills, competency in contextual readings and character writing will be emphasized.
Prerequisite(s): CHN 1102 with a grade of C or better

CHN 2202 - Intermediate Chinese II
3 Cr. Hr(s).
This course is to help students reach an intermediate level of Chinese proficiency in speaking, listening, reading, and writing in the cultural context. It takes an integrated and balanced approach to enable students to apply learned Chinese knowledge to effective oral and written expressions and presentations.
Prerequisite(s): CHN 2201 with a grade of C or better

Civil Architectural Technology

CAT 1100 - Introduction to the Built Environment
3 Cr. Hr(s).
An introduction to career fields of Architecture, Civil Engineering, Construction Management, and Sustainability & Energy Management Technologies. Students explore the roles, responsibilities, and interconnections of these professions in shaping the built environment. Students will gain insight into industry trends, foundational concepts, and the skills required for success in these fields, preparing them for further studies. Students explore career pathways, develop resumes, and establish Work-Based Learning accounts for future internships. Two classroom, two lab hours per week.

CAT 1101 - Architectural Graphics I
3 Cr. Hr(s).
Introduction to various graphic media tools

and techniques, including sketching, manual drafting, and computer assisted drafting as appropriate to the built environment. Includes developing 3D visualization and analysis skills. Two classroom, two lab hours per week.

CAT 1111 - Mechanical Systems Print Reading
1 Cr. Hr(s).
Reading drawings of commercial buildings, emphasizing plumbing, electrical, HVAC, and fire protection systems. One half classroom, one and one half lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110

CAT 1121 - Architectural Graphics II
3 Cr. Hr(s).
Learn Building Information Modeling (BIM) techniques and methodology. Develop proficiency with Revit Architecture modeling software including: user interface, modeling techniques, proper modeling workflow and document generation. Learn rendering and animation communication techniques. Two classroom, two lab hours per week.
Prerequisite(s): CAT 1101

CAT 1131 - Introduction to Revit MEP
3 Cr. Hr(s).
Study and application of advanced drawing using AutoDesk Revit. Major emphasis on building information modeling (BIM) theory along with construction of Mechanical, Electrical and Plumbing (MEP) systems. Two classroom, two lab hours per week.
Prerequisite(s): CAT 1101 OR CAT 1111 OR CAT 1121

CAT 1141 - Reading Architectural Drawings
2 Cr. Hr(s).
Basic techniques for reading and interpreting construction plans and specifications, both residential and commercial. Includes all major building uses and types of construction as defined by the building code. One classroom, two lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600

CAT 1201 - Construction Methods & Materials
3 Cr. Hr(s).
Construction methods of materials for both residential and commercial structures. Emphasis on processes and techniques. Understanding of blueprint reading of architectural and civil drawings. Hands-on exercises of residential and commercial applications. Two classroom, three lab hours per week.
Prerequisite(s): CAT 2431 Note: CAT 2431 may be taken concurrently

CAT 1205 - Construction Engineering Technology
3 Cr. Hr(s).
Organization, planning, and control of construction projects, including a study of the use of machinery, methods, materials, estimates, cost control, and fundamentals of project scheduling. Contracts, bonds, and legal aspects of contracting. Engineering economics including present and annual worth analysis, evaluation of alternatives. Two classroom hours, two lab hours per week.

CAT 1211 - Construction Materials Testing
2 Cr. Hr(s).
This course presents some of the basics of testing materials (concrete, steel, wood, etc.) used in the construction industry. Emphasis on how properties of materials affect their use in the construction process. Utilizes American Society for Testing and Materials (ASTM) Standards. One classroom, three lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445

CAT 1241 - Building Systems
3 Cr. Hr(s).
Basic mechanical and electrical system design principles for residential and commercial structures. Structural engineering principles for designing residential and commercial structures using wood, steel and concrete. Research appropriate building codes and apply knowledge to solve engineering challenges. Two classroom, two lab hours per week.
Prerequisite(s): CAT 1101 OR CAT 1201

CAT 1300 - Introduction to CAD for Applications in Civil Engineering Technology
2 Cr. Hr(s).
Develop proficiency in CAD software to develop civil-construction working drawings. Proper generation of plans to connect the earth's topography and land records will be emphasized. One classroom, two lab hours per week.

CAT 1301 - Civil Construction CAD
2 Cr. Hr(s).
Develop proficiency in CAD software to develop civil-construction working drawings. Proper generation of plans to connect the earth's topography and land records will be emphasized. One classroom, two lab hours per week.
Prerequisite(s): CAT 1300

CAT 1341 - Architectural Design I
3 Cr. Hr(s).
Architecture is the manifestation of history, the values of a society, and our collective human sensibility. Introductory survey of world architectural history and theory. Develop understanding of architectural vocabulary, form and expression. Examine worlds major monuments and buildings. Two classroom, two lab hours per week.

CAT 1401 - Construction Cost Estimating
3 Cr. Hr(s).
Construction estimating, beginning with an understanding of the costs of labor equipment and materials, as well as profit and overhead. Quantity measurements of basic construction materials will be used to develop bidding packages. Two classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): CAT 1101 OR CAT 1201

CAT 1431 - OSHA Construction Standards 10 Hour
1 Cr. Hr(s).
Introduction to rules, interpretations, record keeping and standards required by OSHA (29CFR Part 1926) for the construction industry to ensure employees a safe, healthful work place. The course complies with the guidelines and requirements for the OSHA 10 hour outreach training completion card.

CAT 1501 - Fundamentals of Surveying & Mapping
3 Cr. Hr(s).
This course covers the fundamental principles of distance, elevation and angular measurements used in the practice of engineering surveys. It also includes basic error theory in field observations and mathematical calculations, level circuit and traverse field techniques and basic principles of digital map making. Two classroom, three lab hours per week.
Prerequisite(s): MAT 1200 OR appropriate Math placement test score

CAT 1600 - Introduction to Construction Techniques
2 Cr. Hr(s).
Overview of tools, equipment, and procedures used in the construction industry. Students will learn proper tool operation, shop and jobsite safety practices, and essential construction techniques. The course also explores the role of technology in construction and emphasizes hands-on application of tools and equipment in real-world scenarios. One classroom, two lab hours per week.

CAT 1601 - Building Electric & Controls
4 Cr. Hr(s).
An introduction to building electrical and control systems for HVAC technicians. Includes AC/DC circuits, single phase and three phase motors and motor control, HVAC equipment control, wiring techniques, control components including sequencers, and an introduction to building pneumatic and DDC control. Two classroom, four lab hours per week.

CAT 1605 - Introduction to Construction Math
2 Cr. Hr(s).
Introduction to fundamental mathematical concepts and techniques used in the construction industry. Topics include measurement, function concepts, basic elementary functions, and right-angle trigonometry, with an emphasis on practical applications for construction tasks. Students will develop problem-solving skills and mathematical reasoning necessary for precise measurements, calculations, and design in construction projects. One classroom, two lab hours per week.

CAT 1701 - Construction Craft Skills/Concrete
3 Cr. Hr(s).
An orientation to construction trades and working with concrete with strong emphasis on hands-on learning exercises.
One classroom, four lab hours per week.

CAT 1721 - Structural Framing Systems
3 Cr. Hr(s).
Advanced technical training in wood and light-gauge steel framing systems, including exterior wall finishing and roof construction. One classroom, four lab hours per week.

CAT 1741 - Residential Electrical Systems
3 Cr. Hr(s).
Basic safety procedures, use of power and hand tools, electrical circuit theory and basics of residential wiring observing the National Electric Code (NEC). One classroom, four lab hours per week.

CAT 1761 - Interior & Exterior Finishes
3 Cr. Hr(s).
An orientation to interior and exterior finishes on frame construction. One classroom, four lab hours per week.

CAT 1781 - Construction Project
3 Cr. Hr(s).
Students will work on a significant construction project such as a home for Habitat for Humanity. This course gives students hands-on experience in all phases of a construction project. Most class sessions will be at a construction site in the Greater Dayton Metropolitan area. One classroom, four lab hours per week.
Prerequisite(s): CAT 1701

CAT 1810 - Construction Techniques I
This course is repeatable.

3 Cr. Hr(s).
Basic safety, hand and power tools, wood building materials and fasteners and framing systems. May be taken for two semesters. One classroom, four lab hours per week.
Prerequisite(s): Approval of Department

CAT 1820 - Construction Techniques II
This course is repeatable.

3 Cr. Hr(s).
Construction of concrete structures including forming, placing and finishing. May be taken for two semesters. One classroom, four lab hours per week.
Prerequisite(s): Approval of Department

CAT 1827 - NCCER Electrical Construction Level 1A
2 Cr. Hr(s).
Overview of electrical industry and careers, basic construction safety, electrical safety, communication skills, and introduction to construction drawings based on NCCER (National Center for Construction Education and Research) curriculum. Electric circuits and theory; introduction to National Electric Code (NEC). Methods of conduit bending. One classroom, two lab hours per week.

Prerequisite(s): Approval of Department

CAT 1828 - NCCER Electrical Construction Level 1B
2 Cr. Hr(s).
This course covers Installation of wireways, raceways, fittings, conductors, and cables. Interpretation of electrical drawings and construction documentation, overview of residential wiring basics, and application and safety of electrical test equipment. One classroom, two lab hours per week.

Prerequisite(s): Approval of Department

CAT 1830 - Construction Techniques III
This course is repeatable.

3 Cr. Hr(s).
Exterior and interior finishing of frame structures including roofing materials, siding, drywall, stairs, doors and trim. May be taken for two semesters. One classroom, four lab hours per week.
Prerequisite(s): Approval of Department

CAT 1837 - NCCER Electrical Construction Level 2A
2 Cr. Hr(s).
Alternating current (AC), motor theory and wiring, lighting characteristics and installation requirements, conduit bending using mechanical/hydraulic/electrical benders. One classroom, two lab hours per week.

Prerequisite(s): Approval of Department

CAT 1838 - NCCER Electrical Construction Level 2B
2 Cr. Hr(s).
This course covers conductors, terminations, circuit breakers, fuses, proper grounding, pull/junction boxes, and cable tray. Control systems fundamentals and concepts are also covered. One classroom, two lab hours per week.

Prerequisite(s): Approval of Department

CAT 1840 - Construction Techniques IV
This course is repeatable.

3 Cr. Hr(s).
Development of advanced skills for construction technicians including site layout, floor and roof systems and metal buildings. An introduction to welding, light equipment operation and project management. May be taken for two semesters. One classroom, four lab hours per week.
Prerequisite(s): Approval of Department

CAT 1847 - NCCER Electrical Construction Level 3A
2 Cr. Hr(s).
Load calculations, conductor selection and calculations, applications of lighting, hazardous locations, and overcurrent protection. One classroom, two lab hours per week.

Prerequisite(s): Approval of Department

CAT 1848 - NCCER Electrical Construction Level 3B
2 Cr. Hr(s).
This course will cover distribution equipment, transformers, motor calculations, motor controls, voice, data, and video. One classroom, two lab hours per week.

Prerequisite(s): Approval of Department

CAT 1857 - NCCER Electrical Construction Level 4A
2 Cr. Hr(s).
Health care facilities, emergency systems, fire alarm systems, specialty transformers, basic electronic theory, and advanced controls. One classroom, two lab hours per week.

Prerequisite(s): Approval of Department

CAT 1858 - NCCER Electrical Construction Level 4B
2 Cr. Hr(s).
This course covers HVAC controls, heat tracing/freeze protection, medium voltage terminations/splices, special locations, and motor maintenance. Fundamental skills for crew leadership is also covered. One classroom, two lab hours per week.

Prerequisite(s): Approval of Department

CAT 1861 - Electrical Construction 1A
3 Cr. Hr(s).
Basic safety procedures, use of hand and power tools; electrical circuit theory; use of test equipment; basics of residential, commercial, and industrial wiring, observing National Electric Code (NEC). One classroom, six lab hours per week. One lecture, six lab hours per week.

CAT 1862 - Electrical Construction 1B
2 Cr. Hr(s).
Intermediate safety procedures, use of hand and power tools; electrical circuit theory; use of test equipment; intermediate of residential, commercial and industrial wiring observing National Electric Code (NEC). One classroom, three lab hours per week.

CAT 1863 - Electrical Construction 2A
3 Cr. Hr(s).
Introduction to alternating current theory, motors, grounding, conduit bending, conductor installation, National Electric Code (NEC) for cables, terminations and splices, electrical single and three phase installation, circuit breakers and fuses, contactors, and relays. One classroom, six lab hours per week.

CAT 1864 - Electrical Construction 2B
2 Cr. Hr(s).
Introduction to alternating current theory, motors, grounding, conduit bending, conductor installation, National Electric Code (NEC) for cables, terminations and splices, electrical single and three phase installation, circuit breakers and fuses, contactors, and relays. One classroom, three lab hours per week.

CAT 1865 - Electrical Construction 3A
3 Cr. Hr(s).
Introduction to load calculations for branch circuits, overcurrent protection, wiring devices, distribution equipment, transformers, calculations for motor circuits: motor maintenance and controls and basics of HVAC systems. One classroom, six lab hours per week.

CAT 1866 - Electrical Construction 3B
2 Cr. Hr(s).
Introduction to load calculations for branch circuits, overcurrent protection, wiring devices, distribution equipment, transformers, calculations for motor circuits: motor maintenance and controls and basics of HVAC systems. One classroom, three lab hours per week.

CAT 1867 - Electrical Construction 4A
3 Cr. Hr(s).
Introduction to calculation procedures for residential, commercial, and farming applications, various wiring systems, stand-by and emergency systems, basic electronics, fire alarms, special transformers, solid-state controls, welding techniques, heat and freeze protection, and high-voltage termination. One classroom, six lab hours per week.

CAT 1868 - Electrical Construction 4B
2 Cr. Hr(s).
Intermediate/advanced calculation procedures for residential, commercial, and farming applications, various wiring systems, stand-by and emergency systems, basic electronics, fire alarms, special transformers, solid-state controls, welding techniques, heat and freeze protection, and high-voltage termination. One classroom, three lab hours per week.

CAT 2101 - Architectural Design II
5 Cr. Hr(s).
Develop proficiency with Revit design techniques, developing architectural models and coordinating a set of construction documents. Includes architectural and Mechanical, Electrical and Plumbing (MEP) problem-solving skills. Two classroom, six lab hours per week.
Prerequisite(s): CAT 1101 AND CAT 1121 AND CAT 1201

CAT 2201 - Architectural Visualization
3 Cr. Hr(s).
Learn the philosophy of building information modeling and how Revit and other computer-based modeling software can assist in the design, analysis and documentation of buildings. Two classroom, two lab hours per week.
Prerequisite(s): CAT 1121 OR CAT 1131

CAT 2301 - Land Development Design in Civil 3D
3 Cr. Hr(s).
Application of civil engineering technology principles to land development. Design elements include boundary and topographic surveying, remote sensing, roadway, hydrology and quality estimates within Computer Aided Design software. Emphasis is placed upon federal, state and local regulations related to the development of real property. Two classroom, two lab hours per week.
Prerequisite(s): CAT 1301 AND CAT 1501

CAT 2401 - Construction Project Management
3 Cr. Hr(s).
Practical planning and control of construction and engineering-based projects. Interrelationships and operations of project management and skills required for success in the current engineering environment. Theory, nomenclature and practical application of engineering management using computer software. Two classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): CAT 1241 OR CAT 1401

CAT 2411 - Commercial Building Code
3 Cr. Hr(s).
Students will learn the proper use of the International Building Code provisions for administration, occupancy, types of construction, materials, fire-resistive standards, exiting, and detailed regulations. Students will understand Ohio building code processes and application, and develop career awareness for code enforcement. Two classroom, two lab hours per week.
Prerequisite(s): CAT 1201

CAT 2421 - Soil Mechanics
3 Cr. Hr(s).
Theories of soil mechanics including soil classifications, sampling and testing methods, stress distribution, shearing resistance and strength of soils. Two classroom, two lab hours per week.
Prerequisite(s): MAT 1200

CAT 2425 - Introduction to Structural Analysis & Design
3 Cr. Hr(s).
Introduction to elastic analysis of structural framing systems for buildings and bridges. Two classroom and two lab hours per week.
Prerequisite(s): MAT 1200

CAT 2431 - OSHA Construction Standards
2 Cr. Hr(s).
Rules, interpretations, record keeping and standards required by Occupational Safety & Health Administration (OSHA) (29CFR Part 1926) for the construction industry to ensure employees a safe, healthful workplace. Successful completion of the course provides the 30 hour OSHA Construction Safety Card.

CAT 2435 - Construction Credentials
1 Cr. Hr(s).
Certifications commonly used in the construction industry. Emphasis on worker health and welfare, and jobsite safety. Three lab hours per week.

CAT 2501 - GPS & GIS for Engineering Technology Professionals
2 Cr. Hr(s).
This course covers collection, adjustment, analysis and management of geospatial data used in land development. Integration of Global Positioning Systems field collected data with Geographic Information Systems to maintain public works, cadastrial and utility record keeping systems. One classroom, three lab hours per week.
Prerequisite(s): CAT 1501

CAT 2531 - Advanced Surveying & Mapping
3 Cr. Hr(s).
Utilization of surveying equipment and Computer Aided Drafting (CAD) software to perform field data collection and produce civil engineering drawings. Two classroom, three lab hours per week.
Prerequisite(s): CAT 1501 AND (MAT 1470 OR MAT 1580 OR MAT 2270)

CAT 2561 - Route Surveying with Construction Applications
2 Cr. Hr(s).
Solving complex surveying problems for construction layout of buildings, sites and roads using appropriate mathematical calculations and surveying equipment. One classroom, two lab hours per week.
Prerequisite(s): CAT 1501

CAT 2571 - NSPS Certified Survey Technician Preparation
This course is repeatable.

2 Cr. Hr(s).
This course is an in-depth review of the eleven areas of concentration in preparation of the Level I and/or Level II Survey Technician Certification used by the National Society of Professional Surveyors (NSPS). One classroom, two lab hours per week.
Prerequisite(s): CAT 1501

CAT 2581 - Legal Principles for Surveyors
3 Cr. Hr(s).
Legal principles of surveying. Field investigation and case studies are used to understand the elements that govern establishment of real property boundaries.

CAT 2610 - Stakeholders & Participants for Design & Construction Projects
2 Cr. Hr(s).
Understanding the role and responsibilities of those individuals and organizations actively involved in the project delivery process. Development of interrelationships, communication skills and procedures required for the successful administration of the construction process from start-up to close out. Traditional testing (proctored or in Testing Center) is used in all online sections. One classroom, two lab hours per week

CAT 2620 - Construction Documents, Legal Requirements, & Project Delivery
2 Cr. Hr(s).
Understanding the content of contract and construction documents with respect to the responsibilities and legal obligations for the stakeholders and participants of a construction project. Development of knowledge base for different types of project delivery systems. Develop an understanding of project control methods and procedures that comply with industry standards and practice. Traditional testing (proctored or in Testing Center) is used in all online sections. One classroom, two lab hours per week

CAT 2630 - Architectural Practice Project Deliverables & Contractual Obligations
2 Cr. Hr(s).
Develop a working knowledge of the architectural program development process for the design of a construction project. Understanding of the design process with owner review, comment, and questions. Working knowledge of the contractual obligations and project deliverables for the architect and their consultants for the construction project. Practical planning and control of the drawings, revisions, requests for interpretations, submittals, shop drawings and close out documents. Traditional testing (proctored or in Testing Center) is used in all online sections. One classroom, two lab hours per week.

CAT 2640 - Construction Project Change Management
2 Cr. Hr(s).
Practical initiation and control of changes to design documents for construction projects. Implementation and documentation of procedures to approve and distribute the changes deemed necessary to accommodate unforeseen conditions, omissions and errors in the design and construction of the project. Development of effective meeting management and communication skills. One classroom, two lab hours per week.

CAT 2700 - Architectural Technology Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work-based learning experience. Students already working may apply to use that experience to meet internship requirements. In collaboration with faculty and employers, students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour.
Prerequisite(s): Approval of Department

CAT 2701 - Civil Engineering Technology Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work-based learning experience. Students already working may apply to use that experience to meet internship requirements. In collaboration with faculty and employers, students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour.
Prerequisite(s): Approval of Department

CAT 2702 - Construction Management Technology Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour.
Prerequisite(s): Approval of Department

CAT 2741 - Current Topics in Architecture
2 Cr. Hr(s).
Explore recent developments in the

architectural profession, especially as related to the architectural technology curriculum. Topics to include environment, green building, energy conservation, building technology, etc. One classroom, two lab hours per week.
Prerequisite(s): CAT 1101 AND CAT 1201

CAT 2780 - Architectural Technology Capstone
4 Cr. Hr(s).
Assessment of achievement by Architectural Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on projects will be emphasized. Only offered spring semester. Should be taken last spring term of program. Two classroom, six lab hours per week.
Prerequisite(s): Approval of Department

CAT 2781 - Civil Engineering Technology Capstone
4 Cr. Hr(s).
Assessment of achievement by Civil Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practices of the major. Teamwork on projects will be emphasized. Only offered spring semester. Should be taken last spring term of program. Two classroom, six lab hours per week.
Prerequisite(s): Approval of Department

CAT 2782 - Construction Management Technology Capstone
4 Cr. Hr(s).
Assessment of achievement by Construction Management Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on projects will be emphasized. Only offered spring semester. Should be taken last spring term of program. Two classroom, six lab hours per week.
Prerequisite(s): Approval of Department

Communication

COM 2201 - Introduction to Mass Communication
3 Cr. Hr(s).
An extensive examination of media theory and social effects. Topics covered include history, practices and functions of the press, television, radio, film, advertising, digital media and public relations. Course investigates mass media's influence on modern society.

COM 2206 - Interpersonal Communication
3 Cr. Hr(s).
Exploration of the development, maintenance and termination of interpersonal relationships. The focus is on effective verbal and nonverbal interactions between two people, highlighting methods of initiating and maintaining effective communication with, and understanding of, others through learning and applying interpersonal communication theory.

COM 2211 - Effective Public Speaking
3 Cr. Hr(s).
Designed to improve speaking and listening skills through the study and application of public speaking structure, content and style. This course requires 5 speeches in front of a live audience. The online course sections require the recordings to be created by the student with at least 8 adults present for each speech. Any questions, please contact the Communication Department at com.dept@sinclair.edu.
This course has no textbook costs.

COM 2220 - Introduction to Communication Theory
3 Cr. Hr(s).
Examination of major foundational theories that inform the field of communication. Special emphasis on communication theories that examine the self and the message, relationship development, groups and organizations, the public and the media, as well as culture and diversity.

COM 2225 - Small Group Communication
3 Cr. Hr(s).
Focusing on development of effective small group decision-making and leadership skills, stressing better methods of expressing oneself and understanding others through learning group communication, theory and participating in small group decision-making experiences.

COM 2230 - Nonverbal Communication
3 Cr. Hr(s).
Development of effective nonverbal skills for the successful communicator, stressing better methods of expressing oneself and understanding others through the learning of nonverbal theory and Impression Management.
Prerequisite(s): COM 2206 OR COM 2225

COM 2235 - Principles of Interviewing
3 Cr. Hr(s).
Development of theoretical understanding and effective skills in the interviewing process, as both interviewer and interviewee. Practical experience in key types of interviews including informational, employment, appraisal and survey interviews.

COM 2245 - Intercultural Communication
3 Cr. Hr(s).
Analysis of issues associated with communicating across cultures, including the study of communication norms, communication characteristics of major contemporary cultures and effective cross-cultural communication in interpersonal and organizational contexts.

COM 2270 - Communication Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credit toward degree requirements for work learning experience related to the discipline of communication. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes related to communication and prepare reports and/or projects each term, detailing how the experience allowed for the application of communication theory and/or skills. Seven work hours per credit hour each week.
Prerequisite(s): Approval of Department AND 12 hours of COM or JOU

COM 2278 - Communication Capstone
1 Cr. Hr(s).
Demonstration of communication skills and competencies through the development of a communication portfolio; independent study under the direction of a Communication faculty member. Five directed practice hours per week.
Prerequisite(s): COM 2201 AND COM 2206 AND COM 2211 AND COM 2220 AND COM 2225 AND One additional COM or JOU course

COM 2285 - Organizational Communication
3 Cr. Hr(s).
Study of the theories of communication in organizations. Analysis of the initiation, diffusion, and reception of messages in organizational environments. Exploration of effective communication strategies for work relationships, management practices, and organizational culture.

COM 2286 - Public Relations Principles
3 Cr. Hr(s).
Theories, principles and skills of public relations in organizations and in society, integrating organizational communication and management practices.

COM 2287 - Effective Listening

3 Cr. Hr(s).
Development of effective listening skills. Practical experience in comprehensive, empathic, critical and appreciative listening. Solid foundation in relevant listening theory.

Computer Aided Manufacturing

CAM 1100 - Manufacturing Boot Camp
2 Cr. Hr(s).
This one-week boot camp style course will offer an overview of the history and lucrative opportunities in computer numerical control (CNC) while providing a hands-on introduction to the basics of safety, programming, setup, operation of both milling centers and lathes. Included is also an interactive introduction to precision measurement, blueprint reading, and AutoCAD which will provide useful terminology and language used when seeking employment in manufacturing.

CAM 1107 - Introduction to Mechanical Drafting with CAD
3 Cr. Hr(s).
The course focuses on the study and interpretation of the graphic language used in manufacturing and engineering. This will include principles of: shape description, axonometric projection, specifications, symbology and spatial relationships. The student will apply problem solving and critical thinking skills using both standard and automated communication methods. Two classroom, two lab hours per week.

CAM 1108 - Machine Shop Fundamentals
3 Cr. Hr(s).
An introduction to the manufacturing processes used in the tooling and machining industry. Safety, mechanical hardware, hand tools, metrology, drill press, vertical mill, and lathe, will be the major focus of this course. Two classroom, two lab hours per week.

CAM 1109 - Fundamentals of Tooling & Machining
3 Cr. Hr(s).
An introduction to the manufacturing processes used in the tooling and machining industry. Safety, mechanical hardware, hand tools, metrology, drill press, vertical mill, lathe, and the surface grinder will be the major focus of this course. Two classroom, two lab hours per week.

CAM 1110 - Advanced Machine Operations
3 Cr. Hr(s).
This course will increase student's proficiency in the use of manually operated machine shop equipment with an emphasis on high tolerance parts where precision machining is necessary for project completion. Two classroom, two lab hours per week.
Prerequisite(s): CAM 1107 AND CAM 1109 AND MAT 1110 OR Approval of Department

CAM 1111 - Advanced Machine Operations II
3 Cr. Hr(s).
An advanced lab in the manufacturing processes used in the tooling and machining industry. Safety, handtools, metrology, engine lathe, milling, sawing, and precision grinding, working within close tolerances along with assembly and fit will be the major focus of this course. Two classroom, two lab hours per week.
Prerequisite(s): CAM 1110 with a grade of C or better

CAM 1116 - Fundamentals of Computer Numerical Control Operations
3 Cr. Hr(s).
This course will cover machine safety, setup and operation of computer numerical control (CNC) milling machines and lathes. Adjusting tool and work offsets to hold part tolerances on both types of equipment. Calculation of spindle speeds and feed rates. Introduction to basic programming codes and development of CNC programs for three axis mills and two axis lathes. Two classroom, two lab hours per week.

CAM 1142 - Advanced Shop Floor Math
3 Cr. Hr(s).
This course applies the principles of geometry and trigonometry and the computing of angles using law of sines and law of cosines dealing with situations encountered in the machining industry. It also gives a brief introduction to the calculations required in computer numerical control programming. Two classroom, two lab hours per week.
Prerequisite(s): MAT 1110

CAM 1180 - Welding & Metal Joining I
3 Cr. Hr(s).
This course is a broad introduction to welding with in-depth hands-on labs to include SMAW, GMAW, OAW, GTAW, and Resistance, commonly known as MIG, TIG, Ox-acetylene, and Stick (ARC) welding along with other types of metal joining options and instruction to include sheet metal layout, shearing, bending, riveting, brazing and spot welding. Welding safety, personal protection equipment, special welding tools will be taught in-depth and used by the students within the lab setting. The student will apply critical thinking and problem-solving skills to achieve the end results required using blue prints, verbal instructions or a combination of both. Two classroom, two lab hours per week.

CAM 1191 - MIG Welding and Flux-Cored Arc Welding
4.5 Cr. Hr(s).
Students will gain a foundational understanding of MIG/GMAW (Gas Metal Arc Welding) and FCAW (Flux-Cored Arc Welding) through this course, featuring significant hands-on laboratory experience. Comprehensive instruction will cover welding safety protocols, the correct application of personal protective equipment, and the proficient use of various welding tools within the lab environment. Students will develop and apply critical thinking and problem-solving methodologies to execute welding tasks based on technical blueprints and verbal directives. A key component of the course is the preparation for, and attainment of, AWS (American Welding Society) certification in MIG (GMAW) and Flux Core Arc Welding (FCAW). Three classroom, three lab hours per week.

CAM 1192 - Stick Welding (Shielded Metal Arc Welding)
4.5 Cr. Hr(s).
Students will gain a foundational understanding of Stick Welding (Shielded Metal Arc Welding, or SMAW) through this introductory course, featuring significant hands-on laboratory experience. Comprehensive instruction will cover welding safety protocols, the correct application of personal protective equipment, and the proficient use of various welding tools within the lab environment. Students will develop and apply critical thinking and problem-solving methodologies to execute welding tasks based on technical blueprints and verbal directives. Students will earn attainment of the AWS (American Welding Society) certification in Stick Welding (SMAW). Three classroom, three lab hours per week.

CAM 1193 - TIG (GAS Tungsten Arc Welding)
4.5 Cr. Hr(s).
Designed to equip students with practical and theoretical welding expertise, this course emphasizes a strong foundation in lab safety and operational procedures. The curriculum delves into the interpretation and application of welding symbols, essential for professional fabrication. Students will receive thorough instruction in the GTAW (Gas Tungsten Arc Welding) process, complemented by significant hands-on laboratory sessions to

develop manipulative skills. This in-depth learning of GTAW will include the welding of specialized materials, such as aluminum, stainless steel, and titanium. Furthermore, the course covers critical supporting techniques such as various methods of metal cutting, brazing, and fundamental concepts of metal design to facilitate project execution and problem-solving. Three classroom, three lab hours per week.

CAM 1194 - Weldability of Metals
2 Cr. Hr(s).
This course will provide the non-metallurgist with basic knowledge of various metals and their weldability, including metal properties, selecting filler metals, heat input, preheating, and post-heating. The course will consist of and be designed to provide training on metal properties, basic metallurgy, classification of ferrous metals, heat treatments, hard surfacing, and metals identification; along with weldability of stainless steels, tool steels, cast iron, aluminum alloys, magnesium alloys, nickel alloys, and titanium alloys.

CAM 1214 - Computer Numerical Control Mill Programming
3 Cr. Hr(s).
This is an intermediate course covering the development of Computer Numerical Control (CNC) programs for three axis milling machines including spindle controls, tool changes, linear and circular interpolation, drilling and tapping, subroutines, and G&M codes. Setup and operation of milling machines. Adjusting tool and work offsets to hold part tolerance. Two classroom, two lab hours per week.
Prerequisite(s): (CAM 1109 OR CAM 1161) AND CAM 1116

CAM 2114 - Jig & Fixture Design
3 Cr. Hr(s).
Theory, principles and drawing techniques for the design of jigs and fixtures. Two classroom, two lab hours per week.
Prerequisite(s): CAM 1107 AND CAM 1109

CAM 2145 - Shop Floor Programming
3 Cr. Hr(s).
Operation and programming of conversational controlled lathe and milling machines. Includes programming and manufacturing a variety of machined parts utilizing ProtoTRAK two-axis and three-axis conversational CNC controls. Two classroom, two lab hours per week.
Prerequisite(s): CAM 1109

CAM 2204 - Computer Numerical Control Lathe Programming
3 Cr. Hr(s).
Development of Computer Numerical Control (CNC) programs for two axis CNC lathes including linear and circular interpolation, turning, grooving and threading cycles; drilling and tapping; G & M codes. Review setup and operation of CNC lathe; adjusting tool offsets to hold part tolerance. Two classroom, two lab hours per week.
Prerequisite(s): CAM 1109 AND CAM 1116

CAM 2212 - Computer Assisted Programming
3 Cr. Hr(s).
An introductory course in the use of Computer Aided Design (CAD)/Computer Aided Manufacturing (CAM) software (MasterCAM) as applied to computer numerical control vertical machining centers. Two classroom, two lab hours per week.
Prerequisite(s): CAM 1107 AND CAM 1214

CAM 2225 - Tool Design
3 Cr. Hr(s).
Design theory, principles and drawing techniques for the tool design industry. Two classroom, two lab hours per week.
Prerequisite(s): CAM 2114

CAM 2700 - Computer Aided Manufacturing Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work learning experience, especially related to a co-op experience. Students may not enroll in the internship until their final semester. Ten co-op hours per credit hour per week.
Prerequisite(s): Approval of Department

CAM 2780 - Computer Aided Manufacturing Capstone
3 Cr. Hr(s).
Assessment of achievement by Computer Aided Manufacturing students in attaining program-related outcomes by completing a project demonstrating principles and practices of the major. Two classroom, two lab hours per week.
Prerequisite(s): CAM 1110 AND CAM 2114 AND CAM 2204 AND CAM 2212 AND Approval of Department

CAM 2781 - Precision Machining Capstone
3 Cr. Hr(s).
Assessment of achievement by Precision Machining students in attaining program related outcomes with the completion of a comprehensive project. They will demonstrate the principles and practices of the Precision Machining major. Two classroom, two lab hours per week.
Prerequisite(s): CAM 1111 AND CAM 2114 AND CAM 2145 AND Approval of Department

Computer Information Technology

CIT 1010 - Digital Thread Cyber Security
3 Cr. Hr(s).
Provides an introduction to digital thread-related cyber security threats and challenges, as well as mitigation tools and techniques. The course explores databases and data assurance, anti-tampering, communications, governmental cyber regulations, and other cybersecurity-related topics as applicable throughout the lifecycle of a manufactured product.

CIT 1107 - Introduction to Operating Systems
3 Cr. Hr(s).
In this class, you will learn the foundation of introduction to operating systems, virtualization and basic networking concepts. You will learn how to manage and administer current desktop operating systems (Windows, Linux, and Mac OS X). In addition, you will explore operating systems for mobile devices (Apple IOS, Google Android) and will be introduced to widespread applications for IoT and Cloud concepts. This class will also cover personal and enterprise cybersecurity principles to help protect yourself from common cyber-attacks.

CIT 1130 - Network Fundamentals
3 Cr. Hr(s).
Introduction to computer networking. Topics include network standards and the Open Source Interconnection (OSI) model, topologies and Ethernet standards, network hardware, remote connectivity, wireless networking, in-depth TCP/IP, network security, network troubleshooting and network management.

CIT 1411 - Introduction to Networks
3 Cr. Hr(s).
This course covers networking architecture, structure, and functions. The course introduces the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations to provide a foundation for the Network Engineering curriculum. Students will understand the functions and services associated with the two major models (OSI and TCP/IP) used to plan and implement networks. Students will be able to design an IP addressing scheme to provide network connectivity for a small to medium-sized

network. Use Command Line Interface (CLI) to configure initial settings on routers and switches to implement basic network connectivity between devices.

CIT 1500 - A+ Hardware & Software
4 Cr. Hr(s).
This class is for intermediate to advanced students seeking both the theoretical and practical aspects of building a PC. The class covers CPU, storage devices, printers, and networking devices. This class also includes functions and installation of operating systems as well as troubleshooting steps and common tools. Will help students in preparation for the CompTIA A+ Certification.
Prerequisite(s): CIT 1107 AND (CIT 1130 OR CIT 1411)

CIT 1510 - Windows Client Operating System
3 Cr. Hr(s).
Installing and administering systems that incorporate the current Microsoft desktop operating system. Administering shared resources including files, folders, and printers; installing, managing, and troubleshooting hardware devices; monitoring and optimizing system performance and reliability; implementing network protocols; and configuring security elements.
Prerequisite(s): CIT 1107 AND (CIT 1130 OR CIT 1411)

CIT 2178 - Computer Information Technology Capstone
3 Cr. Hr(s).
Assessment of skills and competencies of Computer Information Systems students through project-based activities. Demonstration of achievement of degree option outcomes via oral and written presentations and creation of a professional growth plan. Course should be taken in the last term prior to graduation.
Prerequisite(s): (CIT 2515 AND CIT 2520) OR (CIT 2416 AND CIT 2421)

CIT 2270 - Computer Information Technology Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn academic credit toward their graduation requirement by working in a professional information technology environment. Students must work at an approved site and be supervised/mentored by a professional in the field. The internship coordinator can help guide students in their search, but students are ultimately responsible for obtaining a qualifying position. Students already working in the field may apply to use that experience to meet the internship requirement if they can prove that new learning will take place. Internship hours vary based on credit hours.
Prerequisite(s): Approval of Department

CIT 2416 - Routing & Switching Essentials
4 Cr. Hr(s).
This course focuses on learning the architecture, components and operations of routers and switches in a small network. Students will learn how to configure a router and a switch for basic functionality. Commonly used network services and protocols will be studied.
Prerequisite(s): CIT 1411 must be completed within the last two years

CIT 2418 - Basic Firewall Security
3 Cr. Hr(s).
This course offers an understanding of security principles and tools available to achieve an appropriate level of network security. Hardware devices (routers and switches from multiple vendors), protocols, and switching technologies will be considered, including Virtual Local Area Networks (VLANs), VLAN Trunking Protocol (VTP), Rapid Spanning Tree Protocol (RSTP), and others.
Prerequisite(s): CIT 2416 must be completed within the last two years

CIT 2421 - Scaling Networks
4 Cr. Hr(s).
The focus of this course is on the architecture, components, and operations of routers and switches in a larger and more complex network. Students will learn how to configure routers and switches for advanced functionality. Students will be able to configure and troubleshoot routing protocols and wireless networks using IPv4 and IPv6 on equipment from various vendors.
Prerequisite(s): CIT 2416 must be completed within the last two years

CIT 2427 - IoT Fundamentals
4 Cr. Hr(s).
This course will focus on defining Internet of Things (IoT), what the IoT Ecosystem is, and how to support IoT on a network. Students will learn how to support, configure, and secure IOT devices on a network. Students will be able to integrate IOT devices into modern networks and help protect them from cyber threats.
Prerequisite(s): CSC 1111 AND (CIT 1130 OR CIT 1411)

CIT 2428 - IoT Architecture
3 Cr. Hr(s).
In this course, we'll explore the fusion of technology and connectivity, uncovering how everyday objects become intelligent and interconnected. Learn key IoT concepts, technologies, and applications across industries using hands-on experiences. Personalize learning experience with goal-driven labs and create the product solution you have always been interested in. This course explores the fundamental infrastructure from the edge to the cloud. Learn what is possible to begin to create the impossible. Develop an understanding of how to do work with the Agile mindset. Get ready to understand the transformative power of IoT and its impact on our connected world!
Prerequisite(s): CIT 1130 OR CIT 1411

CIT 2510 - Microsoft Windows Server Operating System
3 Cr. Hr(s).
Introductory and intermediate aspects of Windows Server administration. Outcomes include installation of the current Windows Server operating system, setup of roles and features, virtualization, client server networking, and knowledge of Active Directory and Group Policy.
Prerequisite(s): CIT 1107 AND (CIT 1130 OR CIT 1411)

CIT 2515 - Windows Network Infrastructure
3 Cr. Hr(s).
Intermediate administration and support functions of the current Windows Server operating system. Focus is on more detailed functions of common roles and features such as core networking, security, and Windows Updating. Also more advanced use of Active Directory and Group Policy.
Prerequisite(s): CIT 2510

CIT 2520 - Windows Server Advanced Services
3 Cr. Hr(s).
Advanced windows services such as advanced network services, security, backups, and IP Address Management (IPAM). High availability through Network Load Balancing, Failover Clustering, Site failover. Also features such as Federation Services, Certificate Services, and Rights Management Services, and other advanced topics included.
Prerequisite(s): CIT 2510

CIT 2545 - Cloud Infrastructure
3 Cr. Hr(s).
This course will prepare students for the Amazon AWS Certified Solutions Architect industry certification. Use of Amazon

provided materials and third-party learning labs to give students the best mix of content to meet the goals of the certification and future career requirements. Students will become proficient in different aspects of cloud-based computing in different industries and configurations.

CIT 2550 - Linux Operating System
3 Cr. Hr(s).
Linux operating system installation, management, administration, troubleshooting techniques, writing and debugging shell procedures, pipes and interprocess communications, command lists, and network configuration for beginning and intermediate students. This course prepares students for the CompTIA Linux + exam.
Prerequisite(s): CIT 1107 AND (CIT 1130 OR CIT 1411)

CIT 2630 - Securing a Windows Network Environment
3 Cr. Hr(s).
Successfully plan, build, and secure systems for a Microsoft Windows Server environment. The primary purpose of this course is to provide experience using actual enterprise state-of-the-art class servers hardware and software. Our classroom is equipped with many new enterprise servers for a hands-on experience. Also includes sections on introductory forensics and securing servers with penetration testing.
Prerequisite(s): CIT 2510

CIT 2640 - Network Security
3 Cr. Hr(s).
Intermediate computing and network security fundamentals. Topics include network vulnerabilities and attacks, network defenses, wireless network security, access control, network assessment and auditing, cryptography, and organizational security. Preparation will also be given for the ComptTIA Security+ exam.
Prerequisite(s): CIT 1107 AND (CIT 1130 OR CIT 1411)

CIT 2642 - PenTest
3 Cr. Hr(s).
Intermediate computer and Penetration Testing fundamentals. Topics include penetration testing, vulnerability assessment and attacks, social engineering, network and application exploitation, and best practices to communicate recommended strategies to improve the overall state of IT security. Preparation will also be given for the ComptTIA PenTest+ exam.
Prerequisite(s): CIT 2550 AND CIT 2640

CIT 2650 - Ethical Hacker
3 Cr. Hr(s).
Intermediate level system and network security related topics including legal ramifications, assessment, social engineering, vulnerability testing, system hacking, network scanning and analysis, mobile device security, Cloud and IoT, cryptography, and remediation. This course includes the TestOut Ethical Hacker certification exam and will help students in their preparation for the ECCouncil Certified Ethical Hacker CEH exam.
Prerequisite(s): (CIT 1130 OR CIT 1411) AND CIT 2640

CIT 2670 - Fundamentals of Information Systems Security
4 Cr. Hr(s).
Intermediate security related topics including security and risk management, security engineering, communication and network security, identity management, security assessment and operations, and software development security. This course will help students in their preparation for the Certified Information Systems Security Professional (CISSP) exam.
Prerequisite(s): CIT 2640

CIT 2711 - Enterprise Desktop Support Technician
3 Cr. Hr(s).
Intermediate and advanced problem solving techniques for Windows desktop operating systems. Includes network and cloud applications and remote access administration. Configure and problem solve operating system functions in real world hands on labs.
Prerequisite(s): CIT 1107 AND CIT 1500

CIT 2808 - Introduction to Computer Forensics
3 Cr. Hr(s).
Computer forensics is the study of obtaining and analyzing evidence/information for use as evidence in civil, criminal, or administrative cases.
Prerequisite(s): CIT 1500 AND CIT 2640

CIT 4101 - Advanced IoT
3 Cr. Hr(s).
This course will continue a personalized IoT experience with goal-driven labs. The technology focus of this course will be security, wireless, machine learning, and specific vertical applications. This enablement creates an advanced product solution with wireless connectivity, low power modes, machine learning on the edge, edge encryption, secure boot, and more. Continue your exploration into infrastructure discovery and innovation. Finalize your chip to cloud automation and security. Begin to look beyond the technology and toward creating incremental value with IoT and developing a profitable business mindset. Compete in the White Rabbit game, testing your IoT technology skills. Use current trends in IoT development and protocols to create your own secure IoT solutions.
Prerequisite(s): CIT 2428 AND MAT 1455

CIT 4102 - Cloud Native & IoT
3 Cr. Hr(s).
The Cloud Native and IoT course provides students with a comprehensive knowledge of IoT using cloud computing. Students will evaluate and build on AWS using their IoT services while also creating their own cloud. They will learn about AWS IoT Core, IoT analytics, IoT device programming, IoT protocols, data science for IoT, digital storage for IoT, and how to apply them to real-world scenarios. Throughout the majority of this course, students will engage in hands-on assignments and projects, building and deploying IoT solutions on AWS and a Personal Cloud. By the end of the course, students will be able to analyze and create IoT solutions using both commercial cloud platforms and their cloud.
Prerequisite(s): CIT 2545

CIT 4170 - Internet of Things (IoT) Internship
3 Cr. Hr(s).
Students earn academic credit toward their graduation requirement by working in a professional industrial technology environment. Students must work 30 hours per week and be supervised/mentored by a professional in the field. The internship coordinator can help guide students in their search, but students are ultimately responsible for obtaining a qualifying position. Students already working in the field may apply to use that experience to meet the internship requirement if they can prove that new learning will occur.
Prerequisite(s): Approval of Department

CIT 4178 - Internet of Things (IoT) Clients Advanced Capstone
3 Cr. Hr(s).
This advanced Internet of Things (IoT) course provides students with a unique opportunity to apply their IoT knowledge in a real-world context by working on projects directly with industry clients. Students will engage in the hands-on development of IoT solutions and tackling real challenges faced by companies in various sectors. The course emphasizes the entire cycle of IoT solution development, from concept and design through development, and

into deployment and evaluation. This course emphasizes value creation for the client.
Prerequisite(s): Approval of Department

Computer Science

CSC 1111 - Introduction to Problem Solving & Computer Programming
3 Cr. Hr(s).
Introduction to problem-solving techniques used in programming. Students learn to use tools such as flowcharts and pseudocode to plan solutions. Using the C++ programming language, students will design, code, and test programs using sequence, selection, iteration, functions, and arrays.
Prerequisite(s): MAT 0200 OR MAT 1120

CSC 1140 - Information Systems Analysis & Design
3 Cr. Hr(s).
Introduction to the systems development life cycle and the four-phase model (planning, analysis, design, and implementation). Emphasis on requirements gathering, methodology, modeling, and skills related to specifications, design, and documentation. Discussion of business processes, law, legal issues, and ethics for IT professionals.

CSC 1160 - Introduction to Data Literacy
3 Cr. Hr(s).
In this course, students will learn how to identify data sources and evaluate whether data is credible and relevant. The course will introduce techniques to cleanse, analyze, and manage data. Visualization tools are covered in the course to assist in identifying and communicating data patterns and trends. Presentation of data findings and communicating meaning through storytelling is an important element of this course. In addition, students will gain an understanding on the impact of data in our society. This course is data literacy for all.

CSC 1202 - C++ Software Development
3 Cr. Hr(s).
A continuation of C++ software development building on prior software development studies. Topics include arrays, searching and sorting, pointers, characters and strings, structures, file operations, C++ classes, inheritance, polymorphism, virtual functions, exceptions, templates, the Standard Template Library (STL), problem analysis, and C++ software solution design, coding, and testing.
Prerequisite(s): CSC 1111

CSC 1350 - Web Site Development with HTML & CSS
3 Cr. Hr(s).
HyperText Markup Language (HTML) and Cascading Style Sheets (CSS) are widely used technologies to create and display content on the web. HTML is the primary language used for creating web pages including basic text formatting, linking between pages and adding images and other media. CSS is a styling language that enables the separation of content from style and provides precision control over the display including layout, colors, and fonts. Students will learn to apply best practices for web design and create sites that enhance the usability and interactivity of the pages.

CSC 1375 - JavaScript
3 Cr. Hr(s).
This class introduces the JavaScript language, with a focus on the language features and client-side programming. Topics covered include basic syntax, object-oriented programming, functions, the DOM. The class will also introduce recent libraries, including jQuery. The class will include coding exercises and assignments consisting of implementation of web applications.
Prerequisite(s): CSC 1350

CSC 2165 - Database Management
3 Cr. Hr(s).
Introduction to database management systems. Discussion of database environments, design, planning, implementation and administration in a relational model environment. Students will design and develop a simple database and implement a portion of this application including forms, queries and reports. Emphasis on database design techniques, normalization, and the SQL database language.
Prerequisite(s): MAT 0200 OR MAT 1120

CSC 2207 - Data Structures & Algorithms
3 Cr. Hr(s).
This course covers data structures using the C++ Programming Language. Topics include data abstraction, encapsulation, information hiding, the use of recursion, searching and sorting algorithms, and the creation and manipulation of various data structures: lists, queues, tables, trees, heaps, and graphs.
Prerequisite(s): CSC 1202 OR CSC 2217

CSC 2212 - Java Software Development I
3 Cr. Hr(s).
Introduction to Java software development. Topics include object orientation, Java syntax, data types, logic structures of sequence, selection and iteration, processing calculations, files, methods, classes and objects, graphical user interface (GUI) applications, arrays and the ArrayList class, problem analysis, and Java software solution design, coding, and testing.
Prerequisite(s): CSC 1111

CSC 2217 - Java Software Development II
3 Cr. Hr(s).
This course builds on prior Java studies and includes abstract classes and interfaces, binary input/output, recursion, generics, use of collection framework lists, stacks, queues, and priority queues, use of sets and maps, developing efficient algorithms and computational complexity, sorting algorithms, implementing lists, stacks, queues and priority queues, software development ethics, binary search trees, problem analysis and Java software solution design, coding and testing.
Prerequisite(s): CSC 2212

CSC 2222 - ASP.NET with C#
3 Cr. Hr(s).
This course introduces server-side web programming to develop web applications based on ASP.NET. Students will learn how to develop ASP.NET applications, employing web forms and data controls. Microsoft SQL Server will be used for database manipulations.
Prerequisite(s): CSC 1350 AND (CSC 1202 OR CSC 2212)

CSC 2250 - Web Site Development with PHP
3 Cr. Hr(s).
PHP is a server-side scripting language and is used to create web sites. This course provides the knowledge necessary to design and develop dynamic, database-driven web pages. Emphasis is placed on programming techniques to design, code, test, debug, and create a dynamic web site using PHP. Students will be introduced to MySQL, which is a popular relational database management system.
Prerequisite(s): CSC 1350 AND CSC 2165

CSC 2265 - Data Visualization with Tableau
3 Cr. Hr(s).
This course will introduce students to the field of data preparation and visualization, including design and hands-on experience with Tableau. Students will learn how to collect, transform, curate, and analyze datasets. The course will introduce students to design and build principles for telling stories for effective communications to facilitate data-driven decision-making, provide insights, and help speed up organizations that are data rich and information poor.
Prerequisite(s): MAT 0200 OR MAT 1120

CSC 2266 - Python for Data Analytics

3 Cr. Hr(s).
This course introduces students to analyzing data using Python. The basics of Python will be taught. Students will learn how to obtain, cleanse and prepare data for analysis. Data analytic and statistical tools will be used to visualize data, predict outcomes, and categorize data.
Prerequisite(s): MAT 0200

CSC 2267 - Advanced Python for Data Analytics
3 Cr. Hr(s).
Students will learn how to obtain, cleanse, and prepare data, use supervised models to predict and categorize data, and present their findings.
Prerequisite(s): CSC 2266

CSC 2268 - Structured Query Language (SQL) Programming
3 Cr. Hr(s).
Introduction to database management system in a client/server environment. The course covers Structured Query Language (SQL) and development and administrative tools. Students are taught to create and maintain database objects and to store, retrieve, and manipulate data, and create blocks of application code that can be shared by multiple forms, reports, and data management applications.
Prerequisite(s): CSC 2165

CSC 2269 - Data Analytics Theory & Solutions
3 Cr. Hr(s).
An introduction to business intelligence, data analysis, data warehousing, data mining theory and tools, and how to structure the data and prepare reports in a way that is meaningful to business users. Emphasis is placed upon understanding business intelligence techniques to construct and use business intelligence solutions for decision support.
Prerequisite(s): CSC 2165 AND (MAT 1450 OR MAT 2170)

CSC 2270 - Computer Science Internship
This course is repeatable.

1-4 Cr. Hr(s).
Students earn academic credit toward their graduation requirement by working in a professional computer science environment. Students must work at an approved site and be supervised/mentored by a professional in the field. The internship coordinator can help guide students in their search, but students are ultimately responsible for obtaining a qualifying position. Students already working in the field may apply to use that experience to meet the internship requirement if they can prove that new learning will take place. Internship hours vary based on credit hours.
Prerequisite(s): Approval of Department

Criminal Justice Science

CJS 1101 - Introduction to Criminal Justice Science
3 Cr. Hr(s).
Overview of the criminal justice system and an analysis of the interdependence of its components, including legislative, law enforcement, prosecution, court and correctional systems. Examination of responsibilities of professionals in each of these systems, including ethical and legal responsibilities.

CJS 1103 - Constitutional Law & Evidentiary Procedures
3 Cr. Hr(s).
Survey and interpretation of the Federal Constitution, and an overview of state and federal law and court systems. Emphasis on the Bill of Rights with particular attention to the Fourth, Fifth, Sixth, Eighth, and Fourteen amendments. Study, analysis, and application of the Rules of Evidence and Rules of Criminal Procedure from investigation to arrest, trial, and the appellate process. Additionally, ethical guidelines for Criminal Justice professionals in the detection, apprehension, and prosecution of the accused and constitutional restrictions on government actions.
Prerequisite(s): CJS 1101 OR CIT 1107

CJS 1105 - Criminal Law
3 Cr. Hr(s).
Basic concepts of Criminal Law and analysis of state and federal criminal statutes. Elements of crimes, criminal liability, jurisdiction over criminal offenses and criminal defenses and criminal responsibility will be examined. Additionally, crimes against property, crimes against persons and alcohol and drug crimes will be covered.
Prerequisite(s): CJS 1101 OR PAR 1101

CJS 1106 - Transition Skills
3 Cr. Hr(s).
Engage students in the process of building a personal portfolio that includes career and financial goals, a professional resume, job search process, a personal budget, a savings and investment plan and access to community resource information. This course will address the process of community re-entry from a personal, social and occupational perspective.

CJS 1110 - Interrogation, Documentation & Testimony
3 Cr. Hr(s).
Development of communication skills applicable to criminal justice professionals. Emphasis on interviewing, interrogation, documentation of evidence in various documents, forms, reports and oral testimony.
Prerequisite(s): CJS 1101

CJS 1125 - Policing
3 Cr. Hr(s).
Management and leadership of law enforcement agencies, including investigations, patrol, internal affairs, traffic enforcement and an overview of community based and problem-oriented policing theory and practice. Emphasis on crime analysis and prevention, community partnerships to reduce crime and community education. Principles of organization, staffing, budgeting, controlling, training and planning.

CJS 1155 - Homeland Security Issues & Administration
3 Cr. Hr(s).
Overview of homeland security threats, statutes, resources and the role of law enforcement as first responders with the emphasis on inter-agency cooperation. Examination of contemporary security issues in public and private spaces including risk analysis, critical incident management, inter-agency collaboration, specialized security fields, intelligence gathering and litigation. Exploration of the career opportunities in homeland security.
Prerequisite(s): CJS 1101

CJS 1165 - Corrections
3 Cr. Hr(s).
Analysis of operations of correctional facilities from historical, functional and management perspectives. Attention to administrative and management issues in different types of facilities, with different populations and in community-based programs. Examination of best practices in the field of corrections, including state and federal programs for institutional and community settings.

CJS 1197 - Corrections Full Service Jails/Basic Correction Officer Academy
3 Cr. Hr(s).
Mandated Ohio Attorney General/Ohio Peace Officer Training Academy training for individuals to attain certification for performing corrections officer functions in full-service jail facilities. Not open to the general student population. Consists of minimum 158 mandated classroom hours of both academic/physical training.

Prerequisite(s): Approval of Training Academy Coordinator

CJS 2111 - Ethics & Professionalism in Criminal Justice
3 Cr. Hr(s).
Examination and analysis of legal and ethical obligations of criminal justice professionals in law enforcement, corrections and the courts. Study and assessment of policy and actions of individuals and organizations within the criminal justice system regarding conformity to accepted ethical and legal standards.
Prerequisite(s): CJS 1101 OR CIT 1107

CJS 2145 - Correctional Case Management
3 Cr. Hr(s).
Survey of case management theories and approaches for criminal offenders. Understanding of intervention strategies for different types of offenders in institutional and community-based correctional programs.
Prerequisite(s): CJS 1101

CJS 2200 - Human Relations, Mediation & Conflict Resolution
3 Cr. Hr(s).
Examination of cultural differences and the handling of special needs population by the criminal justice system, including current trends in meeting community needs. Emphasis on development of the knowledge and skill sets required of the criminal justice professional to address the needs and issues of diverse clientele throughout the criminal justice process. Strategies for mediation, conflict resolution and critical incident management for law enforcement and corrections personnel, including hostage negotiation.
Prerequisite(s): CJS 1101

CJS 2205 - Introduction to Criminal Investigation & Forensic Science
3 Cr. Hr(s).
Survey of legal, technical and ethical aspects of criminal investigation. Common principles and techniques of criminal investigation, including crime scene procedures, collection and preservation of evidence, development of leads and criminalistics (current terminology for forensics). Skills necessary to investigate crimes and obtain legally admissible evidence. Basic science of physical, chemical and biological evidence.
Prerequisite(s): CJS 1101

CJS 2209 - Computer Crime
3 Cr. Hr(s).
Overview of criminal investigation of crimes committed in conjunction with computer technology. Types of crimes, prosecution and prevention strategies.
Prerequisite(s): CJS 1101 OR CIT 1107

CJS 2270 - Criminal Justice Science Internship
3 Cr. Hr(s).
Observation and participation in a criminal justice agency appropriate to the student's professional goals. Opportunity for integration and application of learning in a professional setting. One classroom, fourteen hours field experience per week.
Prerequisite(s): Approval of Department

CJS 2280 - Basic Peace Officer Training I
12 - 14 Cr. Hr(s).
First half of the mandated Ohio Attorney General/Ohio Peace Officer Training Academy (OPOTA) training for individuals to attain certification as peace officers in Ohio law enforcement agencies. Consists of mandated cognitive and psychomotor skills training for entry level Ohio law enforcement officers. OPOTA requires cadets to complete all 740 hours of academy training consecutively with the same academy class. Therefore, CJS 2280 and CJS 2281 must be taken consecutively. If a cadet does not complete both courses consecutively, they must reapply and complete the entire academy with a new academy class.
Prerequisite(s): Federal Bureau of Investigation (FBI) and Bureau of Criminal Identification (BCI) fingerprint checks, a successful five panel drug screening and successful physical fitness assessment required as well as permission and signature of the Sinclair Community College Training Academy Coordinator

CJS 2281 - Basic Peace Officer Training II
12 - 14 Cr. Hr(s).
Second half of the mandated Ohio Attorney General/Ohio Peace Officer Training Academy (OPOTA) training for individuals to attain certification as peace officers in Ohio law enforcement agencies. Consists of mandated cognitive and psychomotor skills training for entry level Ohio law enforcement officers. OPOTA requires cadets to complete all 740 hours of academy training consecutively with the same academy class. Therefore, CJS 2280 and CJS 2281 must be taken consecutively. If a cadet does not complete both courses consecutively, they must reapply and complete the entire academy with a new academy class.
Prerequisite(s): CJS 2280 with a grade of C or better

CJS 2295 - Criminal Justice Science Seminar
3 Cr. Hr(s).
Capstone experience for Criminal Justice Science students that focuses on the integration of learning throughout the program through case study analysis, research and service learning. Additionally, attention will be given to the preparation for employment in the field of criminal justice.
Prerequisite(s): Approval of Department

Dance

DAN 1162 - Beginning Middle Eastern Dance
This course is repeatable.

1 Cr. Hr(s).
Basic fundamentals and theory of Middle Eastern dance for beginning students. Class work consists of hip work, isolations, rhythm, history and cultural comparisons.

DAN 1172 - Ballet
This course is repeatable.

3 Cr. Hr(s).
Basic fundamentals and theory of classical ballet for beginning students. Class work consists of barre work, center combinations and steps. Two classroom, two lab hours per week.

DAN 1173 - Modern Dance
This course is repeatable.

3 Cr. Hr(s).
Basic fundamentals and theory of Modern Dance for beginning students. Two classroom, two lab hours per week.

DAN 1174 - Jazz Dance I
This course is repeatable.

3 Cr. Hr(s).
Introduction of the fundamentals of Jazz dance technique for the beginning student. Two classroom, two lab hours per week.

DAN 1175 - Tap Dance
This course is repeatable.

3 Cr. Hr(s).
Basic fundamentals of Tap dance technique for the beginning student. Two classroom, two lab hours per week.

Dental Assisting

DAS 1102 - Introduction to Dental Assisting Terminology

1 Cr. Hr(s).
Orientation to terms related specifically to the science of dentistry. Includes dental terminology application along with definitions and relationships of words to other similar dental terms, the use of root words, prefixes and suffixes related to dentistry. Introduction to the profession of dental assisting and the ethics, laws and rules.
Prerequisite(s): Approval of Department

DAS 1104 - Dental Assisting Techniques & Materials I
4 Cr. Hr(s).
Principles of dental assisting skills with emphasis on exposure control, dental instrument differentiation, patient anatomy, collecting data and basic dental laboratory procedures. Two classroom, six lab hours per week.
Prerequisite(s): Approval of Department
Corequisite(s): DAS 1105

DAS 1105 - Lab Dental Assisting Techniques & Materials I
0 Cr. Hr(s).
Laboratory experiences for DAS 1104.
Prerequisite(s): Approval of Department
Corequisite(s): DAS 1104

DAS 1108 - Dental Assisting Office Management
2 Cr. Hr(s).
This course will introduce the learner to business operating systems in a dental office. Includes procedure manuals, HIPPA, record keeping, accounts receivable, inventory and scheduling.
Prerequisite(s): Approval of Department

DAS 1204 - Dental Assisting Techniques & Materials II
4 Cr. Hr(s).
Principles of dental assisting skills with emphasis on dental procedure instrument differentiation. Basic dental laboratory materials and equipment utilization. Two classroom, six lab hours per week.
Prerequisite(s): Approval of Department
Corequisite(s): DAS 1205

DAS 1205 - Lab Dental Assisting Techniques & Materials II
0 Cr. Hr(s).
Laboratory experiences for DAS 1204.
Prerequisite(s): Approval of Department
Corequisite(s): DAS 1204

DAS 1206 - Dental Assisting Radiography
2 Cr. Hr(s).
The learner will be introduced to Dental Radiography for the Dental Assistant. The course will prepare the learner for the state license examination for exposing radiographs in a dental office setting. Includes properties of x-rays, the dental x-ray machine, radiation effects, radiation safety, digital imaging, dental films, and the processing of radiographs. One classroom, two lab hours per week.
Prerequisite(s): Approval of Department
Corequisite(s): DAS 1207

DAS 1207 - Lab Dental Assisting Radiography
0 Cr. Hr(s).
Scientific principles of radiation, radiographic production and patient management in dental practice.
Prerequisite(s): Approval of Department
Corequisite(s): DEH 1206

Dental Hygiene

DEH 1102 - Introduction to Dental Hygiene
1 Cr. Hr(s).
Orientation to terms related specifically to the science of dentistry to prepare students for the dental hygiene program. Includes dental terminology application along with definitions and relationships of words to other similar dental terms, the use of root words, prefixes and suffixes related to dentistry. Introduction to the profession of dental hygiene and the ethics, laws and rules. Students are strongly encouraged to take SCC 1101 prior to this course.

DEH 1202 - Head, Neck & Dental Anatomy
3 Cr. Hr(s).
Gross anatomy of the head and neck region including the oral cavity. Morphology and function of permanent and primary dentition. Two classroom, two lab hours per week.
Prerequisite(s): BIO 1141 AND Restricted to Majors
Corequisite(s): DEH 1203

DEH 1203 - Lab for Head, Neck & Dental Anatomy
0 Cr. Hr(s).
Prerequisite(s): Restricted to Majors
Corequisite(s): DEH 1202

DEH 1204 - Preclinical Dental Hygiene I
4 Cr. Hr(s).
Scientific principles of dental hygiene practice with emphasis on preventive dental health concepts, promotion of dental health, exposure control, data collection, patient assessment, oral health education and basic dental hygiene instrumentation. Two classroom, six lab hours per week.
Prerequisite(s): ALH 1101 AND BIO 1141 AND DEH 1102 AND Restricted to Majors
Corequisite(s): DEH 1205

DEH 1205 - Lab for Preclinical Dental Hygiene I
0 Cr. Hr(s).
Prerequisite(s): Restricted to Majors
Corequisite(s): DEH 1204

DEH 1206 - Nutrition & Oral Health
2 Cr. Hr(s).
An introduction to biochemistry and basic fundamentals of the science of nutrition, the role of nutrition in oral health and disease, nutrition standards and guidelines, nutrition and oral structures, nutrition through the life cycle, dietary analysis and nutritional counseling.
Prerequisite(s): Restricted to Majors

DEH 1302 - Preclinical Dental Hygiene II
4 Cr. Hr(s).
Scientific principles of dental hygiene practice with emphasis on preventive dental health concepts, pedodontic care, promotion of dental health, care planning, patient referral and dental specialties, periodontal instrumentation, care of the removable prosthesis and oral health education. Two classroom, six lab hours per week.
Prerequisite(s): DEH 1204 AND DEH 1206 AND Restricted to Majors

DEH 1303 - Lab for Preclinical Dental Hygiene II
0 Cr. Hr(s).
Prerequisite(s): Restricted to Majors
Corequisite(s): DEH 1302

DEH 1304 - Oral Histology & Embryology
1 Cr. Hr(s).
Microscopic anatomy of the human cell and tissues. Embryologic development of the head and neck. Histology of tooth development.
Prerequisite(s): Restricted to Majors

DEH 1305 - Medical Emergencies in Dental Practice
1 Cr. Hr(s).
Principles of general first aid and managing medical emergencies in dental practice. Two lab hours per week.
Prerequisite(s): DEH 1202 AND DEH 1203 AND American Heart Association Health Care Provider BLS
Corequisite(s): DEH 1303

DEH 1306 - General & Oral Pathology
4 Cr. Hr(s).
Study of human disease processes and their

physiological manifestations with emphasis on the etiology, signs and symptoms of pathological conditions within the oral cavity and associated structures.
Prerequisite(s): DEH 1202 AND DEH 1203 AND Restricted to Majors

DEH 1308 - Dental Radiology
3 Cr. Hr(s).
Scientific principles of radiation, radiographic production and patient management in dental practice. Two classroom, two lab hours per week.
Prerequisite(s): DEH 1202 AND DEH 1203 AND Restricted to Majors
Corequisite(s): DEH 1309

DEH 1309 - Lab for Dental Radiology
0 Cr. Hr(s).
Corequisite(s): DEH 1308

DEH 2402 - Clinical Dental Hygiene I
1 Cr. Hr(s).
Foundations of periodontics with emphasis on periodontal disease progression and classification, etiology of periodontal diseases including gingival disease and periodontitis, assessment for clinical decision making, nonsurgical periodontal therapy.
Prerequisite(s): DEH 1302 AND Restricted to Majors
Corequisite(s): DEH 2403

DEH 2403 - Dental Hygiene Clinic I
1 Cr. Hr(s).
Clinical dental hygiene practice with emphasis on the process of dental hygiene care, exposure control, dental imaging and diagnostic assessment procedures, care planning and education, prophylaxis and preventive procedures, pedodontic patient care and management, utilization of practice management technology. Twenty-one clock hours each week will be spent seeing patients over an 8-week term.
Prerequisite(s): DEH 1302 AND Restricted to Majors
Corequisite(s): DEH 2402

DEH 2502 - Pharmacology in the Dental Practice
2 Cr. Hr(s).
Overview of the conventional drug classes with emphasis on the actions, effects and indications for those used in the dental practice.
Prerequisite(s): DEH 2402 AND DEH 2403 AND Restricted to Majors

DEH 2503 - Pain Control in the Dental Practice
1 Cr. Hr(s).
Laboratory and clinical training in the administration of local anesthesia and nitrous oxide sedation. Two lab hours per week.
Prerequisite(s): DEH 2402 AND DEH 2403 Restricted to Majors

DEH 2504 - Dental Hygiene Research
2 Cr. Hr(s).
Overview of statistical terminology needed to evaluate research literature and prepare and present dental hygiene research papers.
Prerequisite(s): Restricted to Majors

DEH 2506 - Dental Materials
2 Cr. Hr(s).
General knowledge and use of various dental materials commonly used in the dental practice setting. Introduces the physical and chemical properties, structures, uses and manipulation of materials. One classroom, three lab hours per week.
Prerequisite(s): Restricted to Majors
Corequisite(s): DEH 2403 AND DEH 2507

DEH 2507 - Lab for Dental Materials
0 Cr. Hr(s).
Laboratory and clinical training in Dental Materials. Laboratory sessions give the student skill development for correctly using dental materials with an emphasis on safety and infection control.
Prerequisite(s): Restricted to Majors
Corequisite(s): DEH 2506

DEH 2508 - Clinical Dental Hygiene II
2 Cr. Hr(s).
A continuation of the dental hygiene process of care, powered instrumentation, child abuse and neglect, risk assessment, medically compromised and special needs patient care, periodontal maintenance, adjunctive therapies, periodontal surgical concepts, dental implant maintenance and periodontal emergencies.
Prerequisite(s): DEH 2402 AND Restricted to Majors
Corequisite(s): DEH 2509

DEH 2509 - Dental Hygiene Clinic II
3 Cr. Hr(s).
Clinical dental hygiene practice with emphasis on diagnostic procedures and assessment, care planning and education, preventive and therapeutic procedures, nonsurgical periodontal therapy, periodontal maintenance, medically compromised and special needs patient care, professional communication and case presentation. Twenty-one practicum hours per week.
Prerequisite(s): DEH 2403 AND Restricted to Majors
Corequisite(s): DEH 2508

DEH 2601 - Community Dental Health
1 Cr. Hr(s).
Introduction to community and public health concepts and community health education. Two lab hours per week.
Prerequisite(s): Restricted to Majors

DEH 2602 - Clinical Dental Hygiene III
1 Cr. Hr(s).
A continuation of the dental hygiene process of care, advanced instrumentation and procedures, dietary assessment and counseling, tobacco education and cessation, emerging trends and special topics, professional philosophy and life-long learning.
Prerequisite(s): DEH 2508 AND Restricted to Majors
Corequisite(s): DEH 2603

DEH 2603 - Dental Hygiene Clinic III
3 Cr. Hr(s).
Clinical dental hygiene practice with emphasis on advanced instrumentation and procedures, adjunctive therapies, dietary assessment and nutritional counseling, tobacco education and cessation strategies, risk assessment, coding strategies, pain control, evaluation of dental hygiene care and prognosis. Twenty-one practicum hours per week.
Prerequisite(s): DEH 2509 AND Restricted to Majors
Corequisite(s): DEH 2602

DEH 2604 - Dental Hygiene Practice
1 Cr. Hr(s).
Examines current trends in dental hygiene including resume and interviewing strategies, practice setting selection, legal and ethical issues, business of dental hygiene, professional development and organized dental hygiene.
Prerequisite(s): DEH 2509 AND Restricted to Majors

Developmental Language Arts

DEV 0035 - Integrated Developmental Reading & Writing II
4 Cr. Hr(s).
Integrated reading/writing course focusing on essay writing and critical reading/thinking skills. Includes stated and implied main ideas, college-level vocabulary development, and the stages of the essay writing process.
Prerequisite(s): Placement Test Score

Early Childhood Education

ECE 1100 - Introduction to Early Childhood Education
3 Cr. Hr(s).
This course focuses on professional ethics and

issues in the Early Childhood Education (ECE) field. Students will review historical and current trends related to ECE, and types of programs of early education and care. Center observation is required.
Prerequisite(s): Approval of Department

ECE 1101 - Introductory Child Development
3 Cr. Hr(s).
This course focuses on applying knowledge of the characteristics and needs of young children from birth through adolescence, for the creation of healthy, supportive, and effective learning environments. Multiple, interrelated influences on the development and learning of young children will be examined.
Prerequisite(s): Approval of Department AND Open to ELEE students

ECE 1200 - Observation & Assessment
4 Cr. Hr(s).
This course focuses on developmentally appropriate methods of observing, documenting, and assessing young children from birth to age five. On-site center observations are required.
Prerequisite(s): Approval of Department

ECE 1201 - Curriculum & Planning
4 Cr. Hr(s).
This course focuses on current curriculum standards recognized in the field of Early Childhood Education. Students will practice planning high-quality developmentally appropriate learning experiences and environments for young children from birth to age five.
Prerequisite(s): Approval of Department

ECE 1202 - Healthy & Safe Environments
3 Cr. Hr(s).
This course focuses on children's experiences emphasizing the health and safety needs of young children: including laws, rules, procedures, and routines in early childhood settings.
Prerequisite(s): Approval of Department

ECE 1400 - Introduction to Early Childhood Education CDA Preparation
3 Cr. Hr(s).
This course focuses on professional ethics and issues in the Early Childhood Education (ECE) field. Students will review historical and current trends related to ECE, and types of programs of early education and care. Center observation is required. This course includes additional materials and assignments related to the preparation for the Child Development Associate Credential (CDA).
Prerequisite(s): Approval of Department

ECE 1401 - Introductory Child Development CDA Preparation
3 Cr. Hr(s).
This course focuses on applying knowledge of the characteristics and needs of young children from birth through adolescence, for the creation of healthy, supportive, and effective learning environments. Multiple, interrelated influences on the development and learning of young children will be examined. This course includes additional materials and assignments related to the preparation for the Child Development Associate Credential (CDA).
Prerequisite(s): Approval of Department

ECE 1402 - Healthy & Safe Environments CDA Preparation
3 Cr. Hr(s).
This course focuses on children's experiences emphasizing the health and safety needs of young children: including laws, rules, procedures, and routines in early childhood settings. This course includes additional materials and assignments related to the preparation for the Child Development Associate Credential (CDA).
Prerequisite(s): Approval of Department

ECE 2103 - Literacy, Art & Music
3 Cr. Hr(s).
This course focuses on planning developmentally appropriate experiences for preschool children following guidelines of professional standards. Content areas include literacy, creative art, and music.
Prerequisite(s): Approval of Department

ECE 2104 - Math, Science & Social Studies
3 Cr. Hr(s).
This course focuses on planning developmentally appropriate experiences for preschool children following guidelines of professional standards. Content areas include math, science, and social studies.
Prerequisite(s): Approval of Department

ECE 2105 - Professionalism in Early Childhood Education
2 Cr. Hr(s).
This course focuses on a comprehensive application of the practices and ethical considerations fundamental for fostering professionalism in the field of early childhood education.
Prerequisite(s): Approval of Department

ECE 2200 - Families, Communities & Schools
3 Cr. Hr(s).
This course focuses on identifying different methods for family and community partnerships, ways to foster family engagement in the classroom, and resources to support the needs of diverse families.
Prerequisite(s): Approval of Department AND Open to ELEE majors

ECE 2201 - Guidance of Young Children
3 Cr. Hr(s).
This course focuses on developmentally appropriate guidance and behavioral intervention strategies used by early childhood professionals to help foster positive social and emotional skills in young children from birth to age five.
Prerequisite(s): Approval of Department

ECE 2301 - Early Childhood Education Practicum
5 Cr. Hr(s).
This course focuses on demonstrating best practices in an early childhood education classroom. Students will complete the state requirement of 300 classroom hours and will attend a weekly seminar on Sinclair's main campus. Background checks/fingerprints and medical documentation will be required before registration. Two classroom, twenty-one practicum hours per week.
Prerequisite(s): Approval of Department

ECE 2302 - Infant & Toddler Curriculum
3 Cr. Hr(s).
This course focuses on high-quality caregiving and developmentally appropriate practices when engaging with infants and toddlers. The importance of quality environments that support development is discussed as they relate to required standards and the care of infants and toddlers.
Prerequisite(s): Approval of Department

ECE 2303 - Early Childhood Education Practicum Part 1
3 Cr. Hr(s).
This course focuses on demonstrating best practices in an early childhood education classroom. Students will complete the state requirement of 150 out of the 300 classroom hours and will attend a weekly seminar on Sinclair's main campus. Background checks/fingerprints and medical documentation will be required before registration. Both ECE 2303 and ECE 2304 must be completed to meet full requirements.
Prerequisite(s): Approval of Department AND Must earn a C or better in the course

ECE 2304 - Early Childhood Education Practicum Part 2
2 Cr. Hr(s).
This course focuses on demonstrating best practices in an early childhood education classroom. Students will complete the state

requirement of 150 out of the 300 classroom hours and will attend a weekly seminar on Sinclair's main campus. Background checks/fingerprints and medical documentation will be required before registration. Both ECE 2303 and ECE 2304 must be completed to meet full requirements.
Prerequisite(s): Approval of Department

Economics

ECO 1100 - Introduction to Economics
3 Cr. Hr(s).
Survey of basic microeconomic and macroeconomic issues and concepts. Coverage includes: Supply, Demand, Equilibrium, the U.S. Economy, the Global Economy and Trade, Competition and Monopoly, Gross Domestic Product, Business Cycles, Unemployment, Inflation, Aggregate Demand and Aggregate Supply, Economic Growth, Fiscal and Monetary Policies.

ECO 2160 - Principles of Macroeconomics
3 Cr. Hr(s).
Basic economic principles with macro sequence. Interrelationship of households, business and government with an examination of Keynesian theory, fiscal policy and monetary policy. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 0050 OR MAT 1120

ECO 2180 - Principles of Microeconomics
3 Cr. Hr(s).
Microeconomic theory including price theory, the theory of the firm, resource demand and wage determination. Also includes public policy toward business, economic inequality, labor, trade, balance of payments and the economics of third-world nations. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 0050 OR MAT 1120

Education

EDU 1100 - Introduction to Education
3 Cr. Hr(s).
Introduction to the teaching profession. A variety of experiences to facilitate exploration of the role of school and its relationship to society. The knowledge, skills, dispositions and performances necessary for an individual to become an effective teacher.

EDU 1105 - Individuals with Exceptionalities
3 Cr. Hr(s).
Introduction to the identification, developmental characteristics, foundations, theory, legal issues, and intervention strategies for exceptional children and youth across educational and community settings.
Prerequisite(s): EDU 1100

EDU 1107 - Art & Music for Elementary Education
3 Cr. Hr(s).
This course includes art and music education for elementary education teachers. Including philosophy, skills, teaching techniques, concepts, and materials. Focus on using art and music as teaching tools with other subjects to enhance student learning.

EDU 1109 - Effective Classroom Management & Learning Environments
3 Cr. Hr(s).
Students will be introduced to concepts of creating and preserving a setting in which children are afforded a safe, productive and responsive learning environment. The course intentions are for pre-service teachers to be exposed to, interact with and become prepared through an array of practical theories and practices to develop and maintain sustainable classroom cultures and climates affording all students the opportunity for an equitable quality of education. Must be taken with EDU 1111.
Prerequisite(s): EDU 1100 AND EDU 1105
Corequisite(s): EDU 1111

EDU 1111 - Classroom Observation K-12
3 Cr. Hr(s).
This course is designed to prepare future educators with valuable insights and experiences essential for effective teaching and professional growth. Students in the Elementary Education program will gain firsthand experience in K-12 classroom settings by completing weekly classroom observations over the semester. In addition to observations, students will participate in readings, projects, and reflective activities that connect educational theory to real-world practice, fostering a deeper understanding of effective teaching. To enroll in this course, students must obtain department permission and must successfully complete and pass an FBI/BCI background check prior to registration (information will be provided by the Education Department).
Prerequisite(s): EDU 1100 AND EDU 1105 AND Successful completion of FBI/BCI background check AND Restricted to Majors AND Approval of Department
Corequisite(s): EDU 1109

EDU 2101 - Introduction to Early Childhood Trauma
3 Cr. Hr(s).
This course is an introductory course that looks at the effects of trauma on the brain, learning, and social and emotional intelligence.

EDU 2102 - Understanding the Brain & Trauma
3 Cr. Hr(s).
This course explore brain development and the impact of trauma on individual development. Students will learn about social emotional development and apply trauma sensitive approaches that align with brain development.

EDU 2103 - Trauma-Informed Classrooms
3 Cr. Hr(s).
Trauma-Informed Classrooms will explore and create a foundational understanding of the characteristics, effects, teaching strategies, and teacher expectations and responsibilities to assist in working with children in grades K-5 who experienced trauma .

Electronics Engineering Technology

EET 1100 - Introduction to Biomedical Equipment Maintenance
1 Cr. Hr(s).
This course introduces and prepares participants for entry-level medical equipment maintenance concepts. This basic course outlines the training, skills, and scope related to the Biomedical Equipment Technician career field within health care, field service engineer and depot maintenance environments.

EET 1116 - Electronics Schematics & Fabrication
4 Cr. Hr(s).
Draw circuits using Multisim. Compose directories using Windows commands. Identify schematic symbols and components. Produce a technical document with text, graphs and schematics. Assembly of circuits. Three classroom, three lab hours per week.

EET 1120 - Introduction to DC & AC Circuits
2 Cr. Hr(s).
Introduction to direct and alternating current (DC/AC) circuits, power, three phase and test equipment. One classroom, two lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445

EET 1121 - UAS Remote Sensing & Analysis
1 Cr. Hr(s).
This course introduces the foundations of

remote sensing and data analysis. Students will acquire knowledge of the characteristics of various sensors and remote sensing applications applicable to civil unmanned aerial system (UAS) operations. Emphasis is placed on data acquisition and processing.

EET 1131 - Digital Electronics
4 Cr. Hr(s).
Number systems, operations and codes, logic gates, Boolean algebra, DeMorgan's theorem and logic simplification, combination logic circuits, encoders/decoders, multiplexers/demultiplexers, adders, subtractors and ALUs, flip-flops and related devices, counters, shift registers, memory and storage, integrated circuit technologies. Three classroom, three lab hours per week.
Prerequisite(s): EET 1116

EET 1139 - Electrical Machinery
3 Cr. Hr(s).
Basic principle, theory, operation and characteristics of common DC and AC machinery. Two classroom, two lab hours per week.
Prerequisite(s): EET 1120 OR (EET 1150 AND EET 1155)

EET 1150 - DC Circuits
4 Cr. Hr(s).
Electrical components and quantities, voltage , current and resistance, Ohm's law; analysis of series, parallel and series-parallel circuits, circuit theorems, capacitors and inductors, transient response of capacitive and inductive circuits. Three classroom, three lab hours per week.
Prerequisite(s): MAT 0200

EET 1155 - AC Circuits
3 Cr. Hr(s).
Sinusoidal wave properties, complex numbers and phasors, behavior of transformers, steady-state behavior of RC circuits under AC conditions, steady-state behavior of RL circuits under AC conditions, steady-state behavior of RLC circuits under AC conditions, analysis of basic filter circuits, AC network theorems such as superposition, Thevenin's and Norton's theorems, three phase and polyphase power and power factor analysis. Two classroom, two lab hours per week.
Prerequisite(s): EET 1150 AND MAT 1580

EET 1158 - Aerospace Spatial Visualization
2 Cr. Hr(s).
This course provides a basic overview of remote sensing, highlights the need for space astronomy, describes the composition of the space environment, principles of black/white and color photography, highlights the importance and different aspects of aerial photography and videography, aerial ground control and land mapping, visual image interpretation, thermal radiation principles associated with thermal sensing, remote sensing history from space as well as the U.S. Landsat program operations and contribution, digital image processing and classification, and microwave sensing principles and applications. One classroom, two lab hours per week.

EET 1166 - Industrial Machine Wiring
3 Cr. Hr(s).
Elementary industrial machine wiring principles; schematics, panel layouts, assembly, wiring techniques and equipment used in automated industry; standards for safe operation of equipment and protection of personnel with emphasis given to hands-on work and actual wiring of panels. Two classroom, two lab hours per week. Note: EGR 1106 may be taken concurrently with department approval.
Prerequisite(s): EET 1120 AND EGR 1106

EET 1198 - Digital Technology
2 Cr. Hr(s).
Electrical fundamentals, introduction to basics of digital logic and circuits, digital systems and basic digital circuit design. One classroom, two lab hours per week.

EET 2101 - Biomedical Instrumentation I
3 Cr. Hr(s).
This practical hands-on course introduces participants to the theory, operational performance verification and principles of medical equipment maintenance required to safely perform duties as a Biomedical Technician within a healthcare environment. Two classroom, two lab hours per week.
Prerequisite(s): EET 1155 OR EGR 2201

EET 2102 - Biomedical Instrumentation II
3 Cr. Hr(s).
This practical, hands-on course introduces participants to medical equipment performance verification skills (techniques) and standards of Biomedical Technician practices. Two classroom, two lab hours per week.
Prerequisite(s): EET 2101

EET 2103 - Introduction to Vacuum System Technology
3 Cr. Hr(s).
In this course, students will be introduced to the operational mechanisms and process use of vacuum pumps used in the semiconductor industry. Students will explain the operational methodology and process use of equipment that require vacuum pumps used in the semiconductor industry. Students will demonstrate problem-solving, critical thinking and communication skills while learning how to perform maintenance on a vacuum system.

EET 2157 - Radio Frequency Identification (RFID) Technology
3 Cr. Hr(s).
Review of basic radio frequency identification (RFID) terminology, emerging electronic product code (EPCglobal) standards, tag design and applications; interrogators configuration, installation and maintenance of common peripherals, various hardware and software components of a complete system, hands-on lab experience and basic RFID applications. Two classroom and two lab hours per week.
Prerequisite(s): EET 1116 OR EET 1120 OR EET 1198 OR MAN 1106

EET 2201 - Electronic Devices & Circuits
4 Cr. Hr(s).
Semiconductor properties, diode applications, special-purpose diodes, bipolar junction transistors (BJTs), BJT biasing circuits and stability, BJT amplifier circuits, multistage amplifier design, power amplifiers, field effect transistors (FETs), JFET and MOSFET biasing circuits, FET amplifier circuits, frequency analysis, thyristors and applications, negative and positive feedback concepts, oscillators, Op-Amp circuits and applications, and electronically regulated power supplies. Three classroom, three lab hours per week.
Prerequisite(s): EET 1155 OR EGR 2201

EET 2221 - UAS Sensors & Systems
4 Cr. Hr(s).
Course will provide students a foundational understanding encompassing all elements of an unmanned aerial system (UAS). Students will be provided the knowledge and necessary skill set to support UAS application. Three classroom, three lab hours per week.
Prerequisite(s): (AVT 1130 OR EET 1120) AND EET 1121

EET 2257 - Radio Frequency Identification (RFID) Capstone
3 Cr. Hr(s).
Initiating best analysis, design and implementation of a Radio Frequency Identification (RFID) solution. Configuration and troubleshooting exercises designed to illustrate the power of today's RFID readers and their interaction with input/output, practical, in-depth instruction and hands-on guidance for leveraging RFID in the real world. Two classroom, two lab hours per week.
Prerequisite(s): EET 2157

EET 2259 - Programming for Electronics Technology
4 Cr. Hr(s).
Computer solutions of engineering technology problems using LabVIEW. Covers the LabVIEW programming environment and virtual instruments, data types, debugging, sub-virtual instruments, programming structures, arrays, graphical presentation and analysis, file input/output, instrument control, data acquisition, and applications to electronic circuits. Three classroom, two lab hours per week.
Prerequisite(s): EET 2201 AND EET 1131

EET 2261 - Microprocessors
4 Cr. Hr(s).
Microprocessor architecture, assembly language programming, bus structures and timing diagrams, memory technologies and interfacing, input/output interface and systems, interrupt-processed input/output, direct memory access (DMA), microcontroller applications and microprocessor-based communications. Three classroom, three lab hours per week.
Prerequisite(s): EET 1131 OR EET 1198

EET 2270 - Electronics Engineering Technology Internship
1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten co-op hours per week per credit hour.
Prerequisite(s): Approval of Department

EET 2278 - Electronics Project Capstone
4 Cr. Hr(s).
Review of electronic circuits, analog and digital electronics, microcontrollers, design and layout of printed circuit board, fabricate-assemble-test-troubleshoot working prototype, write report. Two classroom, four lab hours per week.
Prerequisite(s): EET 2201 AND EET 2261

EET 2281 - Programmable Logic Controllers
3 Cr. Hr(s).
Provides history of control systems and PLCs, use of number systems, ladder logic programming devices, Control I/O modules, relays, contacts, coils, and timers, counters and sequencers, fundamental PLC programming, and data transfer. Two classroom, two lab hours per week.
Prerequisite(s): EET 1120 OR EET 1131 OR EET 1198 OR (EET 1181 AND EET 1182)

EET 2282 - Advanced Programmable Logic Controllers
3 Cr. Hr(s).
Demonstrate the use of control and set analog I/O, bit and project based programming, control servos with analog & High Speed Counter (HSC) cards, the use of ethernet network for programmable logic controllers (PLCs), the interaction between PLCs and sensors, installation and repair. Two classroom, two lab hours per week.
Prerequisite(s): EET 2281

Emergency Medical Services

EMS 1100 - Emergency Medical Responder Lecture & Laboratory
2 Cr. Hr(s).
Emergency medical responders provide initial care for the sick and injured prior to the arrival of the ambulance. This education can be valuable to safety officers working in industry, police officers and some rural fire departments. This course will meet a total of 16 lecture hours and 32 laboratory hours. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): At least 18 years of age

EMS 1150 - Emergency Medical Technician: Lecture
5 Cr. Hr(s).
The Emergency Medical Technician Lecture provides students with the didactic information needed to understand the care of the sick and injured at the emergency medical technician level. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Division Advisor AND 17 years old
Corequisite(s): EMS 1155

EMS 1155 - Laboratory for Emergency Medical Technician
2 Cr. Hr(s).
The Emergency Medical Technician Laboratory provides students with the psychomotor information needed to understand the care of the sick and injured at the emergency medical technician level. Students will attend 64 hours of laboratory, 8 hours of clinical in the hospital and at least 8 hours in an ambulance during the semester. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Corequisite(s): EMS 1150

EMS 2100 - Applied Anatomy, Physiology & Pathophysiology for Emergency Medical Services Provider
3 Cr. Hr(s).
This course provides the fundamental anatomy, physiology and pathophysiology information necessary to understand the care of the sick and injured at the paramedic level. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): (BIO 1107 OR BIO 1121) AND Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required

EMS 2105 - Paramedic 1: Lecture
2 Cr. Hr(s).
The paramedic student is introduced to the fundamental concepts of patient assessment, airway management and pharmacology. These concepts are reinforced within the laboratory setting of EMS 2110. Successful students will then be prepared to begin applying this knowledge within the clinical setting. Clinical activity begins in the second semester of the paramedic program. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department

EMS 2110 - Paramedic 1: Laboratory
2 Cr. Hr(s).
This is the introductory laboratory experience within the paramedic program. Skills will be reviewed and retested from the Emergency Medical Technician level. CPR will be retested. New skills will involve patient assessment, airway management and pharmacology, including drug math. Four lab hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department

EMS 2125 - Paramedic 2: Lecture
5 Cr. Hr(s).
The paramedic student will explore cardiology, pulmonology and pediatrics. This course covers ECG acquisition, interpretation and appropriate patient management, cardiovascular pathology and management, respiratory pathology and management and care for the pediatric patient. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department

EMS 2130 - Paramedic 2: Laboratory
2 Cr. Hr(s).
This course covers the assessment and management of patients with cardiac/respiratory disease. Also covered will be care of the pediatric patient. Specific skills covered include ECG, cardiac monitor use, CPR, advanced cardiac life support (adult and pediatric) and management of respiratory emergencies. Four lab hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department

EMS 2135 - Paramedic 2: Clinical
2 Cr. Hr(s).
The paramedic student is introduced to the hospital clinical setting where he/she will apply knowledge learned from the lecture and laboratory setting in the direct supervised care of patients. Fourteen practicum hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required

EMS 2136 - Paramedic 2a: Clinical
1 Cr. Hr(s).
The paramedic student is introduced to the hospital clinical setting where he/she will apply knowledge learned from the lecture and laboratory setting in the direct supervised care of patients. All students must complete 112 hours in the hospital setting. Seven practicum hours per week. This course must be followed by EMS 2137. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required

EMS 2137 - Paramedic 2b: Clinical
1 Cr. Hr(s).
The paramedic student is introduced to the hospital clinical setting where he/she will apply knowledge learned from the lecture and laboratory setting in the direct supervised care of patients. All students must complete a 112-hour hospital experience. Seven practicum hours per week. This course occurs after EMS 2136. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required

EMS 2150 - Paramedic 3: Lecture
5 Cr. Hr(s).
The paramedic student will explore management of the trauma patient and an in-depth discussion of the medical patient including assessment and management. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department

EMS 2155 - Paramedic 3: Laboratory
2 Cr. Hr(s).
This course covers the assessment and management of patients suffering from traumatic injuries, basic rescue techniques, obstetrical emergencies and medical emergencies. Specific skills covered include managing patients in vehicles, traumatic airway management, neonatal care and differential diagnosis. Four lab hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department

EMS 2160 - Paramedic 3: Clinical
1 Cr. Hr(s).
This course is divided into two settings: hospital and out-of-hospital. Within the hospital clinical setting, the student will work to master knowledge learned related to the direct supervised care of patients. Once mastery is demonstrated, the student will be cleared to apply his/her education in the out-of-hospital setting. All students must complete a 112-hour field experience/ambulance assignment. Seven practicum hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required

EMS 2175 - Paramedic 4: Lecture
2 Cr. Hr(s).
This course is a complaint based approach to patient care. Students will focus on integrating pathology, assessment and patient care knowledge in the care of patients with multiple pathologies. Four classroom hours per week for eight weeks. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department

EMS 2180 - Paramedic 4: Field Experience
1 Cr. Hr(s).
Under direct supervision, students work to integrate lecture, laboratory and hospital clinical knowledge to treat patients in the out-of-hospital setting. The goal is to establish mastery of patient care skills as they apply to the out-of-hospital care setting. All students must complete a 112-hour field internship. Seven practicum hours per week. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department AND background check, current vaccinations (including COVID-19), and a health certificate required

EMS 2200 - Paramedic 5: Integration / Refresher Lecture
2 Cr. Hr(s).
This course reviews all materials from the entire paramedic program. Its goals are to integrate past knowledge and skills into a comprehensive approach to out-of-hospital patient care. Four classroom hours per week for eight weeks. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department

EMS 2205 - Paramedic 5: Integration / Refresher Laboratory
1 Cr. Hr(s).
This course will review all psychomotor skills covered within the paramedic program as students are prepared for the comprehensive practical examination. Students will also have applied knowledge evaluated within the field setting. Students will discuss appropriate patient care with the medical director of the EMS program. Four lab hours per week for eight weeks. The EMS program is accredited by the Ohio Division of EMS, Department of Public Safety. Accreditation number 326.
Prerequisite(s): Approval of Department

EMS 2250 - Paramedic Refresher
3 Cr. Hr(s).
This course meets or exceeds the national standard curriculum for paramedic refresher. Designed to meet the needs of two types of emergency medical services providers: 1) Students who are recertifying their state licensure cards can use this course to complete their state requirements. 2) Students who need to remediate on material before taking their national registry examination can use this course to meet those needs. Two classroom, two lab hours per week.

EMS 2300 - Critical Care Paramedic 1
3 Cr. Hr(s).
This course explores the technologically challenging area of critical care medicine. The use of advanced diagnostics such as arterial lines and swan ganz catheters and patient management skills such as ventilators, LVADs and advanced pharmacology will be explored.
Prerequisite(s): Approval of Department AND Paramedic

EMS 2305 - Critical Care Paramedic 2
3 Cr. Hr(s).
This course explores the technologically challenging area of critical care medicine. The use of advanced diagnostics such as laboratory results, x-rays and ultrasounds and the management of patients with trauma, shock and various medical conditions will be explored.
Prerequisite(s): Approval of Department AND Paramedic

Engineering

EGR 1101 - Introductory Mathematics for Engineering Applications
4 Cr. Hr(s).
An overview of math topics used in engineering courses: algebra, trigonometry, vectors, complex numbers, sinusoids, systems of equations, matrices, differentiation, integration, differential equations. All math topics are presented within the context of engineering applications, reinforced through examples from engineering courses. Also introduces the engineering analysis software MATLAB. Three classroom, three lab hours per week.
Prerequisite(s): MAT 1570 OR MAT 1580

EGR 1105 - Soldering Fundamentals
3 Cr. Hr(s).
This practical, hands-on course introduces participants to the basic concepts, tools, materials, processes, and skills required to safely hand solder through-hole and surface mount chip components according to industry standards. Two classroom, three lab hours per week.

EGR 1106 - Basic Mechanical & Electrical Skills
2 Cr. Hr(s).
Utilization of general/specialized hand/power tools that are typically used in the electromechanical industry; use of various dimension measurement devices; simple machine repair procedures from belt replacement to complete subsystem repair; drilling, reaming and tapping holes for various mechanical fasteners. Elementary industrial machine wiring principles; schematics, panel layouts, assembly and wiring techniques. One classroom, two lab hours per week.

EGR 1111 - Introduction to Nanotechnology
3 Cr. Hr(s).
Introduction to nanotechnology and its application to engineering systems, emphasizing basic principles, materials, measurement tools, fabrication techniques, and applications. Two classroom, two lab hours per week.

EGR 1121 - Introduction to the Intelligence Community
3 Cr. Hr(s).
Presents an overview of the Intelligence Community (IC), the origin and purpose of the IC, its current structure and the diverse roles and missions of its members. Students will study the intelligence cycle, the heart of the IC, by examining the entire process used for creating intelligence: identifying requirements; tasking appropriate agencies and systems to collect data; the processing, exploiting and analyzing of the data and the production and delivery of timely, accurate and relevant intelligence products. This course will also introduce students to operations and communications security, counterintelligence and covert action, homeland security, intelligence oversight and ethics. Two classroom, two lab hours per week.
Prerequisite(s): Approval of Department
Corequisite(s): EGR 1122

EGR 1122 - Fundamentals of Remote Sensing in Intelligence
3 Cr. Hr(s).
This course emphasizes the science, technology and applications of remote sensing, bringing together related information in materials science, physics, optics, electronics, computer processing and other disciplines. Students completing this course will be equipped to approach problems ranging from environmental to social to industrial data gathering and interpretation. Two classroom, two lab hours per week.
Prerequisite(s): Approval of Department
Corequisite(s): EGR 1121

EGR 1128 - Robotics in Computer Integrated Manufacturing (CIM) Systems
3 Cr. Hr(s).
This course serves as an introduction to automated systems. The basics of sensors, logic control systems, motion control systems, robotics and flexible manufacturing systems will be covered. The course will be taught using demonstration and discussion combined with individual and team centered project-based learning. One classroom, four lab hours per week.

EGR 1144 - Sensors & Vision Systems
3 Cr. Hr(s).
Introduction to basic sensors used in Computer Integrated Manufacturing (CIM) systems. Theory of operation, wiring, installation, testing and troubleshooting sensors and circuits. The analysis of various methods of utilizing vision systems in industrial applications using camera, lighting and software. Two classroom, three lab hours per week.
Prerequisite(s): EET 1120 AND EGR 1128

EGR 1201 - Introduction to Spectral Sensing with Applications in Intelligence
3 Cr. Hr(s).
Concepts of spectral remote sensing as they are applied to military / intelligence applications with special emphasis on commercial sensors and solutions. Advantages and disadvantages of special remote sensors. Content will cover available unclassified spectral instruments (both hyper-spectral and multi-spectral sensors), their characteristics and how to best employ them. Topics include Basic Spectral Phenomenology, the Spectral Signature, Sensor Analysis, Data Products and Data Fusion. Two classroom, two lab hours per week.
Prerequisite(s): EGR 1121 AND Approval of Department
Corequisite(s): EGR 1202

EGR 1202 - Introduction to Radar
3 Cr. Hr(s).
Capabilities and limitations of radar, the performance and implementation of its critical sub-systems and the requirements particular radars must meet in order to perform common Measurement and Signature Intelligence (MASINT) and Advanced Geospatial Intelligence (AGI) missions (e.g. Synthetic Aperture Radar (SAR), Line of Sight and Over the Horizon). Students will become conversant in Radar and able to exploit its use in a variety of potential intelligence tasks with a basic knowledge enabling them to predict the expected performance of a radar system. Two classroom, two lab hours per week.
Prerequisite(s): EGR 1122 AND Approval of Department
Corequisite(s): EGR 1201

EGR 1211 - Introduction to Large Area Surveillance
3 Cr. Hr(s).
This course is designed to familiarize the student with the concepts of electro-optical remote sensing of important objects that can

appear anywhere in the world without warning for a limited period of time. Some of these objects can also be rapidly moving. Such objects include missiles and aircraft in powered flight, nuclear and conventional explosions, fires and other military activity. Discussion includes the unique object signature and sensor characteristics that make detection of these objects possible while continuously monitoring large areas. Two classroom, two lab hours per week.
Prerequisite(s): EGR 1202 AND Approval of Department AND Secret Clearance

EGR 1212 - Measurement & Signal Intelligence
3 Cr. Hr(s).
Overview of Measurement and Signature Intelligence (MASINT) and Advanced Geospatial Intelligence (AGI) disciplines including the science behind geophysical signatures such as Chemical, Biological, Radiological and Nuclear Weapons. MASINT as it relates to Seismic and Acoustic phenomena, Geophysical Materials and Radio Frequency Spectrum. Different technologies used in lethal and nonlethal Directed Energy Weapons identifying strengths and vulnerabilities of electromagnetic and chemically powered artillery. Students will apply MASINT/AGI collection and processing techniques and capabilities to develop a collection and analysis plan targeting one of today's challenging intelligence problems. Two classroom, two lab hours per week.
Prerequisite(s): EGR 1202 AND Approval of Department AND Secret Clearance

EGR 1217 - Fluid Power & Control
2 Cr. Hr(s).
Fundamentals and basic applications of fluid power components, systems, controls and accessories. The design parameters and the terminology required to specify and plan fluid power systems. Basic electrical and Programmable Logic Control (PLC) control of fluid power components. One classroom, three lab hours per week.

EGR 2131 - Engineering Digital Design
4 Cr. Hr(s).
Binary systems, Boolean algebra, combinational and sequential circuits, digital design using computer-aided design (CAD) tools with hardware description language. Laboratory exercises include simulation using CAD tools and implementation of designs on breadboards and on field-programmable-gate-array boards. This course is designed for Engineering University Transfer students. Three classroom, three lab hours per week.
Prerequisite(s): MAT 1470 OR MAT 1570 OR MAT 1580 OR MAT 2270 OR MAT 2280

EGR 2201 - Circuit Analysis
4 Cr. Hr(s).
Principles of linear circuit analysis, covering circuits containing passive and active components. Analysis of direct-current (DC) and alternating-current (AC) circuits, including transient behavior and sinusoidal steady-state behavior. This calculus-based course is designed for Engineering University Transfer students. Three classroom, three lab hours per week.
Prerequisite(s): MAT 2270 OR EGR 1101

EGR 2202 - Introduction to Communications Principles
3 Cr. Hr(s).
Introduces a basic understanding of communication systems for today's technology. Both analog and digital communication systems will be covered. Topics include amplitude and frequency modulation, baseband communication, digital transmission, noise and error correction, and layer network models. Two classroom, two lab hours per week.
Prerequisite(s): EET 1120 AND MAT 1570 OR MAT 1580

EGR 2205 - Integrated Circuit (IC) Fabrication Techniques
4 Cr. Hr(s).
This course is designed to develop an understanding of the materials, devices, and processing techniques used in the current semiconductor industry. The current manufacturing processes in the silicon-based semiconductor industry, starting from silicon wafer production to final IC (integrated circuit) development, are covered. Three classroom, three lab hours per week.
Prerequisite(s): EET 1120

EGR 2211 - Nanotechnology Applications & Fabrications Techniques
3 Cr. Hr(s).
Discussions and examples of applications of nanotechnology in Biology, Physics, Chemistry, Medical, Material Science, and Engineering. Introduction to nanofabrication tools, clean room and scanning electron microscope (SEM) via remote lab demonstrations. Twenty-one practicum hours per week.
Prerequisite(s): EGR 1111

EGR 2231 - Troubleshooting of Automated Systems
3 Cr. Hr(s).
Concept of troubleshooting and its importance in manufacturing systems. Troubleshooting philosophies, flowchart examination, electrical and mechanical troubleshooting. Techniques for troubleshooting systems containing sensors, PLCs, Robots, HMIs and other common automation equipment. Fault determination using software to monitor the performance of small automated systems. Two classroom, three lab hours per week.
Prerequisite(s): EET 2281 AND EGR 1128

EGR 2250 - Electromechanical Repair
3 Cr. Hr(s).
Teaches the student theory of controller operation, function of power inputs and supply units, command and feedback loops. Also, troubleshooting, diagnostics and repair including removal and replacement of belts, pulleys, bearings and gears. Finalizing with alignment and recalibration through the computer controller. Two classroom, three lab hours per week.
Prerequisite(s): EGR 2252

EGR 2252 - Teach Pendant Robot Programming
3 Cr. Hr(s).
Introduction to Teach Pendant Programming (TPP) for robots, including TPP program development on the teach pendant and through offline programming software. Programs, tested using Fanuc robots, will be written for motion control, input/output activation and palletizing. Two classroom, three lab hours per week.
Prerequisite(s): EGR 1128

EGR 2256 - Automated Data Acquisition Systems
3 Cr. Hr(s).
Data acquisition technologies with the use of bar coding, image recognition, optical character recognition, Charge Coupled Device (CCD) camera images, laser scanning, voice recognition, radio frequency and microwave transponder. Two classroom, two lab hours per week.
Prerequisite(s): EET 1198 AND EGR 2252 AND EGR 2261

EGR 2261 - Engineering Problem Solving using "C" & "C++"
4 Cr. Hr(s).
Solve representative engineering problems with a focus on: writing in object-oriented style, computer control of input/output port control, stand-alone executable code and library linking. Computer solutions of engineering problems using C and C++ incorporating compiling, running, editing and debugging techniques along with language-specific functions, array and pointer structures

and stream I/O. Three classroom, three lab hours per week.
Prerequisite(s): MAT 1470 OR MAT 1580

EGR 2270 - Automation & Control Internship I
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten hours work per week per credit hour.
Prerequisite(s): Approval of Department

EGR 2271 - Automation & Control Internship II
This course is repeatable.

1 - 4 Cr. Hr(s).
Students will earn credit toward degree requirements for work learning experience for a second semester. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare reports and/or projects each semester. Ten hours work per week per credit hour.
Prerequisite(s): EGR 2270

EGR 2272 - Automation & Control Internship III
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten hours work per week per credit hour.
Prerequisite(s): EGR 2271

EGR 2273 - Automation & Control Internship IV
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten hours work per week per credit hour.
Prerequisite(s): EGR 2272

EGR 2274 - Automation & Control Internship V
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten hours work per week per credit hour.
Prerequisite(s): EGR 2273

EGR 2275 - Automation & Control Technology Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each semester. Ten hours work per week per credit hour.
Prerequisite(s): Approval of Department

EGR 2278 - Automation & Control Capstone
3 Cr. Hr(s).
Project-based review of robotic workcell system design, layout and integration of related industrial systems, and skills from the following areas: robots and programming languages, electronic systems, component installation, troubleshooting, mechanical repair and preventative maintenance. Additional focus on graphics, work processing, analytical and simulation tools, assembly, testing, troubleshooting and repair of a functional robot workcell. One classroom, four lab hours per week.
Prerequisite(s): EGR 2231 AND EGR 2252 AND EET 2281 OR Approval of Department

EGR 2279 - Mechatronics Capstone
3 Cr. Hr(s).
Project-based review of electro-mechanical system design, layout and integration of related industrial systems, and skills from the following areas: robots and programming languages, electronic systems, component installation, motors, troubleshooting, mechanical design, mechanical repair and preventative maintenance. Additional focus on schematics, teamwork and communications, analytical and simulation tools, assembly, testing, troubleshooting and repair of a functional electro-mechanical device. One classroom, four lab hours per week.
Prerequisite(s): EGR 1128

EGR 3303 - Advanced Programmable Logic Controllers II
3 Cr. Hr(s).
This hands-on course will teach PLC distributed networking and communication utilized in advanced manufacturing. Concepts such as modern system architecture techniques and implementation of cybersecurity defense-in-depth will be examined. Two classroom, two lab hours per week.
Prerequisite(s): EET 2282

EGR 4101 - Modern Communication Systems
3 Cr. Hr(s).
This is a continuation into the investigation of modern communications systems. Topics include an introduction to the American Radio Relay League (ARRL), antennas, propagation methods, wireless systems, telephony, networking, and related components. Two classroom, two lab hours per week.
Prerequisite(s): EGR 2202

EGR 4120 - Advanced Microprocessors
3 Cr. Hr(s).
This practical hands-on course examines embedded design of microcontrollers and advanced communication/network/security/wireless applications for IoT systems and sensors. Two classroom, two lab hours per week.
Prerequisite(s): EET 2261

EGR 4150 - Modern Robotics
3 Cr. Hr(s).
This practical hands-on course explores Industry 4.0 related robotics with respect to the high-tech Supply Chain/Logistics and Advanced Manufacturing industries. Modern technology, security, and communications will be explored as it applies to the fast-changing field of robotics. Two classroom, two lab hours per week.
Prerequisite(s): EGR 2252

English

ENG 0101 - English Composition I Booster
2 Cr. Hr(s).
This course is taken in conjunction with ENG 1101, English Composition I. ENG 0101 will be designed to provide additional instruction in writing conventions, practice in critical reading, and other supports for the major

assignments in ENG 1101. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours.
Prerequisite(s): Approval of Division Advisor
Corequisite(s): ENG 1101 in select sections

ENG 1101 - English Composition I
3 Cr. Hr(s).
In English Composition I students learn reflective, analytical and argumentative writing strategies, incorporating sources and personal experience. Students will negotiate between public and private rhetorical situations and purposes to achieve academic literacy. They will write multiple drafts using a recursive writing process as they work toward fluency in style and mechanics. Note: Students who have not successfully completed the prerequisites listed can register for ENG 1101 together with the corequisite course ENG 0101, English Composition I Booster.
This course has no textbook costs.
Prerequisite(s): DEV 0035 OR Placement Test Score

ENG 1131 - Business Writing
3 Cr. Hr(s).
Using audience analysis, a writing process and grammatical and formatting skills in an electronic environment, students write letters and messages for both internal and external business situations; they conduct business research and write and document short, informal research business reports, incorporating graphics and presentation materials.
Prerequisite(s): Placement Test Score

ENG 1199 - Textual Editing
3 Cr. Hr(s).
Strategies to achieve a clear, concise, cohesive and emphatic writing style; sentence structure; contemporary grammar and usage.
Prerequisite(s): Placement Test Score

ENG 1201 - English Composition II
3 Cr. Hr(s).
English Composition II, building on the skills in English Composition I, develops rhetorical literacy through research, critical reading and multigenre writing tasks. Through major and minor, cumulative and stand-alone assignments, students construct arguments and analyses, ethically incorporating academic sources while developing their own voices as writers and citizens.
This course has no textbook costs.
Prerequisite(s): ENG 1101

ENG 2250 - Introduction to Creative Writing
3 Cr. Hr(s).
Develop skills for understanding and analyzing the art and craft of writing fiction, literary nonfiction, poetry, and drama, focusing on the basics of writing creatively including description, image, rhythm, sound, metaphor, voice, storytelling, and character. Develop critical editorial skills for peers' work. Discuss how a particular work is successful and how to make it stronger. Read published stories, essays, poems, and plays that represent a variety of diverse voices in terms of craft. Learn how to apply the techniques of a diverse array of writers to their own writing. Explore hybrid forms and emerging media.

ENG 2255 - Poetry Writing
3 Cr. Hr(s).
Writing and critical reading of poetry. Manuscript form, publication and market information.

ENG 2256 - Fiction Writing
3 Cr. Hr(s).
Traditional elements of short stories (character, scene, conflict, exposition, dialogue, plot and point of view) will be studied, involving student practice in a workshop setting. In addition to extensive student practice, students will read and analyze the work of published writers, learn how to submit their own work for publication and extensively study and write in one or more literary genres. Students will also study alternative or experimental fiction writing techniques.
Prerequisite(s): ENG 1101

ENG 2257 - Creative Writing: Nonfiction
3 Cr. Hr(s).
Nonfiction writing covers magazine, newspaper and Internet article writing. It emphasizes generating, researching and developing nonfiction.
Prerequisite(s): ENG 1101

ENG 2259 - Novel Writing
3 Cr. Hr(s).
Novel writing covers advanced study of traditional novel elements in a workshop setting, including the mechanics of manuscript submission.
Prerequisite(s): ENG 1101

ENG 2262 - Writing to Publish
3 Cr. Hr(s).
This course introduces students to concepts and procedures related to publishing writing, as well as the business and professional aspects of establishing and maintaining a writing career. Topics covered include submission procedures, self-promotion, working with editors and social media, giving readings, and conducting workshops. The types of publishing houses and presses, as well as professional conduct and correspondence is also covered in this course. By the end of this course, students will have an understanding of how to publish their work and market their writing.
Prerequisite(s): ENG 2255 OR ENG 2256 OR ENG 2257 OR ENG 2259

ENG 2270 - English Internship
This course is repeatable.

1-3 Cr. Hr(s).
Provides students the opportunity to gain professional knowledge and skills from a planned work-based learning experience in their career field. In consultation with the employer and faculty, students establish learning outcomes related to their program of study and prepare documents detailing how the experience led to the application of knowledge and skills from their major. Students already working in a relevant field may apply to use that experience to meet internship requirements. Internship hours vary based on credit hours.
Prerequisite(s): Approval of Department

English for Speakers of Other Languages

ESL 0100 - ESOL Intensive Integrated Lab
3 Cr. Hr(s).
This course is a multi-level lab for basic, intermediate, and advanced ESOL students. The course will reinforce the outcomes from their other ESOL courses. Nine lab hours per week.
Prerequisite(s): Approval of International Education Office

ESL 0120 - Reading & Writing Basics
4 Cr. Hr(s).
This beginning course focuses on developing basic reading comprehension and basic grammar and writing skills. Students will be able to write simple sentences, questions, and complete personal information forms. Common everyday vocabulary, spelling, and punctuation will be developed.
Prerequisite(s): Accuplacer Listening ESL Placement

ESL 0125 - Basic Speaking & Listening
4 Cr. Hr(s).
This beginning course focuses on developing basic skills in pronunciation, listening, and speaking. This course will provide practice in pronunciation and comprehension of informal and academic situations.

Prerequisite(s): Accuplacer Listening ESL Placement

ESL 0130 - ESL Reading & Writing I
4 Cr. Hr(s).
This class focuses on developing reading and writing skills at the sentence and paragraph level. The class also includes vocabulary development and intensive grammar review.
Prerequisite(s): ESL 0120 OR Accuplacer Listening ESL Placement

ESL 0135 - ESL Reading & Writing II
4 Cr. Hr(s).
This class develops reading skills in both fluency and comprehension. Writing skills at the paragraph level and short essay. Advanced vocabulary development and grammar usage are included.
Prerequisite(s): ESL 0130 OR Accuplacer Listening ESL Placement

ESL 0140 - ESL Listening & Speaking I
4 Cr. Hr(s).
Through individual and collaborative activities, this course will introduce basic to intermediate conversational skills to promote student development and achievement of listening and speaking skills needed for communication in the English language.
Prerequisite(s): ESL 0125 OR Accuplacer Listening ESL Placement

ESL 0145 - ESL Listening & Speaking II
4 Cr. Hr(s).
Through individual and collaborative activities, this course will introduce high-intermediate to advanced conversational skills to promote student development and achievement of listening and speaking skills needed for communication in the English language.
Prerequisite(s): ESL 0140 OR Accuplacer Listening ESL Placement

ESL 0150 - ESL Basic
4 Cr. Hr(s).
This basic integrated skills course will provide opportunities for listening, speaking, reading, and writing. The goal is to build student confidence in using English skills to communicate in everyday life, at work, and in school.
Prerequisite(s): Accuplacer Listening ESL Placement

ESL 0170 - ESL Intermediate
4 Cr. Hr(s).
This intermediate integrated skills course will provide opportunities for listening, speaking, reading and writing. The goal is to build student confidence in using English skills for academic purposes.
Prerequisite(s): ESL 0150 OR Accuplacer Listening ESL Placement

ESL 0190 - ESL Advanced
4 Cr. Hr(s).
This advanced integrated skills course will provide opportunities for listening, speaking, reading and writing. The goal is to build student confidence in using English skills for academic purposes.
Prerequisite(s): ESL 0170

Entrepreneurship

ENT 2140 - Small Business Finance
3 Cr. Hr(s).
For the student/entrepreneur with no background in finance and accounting. Students will gain a foundation in small business finance: financial and economic concepts; financial terminology; understanding, preparing, analyzing and presenting financial statements; and financial forecasting and budgeting techniques.

ENT 2160 - Business Plan Development
3 Cr. Hr(s).
Upon successfully completing the course, students will understand the business plan development process and will have developed a business plan. Extensive research, writing and oral presentations are required. Students will address: business concept evaluation; business plan development; presentation; evaluation of business plans; identification and evaluation of funding sources for new or existing enterprises.
Prerequisite(s): MAN 1107 AND MRK 2220 AND ENT 2140

Environmental & Energy Engineering Technology

EGV 1100 - Sustainability in the Built Environment
2 Cr. Hr(s).
Overview of sustainability in the built environment, using the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) as a framework. Field trips and guest speakers are an integral part of this course, showing the sustainability concepts in various contexts, such as water, energy, materials, indoor environmental quality, and site design. This course also helps prepare the student for the LEED Green Associate Exam. One classroom, two lab hours per week.

EGV 1101 - Alternate & Renewable Energy Sources
3 Cr. Hr(s).
Overview of past, recent and current research to find viable alternative sources of energy. Examples include water, wind, solar, bio-mass, alternative liquid fuels and introduction to fuel cell technology. Study of applied technologies in the context of how to relieve complete dependence on petrochemical-based products. A case study approach to learning is used. Two classroom, two lab hours per week.

EGV 1251 - Introduction to Energy Management Principles
3 Cr. Hr(s).
The course introduces the principles of energy management and an effective energy management plan. This course provides an overview of energy consuming systems and operations of commercial and industrial buildings and systems and energy saving opportunities for them. Two classroom, two lab hours per week.

EGV 1301 - Sustainable Architecture
2 Cr. Hr(s).
Overview of sustainability, resilience, and inclusive design from an architectural perspective. Critical examination of energy consumption in buildings for the purpose of identifying energy conservation opportunities. One classroom, two lab hours per week.

EGV 1401 - Weatherization & Building Performance Training
3 Cr. Hr(s).
This course covers energy assessment and weatherization methods for single and multifamily dwellings. The course covers the operation of the equipment: blower door, duct blaster, pressure pan, flow meter, infrared camera, and combustion analyzer. This course is designed to prepare students for the Building Performance Institute Building Science Principles Certificate of Knowledge and Building Analyst-Technician written and field test. Two classroom, two lab hours per week.

EGV 1501 - Environmental Assessment & Analysis
3 Cr. Hr(s).
Sampling and analysis techniques for site characterization and assessment. Sampling methods and protocols are presented in detail with respect to environmental liability, compliance and property transfer. Environmental monitoring is explained with emphasis on air quality, surface water and groundwater. Two classroom, three lab hours per week.

EGV 2101 - Solar Photovoltaic Design & Installation
3 Cr. Hr(s).
This course covers components of solar PV systems and components and the sizing of PV systems and components. Designed to prepare the student to take the NABCEP PV Entry Level Exam. Two classroom, two lab hours per week.

EGV 2151 - Solar Thermal Systems
3 Cr. Hr(s).
This course covers some of the basic cognitive materials needed to install and maintain solar thermal systems. Designed to help individuals better prepare for the North American Board of Certified Energy Practitioner (NABCEP) Solar Thermal Installer examination but does not provide all of the materials needed to complete the certification examination. Two classroom, two lab hours per week.

EGV 2201 - Electrical Lighting & Motors
2 Cr. Hr(s).
This course covers components of lighting systems, control strategies, current technologies and electric motors. Energy efficiency opportunities and environmental impacts are identified and analyzed. One classroom, two lab hours per week.
Prerequisite(s): EET 1120 AND EGV 1251 AND (PHY 1100 OR PHY 1131 OR PHY 1141 OR PHY 2201)

EGV 2251 - Energy Control Strategies
3 Cr. Hr(s).
This course covers the use of utility data to conduct a 'Lean Energy Analysis', utility rate structures, the use of both whole building computer simulation and discrete system computer simulation to estimate building and system energy use, energy demand and carbon footprint. Two classroom, two lab hours per week.
Prerequisite(s): EGV 1251

EGV 2301 - Commercial & Industrial Assessment
3 Cr. Hr(s).
This course covers methods of collecting data (utility, envelope, mechanical systems, and operational procedures) for both commercial and industrial facilities and analyzing the data with statistical procedures and simulation software to develop energy-saving management plans. Two classroom, two lab hours per week.

EGV 2501 - Waste Management
3 Cr. Hr(s).
Develop a working knowledge of present waste-management practices including minimization, storage, transportation, treatment and disposal of various waste related to the life cycle of a given activity and corrective actions related to contamination. Two classroom, three lab hours per week.

EGV 2700 - Energy Management Technology Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten co-op hours per week per credit hour.
Prerequisite(s): Approval of Department

EGV 2701 - Environmental Engineering Technology Internship
1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten co-op hours per week per credit hour.
Prerequisite(s): Approval of Department

EGV 2780 - Energy Management Technology Capstone
4 Cr. Hr(s).
Assessment of achievement by Energy Management Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on projects will be emphasized. Two classroom, four lab hours per week.
Prerequisite(s): Approval of Department

EGV 2781 - Environmental Engineering Technology Capstone
4 Cr. Hr(s).
Assessment of achievement by Environmental Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on projects will be emphasized. Two classroom, four lab hours per week.
Prerequisite(s): Approval of Department

Expanded Functions for Dental

EFD 1102 - Dental Anatomy for Dental Auxiliaries
1 Cr. Hr(s).
A study of form and function of the human dentition. This course is designed to provide an overview of the terminology and characteristics of all teeth in the adult and primary dentition. Includes identification of all anatomical tooth structures, eruption schedule and occlusion.
Prerequisite(s): Acceptance into EFDA program

EFD 1202 - Expanded Functions for Dental Auxiliaries I
6 Cr. Hr(s).
Lecture and clinical course designed to teach more extensively the concepts of dental materials and their use in restorative techniques. The principles of the manipulation and placement of dental materials used in delegated intra-oral functions for the expanded function dental auxiliary in Ohio are taught. Three classroom, four lab hours per week plus ten hours of co-op experience per week in the dental office.
Prerequisite(s): EFD 1102

EFD 1203 - Lab for Expanded Functions for Dental Auxiliaries I
0 Cr. Hr(s).
Laboratory experiences in advanced remediable intra-oral dental tasks and/or procedures involved in the art and placement of restorative materials including amalgam and nonmetallic restorative materials including resin restorations.
Prerequisite(s): EFD 1102

EFD 1302 - Expanded Functions for Dental Auxiliaries II
6 Cr. Hr(s).
This course is the third in a three-part series for the Expanded Functions Dental Auxiliary Program. Greater emphasis on topics covered in EFD 1202 is examined. Detailed concepts with regards to amalgam, esthetic and preventive resins are discussed. Concepts involving Class IV resin restorations and dental sealants are introduced. Mock boards are included. Three classroom, four lab hours per week, plus ten hours of co-op experience per week in a dental office.
Prerequisite(s): EFD 1202 AND Restricted to Majors

EFD 1303 - Lab for Expanded Functions for Dental Auxiliaries II
0 Cr. Hr(s).
Laboratory experiences in advanced remediable intra-oral dental tasks and/or procedures involved in the art and placement

of preventive or restorative materials including amalgam, dental sealants and nonmetallic restorative materials including resin restorations.
Prerequisite(s): Restricted to Majors

Finance

FIN 2450 - Personal Finance
3 Cr. Hr(s).
Overview of the theories, concepts, principles, and processes of personal financial management, with an emphasis on everyday financial decision making.

Fire Science Technology

FST 1102 - Firefighter I
7 Cr. Hr(s).
Basic and intermediate instruction in fire suppression, fire chemistry and behavior, rescue, firefighting tools, appliances, equipment, built-in fire suppression systems and firefighting safety and survival. Three classroom, eight lab hours per week.
Prerequisite(s): Approval of Fire Coordinator

FST 1103 - Firefighter II Transition
4 Cr. Hr(s).
Advanced instruction in fire-suppression operations, fire chemistry and behavior, rescue, firefighting tools, appliances, equipment, built-in fire suppression systems and firefighting safety and survival. Two classroom, four lab hours per week.
Prerequisite(s): FST 1102 AND Approval of Department

FST 1104 - Firefighter II
11 Cr. Hr(s).
Basic, intermediate and advanced instruction in fire-suppression operations, fire chemistry and behavior, rescue, firefighting tools, appliances, equipment, built-in fire protection systems and firefighting safety and survival. Seven classroom, eight lab hours per week.
Prerequisite(s): Approval of Department

FST 1120 - Fire Safety Inspector
4 Cr. Hr(s).
This course prepares the student to identify, abate and document fire safety hazards and meets the requirements for those qualified students to take the state certification examination for Fire Safety Inspector. Two classroom, four lab hours per week.
Prerequisite(s): Approval of Department

FST 1125 - Fire Investigation I
3 Cr. Hr(s).
The fundamentals and technical knowledge needed for proper fire scene investigations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter and types of fire causes.

FST 1403 - Live Fire Instructor
2 Cr. Hr(s).
The Live Fire Instructor course certifies firefighters to be a live fire instructor. In order for a firefighter to teach in a live fire environment, they must take both Fire Instructor (FST 2209) and Live Fire Instructor (FST 1403). This course will go beyond the NFPA 1403 standards and focus on the how-to aspects of conducting valuable live fire training evolutions in a safe and compliant manner. Four lab hour per week.
Prerequisite(s): FST 1102 AND FST 1103 AND FST 2209 AND Approval of Department

FST 1442 - Emergency Vehicle Operator
1 Cr. Hr(s).
Sixteen hour course meeting the requirements of the State of Ohio, Division of Emergency Medical Services for emergency vehicle drivers education.
Prerequisite(s): Must have a valid motor vehicle operators license

FST 1521 - Incident Safety Officer
3 Cr. Hr(s).
This course meets NFPA 1521, Standard for Fire Department Safety Officer Professional Qualifications, Chapter five Incident Safety Officer. It is designed for fire and Emergency Medical Services (EMS) responders who may be designated by the Incident Commander (IC) as an ISO while working within an Incident Command System (ICS).
Prerequisite(s): Approval of Department

FST 1555 - Hazardous Waste Operations & Emergency Response (HAZWOPER)
3 Cr. Hr(s).
Training required to enter or work on a hazardous waste site with emphasis on personnel safety, site hazards, toxicology, personal protective equipment, decontamination, site characterization and site control. Two classroom, two lab hours per week.

FST 2209 - Fire Service Instructor
4 Cr. Hr(s).
This course covers the development and delivery of fire and emergency service training materials. Instructional motivations, student learning strategies, and evaluation are addressed. This course meets the requirements of the State of Ohio certification as a State Fire and Emergency Services Instructor and the Job Performance Requirements in the National Fire Protection Association Standard 1041. Two classroom, four lab hours per week.
Prerequisite(s): Approval of Department

FST 2251 - Fire Officer I
3 Cr. Hr(s).
Management, supervision and leadership of the fire company. This course meets the requirements of National Fire Protection Association 1021, Fire Officer I.

FST 2252 - Fire Officer II
2 Cr. Hr(s).
Management, supervision, leadership and command of multi-company operations. This course meets the requirements of National Fire Protection Association 1021, Fire Officer II.
Prerequisite(s): FST 2251

FST 2253 - Fire Officer III
3 Cr. Hr(s).
Administration of fire department operations and the management of programs, facilities and resources to provide a fire protection delivery system. This course meets the requirements of National Fire Protection Association Standard 1021, Fire Officer III.
Prerequisite(s): FST 2252

FST 2254 - Fire Officer IV
3 Cr. Hr(s).
Assessing the public fire protection needs of a community and the strategic planning and development of various components of the fire protection delivery system. This course meets the needs of National Fire Protection Association 1021, Fire Officer IV.
Prerequisite(s): FST 2253

French

FRE 1100 - Conversational French
3 Cr. Hr(s).
A foundation for gaining knowledge about French culture and basic phrases related to simple spoken French and travel situations.

FRE 1101 - Elementary French I
4 Cr. Hr(s).
A foundation for gaining basic knowledge of French grammar, speaking, writing, reading and cultural knowledge.

FRE 1102 - Elementary French II
4 Cr. Hr(s).
Continuing French grammar skills, verbs in the future conditional and subjunctive tenses, speaking, writing, reading and cultural

knowledge.
Prerequisite(s): FRE 1101

FRE 2201 - Intermediate French I
3 Cr. Hr(s).
Reviews and extends basic principles through composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required.
Prerequisite(s): FRE 1102

FRE 2202 - Intermediate French II
3 Cr. Hr(s).
Continue to review and extend basic principles through composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required.
Prerequisite(s): FRE 2201

Geography

GEO 1101 - Global Forces, Local Diversity
3 Cr. Hr(s).
In this course, students will be encouraged to think independently, be expected to argue a point logically, and sharpen their critical thinking skills. More particularly, we will explore the geographies implicit in globalization and specifically think about our connections (and disconnections) to distant places, the uneven geographies of globalization (evident in both processes and outcomes), and how people's actions through social, economic, and political processes, produce and transform place. This course has a particular focus on diversity, equity, and inclusion asking how cultures are shaped by the intersections of a variety of factors (i.e. race, ethnicity, nationality, class, and religion among others) and providing a space to demonstrate empathy through considering how to understand and interpret others' worldview. The purpose of this course is to introduce the student to thinking geographically through the understanding of how to use maps and the significance of place on identity.
This course has no textbook costs.

GEO 1102 - Earth's Physical Environment
4 Cr. Hr(s).
Analysis of the principle spheres of earth - atmosphere, lithosphere, hydrosphere and biosphere; an explanation of processes involved in shaping the earth's physical environment. Three classroom, two lab hours per week.
This course has no textbook costs.

GEO 1107 - Introduction to Geographic Information Systems (GIS)
4 Cr. Hr(s).
Introduction to the basic theoretical as well as practical concepts of Geographic Information Systems (GIS), covering spatial representation, visual literacy, and geographic information technology. Students will learn the basics of ESRI's ArcGIS Pro and explore the GIS software system through exercises, labs, a portfolio, and a final project. Three classroom, two lab hours per week.

GEO 1201 - World Regional Geography: People, Places & Globalization
3 Cr. Hr(s).
This course serves as an introduction to the study of regional geography at the global scale. Students will become familiar with and understand the use of maps/geo-technologies to explain geographic phenomena and patterns as they relate to world regions and their interrelationships, apply geographic concepts to the study of regions or a specific region, compare and contrast human and physical patterns and their variations over space, develop an appreciation of the complexities of regional and global environmental and socio-economic problems, understand globalization and place local issues in their global and historical context, and to understand human-environment interactions in various regions around the world.
This course has no textbook costs.

GEO 1206 - Appalachian Environment
3 Cr. Hr(s).
Overview of the various geographic aspects of the rural and urban Appalachian region, including physiography and geology; migration and settlement patterns; historical development and cultural diffusion; and population characteristics and economy.

GEO 1209 - Map Design & Visualization
4 Cr. Hr(s).
This course is an introduction to the science and art of map making. From the history and principles of thematic map compilation and design, basics of map projections, data sources and processing, map color, symbolization and topography to common types and styles of thematic maps. Three classroom, two lab hours per week.

GEO 1212 - Geospatial Data Acquisition & Management
3 Cr. Hr(s).
This course addresses the interpretation and understanding of a variety of data formats available in GIS. Introduces the fundamental concepts of primary GIS data creation and discusses quantitative techniques for collection, classification, and management of geographical data. Two classroom, two lab hours per week.
This course has no textbook costs.
Prerequisite(s): GEO 1107

GEO 1215 - Introduction to Remotely Sensed Imagery
3 Cr. Hr(s).
This course is an introduction to remote sensing. Topics include fundamentals of the physical principles on which remote sensing is based, history and future trends, sensors and their characteristics, image data sources, and image classification, interpretation and analysis techniques. Two classroom. two lab hours per week.
Prerequisite(s): GEO 1107

GEO 1300 - Introduction to Weather & Climate
4 Cr. Hr(s).
An introduction to the characteristics and processes of Earth's atmosphere and how it interacts with the planet's surface, oceans, and human activity. The course focuses on how these interactions work to produce weather events and climate extremes and how they affect people. Three classroom, two lab hours per week.

GEO 2210 - Advanced Spatial Analysis
4 Cr. Hr(s).
This course will focus on GIS extensions to apply more complex functions and tools of ArcGIS. Students will learn how to utilize ArcGIS Network Analyst and Spatial Analyst tools to create, query and analyze data sets. Students will also learn to use GPS technology to collect data, build databases and prepare data for analysis using more advanced geodatabase tools. Three classroom, two lab hours per week.
Prerequisite(s): GEO 1107

GEO 2310 - Scripting Language for GIS
3 Cr. Hr(s).
The course provides an understanding of how to customize GIS software applications by way of modified service interface elements. Topics include the theory and implementation of the various scripting languages currently in use. Upon completion, students will be able to solve geospatial problems and streamline GIS workflows through the creation and modification of scripts.
Prerequisite(s): GEO 1107

GEO 2600 - Geography Capstone
3 Cr. Hr(s).
The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level

workplace geospatial competencies. The capstone experience should occur during the last semester of the student's educational program. Methods of providing a capstone experience include a summative project and compilation of portfolio.
Prerequisite(s): GEO 2210

GEO 2700 - Geography Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
A structured experience in a supervised setting that provides students with an overview of procedural, professional and ethical issues faced by a geospatial technician on the job. Ten hours per week per credit hour.
Prerequisite(s): GEO 2210

Geology

GLG 1101 - Physical Geology
4 Cr. Hr(s).
Surface processes of wind, water and ice in changing Earth's surface, plate tectonics; interior forces that cause earthquakes, volcanoes, mountain building. Introduction to natural resources; impact of natural hazards on human populations; and impact of human activities in the natural world. Laboratory component stresses introduction to and use of basic scientific method and problem solving. Three classroom, two lab hours per week.
Corequisite(s): GLG 1111

GLG 1111 - Physical Geology Laboratory
0 Cr. Hr(s).
Identification of minerals, sediments and rocks; interpretation of topographic maps and geologic maps. This is a face-to-face laboratory and must be taken concurrently with Physical Geology.
Corequisite(s): GLG 1101

GLG 1201 - Historical Geology
4 Cr. Hr(s).
The Earth in space, physical evolution of the oceans, atmosphere and continents, origin of life and its evolution, physical and biological development of the North American continent. Lab component stresses further application of scientific method and problem solving. Three classroom, two lab hours per week.
Corequisite(s): GLG 1211

GLG 1211 - Historical Geology Laboratory
0 Cr. Hr(s).
Rates of change, age dating, fossils, depositional environments, stratigraphy, correlation, facies, and interpretation of geologic maps. This is a face-to-face laboratory and must be taken concurrently with Historical Geology.
Prerequisite(s): GLG 1101 AND GLG 1111
Corequisite(s): GLG 1201

GLG 1301 - Geologic Field Trips
4 Cr. Hr(s).
Saturdays before spring break, class meets on campus for lecture and lab to build preparatory knowledge and skills. Missing more than two classroom meetings will be cause for withdrawal. After break, students will participate in Saturday morning, hands-on field trips to different locations in our region. Students must provide their own transportation. Students will apply their knowledge and skills to interpret and understand the building of the Appalachian Mountains and the geological development of Ohio. Field activities are meant to mimic the work of professional geologists. Missing more than two trips will be cause for withdrawal. Three classroom, two lab hours per week. Note: Any student choosing to register and take this class may be required to sign one or more liability waivers in favor of the locations where certain learning activities in this course take place. Students who would like additional information about this matter should contact the Physical Sciences Department.
Prerequisite(s): At least 18 years of age

GLG 1311 - Ohio Field Geology
1 Cr. Hr(s).
Hands-on experience during several Saturday morning field trips to different locations in our region. Students must provide their own transportation. Field activities are meant to mimic what field geologists do. Use of on-site observations to interpret and understand the building of the Appalachian Mountains and the geological development of Ohio. Two lab hours in the field per week. Course offered during 8-week B-term. Open to undergraduate and graduate students with or pursuing degrees in geology, and K-12 science educators with or working toward Master Science Teaching (MST). GLG 1201/GLG 1211 may be taken concurrently to meet prerequisite.
Prerequisite(s): GLG 1101 AND GLG 1201 OR Approval of Department AND Must be at least 18 years of age

GLG 1401 - Environmental Geology
4 Cr. Hr(s).
Introduction to minerals, rock cycle, Plate Tectonics. Use/misuse of natural resources, waste disposal, pollution. Analysis of natural hazards: floods, volcanism, earthquakes, mass wasting, and others. Consequences of human activities: population growth, sustainability; mitigation and remediation strategies and processes. Laboratory component stresses use of scientific method, critical thinking, and problem solving. Three classroom, two lab hours per week.
Corequisite(s): GLG 1411

GLG 1411 - Environmental Geology Laboratory
0 Cr. Hr(s).
Identification of minerals and rocks. Analysis of natural hazards, natural resources, pollution and anthropogenic problems. Development/proposal of mitigation/remediation strategies. This is a face-to-face laboratory and must be taken concurrently with GLG 1401, Environmental Geology. Two lab hours per week.
Corequisite(s): GLG 1401

German

GER 1100 - Conversational German
3 Cr. Hr(s).
A foundation for gaining knowledge about Germanic culture and basic phrases related to simple spoken German, including travel situations.

GER 1101 - Elementary German I
4 Cr. Hr(s).
Foundation for understanding, speaking, reading, and writing German. Work outside of class and/or in the language laboratory is required.

GER 1102 - Elementary German II
4 Cr. Hr(s).
Continued understanding, speaking, reading and writing German beyond the discourse level. Work outside of class and/or in the language laboratory is required.
Prerequisite(s): GER 1101

GER 2201 - Intermediate German I
3 Cr. Hr(s).
Reviews and extends basic principles through composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required.
Prerequisite(s): GER 1102

GER 2202 - Intermediate German II
3 Cr. Hr(s).
Intermediate-level composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required.
Prerequisite(s): GER 2201

Health Information Management

HIM 1101 - Medical Terminology
2 Cr. Hr(s).
Basic prefixes, roots and suffixes; terminology including anatomic, diagnostic, symptomatic, procedural, eponymic terms and standard abbreviations required for a working knowledge and understanding of the language of medicine.

HIM 1110 - Health Information Processing
3 Cr. Hr(s).
Foundations of health information management, the Health Information Management profession, including health care systems and organization of HIM functions, data quality, access and retention, patient and healthcare data and data collection methodologies. Discussion of classification systems, clinical vocabularies and nomenclatures. Two classroom, two lab hours per week.
Prerequisite(s): HIM 1101

HIM 1160 - Medical Office Coding Concepts
1 Cr. Hr(s).
Introduction to principles and conventions for assigning ICD-10-CM and CPT codes to patient encounter for billing physician services. Students should possess proficiency in basic medical terminology.
Prerequisite(s): HIM 1101

HIM 1165 - Drug Classification for Coding
1 Cr. Hr(s).
An overview of the major drug classifications, common drugs in each class, conditions for which drugs are administered and their general effects to assist medical coders in analyzing health care documentation for coding and reimbursement applications.
Prerequisite(s): HIM 1101 AND (BIO 1107 OR BIO 1121 OR BIO 1141)

HIM 1201 - Introductory Medical Office Coding
4 Cr. Hr(s).
Introduction to principles, guidelines and conventions for assigning ICD-10-CM diagnostic codes and CPT procedure codes to patient encounters for physician services. Additional out-of-class assignments are required.
Prerequisite(s): HIM 1101 AND BIO 1121

HIM 1204 - Medicolegal & Ethics in Healthcare Records
2 Cr. Hr(s).
Evaluation of health care records as legal documents; special emphasis on policies and procedures concerning release of medical information and protecting patient confidentiality; principles and organization of the judicial system; health care fraud and abuse and Health Insurance Portability and Accountability Act (HIPAA) regulations. Ethical issues in health care settings addressed. One classroom, two lab hours per week.

HIM 1217 - Alternative Health Records & Registries
3 Cr. Hr(s).
Organization and operation of a hospital cancer program emphasizing registry case finding, accession, indexing, abstracting and follow-up of cancer data. Purposes, uses and handling of health information, departmental and facility administration, licensing and accreditation requirements and introduction to payment systems in long-term care and home health care. Note: HIM 1201 may be taken concurrently.
Prerequisite(s): HIM 1110 AND HIM 1201

HIM 2110 - Ambulatory Coding
4 Cr. Hr(s).
Introduction to principles, guidelines and conventions for assigning ICD-10-CM diagnostic codes and CPT procedure codes to patient encounters for outpatient facility services. Students should possess proficiency in basic medical terminology and human anatomy and physiology. Additional out-of-class assignments are required. Three classroom, two lab hours per week.
Prerequisite(s): HIM 1201 AND Restricted to Majors

HIM 2144 - Quality Improvement, Statistics & Research
3 Cr. Hr(s).
Organization and analysis of data in health care quality programs including quality assessment and monitoring, utilization and risk management and medical staff credentialing. Theory and application of health care statistics including data definitions, computation of formulae and research principles. Two classroom, two lab hours per week.
Prerequisite(s): HIM 1110 AND BIS 1120 OR BIS 1221 AND (MAT 1130 OR Any approved OT36 Math) AND Restricted to Majors

HIM 2145 - Health Information Resource Management
3 Cr. Hr(s).
Planning, organizing, staffing, budgeting and analysis of management systems along with job standards and performance evaluations emphasizing development of supervisory management, leadership and communication skills. Two classroom, two lab hours per week.
Prerequisite(s): HIM 1110 AND BIS 1120 OR BIS 1221

HIM 2165 - Healthcare Data in Reimbursement
3 Cr. Hr(s).
Organization of health care delivery system including managed care and capitation. Theory and use of reimbursement systems such as Diagnostic Related Groups, Ambulatory Payment Classifications, Resource-based Relative Value Scale. Discussion of data flow from admission to billing and analysis of casemix. In addition, other external forces, such as Health Insurance Portability and Accountability Act and Recovery Audit Contractors, will be discussed. Two classroom, two lab hours per week.
Prerequisite(s): HIM 1110 AND HIM 1201

HIM 2211 - Inpatient Coding
4 Cr. Hr(s).
Introduction to principles and coding conventions for using ICD-10-CM and ICD-10-PCS for coding inpatient records. Students should possess proficiency in medical terminology and human anatomy and physiology. Additional out-of-class assignments are required. Three classroom, two lab hours per week.
Prerequisite(s): HIM 2110 AND Restricted to Majors

HIM 2233 - Healthcare Information Systems
3 Cr. Hr(s).
An in-depth look at the use of information systems technology in the health care delivery system. Includes information security, electronic clinical systems and health records. Two classroom, two lab hours per week.
Prerequisite(s): HIM 1110

HIM 2252 - Professional Practice Experience
2 Cr. Hr(s).
Practical application of health information management processes, including health information retrieval, qualitative and quantitative analysis of health data, record completion by practitioners, release of health information, document scanning, revenue cycle functions, coding, statistical reporting, hospital-wide and HIM department quality improvement and various other registries and department functions utilizing medical data. Ten directed-practice hours per week at an approved off-site location.
Prerequisite(s): Approval of Department

HIM 2262 - Advanced Medical Office Coding

3 Cr. Hr(s).
ICD-10-CM diagnosis and CPT procedure coding for the physician's office and other ambulatory facilities. Two classroom, two lab hours per week.
Prerequisite(s): HIM 1201 AND BIO 1222

HIM 2278 - Health Information Management Capstone
1 Cr. Hr(s).
A variety of specially designed projects, student oral presentations, case studies, simulations, interviewing, resumes and two mock accreditation exams. Two lab hours per week.
Prerequisite(s): Restricted to Majors

Heating, Ventilation, Air Conditioning & Refrigeration

HVA 1100 - Introduction to HVAC Technology & Controls
2 Cr. Hr(s).
This course introduces the principles and practices of Heating, Ventilation, and Air Conditioning (HVAC) systems and their integration with building control systems. Students will learn how HVAC systems provide thermal comfort, maintain air quality, and manage energy efficiency while developing the mathematical competencies necessary for system sizing, load calculations, and performance analysis. One classroom hour, two lab hours per week.

HVA 1201 - Basic HVAC Systems with Cooling
3 Cr. Hr(s).
Basic concepts and theory of heating, ventilating, air conditioning and refrigeration systems. Foundations in the applications of cooling principles in light commercial equipment. Major components include refrigerant flow through equipment, applications of equipment to the refrigeration cycle, heat transfer fundamentals, customer service, and preparation for the Environmental Protection Agency (EPA) refrigerant handler's certification exam. Two classroom, two lab hours per week.
Prerequisite(s): HVA 1100 OR MAT 0600 OR MAT 1110

HVA 1221 - Heating Systems
3 Cr. Hr(s).
Introduction to the basic concepts of all heating systems found in light commercial applications for the experienced and inexperienced in HVAC. A comprehensive presentation of HVAC systems, including rooftop packaged systems, heat pumps, packaged low-pressure boiler systems, and packaged unitary heaters. Includes low-pressure hot water and steam generation, including the fundamentals of heat generation in water-based heating systems. Two classroom, two lab hours per week.

HVA 1241 - HVAC Installation Techniques & Practices
3 Cr. Hr(s).
Basic practices required for new installation and replacement of HVAC equipment including an introduction to sheet metal skills, and copper and black pipe plumbing. Hands-on skills and code requirements will be stressed along with good safety practices. Includes installation of a complete residential HVACR system. One classroom, six lab hours per week.
Prerequisite(s): HVA 1201

HVA 1261 - HVAC Loads & Distribution for Small Buildings
3 Cr. Hr(s).
A discussion and demonstration of the importance of proper air distribution systems and principles of balanced heat distribution, including design considerations for light commercial applications. Loads will be calculated using commercially available software. Testing, Adjusting and Balancing procedures are included. One classroom, six labs hours per week.
Prerequisite(s): HVA 1100 OR MAT 0100 OR MAT 1110 OR MAT 1130 OR MAT 1445

HVA 1301 - Air & Water Distribution Systems
3 Cr. Hr(s).
Theory and practice of fluid flow in HVAC distribution systems, including water systems, sizing and performance, duct system sizing and performance, fan and pump selection, operation, and performance, valve and damper selection and Testing, Adjusting, and Balancing (TAB) procedures. Hand calculations and use of computer-based design and analysis tools; select hands-on laboratory studies reinforce basic principles; proper installation practices are also included. Two classroom, three lab hours per week.
Prerequisite(s): HVA 1201 AND (MAT 0100 OR MAT 0600 OR MAT 1110)
Corequisite(s): HVA 1352

HVA 1352 - Psychrometrics, Health & Comfort in HVAC
2 Cr. Hr(s).
This course teaches you to perform a psychrometric analysis for purposes of system control and system troubleshooting. It also teaches you to perform ventilation calculations, room air distribution calculations and air terminal selection, filter selection for buildings and building spaces, acoustic issues in HVAC, and ASHRAE energy standard 90.1 as applied to service and maintenance. This course also introduces one to Preventive Maintenance Practices. This is accomplished by concentrating on applicable codes and industry standards to create a healthy environment with an emphasis on the background necessary to properly control an HVAC system. One classroom, three lab hours per week.
Prerequisite(s): MAT 1110
Corequisite(s): HVA 1301

HVA 1401 - HVAC Mechanical & Electrical Troubleshooting
3 Cr. Hr(s).
Diagnostic methods of mechanical, electrical and control system problems in heating and cooling systems. Other topics include common faults and how to reduce future failures. Two lecture, three lab hours per week.
Prerequisite(s): HVA 1201 AND HVA 1221

HVA 2251 - Primary HVAC Equipment Operation & Selection
3 Cr. Hr(s).
Student will learn how to do refrigeration cycle analysis, how to select condensers, evaporators, compressors, boilers, chillers and cooling towers from a manufacturer's catalog for a specific application, how to apply manufacturer's literature, including electrical schematics, to the troubleshooting process and proper installation and equipment room piping practices. Two classroom, two lab hours per week.
Prerequisite(s): HVA 1201 AND HVA 1301

HVA 2351 - HVAC Systems & Controls
5 Cr. Hr(s).
Theory and techniques for the control, troubleshooting, commissioning and operational parameters of a variety of systems used in today's buildings. This course emphasizes control strategies for energy efficiency and indoor environmental quality as directed by current standards for commercial and industrial HVAC systems. The control portions of this course begin with basic control elements and theory and continue with instruction regarding the BACnet, Lonworks, and ModBus protocols. The course prepares the student for a major installation and commissioning project using state-of-the-art equipment. Three classroom, six lab hours per week.
Prerequisite(s): HVA 1301 AND HVA 1352

HVA 2700 - HVACR Engineering Technology Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour.
Prerequisite(s): Approval of Department

HVA 2751 - HVAC-R Operations & Best Practices
1 Cr. Hr(s).
As today's building HVAC systems grow more varied and more sophisticated, the service and operations technician must keep up and be able to determine if a system is operating properly. This course will provide case studies of various building HVAC systems, system operational issues, and changes in applicable standards and codes. The student is then exposed to methods of finding the problem and how to differentiate between a symptom and the underlying cause using the fundamentals learned in previous classes. Two lab hours per week.
Prerequisite(s): Approval of Department

HVA 2780 - HVACR Engineering Technology Capstone Project
3 Cr. Hr(s).
Assessment of achievement by HVACR Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practices of the major. Teamwork on projects will be emphasized. One classroom, six lab hours per week.
Prerequisite(s): Approval of Department

History

HIS 1101 - United States History I
3 Cr. Hr(s).
Development of the people of the United States in political, social, economic, and cultural areas from pre-Columbian America through Reconstruction.
This course has no textbook costs.

HIS 1102 - United States History II
3 Cr. Hr(s).
Development of the people of the United States in political, social, economic and cultural areas from Reconstruction to the present.
This course has no textbook costs.

HIS 1105 - African-American History
3 Cr. Hr(s).
This comprehensive history survey course will delve into the distinctive journey of individuals of African descent in the United States. It will encompass various subjects, including enslavement, the abolitionist movement, Reconstruction, the emergence of and reaction to segregation laws, the Harlem Renaissance, and the struggles for human and democratic rights.

HIS 1111 - Western Civilization I
3 Cr. Hr(s).
Major trends in the development of Western culture, emphasizing political, economic, social and cultural achievements, from prehistory to the seventeenth century.

HIS 1112 - Western Civilization II
3 Cr. Hr(s).
Major trends in the development of Western culture, emphasizing political, economic, social and cultural achievements from the seventeenth century to the present.

HIS 1122 - Global Civilization II
3 Cr. Hr(s).
Comparative approach of major civilizations and to major global developments since 1500 AD / CE including social, political, religious, economic, and environmental trends. Provides general knowledge which will lead students to be more astute global citizens.

HIS 2215 - Survey of African History
3 Cr. Hr(s).
A comprehensive exploration of Africa's people, cultures, and states spanning from ancient times to the present day. This course will navigate through the continent, acknowledging its rich diversity. Key topics covered will encompass Africa's role as the cradle of humanity, the legacy of ancient empires, the historical enslavement of its population, cultural developments, the era of colonization, and the subsequent post-colonial period.

HIS 2216 - Survey of Latin American History
3 Cr. Hr(s).
A survey of Latin American history and culture from pre-colonial times to the present, tracing colonial influences, 20th century revolutions, dictatorships and democratic alternatives and the evolution of global economics, U.S. and Organization of American States policies.

HIS 2217 - Survey of East Asian History
3 Cr. Hr(s).
Survey of eastern Asia from earliest times to the present, including economic, political, religious and colonial influences on modern nations of Asia, with special emphasis on twentieth- and twenty-first- century issues and problems.

HIS 2218 - History of Ohio
3 Cr. Hr(s).
A survey of the political, social, economic and cultural development of the peoples of Ohio, from prehistoric times to the present. Ohio's role in the growth of the United States.

HIS 2220 - History of the Holocaust
3 Cr. Hr(s).
Explores the 20th Century Holocaust as perpetrated by Nazi Germany. The course addresses the background, goals, progress, and historical context of the Nazi Holocaust.

HIS 2270 - History Internship
This course is repeatable.

1-3 Cr. Hr(s).
Provides students the opportunity to gain professional knowledge and skills from a planned work-based learning experience in their career field. In consultation with the employer and faculty, students establish learning outcomes related to their program of study and prepare documents detailing how the experience led to the application of knowledge and skills from their major. Students already working in a relevant field may apply to use that experience to meet internship requirements. Internship hours vary based on credit hours.
Prerequisite(s): Approval of department.

Hospitality Management

HMT 1101 - Basic Culinary Skills
2 Cr. Hr(s).
This course is an introduction to food preparation techniques and culinary theory. Basic concepts of kitchen organization and operation, basic terminology, use of standardized recipes, weights and measures, product evaluation, recipe conversion, food composition and introduction to commercial equipment and work methods. American Culinary Federation competency skills included. HMT 1107 must be completed prior to registering for this course or may be taken at the same time. Four lab hours per week.

HMT 1102 - Kitchen Chemistry
3 Cr. Hr(s).
An introduction to applied chemistry of food

and food preparation. Lecture and demonstrations will be used to illustrate course principles. One classroom, four lab hours per week.

HMT 1105 - Introduction to the Hospitality & Tourism Industry
2 Cr. Hr(s).
This course will provide an overview of the Hospitality and Tourism Industry. Topics include in-depth views of the restaurant and culinary industry, lodging industry, meeting and events, tourism, casinos, cruise-lines and more. Hospitality Interactive simulation, My Hospitality Lab, and service scenarios will provide an experience of fun socialistic learning. Successful students of this course will receive a Hospitality Reception and Service Specialist short term certificate.

HMT 1107 - Sanitation & Safety
2 Cr. Hr(s).
Sanitation and safety involves key concepts such as harmful micro-organisms, contamination and food-borne illnesses, the nine steps within the flow of food from supplier to service, minimum internal cooking temperatures/times for proteins, food safety management systems, sanitary facilities and pest management control. Students must successfully pass a national sanitation exam to pass the course. Students who are culinary or baking majors may not register for kitchen lab courses without a current servsafe certification.

HMT 1110 - Menu Planning & Table Service Practicum
3 Cr. Hr(s).
Menu design and development, standardizing recipes, cost controls and pricing. Practical applications in varieties of table service, catered events and customer service processes. Two classroom hours per week and a total of thirty lab hours to be conducted as part of the Tartan Terrace Dining Room service experience.

HMT 1112 - Food Principles & Basic Preparation
4 Cr. Hr(s).
Preparation of culinary cuisine with a wide variety of plate production techniques including soups, sauces, vegetables, fruits, grains, salads, meats, game, poultry, fish and seafood. Apply food pairing, plating, and garnishing techniques to culinary cuisine. Skill training based on American Culinary Federation competencies. Includes recipe conversion, product evaluation and maintenance of a safe, sanitary kitchen. One classroom, six lab hours per week.
Prerequisite(s): HMT 1101 AND HMT 1107 AND HMT 2207 AND HMT 2200 OR HMT 2201 OR Approval of Department Note: HMT 2201 AND HMT 2207 may be taken concurrently with HMT 1112

HMT 1125 - Beverage Management
2 Cr. Hr(s).
The history and process of different wines, ales and spirits, including pronunciation and selection of wines with food and identifying the required glassware for all drinks. Mixology, establishing a par stock and reorder point, discussion of Ohio's drinking laws and bartender's legal and social responsibilities, and bar design and layout.
Prerequisite(s): HMT 1105

HMT 1126 - Baking I, II, & Barista Basics
4 Cr. Hr(s).
Practical application of basic baking techniques, ingredients, weights and measures, terminology and formula calculations during the first 8 weeks. During the second 8 weeks students will gain practice more advanced and complicated techniques required by the baking and pastry industry in preparing designer pastries, foundations of artisan breads, cake decorating, and assembling two tiered cakes along with covering barista training and gourmet coffee pairings. One classroom, six lab hours per week. Note: HMT 1102 and HMT 1107 should be completed prior to registering for this course or may be taken at the same time.
Prerequisite(s): HMT 1102 AND HMT 1107

HMT 1128 - Baking II & Barista Basics
2 Cr. Hr(s).
This course gives students a practical experience of more advanced and complicated techniques required by the baking and pastry industry. It will also provide students with more advanced techniques in preparing designer pastries, foundations of artisan breads, cake decorating, and assembling two tiered cakes. This course will also cover barista training and gourmet coffee pairings. Four lab hours per week.
Prerequisite(s): HMT 1102 AND HMT 1107 AND HMT 1126 Note: HMT 1102 may be taken concurrently with HMT 1128

HMT 1129 - Restaurant Desserts
3 Cr. Hr(s).
Practical application of basic baking ingredients, weights and measures, terminology and formula calculations. Use of mixes and frozen bakery products to create commercial-grade finished products for restaurant service. One classroom, four lab hours per week.

HMT 1136 - Front Office Operations
2 Cr. Hr(s).
This course presents a systematic approach to front office procedures by detailing the flow of business through a hotel, from the reservations process to check-out and account settlement. The course also examines the various elements of effective front office management, paying particular attention to the planning and evaluation of front office operations.
Prerequisite(s): HMT 1105

HMT 1137 - Hospitality Industry Computer Systems
2 Cr. Hr(s).
Students will learn about computer-based property management systems, involving both front- and back-of-the-house operations. The course is designed to show the inter-related computer functions of an entire full-service lodging property with departments such as food and beverage service outlets, sales, front office, etc.
Prerequisite(s): HMT 1105 AND BIS 1120

HMT 1138 - Managing Lodging Operations
2 Cr. Hr(s).
This course provides an understanding of the General Manager's role in both small and large hotels. Addresses each department, including sales and marketing, maintenance, security, human resources. Features lodging green initiatives, revenue optimization, and a better understanding of the complexity with regard to overseeing an entire property.
Prerequisite(s): HMT 1105 AND HMT 1136

HMT 1139 - Housekeeping Management
2 Cr. Hr(s).
This course provides students with the principles of housekeeping management as they apply specifically to the hospitality industry. Housekeeping is critical to the success of today's lodging operations and this course will illustrate what it takes to direct day-to-day operations of this department, from big-picture management issues to technical details for cleaning each area.
Prerequisite(s): HMT 1105

HMT 1141 - Destination Geography
3 Cr. Hr(s).
Study of important tourism destinations around the world. The course discusses recreational, cultural, economic and social significance.

HMT 1143 - Organization of the Travel Product
3 Cr. Hr(s).
Study of travel/tourism industry products and procedures, including cruises, rail, motorcoach, tours, car rentals, resort and hotel

features and travel insurance.
Prerequisite(s): HMT 1105

HMT 1148 - Meeting & Events Contracts & Obligations
1 Cr. Hr(s).
An introduction to the Meeting & Events industry where by contracts are a necessary part of doing business. This course will explore four key components which are the offer, consideration, acceptance, as well as the Banquet Event Order (BEO) or sometimes referred to as the Catering Event Order (CEO). Note: HMT 1105 must be completed prior to registering for this course or may be taken at the same time

HMT 1149 - Meeting & Events Set-up & Breakdown
2 Cr. Hr(s).
This course will focus on the types of meeting set-ups and break-down procedures involved. The student will also focus on the role of using outside contractors for large events requiring massive structural developments. Students will also physically set-up and break-down meeting rooms such as theater style, classroom style, boardroom style, etc. Note: HMT 1105 must be completed prior to registering for this course or may be taken at the same time.

HMT 1150 - Meeting & Event Planning
3 Cr. Hr(s).
This course teaches students meeting and event basics such as negotiation and contracts, marketing, trade-shows, sponsorships, technology utilization, and post-event activities.
Prerequisite(s): HMT 1105 AND HMT 1148 AND HMT 1149

HMT 1151 - Special Events, Expositions & Festivals
3 Cr. Hr(s).
This course specializes in weddings, social events, parties, receptions, grand openings, expositions, and festivals. Students will learn strategies for building floor plans, pricing, and religious/cultural values that could affect the protocol of an event.
Prerequisite(s): HMT 1150

HMT 2110 - Pastry & Confectionary
4 Cr. Hr(s).
Pastry and confectionary techniques, including laminated doughs, candy making, plate and platter displays, ice creams, and introduction to chocolate and sugar work. One classroom, six lab hours per week.
Prerequisite(s): HMT 1102 AND HMT 1105 AND HMT 1107 AND HMT 1126

HMT 2118 - Artisan Breads
3 Cr. Hr(s).
An in depth study of artisan baking training in proper mixing, kneading, and baking techniques to make a wide variety of crusty breads from around the world. Students will use healthy bread production techniques and whole grains, sour levain starters, poolish's, and sour ryes, to make all classic breads. Six lab hours per week.
Prerequisite(s): HMT 1102 AND HMT 1107 AND HMT 1126

HMT 2126 - Cake Production & Cake Decoration
4 Cr. Hr(s).
Students will gain methods and skill of cake fundamentals and production techniques used in commercial baking operations. Students will also design and use proper equipment/utensils to decorate cakes demonstrating a variety of icing techniques on multi-tiered cakes. Students will produce and or work with a variety of products such as marzipan, glaze, gum paste, butter-cream icing, royal icing, cream-cheese icing, etc. to decorate cakes. One classroom, six lab hours per week.
Prerequisite(s): HMT 1102 AND HMT 1107 AND HMT 1126

HMT 2128 - Cake Decoration
2 Cr. Hr(s).
Students will design and use proper equipment/utensils to decorate cakes demonstrating a variety of icing techniques on multi-tiered cakes. Students will also, produce and or Work with a variety of products such as marzipan, glaze, gum paste, butter-cream icing, royal icing, cream-cheese icing, etc. to decorate cakes. Four lab hours per class.
Prerequisite(s): HMT 1107 AND HMT 1108 AND HMT 1126 AND HMT 1128 AND HMT 2126

HMT 2200 - Baking & Culinary Fundamentals & Commercial Equipment
2 Cr. Hr(s).
This course is designed for students that are transferring from another institution, entering the program with advanced credits such as Tech Prep, and/or for students that need to refresh their skills. All students will be assessed to ensure that appropriate advanced skills match those required of upper level courses in the program. This course will also orient students to kitchen laboratory processes/procedures and commercial equipment for a smooth transition. Four lab hours per week.

HMT 2201 - Food Service Equipment, Design & Maintenance
2 Cr. Hr(s).
This course provides students with skills to perform maintenance, cleaning, and sanitation of commercial kitchen equipment typically found in restaurants for the purposes of avoiding costly repairs and maintaining longevity. Layout of equipment in terms of efficiency and cost is also a part of this course. One classroom, two lab hours per week.

HMT 2203 - Street Foods & Food Trucks
4 Cr. Hr(s).
Students will be able to operate and sustain a successful Food Truck. The course will entail choosing vending locations, opening checklist, closing checklist, and cooking on an actual food truck. Another part of the course will be to develop a sound business plan complete with a reasonable budget, commissary controls, daily operations, and how to stay lean and profitable by avoiding the most common operating mistakes. One classroom, six lab hours per week.
Prerequisite(s): HMT 1101 AND HMT 1107 AND HMT 1112

HMT 2206 - Garde Manger
3 Cr. Hr(s).
Introduction of Garde Manger discipline, including tools and equipment, preparation of pates, terrines, mousse, galantines, hors d'oeuvres and canapes. Demonstrate basic skills in charcuterie, carving of edible and non-edible showpieces, garnishes, ice carvings, chaud-froid and aspics. Includes buffet and plate presentation. Six lab hours per week.
Prerequisite(s): HMT 1112

HMT 2207 - Butchery & Fish Management
1 Cr. Hr(s).
Students will fabricate primal cuts of meat, poultry, fish, and pork with emphasis given to portion control, purchasing, costing, and utilization of byproducts. The product produced in this course will be used in menu development for the Tartan Terrace Restaurant. Four lab hours per week for eight weeks.
Prerequisite(s): HMT 1101

HMT 2208 - Advanced Culinary & Competition Skills
3 Cr. Hr(s).
Competitions play a vital role in culinary arts as the industry standard excellence bar continues to raise. There is no better way for a culinarian to hone their craft than by putting their skills and knowledge to the test in a competitive format. This class will utilize the format of the ACF Ohio State Team

competition to test the readiness of students entering into the work force. Students will develop a menu, set purchasing specs. and preform cost calculations. Once this is completed, students will then prepare various appetizers, soups, entrees, and desserts from their menus serving guest in the Tartan Terrace Restaurant prior to competition. These efforts will be followed by an opportunity to participate in a state wide competition event. Six lab hours per week.
Prerequisite(s): HMT 1129 AND HMT 2206 AND HMT 2215 AND HMT 2226

HMT 2209 - Advanced Culinary Skills
3 Cr. Hr(s).
Capstone course in Culinary Arts which students will prepare seven course meals. The course involves preparation of classical and contemporary cuisine, including American Regional cuisine. Students will develop a menu, set purchase specs, and perform cost calculations. Once this is completed, students will then prepare various appetizers, soups, salads, entrees and desserts from the menus they have created and serve the cuisine prepared in a chef's table style at the Tartan Terrace Restaurant. Six lab hours per week.
Prerequisite(s): HMT 1110 AND HMT 1129 AND HMT 2206 AND HMT 1112

HMT 2215 - Hospitality Cost Controls
3 Cr. Hr(s).
In-depth analysis of financial costs associated with hospitality operations. Although the primary focus will be on restaurants, other operational costs from lodging, meeting and events, etc. will be introduced. Topics include financial statement interpretations, breakeven calculations, butcher test computations, inventory systems and in-depth labor cost control function.
Prerequisite(s): HMT 1105 AND (ACC 1100 OR ACC 1210 OR MAT 1125)

HMT 2218 - Advanced Pastry Skills
3 Cr. Hr(s).
During this capstone course, students will have 15 weeks to prepare, execute, and arrange the display of an industry standard upscale bakery case. Items will include but not limited to basic, intermediate, and advanced pastry items, confections, laminated doughs, candy making, cakes, pies, plate & platter displays, sugar work, etc. Students will receive a complete list of requirements at the beginning of each class and how much time will be allotted to execute the product instructions. The final bakery case display will be presented to faculty and industry professionals for judging. Six lab hours per week.
Prerequisite(s): HMT 1102 AND HMT 1105 AND HMT 1107 AND HMT 1126 AND HMT 2110 AND HMT 2118 AND HMT 2126

HMT 2225 - Hospitality & Tourism Supervision
3 Cr. Hr(s).
This course is designed to provide students with the principles of supervision in the hospitality and tourism industry and the associated responsibilities. Topics include managing resources, team building, productivity cost formulas and the unique supervision techniques used in restaurants, lodging, bakeries, kitchens, and meeting and event planning. The course emphasis will be on leadership.
Prerequisite(s): HMT 1105

HMT 2226 - Hospitality Purchasing & Negotiations
2 Cr. Hr(s).
Food service functions regarding negotiations, laws, buying, science, packaging, distribution, ingredient process, storage, organization, cost controls, security, garden(s) sustainability, and procurement processing experience(s). One classroom, two lab hours per week.
Prerequisite(s): HMT 1105 AND HMT 1110

HMT 2227 - Hospitality Marketing
2 Cr. Hr(s).
Organization of the marketing concepts in the hospitality and tourism industry, utilizing all aspects necessary to build a marketing plan.
Prerequisite(s): HMT 1105

HMT 2230 - Risk & Prevention Management
2 Cr. Hr(s).
This course will cover the broad task of protecting guests, non-guests, employees and assets. Topics will include security, property access, perimeter control, alarm systems, communication systems, closed circuit television, computer security, employment screening, terrorism, emergency procedures and general safety procedures.
Prerequisite(s): HMT 1105

HMT 2291 - Hospitality Management & Tourism Cooperative Work Experience
2 Cr. Hr(s).
This course is a co-op credit experience which requires students to be employed at a work site that coincides with his/her degree option. The goal of this course is for students to apply concepts learned throughout his/her educational experience to a practical work environment. Students are required to complete a minimum of 20 HMT semester hours in his/her concentration prior to registering for this course.
Prerequisite(s): Approval of Department

HMT 2292 - Culinary Arts Option Cooperative Work Experience
2 Cr. Hr(s).
This course is a co-op credit experience which requires students to be employed at a work site that coincides with his/her degree option. A minimum of 20 work hours per week is required. The goal of this course is for students to apply concepts learned throughout his/her educational experience to a practical work environment. A minimum of 25 HMT semester hours in his/her concentration is required prior to registering for this course.
Prerequisite(s): Approval of Department

HMT 2293 - Baking & Pastry Arts Option Cooperative Work Experience
2 Cr. Hr(s).
This course is a co-op credit experience which requires students to be employed at a work site that reflects the Baking and/or Pastry field of his/her degree option. A minimum of 20 work hours per week is required. The goal of this course is for students to apply concepts learned throughout his/her educational experience to a practical work environment. A minimum of 25 HMT semester hours in his/her concentration is required prior to registering for this course.
Prerequisite(s): HMT 2218 AND Approval of Department

HMT 2295 - Hospitality Management & Tourism Capstone
3 Cr. Hr(s).
Application of previously learned hospitality management and tourism concepts through case study, readings and discussion of contemporary issues. Note: This course may be taken concurrently with HMT 2227, HMT 2230, and HMT 2291
Prerequisite(s): HMT 2215 AND HMT 2225

Humanities

HUM 1125 - Introduction to the Humanities
3 Cr. Hr(s).
Explores the nature and content of the humanities by examining and analyzing various cultures from the past. In addition, this course provides an introduction to human thought, creativity and human forms of expression by examining the links between historical realities and human culture.

HUM 1130 - Humanity & the Challenge of Technology
3 Cr. Hr(s).
This course examines the role of technology in

the modern society. It explores the opportunities and dangers faced by humankind in the evolution of new technologies. It inquires into such questions as whether the human quest for mastery of nature has made us masters or slaves of the machine.
This course has no textbook costs.

HUM 1131 - The Search for Utopia
3 Cr. Hr(s).
The Search for Utopia is a survey of humanity's search for the ideal society from ancient times to the modern age. It examines various utopian ideas and practices that have changed world communities and compares Western utopian traditions with Eastern perceptions of the perfect society.
This course has no textbook costs.

HUM 1135 - Environmental Ethics
3 Cr. Hr(s).
Overview of philosophical and ethical dimensions of the environmental crisis, such as environmental politics, animal rights and nonwestern views.
This course has no textbook costs.

HUM 1141 - Appalachian History & Culture
3 Cr. Hr(s).
An examination of various facets of life in Appalachia, including history, culture, economics, politics, education and religion.

HUM 1142 - Native American History
3 Cr. Hr(s).
Survey of the political, social, economic, and cultural development of Native Americans, from prehistoric times to the present, with specific emphasis on Native Americans of Ohio and the Appalachian region.

HUM 1195 - Leadership Development
3 Cr. Hr(s).
An exploration and study of the concept of leadership in the context of community and global issues. Includes Service Learning and applying leadership skills in the community.

HUM 2236 - International Studies
1 - 3 Cr. Hr(s).
Under the supervision of Sinclair faculty, students visit another country and work on study and/or service learning activities related to specific academic majors or topics. Practicum hours vary based on credit hours.

Industrial & Systems Engineering Technology

ISE 1100 - Product Development Fundamentals
1 Cr. Hr(s).
This course will take the student through problem identification, product conceptualization utilizing a flexible hybrid electronic (FHE), business modeling, creation of presentation slides, then presentation shark tank style to a panel of industry and education professionals.

ISE 1101 - Introduction to Industrial & Systems Engineering Technology
3 Cr. Hr(s).
Introduction to the skills and competencies required to be an Industrial and Systems Engineer. Topics will include an introduction to organizational structure and lean processes, lean process development and improvement, data analysis and problem-solving, and teamwork. Integration of leadership and management methods within these skills is also introduced. Two classroom, two lab hours per week.

ISE 1120 - Problem Solving & Continuous Improvement
3 Cr. Hr(s).
Develop robust solutions to problems or develop opportunities for continuous improvement using the Plan-Do-Check-Act cycle as the base methodology. Quality concepts such as root cause analysis (5-Why and Fishbone Diagrams), graphical and data analysis tools (Pareto Charts, Run Charts and Scatter Graphs), and Statistical Process Control and Capability (Control Charts, Histograms, Process Capability) will be used. Learn the differences between Common Cause and Assignable Cause Variation and how they apply to Continuous Improvement. Two classroom, two lab hours per week.
Prerequisite(s): ISE 1101 AND (MAT 1570 OR MAT 1580)

ISE 1130 - Lean Operations & Continuous Improvement
3 Cr. Hr(s).
Lean operations principles including lead time reduction, standardized work, visual controls (5S), takt time, module design, setup reduction, Kanban, value stream mapping, total productive maintenance (TPM), and Office Lean will be used to eliminate process waste and to reduce excess inventory. Two classroom, two lab hours per week.
Prerequisite(s): ISE 1101

ISE 1201 - Introduction to Manufacturing Safety
2 Cr. Hr(s).
This course introduces the concepts and practices of safety in advanced manufacturing, including good practices, hazards, prevention, and corrective action. Students will have the opportunity to earn the Safety certification through the Manufacturing Skills Standards Council (MSSC) as part of their Certified Production Technician (CPT) program.

ISE 1202 - Quality Practices & Measurement for Manufacturing
2 Cr. Hr(s).
An introduction to controlling and improving quality in a manufacturing setting, including the concepts of measurement, calibration, auditing, inspection, and continuous improvement. Explores ways that manufacturers use data and analysis to improve quality. Students will have the opportunity to earn the Quality Practices and Measurement certification through the Manufacturing Skills Standards Council (MSSC) as part of the Certified Production Technician (CPT) program.

ISE 1203 - Manufacturing Processes & Production
2 Cr. Hr(s).
Awareness of basic maintenance requirements of electrical, pneumatic, hydraulic, and mechanical systems utilized in modern manufacturing. Includes the monitoring of key indicators and recognizing potential issues. Students will have the opportunity to earn the Maintenance Awareness certification through the Manufacturing Skills Standards Council (MSSC) as part of their Certified Production Technician (CPT) program.

ISE 1204 - Maintenance Awareness for Manufacturing
2 Cr. Hr(s).
Awareness of basic maintenance requirements of electrical, pneumatic, hydraulic, and mechanical systems utilized in modern manufacturing. Includes the monitoring of key indicators and recognizing potential issues. Students will have the opportunity to earn the Maintenance Awareness certification through the Manufacturing Skills Standards Council (MSSC) as part of their Certified Production Technician (CPT) program.

ISE 1207 - Introduction to Manufacturing
3 Cr. Hr(s).
In this course students will learn basic concepts of manufacturing, technical drawings, measurements, quality and maintenance. They will learn how to read Standard Operating Procedures and document reports. Topics in print reading, part visualization from drawings and 3D models, location of key features and dimensional

specifications using concepts of geometric tolerancing and dimensioning will be covered. They will learn to use precision scales, calipers, micrometers, dial indicators and other measurement instruments. Students will learn about Quality Systems, Quality control methods, statistical process control and control charts. Topics in Maintenance management and the different schemes will be covered. Students will also learn how to analyze data, perform technical calculations, and demonstrate critical thinking and communication skills. Two classroom, two lab hours per week.

ISE 1300 - Fundamentals of Dimensional Metrology
3 Cr. Hr(s).
Student will learn and be able to apply the various measurement techniques involving basic measuring instruments and tools such as calipers, micrometers, height and depth gauges, dial and test indicators, and gauge blocks; correct use and care of basic inspection instruments. Drawing or blueprint reading including an introduction to GD&T inspection techniques will be presented. Coordinate Measuring Machines (CMM) and other precision measuring equipment will be introduced. Two classroom, two lab hours per week.

ISE 1310 - Advanced Metrology & Gauging
3 Cr. Hr(s).
Students will learn metrology and measurement techniques that include advanced dimensional inspection (layout inspection), Vision systems (Optical Comparator), Non-destructive testing (Hardness, X-Ray, Dye Penetrate, Eddy Current), and Destructive testing (Tensile, Bend, Elongation, Fatigue, Corrosion). Metrological applications to the food and health care systems will be introduced. Two classroom, two lab hours per week.
Prerequisite(s): ISE 1300

ISE 1313 - Coordinate Measurement
3 Cr. Hr(s).
Course will prepare students to use and program coordinate measurement machines, apply Geometric Dimensioning and Tolerancing (GD&T) principles, and use advanced operating techniques for a servo driven coordinate measuring device. Two classroom, two lab hours per week.
Prerequisite(s): ISE 1300

ISE 1401 - Introduction to Digital Thread Technology
3 Cr. Hr(s).
Provides an introduction to digital thread applications and career opportunities. The course includes a survey of various related technologies and tools, as well as how they are employed throughout the lifecycle of a manufactured product. Two classroom, two lab hours per week.

ISE 1402 - Digital Thread Enabled Manufacturing
3 Cr. Hr(s).
Provides an overview of how digital thread technologies and tools can be applied to various manufacturing processes through course lectures and labs covering considerations for machining, additive manufacturing, and robotics. Additionally, a review of digital thread methods, protocols, and tools for testing, quality assurance, and conformance throughout the manufacturing process is provided. Two classroom, two lab hours per week.

ISE 2100 - Lean Leadership, Teamwork & Management
3 Cr. Hr(s).
Introduction to Lean Management tools and techniques such as Leader Standard Work, Gemba Walks, and the Daily Accountability process. Proper leadership of teams is taught to include how to charter a team, the role of team members, the stages of a team, and team decision making. Basic Management / Supervision principles are covered. Communication skills are taught as to how they relate to both teamwork and supervision. Two classroom, two lab hours per week.
Prerequisite(s): ISE 1130

ISE 2208 - Engineering Technology Economics & Cost Analysis
3 Cr. Hr(s).
Learn the types of costs such as Direct Labor, Materials and Outside Services, Overhead, and Selling, General and Administrative expenses (SG&A) that are used to determine the pricing and profitability of products and services. Apply basic economic cost concepts, decisions, analysis and evaluations as applied to engineering design, production, maintenance and quality control.
Prerequisite(s): ISE 1101 AND (MAT 1470 OR MAT 1580)

ISE 2210 - Methods Engineering
3 Cr. Hr(s).
This course is a detailed look into measuring and improving an operation or workstation. Tools are used to assess and optimize the work center operation and layout. Development of operation standards for some common service and industrial processes will be demonstrated. The techniques required to develop the necessary documentation (Work Instructions, Routings, Bill of Materials, Work Orders) to ensure a consistent and repeatable process are taught. Performance metrics relating to both labor and material are presented. Two classroom, two lab hours per week.
Prerequisite(s): CAM 1109 AND ISE 1120 AND ISE 1130 AND MAN 2110

ISE 2220 - Applied Statistics for Process Control & Improvement
3 Cr. Hr(s).
Application of statistics as they apply to process control and improvement. Topics covered include Descriptive Statistics, Control Charts, Histograms, and Process Capability Indexes. Advanced statistical topics for process optimization and problem solving include Analysis of Variance (ANOVA), Design of Experiments, Measurement System Analysis, and Hypothesis Testing. Two classroom, two lab hours per week.

ISE 2240 - Six Sigma: Green Belt
3 Cr. Hr(s).
An applied introduction to the Six Sigma process using the DMAIC (Define, Measure, Analyze, Improve, and Control) system as the model. Structured problem solving and basic statistical methods will be taught to ensure a thorough analysis and implementation to reduce costs and improve business processes. Various quality tools (Pareto, Cause and Effect Diagram, Control Charts, Histograms, and Flow Charts) are used during the improvement process. Two classroom, two lab hours per week.

ISE 2250 - New Product Realization
3 Cr. Hr(s).
The New Production Realization (NPR), or New Production Introduction (NPI), process using the Advanced Product Quality Planning (APQP) model will be taught. Tools such as Quality Function Deployment (QFD), Process Failure Mode and Effect Analysis (PFMEA), and Production Part Approval Process (PPAP) will be learned in the context of the APQP model. The relationship to other NPR models, such as the medical field and other non-manufacturing industries, will be reviewed. Two classroom, two lab hours per week.
Prerequisite(s): ISE 2220

ISE 2260 - Work Flow & Facility Design
3 Cr. Hr(s).
This course is an instructional perspective on optimizing the flow of a product between operations or within the organization or facility. Different types of workflow scenarios (such as Job Shop, and Production Line) will be used to teach the student to analyze the

capacity needed and determine the best flow or layout required. Facility design considerations will be introduced for the situations where significant changes require increasing facility area or major changes to the current facility layout. Two classroom, two lab hours per week.
Prerequisite(s): CAM 1107 AND ISE 2210

ISE 2310 - Quality Assurance
3 Cr. Hr(s).
Quality Assurance and Quality Control principles will be introduced. Quality Control elements include the different inspection categories (receiving, in-process, final), material conformance, sampling techniques, traceability methods and the relationship to PPAP/First Article submission. Quality Assurance knowledge areas covered include Quality Costs, Control Plans, Customer and Supplier engagement, and the relationship to PPAP/First Article submissions. Two classroom, two lab hours per week.
Prerequisite(s): ISE 1310

ISE 2360 - Quality Management Systems & Auditing
3 Cr. Hr(s).
This course covers the major components of a Quality Management System (QMS) as it relates to industry standards such as ISO, TS, FDA, and the Medical Device industries will be covered. The ISO 9001:2015 specification will be covered in detail. Quality System Auditing principals and techniques will be learned. Two classroom, two lab hours per week.
Prerequisite(s): ISE 1300 AND ISE 2100

ISE 2700 - Industrial & Systems Engineering Technology Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credit toward their degree requirements through an internship work-based learning experience. Students already working in their area of study may apply to use that experience to meet the internship requirements. Students will develop learning goals, objectives, and activities which may include preparing related reports and /or projects. The student will work with the Office of Work-Based Learning and the department chair or program coordinator to acquire the approval needed to register for this course option. The credit hours earned can range from 1 to 4 based on a student's need and directed work-based learning practice experience. Internship hours vary based on credit hours.
Prerequisite(s): Approval of Department

ISE 2780 - Industrial & Systems Engineering Technology Capstone
3 Cr. Hr(s).
This capstone course provides a fun and unique assessment of achievement by Industrial and Systems Engineering Technology students by completing a project demonstrating the principles and practices of their major through the application of program-related outcomes.
Prerequisite(s): Approval of Department

Interior Design

IND 1180 - History & Theory of Interior Design
3 Cr. Hr(s).
Examination of the stylistic development of interior design, domestic furniture and furnishings from classical times to the present.

IND 1230 - Residential Design
4 Cr. Hr(s).
Introduction to Interior Design includes exploring the profession, the principles, elements and design processes; residential space planning, kitchen design and furniture arrangement fundamentals with emphasis on design drawings and professional presentation form. Two classroom, four lab hours per week.
Prerequisite(s): VIS 1100 AND VIS 1210 OR Approval of Department

IND 1234 - Materials & Textiles
3 Cr. Hr(s).
Overview of specifications, relative costs, performance properties and installation methods of materials, including textiles used in interior design.

IND 1240 - Color Theory
3 Cr. Hr(s).
Course will cover Josef Albers color theory, the effect of light on color and color psychology, including forecasting and trends.

IND 2130 - Non-Residential Design
4 Cr. Hr(s).
Students investigate the design of health care, institutional, hospitality, retail and office environments and identify basic historical exterior styles. Design projects will integrate corporate culture, building codes, Americans with Disabilities Act (ADA) compliance, aesthetic, social and psychological factors. Advanced oral and visual presentation skills. Two classroom, four lab hours per week.
Prerequisite(s): CAT 1101 AND IND 1230 AND IND 1234

IND 2135 - Rendering
3 Cr. Hr(s).
Drawing and computer-aided drawing technique development to aid in the visualization of materials, color and lighting of a three-dimensional interior space.
Prerequisite(s): VIS 1210

IND 2140 - Interior Building Systems & Design
4 Cr. Hr(s).
The course introduces the building systems that affect the interior environment, Students learn about HVAC, plumbing, electrical, lighting applications, and siting and external shading strategies and how these areas affect the interior environment. Building codes and structural systems are introduced. Emphasis is placed on efficiency and cost savings, including commonly accepted sustainable practices. Two classroom, four lab hours per week.
Prerequisite(s): CAT 1101 AND IND 1230

IND 2250 - 3D Modeling
3 Cr. Hr(s).
The course will teach students how to draw three dimensional models of building interiors, and how to create presentation renderings of those designs. Students will also learn how to use layout to create construction drawings and documents that communicate their designs graphically in a standardized, professional manner.
Prerequisite(s): CAT 1101

IND 2260 - Interior Design Portfolio
4 Cr. Hr(s).
Interior design business practices; including cost estimating, contract writing, sales and communication techniques. Development of a portfolio from previous course work, work experience, freelance, etc. Two classroom, four lab hours per week.
Prerequisite(s): IND 2130 AND IND 2135 AND IND 2140

IND 2280 - Kitchen & Bath Design
3 Cr. Hr(s).
Design foundations exploring standards for industry professionals specializing in residential kitchen and bath planning, basic fundamentals with emphasis on design layouts, design concept drawings and professional presentation formats.
Prerequisite(s): CAT 1101 AND IND 1230

Japanese

JPN 1100 - Conversational Japanese I
3 Cr. Hr(s).
A foundation for gaining knowledge about

Japanese culture and basic phrases related to simple spoken Japanese, including travel situations.

JPN 1101 - Elementary Japanese I
4 Cr. Hr(s).
Foundation for understanding, speaking, reading and writing Japanese. Work outside of class and/or in the language laboratory is required.

JPN 1102 - Elementary Japanese II
4 Cr. Hr(s).
This Elementary Japanese II class aims to promote students to attain a basic level of Japanese proficiency in listening, speaking, reading, and writing in the cultural context. This course will focus on essential speaking and writing skills while helping students improve contextual reading and listening competencies.
Prerequisite(s): JPN 1101

JPN 1105 - Conversational Japanese II
3 Cr. Hr(s).
Develops the conversational skills to a greater degree of complexity and covering more situations. Promotes free expression in Japanese within more specific and complex cultural contents.
Prerequisite(s): JPN 1100

JPN 2201 - Intermediate Japanese I
4 Cr. Hr(s).
This Intermediate Japanese I class aims to promote students to attain a higher level of Japanese proficiency in listening, speaking, reading, and writing in the cultural context. This course will focus on competency in contextual readings and character writing skills while continuing to enhance listening and speaking skills.
Prerequisite(s): JPN 1102

JPN 2202 - Intermediate Japanese II
4 Cr. Hr(s).
This Intermediate Japanese II class aims to promote students to attain a higher level of Japanese proficiency in listening, speaking, reading, and writing in the cultural context. This course will focus on competency in contextual readings and character writing skills while continuing to enhance listening and speaking skills.
Prerequisite(s): JPN 2201

Journalism

JOU 2101 - Introduction to Journalism
3 Cr. Hr(s).
The principles and functions of newspapers, including current changes and challenges. Students will learn basic and advanced reporting skills, including how to interview, gather information and write news stories. Computer skills are required.
Prerequisite(s): ENG 1101

JOU 2203 - Reporting & Writing for Media
3 Cr. Hr(s).
Students will develop and advance journalistic principles to address the challenges today's journalists encounter, gain skills to report and write news stories for print, broadcast and on-line media platforms and develop the basic skills for creating multimedia stories.
Prerequisite(s): ENG 1101

JOU 2270 - Journalism Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Seven work hours per credit hour each week.
Prerequisite(s): Approval of Department

Law

LAW 1101 - Business Law
3 Cr. Hr(s).
The American legal system as it relates to business transactions, including the judicial system and sources of law, legal procedures, torts, business ethics and social responsibility, contracts, property, employment law, agency, partnerships and corporations.
This course has no textbook costs.

LAW 1102 - Consumer Law
3 Cr. Hr(s).
This course develops student skills in application of state and federal consumer laws and regulations including privacy, warranties, credit and purchasing assets issues.

LAW 1104 - Employment Law
3 Cr. Hr(s).
This course will provide the student with an understanding of current legal issues in the area of employer/employee relations. Emphasis is placed on legal issues that arise in the employment relationship, employment discrimination issues and federal and state regulations applicable to employment law. The use of current events is emphasized to reinforce areas covered in the course materials.

Legal Studies

PAR 1101 - Introduction to Legal Studies
3 Cr. Hr(s).
The paralegal's role in the legal system is introduced. The function of case law, statutes, administrative regulations, constitutions and court rules are explored.
Prerequisite(s): Restricted to Majors
Corequisite(s): PAR 1102 AND PAR 1103

PAR 1102 - Legal Technology
1 Cr. Hr(s).
This course develops students' skills in introduction to the technology used in law firm environments.
Prerequisite(s): Restricted to Majors
Corequisite(s): PAR 1101 AND PAR 1103

PAR 1103 - Litigation
3 Cr. Hr(s).
Introduction to the civil system, courts, torts and civil pleadings. The student will develop skills in drafting basic pleadings. Note: This course must be taken concurrently with PAR 1101 and PAR 1102.
Prerequisite(s): Restricted to Majors
Corequisite(s): PAR 1101 AND PAR 1102

PAR 1201 - Legal Research & Writing
3 Cr. Hr(s).
This course develops student skills in researching Ohio's legal resources, writing legal memos and letters and using the Ohio Manual of Citations. Note: This may be taken concurrently with PAR 1103.
Prerequisite(s): PAR 1101 AND PAR 1102 AND Restricted to Majors

PAR 1202 - Advanced Legal Technology
1 Cr. Hr(s).
This course develops students' skills in use of software in a legal environment, including spreadsheets, databases, data backup media, group calendaring and research on the Internet.
Prerequisite(s): PAR 1102 AND Restricted to Majors

PAR 1203 - Advanced Litigation
3 Cr. Hr(s).
The paralegal's role in the litigation process, from pleadings through discovery and trial. This course develops student paralegal skills in drafting pleadings, use of discovery tools and litigation software.
Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1103 AND Restricted to Majors

PAR 2301 - Advanced Legal Research & Writing

3 Cr. Hr(s).
Develops skills introduced in Legal Research & Writing. This course covers research in federal and national legal resources, writing trial briefs, writing research memoranda and letters and using a citations manual.
Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1201 AND Restricted to Majors

PAR 2302 - Family Law
3 Cr. Hr(s).
This course develops student paralegal skills in preparation of documents in a domestic relations practice, including pleadings and forms.
Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1103 AND Restricted to Majors

PAR 2303 - Probate Law
3 Cr. Hr(s).
Summary and full administration of probate estates, adoptions, guardianships, name changes and minor settlements.
Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1103 AND Restricted to Majors

PAR 2401 - Legal Studies Internship
2 Cr. Hr(s).
Application of skills in a legal environment. Professionalism, resumes and interviewing skills. One classroom, seven practicum hours per week.
Prerequisite(s): PAR 1101 AND PAR 1102 AND PAR 1103 AND Restricted to Majors AND Approval of Department

Literature

LIT 2201 - British Literature I
3 Cr. Hr(s).
A chronological survey of major writers of English poetry, drama and prose from the beginnings through the eighteenth century (through 1785).

LIT 2202 - British Literature II
3 Cr. Hr(s).
A chronological survey of major writers of English poetry, drama and prose from 1785 to the present.

LIT 2211 - American Literature I
3 Cr. Hr(s).
A chronological survey of major writers of American poetry, drama and prose from the Colonial Period through the Civil War (through 1865).

LIT 2212 - American Literature II
3 Cr. Hr(s).
A chronological survey of major writers of American poetry, drama and prose from the Civil War through the present.

LIT 2217 - Images of Women in Literature
3 Cr. Hr(s).
Major images of women in literature, with emphasis on contemporary literature's role in both reflecting and shaping society's views of women.

LIT 2220 - Introduction to Literature
3 Cr. Hr(s).
Introduction to Literature introduces students to the major literary genres of literature, including narrative fiction, poetry, and drama. Emphasis is placed on literary terminology and interpretation. Upon completion, students should be able to analyze and respond to literature. Students will effectively and ethically argue their interpretations of literary works using textual evidence and Modern Language Association (MLA) documentation.

LIT 2230 - Great Books of the Western World
3 Cr. Hr(s).
A chronological survey of the major literary works of periods of Western culture beginning with the Greeks and progressing through the Middle Ages, the Renaissance, Neo-Classicism and Enlightenment, Romanticism, Realism and Modernism.

LIT 2234 - Literature of Africa, Asia, & Latin America
3 Cr. Hr(s).
Selected thematic study of major literary works of Africa, Asia and Latin America, emphasizing universal values and the commonality of experience.

LIT 2236 - African American Literature
3 Cr. Hr(s).
This course provides an overview of the African American literary tradition with emphasis on early slave narratives, the Harlem Renaissance, the Black Revolution and Arts Movement and contemporary social expression.

LIT 2400 - Children's & Adolescent Literature
3 Cr. Hr(s).
Children's and Adolescents' Literature focuses on reading, analyzing and evaluating various literary genres for children and adolescents. Students will examine the literary elements and values presented in classic and modern picture books, fiction, fairy tales and poetry. Children's books that have won the Newbery and Caldecott Awards will be studied and discussed.

Management

ENS 1118 - Lifetime Physical Fitness & Wellness
3 Cr. Hr(s).
This course provides an overview of the concepts of physical fitness, conditioning principles and appropriate exercise and health practices with application to lifelong fitness and wellness. Course includes lecture and physical fitness testing.
Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445

ENS 2419 - Health Promotion, Fitness & Sport Programming
3 Cr. Hr(s).
This course provides organizational techniques, administrative procedures and principles of managing health promotion, fitness and sport programs, including facility design and operational standards and guidelines.
Prerequisite(s): Restricted to Majors

MAN 1010 - Digital Thread Enhanced Logistics
3 Cr. Hr(s).
Provides an overview of management principles, technologies, and tools related to digital thread enhanced logistics. The course coves digital thread compliant logistics topics including manufactured product preparation and packaging, shipping, tracking, receiving, inventory and storage, and associated hardware, software, and data management resources.

MAN 1050 - Organizational Leadership I
3 Cr. Hr(s).
This course explores core leadership principles and skills essential for thriving in today's diverse and dynamic workplaces. Topics include communication and personality styles, managing conflict, emotional intelligence, and fostering trust and psychological safety. Students will develop practical tools for problem-solving, effective time management, and leveraging technology to enhance productivity while building resilience and navigating organizational change.

MAN 1106 - Introduction to Radio Frequency Identification
1 Cr. Hr(s).
Overview of the technology of Radio Frequency Identification (RFID). Applications,

terminology. Introduction of global standards and case studies discussed.

MAN 1107 - Foundations of Business
3 Cr. Hr(s).
The American business system and basic principles of the free market system. Includes introduction of business concepts, entrepreneurship, management, marketing, economics, accounting and other important business principles.

MAN 1110 - International Business
3 Cr. Hr(s).
Global dimensions of business, overview of theories and institutions of trade, investment and management, emphasizing the managerial perspective on issues arising from international business and global operations.

MAN 1114 - Introduction to Sports Management
3 Cr. Hr(s).
Historical, sociological and business foundations of sport, including an emphasis on professional opportunities, application of sports management and organizational concepts.

MAN 1157 - Management Applications of Radio Frequency Identification Technology
2 Cr. Hr(s).
This course will introduce students to the management applications of Radio Frequency Identification (RFID) technology, which enables automated gathering and sending of asset information. Case studies and hands-on activities will allow students the opportunity to experience RFID from a business perspective, linking cost, price, customer satisfaction and product performance measures to business application outcomes.
Prerequisite(s): MAN 1106

MAN 2050 - Organizational Leadership II
3 Cr. Hr(s).
This course explores leadership principles that drive individual and organizational success. Students will learn key concepts such as the Law of the Lid, setting leadership potential; the Law of Addition, serving others to create impact; and the Law of Empowerment, fostering trust and delegation. Additional topics include aligning vision with action, building momentum and creating lasting influence through timing, respect, and connection. Emphasis is placed on building strong networks, sustaining morale, and setting priorities to realize goals. Participants will develop actionable strategies to lead with clarity, inspire trust, and achieve excellence.
Prerequisite(s): MAN 1050

MAN 2101 - Introduction to Supervision
3 Cr. Hr(s).
Strategies and techniques for current, as well as prospective, supervisors emphasizing the assessment of skills required, the analysis of situational factors and the development of creative approaches to effective supervision.

MAN 2110 - Introduction to Project Management
3 Cr. Hr(s).
Introduction to basic project management concepts, including how to scope, plan, launch, monitor, control and close a project. The course includes the Project Management Institute's (PMI) basic knowledge areas: Integration, Scope, Time, Cost, Quality, Human Resources, Communication, Risk and Procurement.

MAN 2140 - Human Resource Management
3 Cr. Hr(s).
Introduction through application of Human Resource Management concepts. Emphasis on Strategic Human Resource Management, Workforce Planning and Employment, Human Resource Development, Total Compensation and Rewards, Employee and Labor Relations and Risk Management.
Prerequisite(s): MAN 2150

MAN 2144 - Negotiation Techniques
3 Cr. Hr(s).
This course addresses the application of basic principles of negotiation through the introduction and analysis of the negotiation process, case studies and simulations. It focuses on accurately identifying requirements specifications, analyzing proposals and conducting purchasing and contracting negotiations ethically and legally, but is also relevant to compromise and agreement in other business and personal life situations.

MAN 2150 - Management & Organizational Behavior
3 Cr. Hr(s).
Introduction to fundamental concepts necessary for understanding management, motivation and behavior in organizational settings. Emphasis on planning, organizing, influencing and controlling to continually improve effective management skills.

MAN 2159 - Supply Chain Management Concepts & Applications
3 Cr. Hr(s).
This course provides an in-depth study of Supply Chain Management (SCM) functions and the application of effective SCM strategies and practices to achieve improved operations in manufacturing and service organizations. It focuses on analysis of real-world SCM challenges, strategies and techniques.

MAN 2270 - Management Internship
3 Cr. Hr(s).
Students earn credit toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Thirty hours per week in the workplace.
Prerequisite(s): Approval of Department

MAN 2275 - Retail Management Capstone
3 Cr. Hr(s).
Discover the nature and scope of retailing. Topics include strategic and financial planning, supply chain management, impact of laws and regulations, product life cycles, and technology in retail.
Prerequisite(s): Approval of Department

MAN 2279 - Business Management Capstone
3 Cr. Hr(s).
Assessment of achievement by Business Management degree students in attaining program outcomes by employing reflective learning through demonstration of management-related principles and practices.
Prerequisite(s): Approval of Department

MAN 2414 - Foundations of Coaching
3 Cr. Hr(s).
This course will cover many aspects of coaching in society. Topics include youth, collegiate and professional sport, coaching models, training, coaching networking, coaching for managers and professional growth. Other discussions will cover sport and business topics.

MAN 2415 - Coaching & Leadership
3 Cr. Hr(s).
This course introduces students to the principles of leadership in sport and organizations. Topics focus on discovering an individual coaching and leadership style, contemporary coaching issues, leadership models and an investigation into the great leaders of the past.

Marketing

MRK 2100 - Foundations of Marketing
3 Cr. Hr(s).
Foundations of Marketing is designed to provide a broad introduction to the field of marketing. Marketing is far more than just

selling or advertising within a business setting; it is a major part of our everyday lives. This course will illustrate the importance of marketing and skills that are applicable to all specializations within business.

MRK 2101 - Principles of Marketing Management
3 Cr. Hr(s).
Marketing strategies and decision making in the context of other business functions. Topics include: research and analysis of markets, environments and competition; market segmentation and selection of target markets; consumer and organizational behavior; planning and integration of product, price, promotion and distribution activities for profit and nonprofit, domestic and global settings.
Prerequisite(s): ECO 2180

MRK 2102 - Principles of Advertising
3 Cr. Hr(s).
This course focuses on integrated marketing communications (IMC). The concepts of IMC enhance the equity of brands and show how advertising, promotion, packaging and branding strategies, point-of-purchase communications, public relations, event and cause-oriented sponsorships can affect the marketing of products, goods, services or ideas.

MRK 2135 - Digital Marketing
3 Cr. Hr(s).
Digital marketing is a broad and growing field encompassing any form of marketing that utilizes technology to deliver a message. Students in this course study some of the most popular tactics used by successful businesses today to promote their brand and reach their customers. This information is applied in hands-on activities that expose students to real-world business situations, including developing a digital marketing campaign for a brand.

MRK 2145 - Principles of Retailing
3 Cr. Hr(s).
Functions and concepts for the retail organization. Development and implementation of policies and procedures in planning, pricing, display, layout, buying and services from a management perspective. A consumer-centered approach to examining problems of various types.

MRK 2220 - Small Business Marketing
3 Cr. Hr(s).
This course explores the marketing strategy and planning process. Special emphasis is given to analyzing marketing techniques used by innovative entrepreneurs. Students will work collaboratively to develop a marketing plan for a start-up or existing business.

MRK 2225 - Sales Fundamentals
3 Cr. Hr(s).
Along with exploring potential career opportunities, this course introduces students to the approaches and philosophies used by successful sales professionals. Topics such as identifying and communicating with prospects, identifying needs, matching presentation styles to the situation, handling objections, closing techniques and long-term relationship building strategies will be explored.

MRK 2230 - Social Media & Consumer Engagement
3 Cr. Hr(s).
The emergence and growth of social media changed the way we communicate and conduct business. Consumers can influence one another and brands now more than ever, and this power shift creates both opportunities and challenges for organizations today. This course includes a brief overview of the popular social media platforms, but primarily focuses on how brands can use social media strategically to connect with customers and achieve their goals. Students apply this information by evaluating and developing social marketing campaigns.
Prerequisite(s): MRK 2135 OR MRK 2100 OR MRK 2101 OR MRK 2220

MRK 2236 - Consumer Behavior
3 Cr. Hr(s).
This course is designed to enable students to acquire an understanding of the purchasing decision process for individuals, families and organizations. Psychological, societal, and cultural influences on consumer decisions will be studied. Marketing strategy implications of conceptual constructs will be discussed throughout the course.
Prerequisite(s): MRK 2100 OR MRK 2101

MRK 2250 - Digital Marketing Analytics
3 Cr. Hr(s).
Digital marketing tactics and tools are essential components of a business strategy in today's digital world. However, what differentiates many successful organizations from the rest is a data-driven and customer-centric approach. Marketing professionals with strong data analytics and problem-solving skills now have a competitive advantage above the rest. In this course, students learn about data sources, analytics techniques, using popular industry tools, and generating and reading reports. Students complete a project that provides opportunities to practice testing and optimization techniques for owned and paid media, extract meaningful insights from performance results, and make decisions that add value for both a company and its customers. The course concludes with an exam that enable students to earn an in-demand industry certification.
Prerequisite(s): MRK 2135

Mathematics

MAT 0050 - Arithmetic Refresher
1 Cr. Hr(s).
This course is a refresher in the arithmetic topics essential for studying algebra. Successful students will demonstrate proficiency in operations with whole numbers, fractions, decimal numbers, and percents. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours.

MAT 0100 - Algebra I
3 Cr. Hr(s).
Course provides a brief review of pre-algebra concepts including: operations with rational numbers; translating, evaluating, and simplifying expressions; translating, simplifying, and solving various types of first degree equations, inequalities and applied problems, including geometry, percent proportions, and other formulas; an introduction to coordinate planes, graphing and writing equations of straight lines. Traditional testing (proctored or in Testing Center) is used in all online sections. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours.
Prerequisite(s): MAT 0050 OR satisfactory score on math placement test

MAT 0200 - Algebra II
3 Cr. Hr(s).
Factoring; operations with polynomials and rational expressions; solving second-degree equations by factoring; solving equations with rational expressions. Traditional testing (proctored or in Testing Center) is used in all online sections. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours.
Prerequisite(s): MAT 0100 OR MAT 0600 with a grade of C or better OR satisfactory score on math placement test

MAT 0300 - Algebra III
3 Cr. Hr(s).
Systems of linear equations in two variables and applied problems; two-variable

inequalities and systems of inequalities and applied problems; operations with rational exponents, radical expressions and complex numbers; relations and functions; simplifying radical expressions; solving equations with rational exponents, equations with radical expressions, quadratic equations by factoring, completing the square, and the quadratic formula, equations quadratic in form; quadratic functions. Traditional testing (proctored or in Testing Center) is used in all online sections. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours.
Prerequisite(s): MAT 0200 with a grade of C or better OR satisfactory score on math placement test

MAT 0445 - Quantitative Reasoning Booster
1 Cr. Hr(s).
This course is taken in conjunction with MAT 1445, Quantitative Reasoning. It reviews prerequisite concepts for the topics in MAT 1445. Each prerequisite concept is covered in this course just prior to being needed in MAT 1445. Topics covered include: numerical reasoning, proportional reasoning, algebraic reasoning and modeling with linear functions. Two lab hours per week. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours.
Corequisite(s): MAT 1445

MAT 0450 - Introductory Statistics Booster
1 Cr. Hr(s).
This course is taken in conjunction with MAT 1450, Introductory Statistics. This course reviews prerequisite concepts for the topics in MAT 1450. Each prerequisite concept is covered in this course just prior to being needed in MAT 1450. Topics covered include: use of summation notation, solving equations and inequalities with square roots, and extracting information from tables and graphs. Two lab hours per week. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours.
Corequisite(s): MAT 1450

MAT 0460 - Booster for Mathematics for Business Analysis
1 Cr. Hr(s).
This course is taken in conjunction with MAT 1460, Mathematics for Business Analysis. This course reviews prerequisite concepts for the topics in MAT 1460. Each prerequisite concept is covered in this course prior to being needed in MAT 1460. Topics covered include: operations on polynomials, radical and rational functions, solving quadratic/rational equations/applications and graphing basic functions. Three lab hours per week. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours.
Corequisite(s): MAT 1460

MAT 0470 - College Algebra Booster
1 Cr. Hr(s).
This course is taken in conjunction with MAT 1470, College Algebra. This course reviews prerequisite concepts for the topics in MAT 1470. Each prerequisite concept is covered in this course just prior to being needed in MAT 1470. Topics covered include: operations on polynomial, radical and rational functions, solving quadratic/rational equations/applications and graphing basic functions. Three lab hours per week. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours.
Corequisite(s): MAT 1470

MAT 0600 - Bridge to College Math
This course is repeatable.

3 Cr. Hr(s).
The topics contained in MAT 0100, MAT 0200, and MAT 0300 will be delivered in a self-paced format using technology, allowing students to begin at the appropriate level based on course placement and allowing them to move through as many topics, and courses, as they can within the time limits of the semester. Topics include: a brief review of pre-algebra concepts, solving and graphing linear equations and inequalities, factoring, simplifying polynomial and rational expressions, solving and graphing systems of linear equations and inequalities in two variables, solving and graphing quadratic equations, complex numbers, and simplifying exponential and radical expressions. At the end of the semester, based on proficiency of the topics in one or more courses, students will earn a grade of "S" for satisfactory progress and gain permission to enter subsequent courses in their plan of study. Note: Courses that begin with a zero are developmental in nature. Credit earned in developmental courses will not apply to the overall program hours. Six lab hours per week.
Prerequisite(s): MAT 0050 OR satisfactory score on math placement test

MAT 1110 - Math for Technologists
3 Cr. Hr(s).
Use ratio and proportion to solve applications in technology; convert within and between metric and customary systems of measurement; read and interpret measurement tools and gauges; simplify algebraic expressions; solve linear equations; apply the geometry of lines, angles, and circles to technology applications. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 0050 OR satisfactory score on math placement test

MAT 1120 - Business Mathematics
3 Cr. Hr(s).
Mathematics of finance, mathematics of trade, payroll, taxes, insurance, elementary statistics. Traditional testing (proctored or in Testing Center) is used in all online sections.

MAT 1125 - Math for the Culinary Arts & Baking & Pastry Arts Professional
3 Cr. Hr(s).
This course is specifically for Culinary Arts and Baking & Pastry Arts majors. The math requirement for this course will form the foundations needed for costing of food and beverage, recipe conversion, bakers scaling (of liquid verses dry weights), edible product yield percentages, and menu cost cards. Students will be expected to demonstrate proficiency in converting improper as well as mixed number fractions, (add, subtract, multiply, and divide) decimals, solve complicated word problems and more.
Prerequisite(s): MAT 0050 OR satisfactory score on math placement test AND Restricted to Majors

MAT 1130 - Mathematics in Health Sciences
3 Cr. Hr(s).
Solve health science applications; convert within and between metric, household and apothecary systems; read and interpret health science labels and graphs; calculate and apply statistical concepts; solve problems involving parenteral, pediatric and/or intravenous administration and dosage calculations. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 0050 OR satisfactory score on math placement test

MAT 1200 - Technical Mathematics
5 Cr. Hr(s).
This is a context-centered course intended for majors in Construction Management Technology, Architectural Technology, and Civil Engineering Technology. It contains collaborative labs which apply the

mathematical methods to relevant applications. Students will apply properties of shapes in 2-dimensional and 3-dimensional geometry; use dimensional analysis to convert between systems of units; use scientific notation; apply vector analysis and basic trigonometry to find indirect measurements; use and solve linear and quadratic functions and equations; and use systems of linear equations in applications and find their solutions. Four classroom, two lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600 with a grade of C or better

MAT 1445 - Quantitative Reasoning
3 Cr. Hr(s).
The course will explore various applications of mathematics in the social, finance, health and environmental fields with emphasis on developing informational, technological, logical, and visual reasoning skills. Topics from numeracy, probability and statistics, finance, mathematical modeling with linear, statistical, and exponential functions, and other areas of mathematics will be covered. Note: Students who have not completed the required pre-requisite courses listed, but have successfully completed MAT 0100 with a grade of "C" or better, or MAT 0600 with a grade of "P", can register for MAT 1445 together with the co-requisite course MAT 0445, Quantitative Reasoning Booster. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 0200 with a grade of C or better OR satisfactory score on math placement test

MAT 1450 - Introductory Statistics
4 Cr. Hr(s).
An introduction to the fundamental ideas of statistics, including statistical methods to gather, analyze and present data; fundamentals of probability; statistical distributions, sampling distributions, confidence intervals, hypothesis testing, Chi-square tests, regression and correlation. Three classroom, two lab hours per week. Note: Students who have not completed the required pre-requisite courses listed, but have successfully completed MAT 0100 or MAT 1130 with a grade of "C" or better, or MAT 0600 with a grade of "P", can register for MAT 1450 together with the co-requisite course MAT 0450 - Introductory Statistics Booster. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 0200 with a grade of C or better OR satisfactory score on math placement test

MAT 1455 - Introduction to Data Science
5 Cr. Hr(s).
An introductory course in data science for students interested in information technology, computer science, and related fields. Topics include curation of data; enhanced data visualization; statistical models, estimation, and prediction; and applications of data science.
Prerequisite(s): MAT 0300 and with a grade of C or better

MAT 1460 - Mathematics for Business Analysis
3 Cr. Hr(s).
Applications of mathematics and functions to business analysis. Linear applications, functions, financial mathematics, systems, matrices, inequalities. Traditional testing (proctored or in Testing Center) is used in all online sections. Note: Students who have not completed the required prerequisite courses listed, but have successfully completed MAT 0200 with a grade of C or better, can register for MAT 1460 together with the co-requisite course MAT 0460 - Booster for Mathematics for Business Analysis.
Prerequisite(s): MAT 0300 with a grade of C or better OR satisfactory score on math placement test

MAT 1470 - College Algebra
3 Cr. Hr(s).
Polynomial, radical, rational, exponential and logarithmic functions and their graphs; roots of polynomial functions, rational and polynomial inequalities; systems of linear and nonlinear equations; matrices; and applications. Traditional testing (proctored or in Testing Center) is used in all online sections. Note: Students who have not completed the required prerequisite courses listed, but have successfully completed MAT 0200 with a grade of "C" or better, can register for MAT 1470 together with the corequisite course MAT 0470 - College Algebra Booster. Two classroom, two lab hours per week.
Prerequisite(s): MAT 0300 with a grade of C or better OR satisfactory score on math placement test

MAT 1570 - Analytic Geometry & Trigonometry
3 Cr. Hr(s).
Trigonometric functions of angles, solving right and oblique triangles, identities, trigonometric and inverse trigonometric equations, vectors, radian measure, graphs of trigonometric functions and inverse trigonometric functions, conic sections, sequences, and series. Two classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 1470 with a grade of C or better OR satisfactory score on math placement test

MAT 1580 - Precalculus
5 Cr. Hr(s).
Polynomial, radical, rational, exponential and logarithmic functions and their graphs, roots of polynomial functions, rational and polynomial inequalities, conic sections, systems of linear equations; sequences and series. Trigonometric functions of angles, solving right and oblique triangles, trigonometric identities and equations, vectors, radian measure, graphs of trigonometric functions, inverse trigonometric functions and applications. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 0300 with a grade of C or better OR satisfactory score on math placement test

MAT 2160 - Calculus for Business & Economics
5 Cr. Hr(s).
Functions and graphs, limits, continuity, derivatives, techniques of differentiation, applied problems in business and economics, exponential and logarithmic functions, techniques of integration, applications of integration, functions of two variables, partial derivatives and applications. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 1460 with a grade of C or better OR satisfactory score on math placement test

MAT 2170 - Business Statistics I
4 Cr. Hr(s).
Statistical techniques and methodology. Graphical and tabular presentation of data, probability, parameters, statistical distributions, sampling, confidence intervals, tests of hypotheses, regression, and correlation. Three classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 0300 with a grade of C or better OR satisfactory score on math placement test

MAT 2180 - Business Statistics II
3 Cr. Hr(s).
Statistical inferences, including estimation, confidence intervals, and tests of hypotheses for means, standard deviations and proportions; analysis of variance; regression analysis; chi-square; business applications. Students will develop a basic competency using a computer spreadsheet to perform

statistical calculations. Two classroom, two lab hours per week. Traditional testing (proctored or in Testing Center) is used in all online sections.
Prerequisite(s): MAT 2170 with a grade of C or better OR satisfactory score on math placement test

MAT 2215 - Mathematics for Machine Learning & Artificial Intelligence
5 Cr. Hr(s).
The four pillars of machine learning are regression, dimensionality reduction, density estimation, and classification. This course aims to establish the mathematical foundation upon which to build these pillars by covering carefully selected topics in linear algebra, analytic geometry, vector calculus, probability and distributions, and optimization.
Prerequisite(s): MAT 1570 OR MAT 1580 with a grade of C or better OR satisfactory score on math placement test

MAT 2240 - Calculus for the Life Sciences
4 Cr. Hr(s).
This course uses calculus as a tool for modeling applications in the life sciences. Limits, derivatives, and integrals are introduced and applied in this context. Emphasis is placed on qualitative analysis and interpretation.
Prerequisite(s): MAT 1470 with a grade of C or better OR satisfactory score on math placement test

MAT 2270 - Calculus & Analytic Geometry I
5 Cr. Hr(s).
The first course of a three-semester sequence of courses. Topics include limits and continuity, the derivative and its applications including related rates and optimization, L'Hopital's rule, antiderivatives, the Fundamental Theorem of Calculus, integration by substitution. Traditional testing (proctored or in Testing Center) is used in all online sections. Four classroom, two lab hours per week.
This course has no textbook costs.
Prerequisite(s): MAT 1570 OR MAT 1580 with a grade of C or better OR satisfactory score on math placement test

MAT 2280 - Calculus & Analytic Geometry II
5 Cr. Hr(s).
The second course of a three-semester sequence of courses. Techniques of integration, applications of integration, numerical integration, improper integrals, infinite sequences and series, power series, parametric equations, polar coordinates, conic sections.
Prerequisite(s): MAT 2270 with a grade of C or better OR Approval of Department

MAT 2290 - Calculus & Analytic Geometry III
5 Cr. Hr(s).
Vectors in the plane and space, dot and cross product of two vectors. Lines, planes and surfaces in space, vector-valued functions, arc length and curvature. Functions of several variables, partial derivatives with applications, multiple integrals with applications, line integrals, surface integrals, vector fields, Green's Theorem, the Divergence Theorem and Stokes' Theorem.
Prerequisite(s): MAT 2280 with a grade of C or better OR Approval of Department

MAT 2310 - Elementary Differential Equations
4 Cr. Hr(s).
Solutions and applications of ordinary differential equations including separable, exact, homogeneous and non-homogeneous linear equations and others. Numerical approximation methods as well as substitutions, the total differential, separation of variables, integrating factors, undetermined coefficients, variation of parameters, Laplace Transforms and power series methods are covered.
Prerequisite(s): MAT 2280 with a grade of C or better OR Approval of Department

MAT 2320 - Linear Algebra
3 Cr. Hr(s).
Systems of linear equations, matrices, determinants, linear transformations, Euclidean n-space, coordinate vectors, abstract vector spaces, dimension and rank, eigenvalues and eigenvectors, orthogonal vectors, least-square problems, diagonalization, quadratic forms, singular-value decomposition. Applications such as Markov chains and computer graphics will be covered. Students will be introduced to the use of MATLAB for Linear Algebra. Two classroom, two lab hours per week.
Prerequisite(s): MAT 2280 with a grade of C or better OR Approval of Department

MAT 2330 - Differential Equations & Linear Algebra
5 Cr. Hr(s).
Ordinary differential equations of first and second order including, the Laplace transform, numerical approximation methods and applications. Vectors in Rn, systems of linear equations, systems of differential equations, matrices, linear transformations, subspaces, dimension and rank, coordinate vectors, determinants, eigenvalues, eigenvectors and abstract vector spaces.
Prerequisite(s): MAT 2280 with a grade of C or better OR Approval of Department

MAT 2415 - Mathematics for Elementary Education I
5 Cr. Hr(s).
This is the first of two mathematics courses designed for future elementary school teachers. The focus is on understanding numbers, operations, algebraic thinking, and number theory. This is a mathematics content course. Please note that this is not a teaching methods course, but a course focusing on using, justifying and connecting mathematical concepts. This course employs oral and written communication as both a learning tool and as preparation for handling mathematical questions which arise in elementary school classrooms. Discussion focuses on the deep mathematical reasoning underlying the computational procedures that are usually taught in elementary school. The course explores common misconceptions with preservice teachers, enabling the interpretation of children's work which might be incorrect, incomplete, or different from adult ways of thinking. Also this course is activity based, providing opportunities for deep, connected learning. It is essential for all teachers of mathematics to understand the reasoning underlying the mathematics they are teaching. They need to understand why various procedures work, how each idea they will be teaching connects with other important ideas in mathematics, and how these ideas develop and become more sophisticated. Please note that students are expected to pass a mathematics competency exam without the use of a calculator in order to be eligible to take the final exam.
Prerequisite(s): MAT 0300 with a grade of C or better OR satisfactory score on math placement test

MAT 2435 - Mathematics for Elementary Education II
4 Cr. Hr(s).
This is the second of two mathematics courses designed for future elementary school teachers. The focus is on understanding ratios, proportional relationships, functions, measurement, geometry, statistics, and probability. This is a mathematics content course. Please note that this is not a teaching methods course, but a course focusing on using, justifying and connecting mathematical concepts. This course employs oral and written communication as both a learning tool and as preparation for handling mathematical questions which arise in elementary school

classrooms. Discussion focuses on the deep mathematical reasoning underlying the computational procedures that are usually taught in elementary school. The course explores common misconceptions with preservice teachers, enabling the interpretation of children's work which might be incorrect, incomplete, or different from adult ways of thinking. Also this course is activity based, providing opportunities for deep, connected learning. It is essential for all teachers of mathematics to understand the reasoning underlying the mathematics they are teaching. They need to understand why various procedures work, how each idea they will be teaching connects with other important ideas in mathematics, and how these ideas develop and become more sophisticated. Three classroom, two lab hours per week.
Prerequisite(s): MAT 2415 with a grade of C or better

MAT 2570 - Discrete Mathematics
4 Cr. Hr(s).
A course in Discrete Mathematics for students interested in information technology, computer science, and related fields. Topics include logic, proof techniques, set theory, functions and relations, counting, elementary number theory, graphs and tree theory, base-n arithmetic, and Boolean Algebra.
Prerequisite(s): MAT 1460 OR MAT 1470 OR MAT 1580 with a grade of C or better OR satisfactory score on math placement test

MAT 2600 - Applied Statistics
3 Cr. Hr(s).
Covers sample spaces and probability laws; discrete and continuous random variables with special emphasis on the binomial, Poisson, hypergeometric, normal and gamma distributions; fundamental sampling distributions and data descriptions; use of computer software packages for simulating, summarizing, and displaying data. Provides a foundation for the further study of statistics.
Prerequisite(s): MAT 2280 OR Approval of Department

MAT 2700 - Mathematics Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students work at an approved mathematics related industry site and will earn credits toward degree requirements for their work experiences. Students already working may apply to use that experience to meet internship requirements. Students prepare and submit reports and/or projects describing their industry experience and are evaluated by the course instructor as well as their on-site supervisor. Ten work hours per week per credit hour.
Prerequisite(s): Approval of Department

MAT 2800 - Writing Mathematical Proofs
3 Cr. Hr(s).
This course serves as a bridge between Calculus and more abstract upper-level mathematics courses like Real Analysis and Abstract Algebra. Students are first introduced to logic and basic concepts in writing mathematical proofs. Then topics such as sets, induction, relations, partitions, functions, and sequences provide experience in constructing proofs.
Prerequisite(s): MAT 2280

Mechanical Engineering

MEE 2101 - Statics for Engineers
3 Cr. Hr(s).
Vectorial treatment of forces and moments. Analysis of trusses and frames. Centroids, friction and moment of inertia. Internal shear and moment for beams. Virtual work. This calculus-based course is designed for Engineering University Transfer students. Two classroom, three lab hours per week.
Prerequisite(s): MAT 2270 AND PHY 2201

MEE 2201 - Thermodynamics for Engineers
3 Cr. Hr(s).
First and second laws of thermodynamics; thermodynamic properties of gases, vapors and gas-vapor mixtures; energy-systems analysis including power cycles, refrigeration cycles and air-conditioning processes. Introduction to thermodynamics of reacting mixtures. Two classroom, two lab hours per week.
Prerequisite(s): MAT 2270

MEE 2301 - Strength of Materials for Engineers
3 Cr. Hr(s).
Stress and deformations, torsions, shear and moments in beams, stresses in beams, beam deflections, combined stresses and eccentric loading. This course is calculus based. One classroom, four lab hours per week.
Prerequisite(s): MEE 2101

MEE 2401 - Dynamics for Engineers
3 Cr. Hr(s).
Kinematics of particles and rigid bodies; acceleration, work, energy, impulse and momentum of particles and rigid bodies. Two classroom, two lab hours per week.
Prerequisite(s): MEE 2101

MEE 2700 - Mechanical Engineering Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour.
Prerequisite(s): Approval of Department

Mechanical Engineering Technology

MET 1111 - Preparatory Math for Engineering Technology
3 Cr. Hr(s).
Mathematics for engineering technology students to prepare them for critical thinking, analytical reasoning and problem solving. Students will apply math to typical engineering technology problems from a variety of fields. Two classroom, two lab hours per week.
Prerequisite(s): MAT 0200

MET 1131 - Personal Computer Applications for Engineering Technology
1 Cr. Hr(s).
Applied computer tools to solve engineering technology problems, emphasizing the integration of word processing, spreadsheets, presentation software and engineering research skills using the Internet. Applications of an integrated approach to research papers, engineering technology analysis, technical laboratory reports and technical presentations. One-half classroom, one and one-half lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110

MET 1151 - Guitar Manufacturing using Science, Technology, Engineering, & Mathematics (STEM) Concepts
3 Cr. Hr(s).
This course looks at the design elements, manufacturing and assembly of solid-body electric guitars. Science, Technology, Engineering & Mathematics (STEM) concepts that relate directly to guitars are used to help students make an applied learning connection. Two classroom, two lab hours per week.

MET 1161 - Software Tools for Engineering Technology
1 Cr. Hr(s).
Introduction to computer-based solution of engineering and engineering technology problems. Includes the fundamentals and applications of computer-based software

(MathCAD) and integration with other software for documentation of work, including proper use of units and unit systems. Software solution applications include graphing functions and data, basic statistical calculations, use of matrices, vectors, solution of simultaneous and an introduction to Boolean logic. One-half classroom, one and one-half lab hours per week.
Prerequisite(s): MAT 0300 OR MAT 1280 OR MAT 1470 OR MAT 1580

MET 1231 - Introduction to Engineering Design Using 3D CAD
4 Cr. Hr(s).
Application of the process of design and the interpretation of engineering drawings. Includes design development, product development, and problem solution, principles of orthographic projection, drafting symbols, surface finish symbols, and geometric dimensioning and tolerancing symbols. Student is exposed to parametric 3D CAD modeling for the purpose of creating parts and assemblies and to properly dimension and detail drawings to effectively communicate design intent. Three classroom, three lab hours per week.

MET 1301 - SolidWorks Basics
4 Cr. Hr(s).
Utilize SolidWorks mechanical design automation software to build parametric models of parts and assemblies and learn how to make drawings of those parts and assemblies. Three classroom, three lab hours per week.

MET 1321 - SolidWorks Advanced
4 Cr. Hr(s).
Application of intermediate and advanced parametric solid modeling techniques using SolidWorks computer-aided design (CAD) software. The engineering design process will be applied to solve individual and team design projects. Application of Geometric Dimensioning and Tolerancing (GD&T) standards. At the end of the course, students are eligible to take the SolidWorks Design Professional (CSWP) exam. Three classroom, three lab hours per week.
Prerequisite(s): MET 1301

MET 1401 - Additive Design & Printing
3 Cr. Hr(s).
A course in the design, development and operation of additive manufacturing machines. Types of machines, input types, materials and design considerations will be accomplished as part of the hands-on model making class. Two classroom, two lab hours per week.
Prerequisite(s): MET 1231 OR MET 1301

MET 1431 - Additive Manufacturing Post Process
3 Cr. Hr(s).
A course designed to examine the post process aspects of bonding, securing, finishes and assembly operation of components. Emphasis on metal materials and case studies. Two classroom, two lab hours per week.
Prerequisite(s): (MET 1231 OR MET 1301) AND MET 1401

MET 2101 - Thermodynamics
3 Cr. Hr(s).
The laws and application of the principles of thermodynamics as they apply to internal combustion engines, steam cycles and refrigeration. Two classroom, two lab hours per week.
Prerequisite(s): (PHY 1141 OR PHY 2201) AND (MET 2201 OR MEE 2101)

MET 2151 - Material Science
4 Cr. Hr(s).
Terminology, designations of metals and the relationship among the properties of metals, the environment and heat treatment processes. Selecting and testing materials. Factors related to the selection of nonmetallic materials and the relationship between the nature of the materials and their properties. Thermoplastics, thermosetting, ceramics, composites and glasses are included. Three classroom, three lab hours per week.
Prerequisite(s): (MET 1111 OR MET 1161) AND (MAT 1570 OR MAT 1580)

MET 2201 - Statics
3 Cr. Hr(s).
Analysis of various types of two and three dimensional force systems, analysis of trusses, frames, friction, center of gravity and moment of inertia. Two classroom, three lab hours per week.
Prerequisite(s): MET 1111 AND MET 1161 AND (MAT 1570 OR MAT 1580)

MET 2251 - Strength of Materials
3 Cr. Hr(s).
Stress and deformations, torsions, shear and moments in beams, stresses in beams, beam deflections, combined stresses. This course is algebra based. Two classroom, three lab hours per week.
Prerequisite(s): MET 2201 OR MEE 2101

MET 2281 - Engineering Technology Professional Practice
3 Cr. Hr(s).
A project-based course utilizing reverse engineering to integrate ABET professional components in preparing students with the knowledge, techniques, skills, and use of modern equipment in mechanical engineering technology. The course strengthens student ability in specifying, installing, building, testing, documenting, operating, selling or maintaining basic mechanical systems. Two classroom, two lab hours per week.
Prerequisite(s): MET 1111

MET 2301 - Fluid Mechanics
3 Cr. Hr(s).
Essentials of fluid properties, fluid statics, flow measurements, force of a fluid jet including turbo machinery, open channel flow losses through flow in pipe and duct and pump and fan performance and operation. Two classroom, two lab hours per week.
Prerequisite(s): MET 2201 OR MEE 2101

MET 2351 - Dynamics
3 Cr. Hr(s).
Kinematics and kinetics of rectilinear motion, curvilinear motion and rotation; plane motion, work, energy, power, impulse and momentum. Two classroom, two lab hours per week.
Prerequisite(s): MET 2201 OR MEE 2101

MET 2401 - Machine Design
3 Cr. Hr(s).
Design and evaluation of machine elements, design for safety, strength, stability and wear. Analysis and design of gears, shafts, drive systems, mechanical fasteners, permanent connections, roller and journal bearings and springs. A design project including an oral presentation and written report is required. Two classroom, three lab hours per week.
Prerequisite(s): MET 2251 AND (PHY 1141 OR PHY 2201)

MET 2700 - Mechanical Engineering Technology Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term. Ten work hours per week per credit hour.
Prerequisite(s): Approval of Department

MET 2711 - Ethics for Engineering Technology Professionals
1 Cr. Hr(s).
Instruction to the core skills of an engineering professional. Technical skills, soft skills and team management techniques. Concepts of lifelong learning, continued personal improvement, engineering ethics, working in a

diverse industry and future trends in engineering technology. One-half classroom, one and one-half lab hours per week.
Prerequisite(s): (COM 2206 OR COM 2211 OR COM 2225) AND ENG 1101

MET 2780 - Mechanical Engineering Technology Capstone
3 Cr. Hr(s).
Assessment of achievement by Mechanical Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on projects will be emphasized. One classroom, six lab hours per week.
Prerequisite(s): MET 2251 AND MET 2281 AND Approval of Department

MET 2781 - Manufacturing Engineering Technology Capstone
5 Cr. Hr(s).
Assessment of achievement by Manufacturing Engineering Technology students in attaining program outcomes by completing a project demonstrating principles and practice of the major. Teamwork on manufacturing projects will be emphasized. Two classroom, six lab hours per week.
Prerequisite(s): Approval of Department

Medical Assistant Technology

MAS 1102 - Clinical Medical Assisting I
3 Cr. Hr(s).
Introduction to the theory components of clinical assisting procedures in the medical office, emphasizing patient preparation, medical history interviews, vital signs, positioning and draping, medical asepsis, assisting with physical exams, pediatric assessment, techniques required for patient assessment and treatment during medical office emergencies and the role of the medical assistant in urgent situations with the physician present and also during the physician's absence. Two classroom, three lab hours per week.
Corequisite(s): MAS 1192

MAS 1103 - Clinical Medical Assisting II
4 Cr. Hr(s).
This course will introduce students to intermediate-level clinical procedures in a family practice setting such as medical microbiology, minor office surgery, administering therapeutic modalities, preparing and administering medications, and eye and ear procedures. Two classroom, six lab hours per week.
Prerequisite(s): MAS 1102 AND (BIO 1107 OR BIO 1121 OR BIO 1141) AND HIM 1101 AND Restricted to Majors
Corequisite(s): MAS 1193

MAS 1110 - Administrative Medical Assisting
4 Cr. Hr(s).
The Administrative Medical Assistant course will provide an overview of the role of a medical assistant within the health care industry and different work environments, administrative duties in a physician's office including monitoring patient appointments, outpatient procedures, medical and office equipment maintenance, storing supplies and pharmaceuticals, hiring, evaluating and managing personnel, as well as the fundamentals of medical ethics and law in the medical office setting. Two classroom, six lab hours per week.
Prerequisite(s): ENG 1101

MAS 1130 - Reimbursement Specialist Practicum
2 Cr. Hr(s).
Student will complete seven hours per week of non-paid directed practice at a medical billing facility in order to obtain practical knowledge with medical reimbursement procedures. Students will, as part of this course, attend a one hour lecture per week in order to prepare to sit for the national credentialing certificate, Certified Medical Reimbursement Specialist. One classroom, seven practicum hours per week.
Prerequisite(s): Approval of Department

MAS 1192 - Lab for MAS 1102
0 Cr. Hr(s).
This is the laboratory portion of MAS 1102 Clinical Medical Assisting I and will provide "hands-on aspects of the clinical topics taught in MAS 1102 to prepare students to perform clinical assisting procedures in the medical office, emphasizing patient preparation, medical history interviews, vital signs, positioning and draping, medical asepsis, assisting with physical exams, pediatric assessment, techniques required for patient assessment and treatment during medical office emergencies and the role of the medical assistant in urgent situations with the physician present and also during the physician's absence, theory and techniques of Basic Life Support as established by the American Heart Association.
Prerequisite(s): Restricted to Majors
Corequisite(s): MAS 1102

MAS 1193 - Lab for MAS 1103
0 Cr. Hr(s).
This is the laboratory portion of MAS 1103 Clinical Medical Assisting II and will provide "hands-on" aspects of the clinical topics taught in MAS 1103 to prepare students to perform intermediate-level clinical procedures in a family practice setting such as medical microbiology, minor office surgery, administering therapeutic modalities, preparing and administering medications, and eye and ear procedures.
Prerequisite(s): (BIO 1107 OR BIO 1121 OR BIO 1141) AND HIM 1101 AND MAS 1102 AND Restricted to Majors
Corequisite(s): MAS 1103

MAS 2201 - Clinical Medical Assisting III
4 Cr. Hr(s).
This course will introduce students to advanced/specialized procedures such as assisting with gastroenterologic procedures, urinary procedures, basic respiratory procedures, OB/GYN procedures and laboratory procedures that are performed in ambulatory care settings. Two classroom, six lab hours per week.
Prerequisite(s): HIM 1101 AND (BIO 1107 OR BIO 1121 OR BIO 1141) AND MAS 1102 AND Restricted to Majors
Corequisite(s): MAS 2291

MAS 2210 - Medical Billing Specialist
3 Cr. Hr(s).
This course is designed to introduce the student to the practice of medical billing within the medical office, including the use of computerized medical billing software. It is also designed to introduce the student to the principles of bookkeeping, automated and manual patient financial accounting, collection techniques, employee payroll and banking procedures. Two classroom, three lab hours per week.
Prerequisite(s): HIM 1160 OR HIM 1201

MAS 2220 - MAS Practicum
3 Cr. Hr(s).
Introduction to the ambulatory care clinical setting involving structured observation and unpaid participation in the administrative and clinical aspects of patient care under the supervision of a licensed physician or certified medical assistant, discussion of practicum experience and topics relative to the medical assisting profession, preparation to sit for a national credentialing certificate. Healthcare Professional CPR, health certificate, immunizations, student health insurance, and background check must be completed prior to the start of MAS 2220 - MAS Practicum. One classroom, fourteen practicum hours per week.
Prerequisite(s): MAS 1103 AND MAS 1110 AND MAS 2201 AND ALH 2201 AND Restricted to Majors AND Accumulative GPA of 2.0 or greater

MAS 2291 - Lab for MAS 2201
0 Cr. Hr(s).
This is the laboratory portion of MAS 2201 Clinical Medical Assisting III and will provide "hands-on" aspects of the clinical topics taught in MAS 2201 to prepare students to perform advanced/specialized procedures such as assisting with gastroenterologic procedures, urinary procedures, basic respiratory procedures, OB/GYN procedures and laboratory procedures performed in the ambulatory care setting.
Prerequisite(s): MAS 1102 AND (BIO 1107 OR BIO 1121 OR BIO 1141) AND HIM 1101 AND Restricted to Majors
Corequisite(s): MAS 2201

Medical Laboratory Technology

CLT 1113 - Clinical Phlebotomy
2 Cr. Hr(s).
Introduction to the fundamental and clinical methods and practices of phlebotomy, including basic hematology, venipuncture and microcollection techniques, along with routine processing and special testing procedures. One classroom, three lab hours per week.

CLT 1114 - Clinical Phlebotomy Practice
2 Cr. Hr(s).
Introduction to the phlebotomy clinical setting involving structured observation and participation in the blood collection aspects of patient care under the supervision of a phlebotomist; performing venipunctures and microcollection techniques on adult and pediatric patients. One hour seminar on main campus and 105 hours un-paid practicum per term.
Prerequisite(s): CLT 1113 AND background check, health certificate and student health insurance will be required to complete the clinical portion of the course

CLT 1200 - Introduction to Clinical Laboratory
2 Cr. Hr(s).
The course will introduce students to the terms, concepts, procedures, and equipment used in a professional medical laboratory. One classroom, three lab hours per week.
Prerequisite(s): ALH 1101 AND (BIO 1121 OR BIO 1107 OR BIO 1141) Note: Prerequisites may be taken concurrently
Corequisite(s): CLT 1203

CLT 1203 - Lab for Introduction to Clinical Laboratory
0 Cr. Hr(s).
Lab portion of CLT 1200 - Introduction to Clinical Laboratory.
Corequisite(s): CLT 1200

CLT 2110 - Urine & Body Fluid Analysis/Immunology/Serology
2 Cr. Hr(s).
The course will provide instruction on the structure and function of the kidney, renal pathology and the principles, sources of error and interpretation of test results in urinalysis. Principles of CSF and serous fluid analysis are covered. This course is also an introduction to the principles of immunology, covering the broad areas of the body's defense mechanisms, the nature of the mammalian immune system and the immune response, and discusses immunological disease states of auto-immunity, tumor immunology, transplant immunology, immunodeficiency, and the theory behind immunoassays used in the laboratory environment. One classroom, two lab hours per week.
Prerequisite(s): CLT 1200 AND (BIO 1222 OR BIO 1242) AND Restricted to Majors
Corequisite(s): CLT 2113

CLT 2113 - Lab for Urine & Body Fluid Analysis/Immunology/Serology
0 Cr. Hr(s).
Lab portion of CLT 2110 - Urine & Body Fluid Analysis/Immunology/Serology
Corequisite(s): CLT 2110

CLT 2210 - Hematology
4 Cr. Hr(s).
The course will introduce the students to the theory and practical application of routine and special hematology procedures, both manual and automated; red blood cells and white blood cells maturation sequences, and normal and abnormal morphology and associated diseases. Three classroom, three lab hours per week.
Prerequisite(s): CLT 2410 AND Restricted to Majors
Corequisite(s): CLT 2213

CLT 2213 - Lab for Hematology
0 Cr. Hr(s).
Lab portion of CLT 2210 - Hematology
Corequisite(s): CLT 2210

CLT 2310 - Clinical Chemistry
3 Cr. Hr(s).
The course will introduce the students to the theory and application of human biochemistry and principles of chemistry techniques used in the analysis of blood and other body fluids. Two classroom, four lab hours per week.
Prerequisite(s): CLT 2410 (with grade of C or better) AND Restricted to Majors
Corequisite(s): CLT 2313

CLT 2313 - Lab for Clinical Chemistry
0 Cr. Hr(s).
Lab portion of CLT 2310 - Clinical Chemistry.
Corequisite(s): CLT 2310

CLT 2410 - Clinical Microbiology/Parasitology
4 Cr. Hr(s).
Basic concepts of microbiology with emphasis on microbial pathogenesis and immunity. Medically important microorganisms including bacteria, fungi, viruses, rickettsia, protozoa, and the diseases which they produce. This course will also introduce students to the basic knowledge of the physical and chemical properties of clinically significant micro-organisms, the emphasis will be on describing phenotypic characteristics of clinically relevant organisms and the principles of antimicrobial action. Three classroom, three lab hours per week.
Prerequisite(s): CLT 1200 AND (BIO 1222 OR BIO 1242) AND Restricted to Majors
Corequisite(s): CLT 2413

CLT 2413 - Lab for Clinical Microbiology/Parasitology
0 Cr. Hr(s).
Lab portion of CLT 2413 - Clinical Microbiology/Parasitology
Corequisite(s): CLT 2410

CLT 2510 - Immunohematology
2 Cr. Hr(s).
An introduction to theory and practice of blood banking and transfusion medicine. Various Blood typing and Antibody identification tests will be performed in the Clinical blood banking simulated lab. This course presents the physiological basis for the test, the principle and procedure for the test, and the clinical significance of the test results, including quality control. One classroom, three lab hours per week.
Prerequisite(s): CLT 2410 AND Restricted to Majors

CLT 2513 - Lab for Immunohematology
0 Cr. Hr(s).
Lab portion of CLT 2510 - Immunohematology
Corequisite(s): CLT 2510

CLT 2720 - Histology Techniques
3 Cr. Hr(s).
This course will provide additional instruction of hands-on, practical skills required of the Histology laboratory. Special emphasis will be placed on the operation of histology equipment and technical skill in the preparation of tissue slides from both paraffin and frozen tissue sections. Two classroom, three lab hours per

week.
Prerequisite(s): ALH 1101 AND BIO 1121 AND CHE 1111 AND CHE 1151 AND Approval of Department
Corequisite(s): CLT 2723

CLT 2723 - Lab for Histology Techniques
0 Cr. Hr(s).
This course will provide additional instruction of hands-on, practical skills required of the Histology laboratory. Special emphasis will be placed on the operation of histology equipment and technical skill in the preparation of tissue slides from both paraffin and frozen tissue sections.
Prerequisite(s): ALH 1101 AND BIO 1121 AND CHE 1111 AND CHE 1151 AND Approval of Department
Corequisite(s): CLT 2720

CLT 2730 - Special Staining in Histology
3 Cr. Hr(s).
This course will provide instruction on the use of special stains within the histology laboratory. Topics include: nuclear and cytoplasmic staining, carbohydrate and amyloid tissue, connective and muscle tissue, nerve tissue, microorganisms, pigments, minerals, and cytoplasmic granules. Two classroom, two lab hours per week.
Prerequisite(s): ALH 1101 AND BIO 1121 AND CHE 1111 AND CHE 1151 AND Approval of Department
Corequisite(s): CLT 2733

CLT 2733 - Lab for Special Staining in Histology
0 Cr. Hr(s).
This course will provide instruction on the use of special stains within the histology laboratory. Topics include: nuclear and cytoplasmic staining, carbohydrate and amyloid tissue, connective and muscle tissue, nerve tissue, microorganisms, pigments, minerals, and cytoplasmic granules.
Prerequisite(s): ALH 1101 AND BIO 1121 AND CHE 1111 AND CHE 1151 AND Approval of Department
Corequisite(s): CLT 2730

CLT 2740 - Histology Topics I
3 Cr. Hr(s).
This course will provide instruction on the fixation, processing, decalcification, and sectioning of histological samples. Students will also be instructed on standard practices of the Histology laboratory, including instrumentation and safety protocols. Two classroom, two lab hours per week.
Prerequisite(s): ALH 1101 AND BIO 1121 AND CHE 1111 AND Approval of Department
Corequisite(s): CLT 2743

CLT 2743 - Lab for Histology Topics I
0 Cr. Hr(s).
This course will provide instruction on the fixation, processing, decalcification, and sectioning of histological samples. Students will also be instructed on standard practices of the Histology laboratory, including instrumentation and safety protocols.
Corequisite(s): CLT 2740

CLT 2810 - CLT Practicum
6 Cr. Hr(s).
Practical training in clinical chemistry, microbiology, hematology and serology under the direction of a National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) approved/accredited hospital educational program personnel. One classroom, thirty-five practicum hours per week.
Prerequisite(s): CLT 2510 with grade of "C" or higher AND Restricted to Majors AND A background check and health physical must be completed prior to starting practicum

CLT 2910 - Histology Topics II
2 Cr. Hr(s).
This course will provide instruction on immunohistochemistry, enzyme histochemistry, and electron microscopy. Students will also be provided a review for the board certification exam.
Prerequisite(s): CLT 2710 AND CLT 2713 AND CLT 2720 AND CLT 2723 AND CLT 2730 AND CLT 2733 AND Approval of Department

CLT 2913 - Lab for Histology Topics II
0 Cr. Hr(s).
This course will provide instruction on immunohistochemistry, enzyme histochemistry, and electron microscopy. Students will also be provided a review for the board certification exam.
Prerequisite(s): CLT 2720 AND CLT 2723 AND CLT 2730 AND CLT 2733 AND CLT 2740 AND CLT 2743 AND Approval of Department
Corequisite(s): CLT 2910

CLT 2990 - Histology Practicum
5 Cr. Hr(s).
Practical training in all major areas in the contemporary histopathology laboratory, under the direction of a National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) approved/accredited hospital educational program personnel. One classroom, twenty-eight practicum hours per week.
Prerequisite(s): CLT 2710 AND CLT 2713 AND CLT 2720 AND CLT 2723 AND CLT 2730 AND CLT 2733 AND Approval of Department

Mental Health and Addiction Services

MHT 1101 - Introduction to Mental Health Services
3 Cr. Hr(s).
Introduction to the field of mental health services. Students will identify principles, skills and history and evolution of the mental health field. Analyze motives, values, biases, cultural and social influences for becoming a helper. Examine key terminology and concepts. Describe basic theories, evidenced based practices and interventions of the helping profession. Recognize professional behaviors, documentation practices and ethical standards required to work in the helping profession.

MHT 1120 - Trauma-Informed Healthcare
3 Cr. Hr(s).
This course is designed for healthcare workers, public health professionals, social service professionals and mental health and addiction services clinicians. Students will be introduced to concepts of trauma informed care including trauma definitions, types of trauma, the trauma survivor, trauma responses, evidence-based practices, and the effect of trauma on the caregiver. This course will also provide a framework for identifying the difference between a trauma informed system service delivery and a traditional system of service delivery.

MHT 1130 - Fundamentals of Addiction Counseling CDCA Preliminary
3 Cr. Hr(s).
Course provides 40 hours of chemical dependency specific educational content required for application for CDCA Preliminary credential with the Ohio Chemical Dependency Professionals Board. Theories and fundamentals of addictive illness and physical/mental effects of psychoactive drugs. Dynamics of substance related and addictive disorders on persons, families and society. Knowledge of disease concept, stigmas, identification, assessment, trends in treatment and relapse process. Develop insights, challenge biases and identify personal and professional issues. Elements of professional/ethical behaviors.

MHT 1202 - Motivational Interviewing
3 Cr. Hr(s).
The course provides the foundation of client centered approach with learning and applying the model of Motivational Interviewing. Basic

interviewing, active listening skills, elements of the helping relationship, practice in conducting clinical interviews. Includes engaging, focusing, evoking, and planning. Concepts of OARS, stages of change, oral communication skills, client ambivalence, developing discrepancies, change talk, client goals, and developing a change plan.

MHT 1203 - Professional Documentation
3 Cr. Hr(s).
Functional, legal, and ethical aspects of documentation including behavioral observation, mechanics of writing problem statements, client assessments, and progress notation. Introduction to electronic record keeping.
Prerequisite(s): MHT 1101 AND Restricted to Majors

MHT 1236 - Assessment & Diagnosis of Substance Use Disorders
3 Cr. Hr(s).
Holistic assessment and diagnosis of substance use disorders. Assessment skill development. Use of and interpretation of assessment instruments. Use of current Diagnostic and Statistical Manual (DSM) criteria related to substance use disorders.
Prerequisite(s): MHT 1130 AND Restricted to Majors

MHT 2105 - Mental Health Treatment Methods
3 Cr. Hr(s).
Identify and examine mental health treatment methods and evidenced-based practices. Recognize mental and emotional disorders from the current Diagnostic and Statistical Manual (DSM) and their evidenced based treatments. Apply clinical interventions and treatment modalities for various client populations. Identify key concepts, terminology and ethical dilemmas associated with mental health treatment methods.
Prerequisite(s): Restricted to Majors

MHT 2111 - Group Dynamics I
4 Cr. Hr(s).
Introduction to interpersonal dynamics in therapeutic groups. Awareness of group leadership skills and personal issues affecting participation. Discussion groups promote personal learning while providing experiential awareness of stages of group development. History of the group work method. Factors in group composition. Professional ethics. Practice in group facilitation.
Prerequisite(s): MHT 1201 AND Restricted to Majors

MHT 2121 - Practicum I
5 Cr. Hr(s).
First of two clinical practicum experiences in mental health and addiction services. Professional and ethical work skills with an interdisciplinary team in an agency setting. Components of Electronic Health Record. Ethical decision making. Emerging trends and contemporary topics in the helping profession. Diversity factors to support culturally competent clinical practice. Three and one-half classroom, fourteen clinical hours per week.
Prerequisite(s): MHT 1201 AND Restricted to Majors

MHT 2130 - Fundamentals of Addiction Counseling CDCA Renewable
2 Cr. Hr(s).
Course provides 30 hours of chemical dependency specific educational content required for application for CDCA Renewable credential with the Ohio Chemical Dependency Professionals Board. Content included: Addiction and treatment knowledge, individual and group counseling, evaluation, service coordination, documentation and professionalism. Persons who currently hold a CDCA Preliminary with the State of Ohio may also take this course.
Prerequisite(s): MHT 1130 Approval of Department

MHT 2137 - Treatment Techniques in Substance Use Disorders
3 Cr. Hr(s).
Contemporary holistic treatment methods, including motivational interviewing. Models of treatment with individual, group, case management, intervention and families. Levels of care and stages of recovery. Ethical, legal and professional behaviors.
Prerequisite(s): MHT 1236 AND Restricted to Majors

MHT 2138 - Ethical Issues in the Helping Professions
3 Cr. Hr(s).
Ethical codes and responsibilities in the helping professions. Federal Confidentiality Regulations, case law, scope of practice, expectations of funding bodies and managed care. Principles of professional behavior with clients and self-awareness of their personal boundary and value concerns. Importance of cultural diversity.
Prerequisite(s): Restricted to Majors

MHT 2211 - Group Dynamics II
4 Cr. Hr(s).
Stages of group development, process planning, and group leadership skills. Advanced practice in group co-facilitation and critical analysis of group processes. Therapeutic factors in groups. Open group promotes personal learning while providing experiential awareness of group dynamics and stages of group development.
Prerequisite(s): MHT 2111 AND Restricted to Majors

MHT 2222 - Practicum II
5 Cr. Hr(s).
Second of two semesters of clinical practicum in Mental Health and Addiction Services. Demonstrate professional and ethical work skills with an interdisciplinary team in an agency setting. Awareness of diversity factors to support culturally competent practice in helping profession. Ethical decision making. American Psychological Association format to research evidenced based practices and best practice principles. Capstone course. Three and one-half classroom, fourteen clinical hours per week.
Prerequisite(s): MHT 2121 AND Restricted to Majors

MHT 2235 - Family Dynamics of Addiction
3 Cr. Hr(s).
Impact of substance use disorders on individual family members and overall family functioning. Focuses on the nature of addiction as a disease, its progression, symptoms and treatments. The nature of codependency is discussed. Insight is gained by the students regarding their biases about the disease of addiction.
Prerequisite(s): MHT 1130 AND Restricted to Majors

MHT 2245 - Mental Health & the Family
3 Cr. Hr(s).
Impact of mental health disorders on individual family members and overall family functioning. Family Systems Theory and assessing family issues. Diversity factors and contemporary issues in modern families. Key concepts and terminology related to family dynamics.
Prerequisite(s): ENG 1101 AND Restricted to Majors

MHT 2250 - Child & Adolescent Mental Health
3 Cr. Hr(s).
Mental health and mental ill-health issues related to childhood and adolescents. Etiology and treatment approaches.

Music

MUS 1101 - Introduction to Music
3 Cr. Hr(s).
Fundamentals of music theory including

notation of pitches, rhythms, scales, intervals, triads and chords.

MUS 1102 - Introduction to Aural Skills
3 Cr. Hr(s).
Fundamentals of sight singing, dictation, ear training including reading, hearing and notating rhythms, melodies and intervals.

MUS 1109 - Introduction to Music Education
2 Cr. Hr(s).
Aspects of professional music teaching and pedagogy including teaching methodologies and philosophies; elements of learning and teaching; variety of professional organizations and their resources will be introduced.
Prerequisite(s): ENG 1201 AND Approval of Department AND Restricted to Majors

MUS 1110 - Music Technology for Music Majors
1 Cr. Hr(s).
Introduction to technology resources used by music majors and future musicians. Typical music studio set-up. Sinclair systems, music notation software, MIDI and digital audio recording.
Corequisite(s): MUS 1111

MUS 1111 - Music Theory I
3 Cr. Hr(s).
First in a sequence of four music theory courses. Focus placed on diatonic melodic and harmonic structures, including scales and modes, intervals, tonality and keys, melodic organization, voice leading, instrument and voice ranges, transposition, triads and seventh chords. Activities include musical composition, analysis, listening, discussion and computer work.
Prerequisite(s): MUS 1101 AND Approval of Department
Corequisite(s): MUS 1110

MUS 1112 - Aural Skills I
1 Cr. Hr(s).
First in a sequence of four aural skills courses. Focus placed on diatonic melodic and harmonic structures within a more basic rhythmic environment. Practical transcription and singing skills are systematically studied. Activities include dictation of intervals, chords, melodies, harmonic progressions and rhythms, as well as singing of intervals, melodies and rhythms.
Prerequisite(s): Approval of Department

MUS 1113 - Music Theory II
3 Cr. Hr(s).
Second in a sequence of four music theory courses. Focus placed on diatonic and chromatic melodic and harmonic structures, including voice leading, seventh chords, modulation, secondary dominant-functioning chords and binary and ternary forms. Activities include musical composition, analysis, listening, discussion and computer work.
Prerequisite(s): MUS 1111

MUS 1114 - Aural Skills II
1 Cr. Hr(s).
Second in a sequence of four aural skills courses. Focus placed on diatonic melodic and harmonic structures within a more challenging rhythmic environment. Practical transcription and singing skills systematically studied. Activities include interval, chord, melodic, harmonic progression and rhythm dictation, as well as singing of intervals, melodies and rhythms.
Prerequisite(s): MUS 1101

MUS 1115 - Piano for Music Majors I
1 Cr. Hr(s).
First semester of a four-semester sequence for nonpianist music majors. Instruction in correct piano playing techniques with emphasis on skills needed by future music educators.
Prerequisite(s): MUS 1101

MUS 1116 - Piano for Music Majors II
1 Cr. Hr(s).
Second semester of a four-semester sequence for nonpianist music majors. Continued instruction in correct piano playing techniques with emphasis on early intermediate repertoire. The integration of circle of fifths with the playing of all major and minor scales, chords and arpeggios is also stressed.
Prerequisite(s): MUS 1115

MUS 1117 - Vocal Diction I
2 Cr. Hr(s).
Italian and German diction, studied with emphasis on correct pronunciation, with regard to clarity, expressiveness, fundamentals of the International Phonetic Alphabet and sound production as applied to singing and reading.
Prerequisite(s): Approval of Instructor

MUS 1119 - Secondary Voice
This course is repeatable.

1 Cr. Hr(s).
Private instruction in Applied Voice is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements vary per term, according to the singing ability of the student. Secondary Voice is the required minor instrument for pianists and organists who are seeking an associate degree in music. Four semesters are required; MUS 1119 is the first of these.
Prerequisite(s): Approval of Department

MUS 1121 - Music Appreciation
3 Cr. Hr(s).
Basic parameters of music through a survey of styles from Gregorian Chant to jazz and current popular styles focusing on melody, rhythm, harmony, performance media and form.

MUS 1122 - History of Pop/Rock Music
3 Cr. Hr(s).
The musical reasons and social conditions under which pop music and rock music have developed, with particular emphasis on music from 1955 until the present. The personalities, events and music that shaped this music and which continue to evolve today.

MUS 1123 - World Music
3 Cr. Hr(s).
A course that describes and analyzes historical-social elements of western culture, non-western culture, and the global interdependence of groups and individuals as seen in the music(s) of these various cultures.

MUS 1131 - Chorale
This course is repeatable.

1 Cr. Hr(s).
Large select SATB (soprano-alto-tenor-bass)choral ensemble specializing in the performance of significant choral repertoire representing varied styles, historical periods and languages. School and public performances required.
Prerequisite(s): Approval of Instructor

MUS 1141 - Wind Symphony
This course is repeatable.

1 Cr. Hr(s).
Concentration on instrumental problems and techniques. Development of large and small group wind repertoire. Public performance is a major part of course activities.
Prerequisite(s): Audition required

MUS 1143 - Concert Band
This course is repeatable.

1 Cr. Hr(s).
Concentration on instrumental problems and techniques. Development of large concert band repertoire. Public performance is a major part of course activities.

MUS 1145 - Classical Guitar Ensemble
This course is repeatable.

1 Cr. Hr(s).
The study and performance of selected classical guitar ensemble literature. The size of the ensemble and the respective backgrounds of its players will determine the performance level of the repertoire. End-of-term performance.
Prerequisite(s): Approval of Instructor

MUS 1147 - Jazz Ensemble
This course is repeatable.

1 Cr. Hr(s).
Big band jazz ensemble open to college and community musicians. Concerts and appearances are scheduled during academic year.
Prerequisite(s): Audition required

MUS 1149 - Jazz Combo
This course is repeatable.

1 Cr. Hr(s).
Small jazz group, limited to ten or fewer players. Development of basic jazz performance skills, including improvisation. Concerts scheduled near end of terms.
Prerequisite(s): Audition

MUS 1171 - Piano Class
3 Cr. Hr(s).
Basic music reading skills and correct piano playing techniques acquired in a group setting. Simple chords and pieces. No piano playing or musical experience required.

MUS 1172 - Voice Class
3 Cr. Hr(s).
Fundamentals of vocal production, song literature, interpretation and performance skills are studied, either as a terminal course or to prepare students for possible private applied study. Combines lecture with group and individual singing.

MUS 1173 - Guitar Class I
This course is repeatable.

1 Cr. Hr(s).
Fundamental study of guitar playing techniques. Students must provide their own acoustic instruments. (Electric guitars are not appropriate.)

MUS 1500 - Applied Piano for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in piano is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1501 - Applied Voice for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in voice is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1502 - Applied Classical Guitar for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in classical guitar is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1503 - Applied Flute for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in flute is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1504 - Applied Clarinet for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in clarinet is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1505 - Applied Saxophone for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in saxophone is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1506 - Applied Oboe for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in oboe is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1507 - Applied Bassoon for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in bassoon is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1508 - Applied Trumpet for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in trumpet is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1509 - Applied Trombone for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in trombone is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1510 - Applied French Horn for Non-Majors

This course is repeatable.

1 Cr. Hr(s).
Private instruction in French horn is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1511 - Applied Baritone Horn for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in baritone horn is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1512 - Applied Tuba for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in tuba is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1513 - Applied Violin for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in violin is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1514 - Applied Viola for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in viola is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1515 - Applied Cello for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in cello is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1516 - Applied String Bass for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in string bass is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1517 - Applied Percussion for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in percussion is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1520 - Applied Popular Guitar for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in popular guitar is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1521 - Applied Electric Bass for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in electric bass is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1522 - Applied Jazz Drumming for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in jazz drumming is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 1523 - Applied Jazz Piano for Non-Majors
This course is repeatable.

1 Cr. Hr(s).
Private instruction in jazz piano is given on the basis of one credit for 30-minute lessons for 15 weeks, with an expectation of 45 minutes per day of practice. Repertoire and technical requirements according to advancement of student.
Prerequisite(s): Approval of Department

MUS 2111 - Music Theory III
3 Cr. Hr(s).
Third in a sequence of four music theory courses. Focus will be placed on more advanced chromatic melodic and harmonic structures, including borrowed chords, the Neapolitan chord and augmented-sixth chords. Activities include musical composition, analysis, listening, discussion and computer work.
Prerequisite(s): MUS 1113

MUS 2112 - Aural Skills III
1 Cr. Hr(s).
Third in a sequence of four aural skills courses. Focus placed on chromatic melodic and harmonic structures within a challenging rhythmic environment. Practical transcription and singing skills systematically studied. Activities include interval, chord, melodic, harmonic progression and rhythm dictation, as well as singing of intervals, melodies and rhythms.
Prerequisite(s): MUS 1114

MUS 2113 - Music Theory IV
3 Cr. Hr(s).
Final course in a sequence of four music theory courses. Focus placed on advanced chromatic melodic and harmonic structures, including extended harmony, altered dominant chords, chromatic mediants, sonata and rondo forms, late 19th-century and contemporary techniques. Activities include musical composition, analysis, listening, discussion

and computer work.
Prerequisite(s): MUS 2111

MUS 2114 - Aural Skills IV
1 Cr. Hr(s).
Last in a sequence of four aural skills courses. Focus placed on advanced chromatic melodic and harmonic structures within an advanced rhythmic environment. Practical transcription and singing skills systematically studied. Activities include interval, chord, melodic, harmonic progression and rhythm dictation, as well as singing of intervals, melodies and rhythms.
Prerequisite(s): MUS 2112

MUS 2115 - Piano for Music Majors III
1 Cr. Hr(s).
Third semester of a four-semester sequence for nonpianist music majors. Transposition and harmonization are emphasized.
Prerequisite(s): MUS 1116

MUS 2116 - Piano for Music Majors IV
1 Cr. Hr(s).
Fourth semester of a four-semester sequence for nonpianist music majors. Sight reading and vertical four-part reading are emphasized. A comprehensive review of the skills acquired during the four-semester sequence precedes a year-end assessment of all these skills.
Prerequisite(s): MUS 2115

MUS 2117 - Survey of Musical Styles I
3 Cr. Hr(s).
The historical styles of Western music in chronological sequence through analysis of various musical compositions and musical forms from the Medieval, Renaissance, Baroque and Classical eras.
Prerequisite(s): MUS 1112 AND ENG 1201 AND Approval of Department

MUS 2118 - Survey of Musical Styles II
3 Cr. Hr(s).
The historical styles of Western music in chronological sequence through analysis of various musical compositions and musical forms from the early 19th century to contemporary times, including the Romantic, Modern and 20th century eras.
Prerequisite(s): MUS 2117 AND Approval of Department

MUS 2210 - Conducting Fundamentals
2 Cr. Hr(s).
Fundamentals of conducting music ensembles with emphasis on basic baton technique, meters, cueing, addressing different styles, conducting terminology and score reading.
Prerequisite(s): MUS 1113 AND Approval of Department

MUS 2231 - Chorale for Majors
This course is repeatable.

0 Cr. Hr(s).
Large select SATB (soprano-alto-tenor-bass) choral ensemble for music majors specializing in the performance of significant choral repertoire representing varied styles, historical periods and languages. School and public performances required.
Prerequisite(s): Approval of Department

MUS 2240 - Music Practicum
This course is repeatable.

1 Cr. Hr(s).
Music majors may receive credit for practical performance experiences such as performing in a (non-Sinclair) musical, opera, choral organization, etc. Arrangements must be made through department chairperson; only for those students who, due to scheduling impossibilities, cannot participate in Sinclair ensembles at their regularly scheduled times.

MUS 2241 - Music Practicum for Majors
This course is repeatable.

0 Cr. Hr(s).
Music majors may fulfill requirements for performance experiences such as performing in a (non-Sinclair) orchestra, musical, opera, choral organization, etc. Arrangements must be made through department chairperson; only for those students who, due to scheduling impossibilities, cannot participate in Sinclair ensembles at their regularly scheduled times.
Prerequisite(s): Approval of Department

MUS 2243 - Concert Band for Majors
This course is repeatable.

0 Cr. Hr(s).
Concentration on instrumental problems and techniques for music majors. Development of large concert band repertoire. Public performance is a major part of course activities.

MUS 2245 - Classical Guitar Ensemble for Majors
This course is repeatable.

0 Cr. Hr(s).
The study and performance of selected classical guitar ensemble literature for music majors. The size of the ensemble and the respective backgrounds of its players will determine the performance level of the repertoire. End-of-term performance.
Prerequisite(s): Approval of Department

MUS 2251 - Performance Class
This course is repeatable.

1 Cr. Hr(s).
Performance repertoire from intermediate to advanced levels on one's instrument. Designed to anticipate and alleviate public performance problems. Emphasizing all aspects of technique and music. Also addressed: sight reading in public, memorization of scores and nervousness/anxiety caused by stage fright. Section 01 - Pianists; Section 02 - Singers; Section 03 - Guitarist
Prerequisite(s): Instructor Approval

MUS 2261 - Applied Music Practicum
This course is repeatable.

2 Cr. Hr(s).
Applied music study for early-intermediate or advanced-level instrumentalists or singers. Sixty minute lessons for 15 weeks. No student recital or board examination obligations (although recital performance is optional, according to the desire of student.) Indefinitely repeatable. section 01 - piano section 02 - voice section 03 - guitar Additional sections, representing other instruments, added each term as necessary.
Prerequisite(s): Approval of Department

MUS 2601 - Applied Music for Majors I
This course is repeatable.

2 Cr. Hr(s).
Private instruction for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2601 is the first of four semesters of applied music study.
Prerequisite(s): Approval of Department; Restricted to Majors

MUS 2602 - Applied Music for Majors II
This course is repeatable.

2 Cr. Hr(s).
Private instruction for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2602 is the second of four semesters of applied music study.
Prerequisite(s): Approval of Department; Restricted to Majors

MUS 2603 - Applied Music for Majors III
This course is repeatable.

2 Cr. Hr(s).
Private instruction for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2603 is the third of four semesters of applied music study.
Prerequisite(s): Approval of Department; Restricted to Majors

MUS 2604 - Applied Music for Majors IV
This course is repeatable.

2 Cr. Hr(s).
Private instruction for music majors. Weekly one-hour lessons for 15 weeks, with an expectation of two hours per day of practice. Student recital performances and board examinations required each semester. MUS 2604 is the fourth of four semesters of applied music study.
Prerequisite(s): Approval of Department; Restricted to Majors

Neurodiagnostic Technology

NDT 1101 - Introduction to Neurodiagnostic Technology
1 Cr. Hr(s).
Introduction and orientation to health careers in Neurodiagnostic Technology, covering the roles, certifications, licensure requirements, work environments, and career advancement opportunities in the field. This course provides an overview of clinical neurophysiology standards, focusing on neuroscience techniques, instrumentation, Neurodiagnostic terminology, and recording/monitoring methods used in diagnosing and treating neurological disorders. Students will also explore various modalities performed by Neurodiagnostic Technologists.
Prerequisite(s): MAT 0050

NDT 1102 - Introduction to Electroencephalography (EEG)
4 Cr. Hr(s).
Provides basic knowledge of electroencephalography, understanding EEG concepts utilized for diagnosis of various cerebral disorders. Includes history, development, basic neurophysiology concepts of EEG, normal and abnormal brain wave patterns in adults and children, with emphasis on instrumentation and recording techniques. Two classroom, six lab hours per week.
Prerequisite(s): ALH 1101 AND NDT 1101 AND Restricted to Majors
Corequisite(s): NDT 1182

NDT 1182 - Lab for Introduction to Electroencephalography (EEG)
0 Cr. Hr(s).
This laboratory course complements the Introduction to Neurodiagnostic Technology, NDT 1102, providing hands-on training in the foundational concepts of electroencephalography (EEG). Students will learn to apply electrodes according to the International 10-20 System, understand EEG principles for diagnosing cerebral disorders, and explore basic neurophysiology, normal and abnormal brain wave patterns in adults and children, with a focus on instrumentation and recording techniques.
Corequisite(s): NDT 1102

NDT 1250 - Intermediate Electroencephalography (EEG)
3 Cr. Hr(s).
Overview of EEG applications in clinical practice. You will learn to identify and interpret epileptiform discharges, understand the effects of various medications on brainwave patterns, and correlate EEG findings with neurological diseases. It includes an in-depth review of criteria for specialized recording techniques used in prolonged EEG studies and in specialized hospital settings, such as intensive care units and operating rooms. The course also explores EEG signal analysis methods. Two classroom, two lab hours per week.
Prerequisite(s): ALH 1110 AND NDT 1102 AND HIM 1101 AND (CHE 1111 OR CHE 1311) AND (MAT 1130 OR MAT 1450 OR MAT 1470) AND Restricted to Majors
Corequisite(s): NDT 1285

NDT 1260 - Basic Evoked Potentials
3 Cr. Hr(s).
An introduction to evoked potential recording techniques, focusing on equipment operation, waveform principles, and the identification of normal and abnormal patterns. Topics include electrode placement, calibration, and obtaining clear, replicable waveforms for brainstem auditory, visual, and somatosensory evoked potentials in both adult and pediatric subjects. Two classroom, three lab hours per week.
Prerequisite(s): BIO 1222 AND NDT 1102 AND (CHE 1111 OR CHE 1311) AND (MAT 1130 OR MAT 1450 OR MAT 1470) AND Restricted to Majors
Corequisite(s): NDT 1286

NDT 1285 - Lab for Intermediate EEG
0 Cr. Hr(s).
The lab for Intermediate Electroencephalography (EEG) focuses on identifying the clinical significance of epileptiform patterns, the effects of medications on EEG recordings, and EEG correlations with infections, vascular conditions, and structural diseases. Students will analyze criteria for specialized recording techniques used in prolonged EEG studies and in hospital settings such as intensive care units and operating rooms. The course also includes practical experience in performing EEG signal analysis.
Corequisite(s): NDT 1250

NDT 1286 - Lab for Basic Evoked Potentials
0 Cr. Hr(s).
Lab for Basic Evoked Potential introduces evoked potential recording techniques. The course emphasizes equipment operation, principles of use, waveform characteristics (normal and abnormal), electrode placement, calibration, and the process of obtaining clear, replicated evoked waveforms. It covers brainstem auditory, visual, and somatosensory evoked potentials in both adult and pediatric subjects.
Corequisite(s): NDT 1260

NDT 1421 - Intermediate Polysomnography
3 Cr. Hr(s).
The course is designed to assist the Polysomnography Certificate Program in meeting the minimum expectation "to prepare competent entry-level polysomnographic technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains." The course will focus on discussion of the classification of sleep disorders, and the physiological effects of sleep disorders and ramifications/implications on patient health. In addition there will be discussion of medication effects on sleep stages/patterns. Discussion of various therapies for sleep disordered breathing, and other sleep disorders. Discussion on monitoring of nocturnal seizures, and seizure types. Two classroom, three lab hours per week.
Prerequisite(s): NDT 2550
Corequisite(s): NDT 1425

NDT 1425 - Lab for Intermediate Polysomnography
0 Cr. Hr(s).
The course is designed to assist the Polysomnography Certificate Program in meeting the minimum expectation "to prepare competent entry-level polysomnographic technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains." Lab includes demonstration

of pattern recognition of sleep disorders, physiological effects of sleep disorders and ramifications/implications on patient health, Positive Airway Pressure (PAP) set-up, nocturnal O2, CO2 monitoring. Recognizing medication effects on sleep stages/patterns. Determining various therapies for sleep disordered breathing, and other sleep disorders, nocturnal seizures, and seizure types.
Corequisite(s): NDT 1421

NDT 1430 - Advanced Polysomnography
3 Cr. Hr(s).
The course is designed to assist the Polysomnography Certificate Program in meeting the minimum expectation "to prepare competent entry-level polysomnographic technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains." The course will discuss parameters, digital and technical specifications of polysomnography, staging and scoring of sleep patterns, identification of various forms of sleep breathing and movement disorders. Discuss sleep calculations and daytime sleep studies, advanced PAP therapies, esophageal pH and NPT testing, sleep disorders lab management, and Home Sleep Testing. Two classroom, three lab hours per week.
Prerequisite(s): NDT 1421
Corequisite(s): NDT 1435

NDT 1435 - Lab for Advanced Polysomnography
0 Cr. Hr(s).
The course is designed to assist the Polysomnography Certificate Program in meeting the minimum expectation "to prepare competent entry-level polysomnographic technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains." Lab for this course involves parameters, digital and technical specifications of polysomnography, staging and scoring sleep patterns, identification breathing and movement disorders. Demonstrating sleep calculations and daytime sleep studies advanced PAP therapies, esophageal pH and NPT testing. Evaluating the aspects of sleep disorders lab management, and Home Sleep Testing.
Corequisite(s): NDT 1430

NDT 1801 - Seminar for Polysomnography Practicum
1 Cr. Hr(s).
The course is designed to assist the Polysomnography Certificate Program in meeting the minimum expectation "to prepare competent entry-level polysomnographic technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains." Classroom portion to enhance the END 1881 Polysomnography practicum experience in a selected polysomnography lab or an affiliated health care facility under the direct supervision of a PSG technologist or physician. Emphasis on PSG concepts.
Prerequisite(s): NDT 1421 AND NDT 1430 AND NDT 2460 AND NDT 2550
Corequisite(s): NDT 1891

NDT 1891 - Polysomnography Practicum
The course is designed to assist the Polysomnography Certificate Program in meeting the minimum expectation "to prepare competent entry-level polysomnographic technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learn

3 Cr. Hr(s).
The course is designed to assist the Polysomnography Certificate Program in meeting the minimum expectation "to prepare competent entry-level polysomnographic technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains." Practicum in the clinical setting in a sleep laboratory or a sleep center. Departmental orientation, policies and procedures, individual body mechanics and patient transfer techniques. Gather and analyze patient information, perform testing preparation procedures, perform polysomnographic procedures. Emphasis on performing overnight diagnostic and therapeutic polysomnograms. Twenty-one practicum hours per week.
Corequisite(s): NDT 1801

NDT 1901 - Seminar for NDT Practicum I
2 Cr. Hr(s).
Classroom component designed to complement the clinical electroencephalography experience in a designated neurodiagnostic lab or affiliated healthcare facility, supervised by a neurodiagnostic technologist. Focus is placed on EEG concepts, communication, and professionalism. One classroom, seven practicum hours per week.
Prerequisite(s): NDT 1101 AND NDT 1102 AND Restricted to Majors

NDT 1991 - Practicum Experience I for NDT
0 Cr. Hr(s).
Clinical electroencephalography experience in a selected neurodiagnostic lab or an affiliated health care facility under the direct supervision of a neurodiagnostic technologist. Emphasis on EEG concepts. Performance of EEG testing on clinical patients, medical record keeping, and clinical history taking.
Corequisite(s): NDT 1901

NDT 2350 - Intraoperative Monitoring for Neurodiagnostic Technologists
2 Cr. Hr(s).
Discussion of intraoperative monitoring of CNS (brain, brainstem, spinal cord) function during surgical procedures. Types of recordings, technologist's role, recording parameters, reason for surgical monitoring, variables affecting monitoring, and outcome of surgery.
Prerequisite(s): NDT 1250 AND NDT 1260 AND Restricted to Majors

NDT 2360 - Neonatal/Pediatric Electroencephalography
3 Cr. Hr(s).
Discussion of neonatal and pediatric EEG recording techniques, including normal and abnormal electroencephalograms. Topics include the development of the sleep-wake cycle, EEG monitoring in neonatal and pediatric populations, and differential diagnosis considering various factors. Two classroom, two lab hours per week.
Prerequisite(s): BIO 1222 and NDT 1250 AND Restricted to Majors
Corequisite(s): NDT 2386

NDT 2386 - Lab for Neonatal/Pediatric EEG
0 Cr. Hr(s).
Lab for Neonatal/Pediatric Electroencephalography will demonstrate recording neonatal and pediatric EEG electroencephalograms. Development of sleep-wake cycle, monitoring the EEG in neonatal and pediatric populations, and differential diagnosis based on polysomnographic variables.
Corequisite(s): NDT 2360

NDT 2450 - Nerve Conduction Studies
3 Cr. Hr(s).
This course provides a foundational overview of nerve conduction studies and electromyography, focusing on equipment use, stimulation site placement, and error prevention. Topics include the electronics and pathology of nerve conduction studies, identification of normal and abnormal findings, anatomy relevant to entrapment sites, and waveform analysis. Case presentations are incorporated to enhance clinical understanding. Two classroom, two lab hour per week.
Prerequisite(s): BIO 1222 and NDT

1250 AND Restricted to Majors
Corequisite(s): NDT 2485

NDT 2460 - Neurophysiology of Electroencephalography/Sleep Disorders
3 Cr. Hr(s).
This course explores the neurophysiology of the central and peripheral nervous systems. It examines the neurophysiology of sleep, including the role of the autonomic nervous system, respiratory and cardiovascular effects, regulation of sleep, and circadian rhythms. Emphasis is placed on the maturation of sleep stages from neonates to adults. Designed to support the Polysomnography Certificate Program, this course prepares students to become competent entry-level polysomnographic technologists by developing their cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.
Prerequisite(s): NDT 1250 AND Restricted to Majors

NDT 2485 - Lab for Nerve Conduction Studies
0 Cr. Hr(s).
This lab focuses on practical skills for performing nerve conduction studies, including proper use of equipment, accurate placement of stimulation sites, and identification of common sources of error. Students will analyze waveforms, explore the anatomy of entrapment sites, and interpret normal and abnormal nerve conduction study findings. Case presentations will enhance understanding of pathology and clinical applications.
Corequisite(s): NDT 2450

NDT 2550 - Fundamentals of Polysomnography
3 Cr. Hr(s).
This course provides an overview of polysomnography, including job responsibilities and credentialing. It covers normal and abnormal sleep disorders, focusing on the nervous, respiratory, and cardiovascular systems. Students will learn sleep apnea recording techniques, electrode placement and calibration, and use of diagnostic equipment. Emphasis is placed on monitoring, diagnosing, scoring, and treating sleep disorders, including the use of CPAP and BiPAP equipment. Troubleshooting artifacts and interpreting sleep study results are also addressed. The course is designed to assist the Polysomnography Certificate Program in meeting the minimum expectation to prepare competent entry-level polysomnographic technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Two classroom, three lab hours per week.
Prerequisite(s): NDT 2450 AND NDT 2460 AND Restricted to Majors
Corequisite(s): NDT 2585

NDT 2585 - Lab for Polysomnography
0 Cr. Hr(s).
This lab focuses on the fundamentals of polysomnography, emphasizing proper electrode placement and baseline testing. Students will practice recording sleep apnea montages, calibrating diagnostic equipment, and integrating physiologic functions of the nervous, respiratory, and cardiovascular systems. Key topics include monitoring, diagnosing, scoring, and treating sleep disorders, as well as troubleshooting artifacts and using CPAP and BiPAP equipment effectively. The course is designed to assist the Polysomnography Certificate Program in meeting the minimum expectation to prepare competent entry-level polysomnographic technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.
Corequisite(s): NDT 2550

NDT 2902 - Seminar for NDT Practicum II
3 Cr. Hr(s).
Continuation of practicum in a clinical setting at neurology laboratory or neurodiagnostic department. Departmental orientation, policies and procedures, assist patient setup, performance, and discontinuance of neurodiagnostic activities performed at the assigned clinical site. One classroom, fourteen practicum hours per week.
Prerequisite(s): (COM 2206 OR COM 2211 OR COM 2225) AND ENG 1101 AND NDT 1260 AND NDT 1901 AND Restricted to Majors
Corequisite(s): NDT 2992

NDT 2903 - Seminar for NDT Practicum III
3 Cr. Hr(s).
This course provides hands-on practice in a clinical setting, such as a neurology laboratory or neurodiagnostic department. Students will participate in departmental orientation, learn policies and procedures, and assist with patient setup and monitoring for EEG, and/or nerve conduction studies, polysomnography, or other neurodiagnostic procedures. One classroom, fourteen practicum hours per week.
Prerequisite(s): NDT 2450 AND NDT 2460 AND NDT 2902 AND Restricted to Majors
Corequisite(s): NDT 2993

NDT 2990 - Neurodiagnostic Capstone
2 Cr. Hr(s).
This capstone course focuses on evaluating and refining the knowledge, skills, and experiences of neurodiagnostic technologists. Students will prepare a professional resume and cover letter, review employment interview techniques, and receive guidelines for career readiness. The course also includes board preparation for the EEG certification exam.
Prerequisite(s): NDT 2902 AND Restricted to Majors

NDT 2992 - NDT Practicum II
0 Cr. Hr(s).
Continuation of practicum in clinical setting at neurology laboratory or neurodiagnostics department. Departmental orientation, policies and procedures, assist patient setup, performance and discontinuance of neurodiagnostic activities performed at the assigned clinical site.
Corequisite(s): NDT 2902

NDT 2993 - Neurodiagnostic Technology Practicum III
0 Cr. Hr(s).
Practicum in clinical setting at a neurology laboratory or neurodiagnostics department. Students will participate in departmental orientation, learn policies and procedures, and assist with patient setup and monitoring for EEG, nerve conduction studies, polysomnography, or other neurodiagnostic procedures.
Corequisite(s): NDT 2903

Nursing

NSG 1200 - Introduction to Nursing
1 Cr. Hr(s).
Explores nursing as a personal career choice. An overview of practice areas, essential functions, basic ethical and legal responsibilities and professional behaviors expected of registered nurses and nursing students. Topics include history of nursing practice, the art and science of nursing, legal and ethics, professional behaviors, and basic medical terminology. This is a fully online course.

NSG 1400 - Health & Illness I: Foundational Concepts in Nursing
7 Cr. Hr(s).
Introduces program and foundational nursing concepts and nursing process. Utilizes knowledge from general education courses to assist students to plan and implement nursing care of individuals across the lifespan. Develops communication, assessment and basic psychomotor skills. Total clock hours for theory: 37.5; Total planned clinical hours:

56.25; total planned lab hours: 93.75; Clinical and lab hours combined: 150 hours.
Prerequisite(s): ALH 1101 AND BIO 1141 AND ENG 1101 AND (MAT 1130 OR higher level math) AND NSG 1200 AND Restricted to Majors

NSG 1450 - Professional Nursing I: Introduction to the Role of the Professional Nurse
2 Cr. Hr(s).
Introduces the scope and practice of the nursing profession. Examines the role of the nurse in the health care team including communication and collaboration. Applies basic legal, ethical, and safety principles to the practice of nursing. A minimum of 25 class hours. This is a blended course containing both face-to-face and online elements.
Prerequisite(s): ALH 1101 AND BIO 1141 AND ENG 1101 AND NSG 1200 AND (MAT 1130 or higher level MAT course) AND Restricted to Majors

NSG 1600 - Health & Illness II: Health & Wellness Concepts
7 Cr. Hr(s).
Applies nursing concepts and utilizes the nursing process in health promotion and nursing care of individuals and families experiencing prevalent health issues across the lifespan, including introduction to care of the child-bearing family. Total clock hours for theory: 37.5; Total planned clinical hours: 112.5; Total planned lab hours: 37.5; Clinical and lab hours combined: 150 hours.
Prerequisite(s): NSG 1400 AND NSG 1450 AND Restricted to Majors

NSG 1650 - Professional Nursing II: Healthcare System Concepts
2 Cr. Hr(s).
Explores current federal and state laws, practice standards and organizational regulations that impact healthcare delivery and nursing practice. Identifies the importance of economic resources, ethical principles, and evidence-based practice in improving quality and safety to achieve optimal patient outcomes in a variety of healthcare settings. A minimum of 25 class hours. This is a blended course containing both face-to-face and online elements.
Prerequisite(s): NSG 1400 AND NSG 1450 AND Restricted to Majors

NSG 1700 - Health & Illness Concepts I & II
7 Cr. Hr(s).
Advanced placement for RN pathway containing the first year nursing concepts and exemplars of health and illness across the lifespan. Uses knowledge from preceeding nursing education, or military equivalent training, and general education courses to care for individuals, families and populations experiencing heath issues across the lifespan. Focuses on RN scope of practice, clinical judgement, and refinement of psychomotor skills. Total clock hours for theory: 37.5; Total planned clinical hours: 97.5; Total planned lab hours: 52.5; Clinical and lab hours combined: 150.
Prerequisite(s): BIO 1141 AND ALH 2202 AND ENG 1101 AND MAT 1130 (or higher level math) AND Restricted to Majors Note: Permission needed from ALH Chair and ALH 2202 faculty for students to take BIO 1141 and ALH 2202 concurrently

NSG 1750 - Professional Nursing Practice
2 Cr. Hr(s).
Using LPN or military equivalent experience as a base, students learn about the scope and practice of the registered nursing profession. Examines the role of the nurse in the health care team including communication and collaboration. Applies legal, ethical, and safety principles to the practice of nursing. Explores current federal and state laws, practice standards and organizational regulations that impact healthcare delivery and nursing practice. Identifies the importance of economic resources, ethical principles, and evidence-based practice in improving quality and safety to achieve optimal patient outcomes in a variety of healthcare settings. Ohio LPN license or military training transcripts, or military rank equivalency required. A minimum of 25 class hours. This is a blended course containing both face-to-face and online elements.
Prerequisite(s): BIO 1141 AND ALH 2202 AND ENG 1101 AND MAT 1130 AND Restricted to Majors Note: Permission needed from ALH Chair and ALH 2202 faculty for students to take BIO 1141 and ALH 2202 concurrently

NSG 2400 - Health & Illness III: Health & Wellness Concepts
7 Cr. Hr(s).
Integrates nursing concepts and utilizes the nursing process to plan and provide nursing care to individuals and families experiencing complex physiologic and psychosocial health issues across the lifespan. Develops care competencies to enhance patient outcomes in a variety of settings. Total clock hours for theory: 37.5; Total planned clinical hours: 112.5; total planned lab hours: 37.5; Clinical and lab hours combined: 150 hours.
Prerequisite(s): (NSG 1600 AND NSG 1650) OR (NSG 1700 AND NSG 1750) AND Restricted to Majors

NSG 2450 - Professional Nursing III: Leadership & Management of Care
2 Cr. Hr(s).
Facilitates development of leadership and management skills, with an emphasis on prioritization, delegation, supervision, and collaboration with the health care team. A minimum of 25 class hours. This is a blended course containing both face-to-face and online elements.
Prerequisite(s): (NSG 1600 AND NSG 1650) OR (NSG 1700 AND NSG 1750) AND Restricted to Majors

NSG 2600 - Concept Synthesis
8 Cr. Hr(s).
Synthesizes professional nursing and health and illness concepts to manage and plan collaborative care for individuals and families in a variety of settings. Facilitates the transition from student to beginning associate degree nurse, managing the care of a group of patients with the healthcare team. Total clock hours for theory: 37.5; Total planned clinical hours: 150; Total planned lab hours: 37.5; Clinical and lab hours combined: 187.5.
Prerequisite(s): NSG 2400 AND NSG 2450 AND Restricted to Majors

NSG 3101 - Nursing Theory
3 Cr. Hr(s).
This course focuses on the transition from technical to professional nursing through the theoretical basis of nursing applied to the scope and standards of professional nursing practice. This is an online course with minimum class time of 37.5 hours.
Prerequisite(s): ALH 2220 AND ENG 1201 AND MAT 1450 AND PSY 2200 AND SOC 1101 AND Must hold valid RN license AND Restricted to Majors

NSG 3103 - Nursing Evidence-Based Practice
3 Cr. Hr(s).
This course examines how evidence provided through the literature and research is applied by professional nurses to improve patient outcomes. This is an online course with minimum class time 37.5 hours.
Prerequisite(s): ALH 2220 AND ENG 1201 AND MAT 1450 AND PSY 2200 AND SOC 1101 AND Must hold valid RN license AND Restricted to Majors

NSG 4101 - Community Nursing
3 Cr. Hr(s).
This course examines community-based and population-focused public health. Influences of

culture, environment, and governmental policy are discussed. The use of theory, research, and epidemiology are applied as foundations for the community as a client. This is a blended course with minimum of 25 hours of coursework and minimum 45 hours of hands-on experience.
Prerequisite(s): NSG 3101 AND NSG 3103 AND NSG 4102 AND Must hold valid RN license AND Restricted to Majors

NSG 4102 - Cultural Competency
3 Cr. Hr(s).
Explores cultural effect on health and illness. Analyzes the attitudes, knowledge, and values of diverse populations. Emphasis is on heightened cultural awareness for professional nurses providing care in a diverse environment. Identifies best practice guidelines for culturally responsive care, to transform knowledge, to identify at-risk cultural groups and influence health promotion and disparity reduction within these groups. This is an online course with minimum class time of 37.5 hours.
Prerequisite(s): NSG 3101 AND NSG 3103 AND Must hold valid RN license AND Restricted to Majors

NSG 4103 - Informatics for the Professional Nurse
3 Cr. Hr(s).
This course addresses the nurse's role and professional responsibility in utilizing health information systems (HIS). The course addresses the use of HIS and technology to support patient care and to enhance safe, effective, and quality patient outcomes. Ethical, legal, cultural, and financial issues surrounding information systems are also explored. This is an online course with minimum class time of 37.5 hours.
Prerequisite(s): NSG 3101 AND NSG 3103 AND Must hold valid RN license AND Restricted to Majors

NSG 4104 - Advanced Health Assessment & Health Promotion
3 Cr. Hr(s).
This course focuses on the theory and practice of health assessment and health promotion across the life span. Assessment of all aspects of the patient's health status for purposes of health promotion, health protection, and disease prevention is explored. Incorporates concepts, theories, and research on human development and genetics, prevention of disease, early detection of risk factors and anticipatory guidance. Minimum class time of 25 hours and 25 lab hours.
Prerequisite(s): NSG 3101 AND NSG 3103 AND Must hold valid RN license AND Restricted to Majors

NSG 4105 - Population Health
3 Cr. Hr(s).
This elective course evaluates patterns of health in a human population for analysis and correlation to contributing factors of poor health patterns, including access to healthcare, health disparity, genetics, lifestyle, and habitat. Students are asked to identify and evaluate regional health promotion programs and develop a health plan and outcome for a select population. This is an online course with minimum class time of 37.5 hours.
Prerequisite(s): NSG 3101 AND NSG 3103 AND Must hold valid RN license AND Restricted to Majors

NSG 4106 - Women's Health
3 Cr. Hr(s).
This elective course emphasizes care of women during the reproductive years through menopause. Explores issues of infertility, preconception counseling, contraception, pregnancy, childbirth, postpartum, aging reproductive health, and breast health. Students will identify disparities in women's health, and opportunities to promote the health of women during reproductive years through menopause. This is an online course with minimum class time 37.5 hours.
Prerequisite(s): NSG 3103 AND Must hold valid RN license AND Restricted to Majors

NSG 4107 - Academic Nurse Educator
3 Cr. Hr(s).
This elective course addresses the responsibilities of the academic nurse educator in a pre-licensure nursing program. Compares and contrasts learning theories pertinent to nursing education. Discusses aspects of curriculum development, evaluation, and quality improvement. Identifies educational practice changes driven by evidence-based findings in the academic setting. This is an online course with minimum class time 37.5 hours.
Prerequisite(s): NSG 3103 AND Must hold valid RN license AND Restricted to Majors

NSG 4110 - Nursing Leadership
3 Cr. Hr(s).
This course focuses on leadership and management roles of professional nurses. Emphasis is placed on concepts of leadership as they relate to the ethical-legal decision-making processes in implementing high quality nursing care, healthcare team coordination, and the oversight and accountability processes in diverse healthcare settings. This is an online course with minimum class time of 37.5 hours.
Prerequisite(s): NSG 4101 AND NSG 4102 AND NSG 4103 AND NSG 4104 AND Must hold valid RN license AND Restricted to Majors

NSG 4120 - RN to BSN Capstone
3 Cr. Hr(s).
The capstone course promotes the application of knowledge acquired in the RN to BSN program with previous knowledge and clinical experiences to identify and implement a scholarly nursing project. The project must address the analysis of, and strategies to address, improvements in clinical or organizational practices. This is a blended course with minimum of 25 hours of coursework and minimum 45 hours of hands-on experience.
Prerequisite(s): NSG 4101 AND NSG 4102 AND NSG 4103 AND NSG 4104 AND Must have completed all general education courses AND Must hold valid RN license AND Restricted to Majors

Nutrition & Dietetics Technology

DIT 1105 - Exploration of the Nutrition & Dietetics Profession
1 Cr. Hr(s).
Exploration of all aspects of the nutrition and dietetics profession. Introduces the Academy of Nutrition and Dietetics (AND) professional organization and structure as well as supporting professional nutrition branches and organizations. Students are introduced to the student membership opportunity with the AND. The course covers the recognized nutrition professionals and the credentialing processes for each. Clarifies the roles, requirements and standards of practice for different nutrition professionals. Review and case study assessment of the professional application of the Academy of Nutrition and Dietetics Code of Ethics. Utilizes an expert panel discussion venue with area nutrition professionals in various professional practice roles. Investigates areas of nutrition professional's employment and advanced degree programs. The AND public policy efforts are reviewed. Students review the Policies and Procedures for the Nutrition and Dietetics department. Students initiate a professional e-portfolio, which is maintained throughout the Nutrition and Dietetics Technician program.

DIT 1108 - Nutrition for the Culinary Professional
3 Cr. Hr(s).
Introduction to general nutrition principles emphasizing foundations of healthy cooking.

Explores how to gauge customers' needs/wants while developing and implementing healthy menu options. Includes National Restaurant Association Education Foundation ManageFirst Nutrition Exam. Successful completion of exam fulfills requirements toward American Culinary Federation (ACF) certification.

DIT 1111 - Nutrition & Wellness
3 Cr. Hr(s).
Overview of general nutrition principles focusing on healthy food choices, disease prevention, and nutrition that supports fitness and exercise. Students will increase their knowledge of comprehensive health and wellness by exploring fad diets, herbs/supplements, use of ergogenic aids, and societal influences of personal food choices. Students will be able to identify the components of fitness and communicate the relationship between physical fitness, physical performance, and nutritional intake. Students will evaluate their personal state of nutrition based upon their food choices. Further, students will calculate their personal kilocalorie intake and burn rate. The course incorporates effective use of nutrition information from reliable sources as well as personal nutrition and health responsibility in a professional setting.

DIT 1210 - Medical Terminology for Dietetics
1 Cr. Hr(s).
The use of root words, combining forms, prefixes and suffixes related to pathology, diagnosis and treatment of body systems pertaining to the practice of dietetics. Exposure to research journal articles and medical terminology application.

DIT 1525 - Human Nutrition
3 Cr. Hr(s).
This is an in-depth study of the principles of nutrition with emphasis on the functions of the nutrients, their digestion, absorption, metabolism, inter-relationships and nutrition requirements. Incorporates assessment of nutritional health risks, health promotion and disease prevention theories. Explores the influence of socioeconomic, cultural, psychological and environmental factors on food and nutritional behavior.

DIT 1630 - Nutrition Through the Lifecycle
3 Cr. Hr(s).
Nutritional needs of individuals from conception to maturity, including physiological, psychological, environmental and sociological factors affecting nutrition. The Nutrition Care Process is introduced. Four lifecycle clients (pregnancy, toddler, young adult, and elderly) are interviewed and assessed. Incorporates weekly counseling sessions on weight management strategies with an individual client for each student. Examines nutrition concerns for special health conditions including allergies, eating disorders, and obesity. Two classroom, five directed practice hours per week.
Prerequisite(s): DIT 1525

DIT 1635 - Community Nutrition
3 Cr. Hr(s).
Addresses community food/nutrition issues and federal/nongovernmental programs designed to meet needs of at-risk populations. Focuses on tools, strategies and resources to evaluate effectiveness of community programs. Students participate with community agencies providing nutrition programs and education. Two classroom, five directed practice hours per week.

DIT 1825 - Nutrition for Exercise & Sport Science
3 Cr. Hr(s).
Study of the interrelationship between nutrition and physical fitness including nutrient and food energy needs of individuals who are physically active. Discussion of nutritional aspects for specific sports. Examination of nutrition research related to health enhancement and performance. Investigation of current research in the nutritional evaluation of the athlete. Topics include dietary needs, fluid replenishment, pre-game meals, tissue maintenance, growth and development, immune function, energy development, dietary guidelines, sound dietary practices and "fad" diets for the athlete.

DIT 2101 - Dining Assistant Dietary Aide
1 Cr. Hr(s).
Practical skill development in feeding techniques for the elderly, hospitalized, rehabilitation, or populations with physical feeding need support. Ensures understanding of nutritional needs of patients and residents, communication and interactions between patients/residents/staff, behavior challenges and safety procedures. Students receive a Dining Assistant Certificate from Ohio Department of Health upon completion.

DIT 2180 - Medical Nutrition Therapy for Dietary Managers
3 Cr. Hr(s).
Introductory course for nutrition care personnel in health care institutions. Overview of nutrition principles, medical nutrition therapy and menu planning. Exploration of diseases/health conditions that require nutrition intervention. Addresses multidisciplinary team approach to long term care resident care. Nutrition Care Process introduced with basic nutrition-related calculations. Two classroom, five directed practice hours per week.

DIT 2240 - Motivational Interviewing, Nutrition Counseling & Education
3 Cr. Hr(s).
This course provides opportunity for the learning, development, and preparation of a variety of necessary counseling and communication skills that are required for the practice of an entry-level healthcare professional. An integrated approach to the theory, techniques, skills, and values of Motivational Interviewing along with prominent models of behavioral change utilized in interviewing and counseling approach. Practice through written assignments, self-study, course exercises, discussions, role-playing, and oral presentations. Explore teaching methods and materials to maximize educator effectiveness while accommodating different learning styles and diverse audiences. Evaluation (formative, summative) of learning and assessment rubric design are included along with the DEAL model for critical reflection. Use of media and educational resources and current education materials addressed. Research design methods are introduced and analyzed. A service learning project is incorporated into course activities.

DIT 2305 - Food, Culture & Cuisine
2 Cr. Hr(s).
Explore cuisines of Asia, Middle East, Africa, Europe, Mediterranean and the Americas. Identify the demographics and research/evaluate the differences and similarities among the various cultures of the world. Demonstrate the relationship between traditional foods, cultural and current food practices. One classroom, three clinical lab hours per week.
Corequisite(s): DIT 2310

DIT 2310 - Lab for Food, Culture & Cuisine
1 Cr. Hr(s).
This laboratory component of DIT 2305 explores cuisines of Asia, Middle East, Africa, Europe, Mediterranean and the Americas. Indigenous ingredients and flavor profiles of international cuisines are addressed. Advanced preparation methods and cooking techniques will be utilized and demonstrated. Two lab hours per week.
Corequisite(s): DIT 2305

DIT 2505 - Food Science Introductory Foods Lab
3 Cr. Hr(s).
This course is an introduction to the science of food in relation to chemical composition, nutritional value, processing methods, quality, safety, and standards of identity using an ecological approach, experimentation, and research. Students will demonstrate cooking methods and procedures, use basic and advanced knife skills, maintain nutritional quality of food and present proper plate composition for aesthetic value. Six lab hours per week.

DIT 2510 - Institutional Food Safety & Quantity Food Systems
3 Cr. Hr(s).
This course incorporates food delivery and production systems, facility and materials management, menu planning, food and non-food procurement, cost and quality control methods. Institutional and healthcare food safety and sanitation principles will be reviewed and applied. A ServSafe (level II) certificate will be earned from the National Restaurant Association (NRA) to all students successfully passing the proctored ServSafe exam. Nutrition & Dietetics Technician students, as well as Dietary Manager program students, must successfully complete this course with a "C" or better and also successfully complete the ServSafe certification exam. Students with a current ServSafe certification may waive the ServSafe examination portion of this course with appropriate submission of a valid and verifiable ServSafe certificate provided to the instructor.

DIT 2515 - Foodservice Systems Supervised Practice
1 Cr. Hr(s).
Hands-on experience completed in an institutional foodservice kitchen. Covers menu development, including modified diets, recipe scaling, forecasting and food production, equipment care and use, kitchen layout and design, and safety and sanitation. Students will perform several safety and sanitation audits and will present an in-service training to facility staff based on audit results. Five supervised practice hours per week at assigned site.

DIT 2520 - Advanced Food Science Lab
3 Cr. Hr(s).
This food laboratory course addresses food science principles for the functions of ingredients in modified textured and therapeutic recipe preparation. A review of quantity cooking principles, sensory evaluation of food, recipe standardization, kitchen equipment and food safety and sanitation are completed. Food composition and product evaluation along with the application of food pairing, plating, and garnishing techniques reviewed. Hazard analysis critical control point standards are identified and reinforced. Six lab hours per week.

DIT 2625 - Medical Nutrition Therapy I
3 Cr. Hr(s).
Medical nutrition therapy for physiologic stress, diabetes mellitus, cardiovascular disease and disorders of the upper gastrointestinal tract. Content includes modified texture/therapeutic feeding strategies, dietary interventions for swallowing difficulties and enteral/parenteral/IV feeding routes. Incorporates the nutrition care process with emphasis on nutritional assessments, minimum data sets, care assessment triggers and care plans.
Prerequisite(s): DIT 1630 AND Restricted to Majors
Corequisite(s): DIT 2630

DIT 2630 - Medical Nutrition Therapy Clinical I Supervised Practice
2 Cr. Hr(s).
Supervised practice component of medical nutrition therapy I series: for physiologic stress, diabetes mellitus, cardiovascular disease, and disorders of the upper gastrointestinal tract. Menu writing for therapeutic interventions; feeding routes for enteral, parenteral, and IV therapy; patient interviews, nutrition screening, and nutrition care process. Ten supervised practice hours per week.
Prerequisite(s): DIT 1630 AND Restricted to Majors
Corequisite(s): DIT 2625

DIT 2735 - Foodservice Retail Business Management & Mid-Program Assessment
3 Cr. Hr(s).
This course introduces the functions of foodservice retail business management and identifies a variety of tools used to assist with management organizational performance. While designed for the healthcare nutrition department managerial application, given the proliferation of foodservice business operations such as cafes, coffee shops, and specialty food kiosks within healthcare settings, this course provides retail business concept strategies and exposure. Application of marketing concepts, financial reports/budget, quality improvement, and current trends/regulations in healthcare nutrition environments reviewed. This foodservice management course culminates the Nutrition & Dietetics Technician program foodservice and foodservice management curriculum offerings. Students continuing to complete their Medical Nutrition Therapy I and II courses must successfully complete the Mid-Program Assessment for Domain I (foodservice management) exam offered in this 2735 course. Students will have three attempts to successfully complete the assessment exam with a 75% or higher. Failure to successfully complete the comprehensive foodservice management program assessment exam after three attempts will result in a maximum grade of "D" for the student in the course. Opportunities for remediation pathways are provided to all students with a grade of "D" as outlined in the Nutrition and Dietetics Policy and Procedures Student Handbook available on the Sinclair Nutrition and Dietetics program website.

DIT 2740 - Retail Business Management Supervised Practice
1 Cr. Hr(s).
Hands-on experience completed in an institutional foodservice setting. Covers five major aspects of human resource management: planning, organizing, directing, controlling, and evaluating and the tools used to assist with organizational performance. Includes marketing of services, budget concerns, and cost control measures while maintaining quality service within regulatory guidelines. Five supervised practice hours per week at assigned facility site.

DIT 2845 - Medical Nutrition Therapy II
3 Cr. Hr(s).
Capstone course for the medical nutrition therapy series. Course content includes medical nutrition therapy for cancer, AIDS, disorders of the lower gastrointestinal tract, gallbladder, liver and renal disease. Incorporates review modules, case studies, critical thinking exercises and the nutrition care process addressing feeding routes and diseases.
Prerequisite(s): DIT 2625 AND Restricted to Majors
Corequisite(s): DIT 2850

DIT 2850 - Medical Nutrition Therapy Clinical II Supervised Practice
2 Cr. Hr(s).
Supervised practice component covering topics in Medical Nutrition Therapy II: cancer, childhood obesity, disorders of the lower gastrointestinal tract, gallbladder, and liver, and renal diseases. Experience includes: menu writing for modified texture/therapeutic interventions, feeding routes, patient interviews, nutrition screening/education, and

the nutrition care process from admission to discharge. Ten supervised practice hours per week.
Prerequisite(s): DIT 2630 AND Restricted to Majors
Corequisite(s): DIT 2845

DIT 2855 - Nutrition & Dietetics Program Assessment Capstone
1 Cr. Hr(s).
This capstone course prepares students for the national credentialing nutrition and dietetic technician (NDTR) examination as well as guidance and preparation for employment in nutrition professional positions. This course reviews the student's SCC Professional Portfolio completion utilized to track student competency, knowledge, and performance throughout the Nutrition and Dietetics program as well as providing a self-marketing tool for the student seeking employment or pursued education and internship ventures. This course includes job interviewing training and resume writing skill sessions and professional self-marketing for adequate workplace position and compensation. This course provides training for the student's post-graduate skill set for becoming a future preceptor of dietetics students. This course exposes the student to the Commission on Dietetic Registration (CDR) Professional Development Portfolio process to initiate, submit and maintain continuing professional education units once the NDTR credential is obtained. This course provides the student with training to identify levels of care (RDN vs NDTR) to establish a foundational working knowledge of critical care triage. This course reviews professional ethics scenarios as well as life-long learning opportunities and the Academy of Nutrition and Dietetics (AND) continuing education submission process. Students are provided with NDTR national exam information and the exam application process. This program-culminating nutrition and dietetics course contains the second (Domain II) comprehensive program exam covering ACEND competency and knowledge standards on the NDTR credentialing exam. Students must pass the program-comprehensive Domain II (Clinical) with a "C" or better (75% or higher) in this DIT 2855 capstone course to earn a release of the ACEND Verification statement required for the NDTR national credentialing exam application. Capstone students will have three attempts to successfully complete the comprehensive program assessment exam. Failure to successfully complete the comprehensive program assessment exam after three attempts will result in a maximum grade of "D" for the student in the course. Opportunities for remediation pathways are provided to all students with a grade of "D" as outlined in the Nutrition and Dietetics Policy and Procedures Student Handbook available on the Sinclair Nutrition and Dietetics program website.
Prerequisite(s): Restricted to Majors

Occupational Therapy Assistant

OTA 1111 - Introduction to Occupational Therapy Assistant
2 Cr. Hr(s).
History, philosophy, ethics and definitions of occupational therapy; overview of occupational therapy practice areas; differences between occupational therapists and occupational therapy assistants; functions of professional and regulatory agencies; exploration of learning experiences within the occupational therapy assistant program curriculum; basic prefixes, roots and suffixes; terminology and standard abbreviations required for understanding of the language used in medicine. One classroom, two lab hours per week.

OTA 1211 - Occupational Therapy Assistant Foundations I
3 Cr. Hr(s).
Introduction to occupational therapy and people with physical, psychosocial and/or developmental disabilities in a non-traditional community-based setting with supervision provided by a licensed Occupational Therapy Assistant. Focuses on activity implementation, observation skills, professionalism, therapeutic use of self and occupational therapy practice framework language. Two classroom, three clinical hours per week.
Prerequisite(s): OTA 1111 AND Restricted to Majors

OTA 1212 - Functional Anatomy
2 Cr. Hr(s).
Functional Anatomy of neurological and musculoskeletal systems. Analysis of nervous systems, major joint and muscle groups involved in daily living tasks such as bathing, dressing, grooming, eating, cooking, and housekeeping.
Prerequisite(s): OTA 1111 AND Restricted to Majors

OTA 1213 - Occupational Therapy & Adults with Physical Dysfunction
2 Cr. Hr(s).
Effect of the features of major diseases, injuries, and disorders on adult occupational performance. Physical dysfunction theories, models of practice, frames of reference that provide the foundation of occupational therapy. Screening and evaluation of occupational performance affected by physical dysfunction. Includes use of occupations for the purpose of assessment, specified screening tools, assessments, observation, checklists, histories and interviews with clients and/or their family members or caregivers.
Prerequisite(s): OTA 1111 AND Restricted to Majors
Corequisite(s): OTA 1214

OTA 1214 - Occupational Therapy & Adults with Physical Dysfunction Lab
2 Cr. Hr(s).
Focus on physical dysfunction intervention to increase independence in areas of occupation. Screening and evaluation of occupational performance affected by physical dysfunction. Includes use of occupations for purpose of physical dysfunction assessments and interventions. Six lab hours per week.
Prerequisite(s): OTA 1111 AND Restricted to Majors
Corequisite(s): OTA 1213

OTA 1311 - Occupational Therapy Assistant Foundations II
3 Cr. Hr(s).
Continue refining definition of occupational therapy and experience with people with physical, psychosocial and/or developmental disabilities in a non-traditional community-based setting under the supervision of a licensed Occupational Therapy Assistant. Focuses on occupational therapy documentation, observation skills, professionalism and activity analysis. Two classroom, three clinical hours per week.
Prerequisite(s): OTA 1211 AND Restricted to Majors

OTA 1312 - Occupational Therapy & Human Development
2 Cr. Hr(s).
Exploration of human development from conception to death including developmental stages, theories supporting human development, occupational engagement throughout the lifespan and cultural impact on human development.
Prerequisite(s): OTA 1211 AND Restricted to Majors

OTA 1313 - Occupational Therapy & Adults with Neurological Dysfunction
2 Cr. Hr(s).
Effect of the features of major neurological diseases, injuries and disorders on adult occupational performance. Neurological Dysfunction theories, models of practice, frames of reference that provide the foundation of Occupational Therapy. Screening and evaluation of occupational performance

affected by neurological dysfunction. Includes use of occupations for the purpose of assessment, specified screening tools, assessments, observation, checklists, histories and interviews with clients and/or their family members or caregivers.
Prerequisite(s): OTA 1213 AND Restricted to Majors

OTA 1314 - Occupational Therapy & Neurological Dysfunction Lab
2 Cr. Hr(s).
Focus on neurological dysfunction intervention to increase independence in areas of occupation. Screening and evaluation of occupational performance affected by neurological dysfunction. Includes use of occupations for purpose of neurological dysfunction assessments and interventions. Six lab hours per week.
Prerequisite(s): OTA 1214 AND Restricted to Majors
Corequisite(s): OTA 1313

OTA 1315 - Therapeutic Use of Self
2 Cr. Hr(s).
Personal development, including development of the self as an effective therapeutic tool, exploration of values, personal and cultural attitudes, sensitivity to cultural differences, group process and ethical decision making. One classroom, two lab hours per week.
Prerequisite(s): OTA 1111 AND Restricted to Majors

OTA 2412 - Occupational Therapy Assistant & Pediatrics
1 Cr. Hr(s).
Effect of the features of major diseases, injuries, and disorders that affect pediatric population's occupational performance. Pediatric Function and Dysfunction theories, models of practice, frames of reference that provide the foundation of Occupational Therapy. Screening and evaluation of occupational performance affected by dysfunction in the pediatric population. Includes use of occupations for the purpose of assessment, specified screening tools, assessments, observation, checklists, histories and interviews with clients and/or their family members or caregivers. Pediatric medical and educational practice settings.
Prerequisite(s): OTA 1313 AND Restricted to Majors
Corequisite(s): OTA 2413

OTA 2413 - Occupational Therapy Assistant & Pediatrics Lab
2 Cr. Hr(s).
Focus on intervention to increase independence in areas of occupation with pediatric population. Screening and evaluation of occupational performance affected by dysfunction. Includes use of occupations for purpose of assessments and interventions with infants, children and adolescents. Six lab hours per week.
Prerequisite(s): OTA 1314 AND Restricted to Majors
Corequisite(s): OTA 2412

OTA 2414 - Occupational Therapy Assistant & Psychosocial Dysfunction
1 Cr. Hr(s).
Effect of the features of major psychosocial diseases and disorders on occupational performance. Psychosocial dysfunction theories, models of practice, frames of reference that provide the foundation of occupational therapy. Screening and evaluation of occupational performance affected by psychosocial dysfunction. Includes use of occupations for the purpose of assessment, specified screening tools, assessments, observation, checklists, histories and interviews with clients and/or their family members or caregivers.
Prerequisite(s): OTA 1213 AND Restricted to Majors
Corequisite(s): OTA 2415

OTA 2415 - Occupational Therapy Assistant & Psychosocial Dysfunction Lab
2 Cr. Hr(s).
Focus on psychosocial dysfunction intervention to increase independence in areas of occupation. Screening and evaluation of occupational performance affected by psychosocial dysfunction. Includes use of occupations for purpose of psychosocial dysfunction assessments and interventions. Role of the Occupational Therapy Assistant in a variety of mental health settings and in the therapeutic group process. Six lab hours per week.
Prerequisite(s): OTA 1214 AND Restricted to Majors
Corequisite(s): OTA 2414

OTA 2416 - Occupational Therapy Assistant Level 1 Fieldwork
3 Cr. Hr(s).
Level 1 Fieldwork integrates the academic classroom instruction and clinical experiences in an Occupational Therapy setting(s) under the direct supervision of an Occupational Therapy practitioner and coordinated by the Academic Fieldwork Educator. Two classroom, seven clinical hours per week.
Prerequisite(s): OTA 1311 AND Restricted to Majors

OTA 2511 - Occupational Therapy Assistant Level 2 Fieldwork A
2 Cr. Hr(s).
First of two full-time 8-week assignments of advanced clinical experience under the supervision of a licensed Occupational Therapy Practitioner which must be completed before the student is eligible for national certification examination. Fourteen clinical hours per week.
Prerequisite(s): OTA 2416 AND Restricted to Majors
Corequisite(s): OTA 2523

OTA 2512 - Occupational Therapy Assistant Level 2 Fieldwork B
2 Cr. Hr(s).
Second of two 8-week full-time assignments of advanced clinical experience under the supervision of a licensed Occupational Therapy Practitioner which must be successfully completed before the student is eligible for national certification examination. Fourteen clinical hours per week.
Prerequisite(s): OTA 2511 AND Restricted to Majors
Corequisite(s): OTA 2524

OTA 2523 - Occupational Therapy Assistant Clinical Issues A
1 Cr. Hr(s).
Facilitation of increased practical knowledge and problem-solving skills to address professional, ethical, legal and social issues within clinical practice.
Prerequisite(s): OTA 2416 AND Restricted to Majors
Corequisite(s): OTA 2511

OTA 2524 - Occupational Therapy Assistant Clinical Issues B
1 Cr. Hr(s).
Facilitation of discussion on issues related to the transition from student to entry-level Occupational Therapy Assistant. Advanced exploration of legal and ethical issues related to occupational therapy practice.
Prerequisite(s): OTA 2523 AND Restricted to Majors
Corequisite(s): OTA 2512

Philosophy

PHI 2205 - Introduction to Philosophy
3 Cr. Hr(s).
Basic nature of philosophy, its relationship to physical and social sciences and theology and its value to the individual.

PHI 2206 - Introduction to Ethics

3 Cr. Hr(s).
Historical inquiry into the major concepts and attitudes of moral and ethical theory in Western society, emphasizing the role of human responsibility and the conditions for making ethical judgments.

PHI 2207 - Logic
3 Cr. Hr(s).
Principle elements in deductive and inductive logic. Analysis of three acts of the intellect and the laws of reasoning. Application of principles to specific cases.

PHI 2208 - Symbolic Logic
3 Cr. Hr(s).
This course explores techniques in logical analysis using both philosophical and mathematical processes. Students will focus on constructing and evaluating deductive arguments, engage in symbolic translation, recognize formal argument forms, use truth-tables to analyze statements and arguments, conduct proofs, and learn and apply the rules of sentential and predicate logic.

Physical Education

PED 1201 - Physical Fitness
1 Cr. Hr(s).
Physical Fitness is designed to offer a variety of fitness components; cardiorespiratory endurance, muscular strength and endurance and flexibility. Sections will focus on selected fitness programming; Nia Technique, Boot Camp, TRX Training, Functional Fitness and other programs. This course includes both active participation and academics. Two lab hours per week.

Physical Therapist Assistant

PTA 1000 - Introduction to Physical Therapy
2 Cr. Hr(s).
Purpose, philosophy, history and development of the physical therapy (PT) profession; physical therapist assistant (PTA) duties; PT/PTA relationship; essential functions; legal and ethical responsibilities and professional behaviors; function of regulatory agencies, licensing bodies and professional associations; PTA program expectations; physical therapy practice; communication basics; medical terminology.

PTA 1005 - Musculoskeletal Anatomy
A study of the musculoskeletal system, emphasizing the structure and function of bones, muscles, joints, connective tissues, and associated nerve structures. Four lab hours per week.
Prerequisite(s): BIO 1121 OR BIO 1141

PTA 1100 - Professional Issues
1 Cr. Hr(s).
The American Physical Therapy Association and it's role in supporting physical therapists (PTs), physical therapist assistants (PTAs), and the profession; Professionalism and professional behaviors in the health care setting; Communication and interpersonal skills to build rapport and foster effective teamwork; Introduction to documentation and physical therapy specific medical terminology; Legal and ethical considerations for the practicing PTA; Scope of practice, including the roles and responsibilities of PTs versus PTAs; Introduction to interprofessional collaboration; Critical thinking and problem-solving for evidence-based practice.
Prerequisite(s): PTA 1005 AND Restricted to Majors

PTA 1105 - Kinesiology
2 Cr. Hr(s).
Exploration and application of clinical kinesiology with an emphasis on biomechanical principles as they relate to anatomical structures, functional movements, and body performance. One classroom, three lab hours per week.
Prerequisite(s): BIO 1222 AND PTA 1005 AND Restricted to majors

PTA 1165 - Manual Therapy
2 Cr. Hr(s).
Theory of the physiological effects, indications, and contraindications of therapeutic touch and manual therapy and the therapeutic application of palpation, patient draping, and manual techniques, including massage, soft tissue mobilization, myofascial release, and joint mobilization as a portion of therapeutic treatment interventions. Four lab hours per week.
Prerequisite(s): PTA 1005 AND Restricted to Majors

PTA 1215 - Functional Mobility
3 Cr. Hr(s).
Theory, clinical rationale and application of therapeutic interventions utilized in the practice of physical therapy, with emphasis on demonstration of knowledge, skillful performance and patient education related to functional mobility and gait training. Six lab hours per week.
Prerequisite(s): PTA 1005 AND Restricted to Majors

PTA 1300 - Pathophysiology for the PTA
2 Cr. Hr(s).
Recognition of pathology and clinical rationale for the appropriate therapeutic management of physiological responses in body systems associated with commonly treated pathological conditions. One classroom, three lab hours per week.
Prerequisite(s): PTA 1105 AND Restricted to Majors

PTA 1325 - Neuropathophysiology
3 Cr. Hr(s).
Structure and function of the nervous system; recognition of pathology and clinical rationale for the appropriate therapeutic management of commonly treated neurological diseases/conditions. One classroom, three lab hours per week.
Prerequisite(s): PTA 1105 AND Restricted to Majors

PTA 1350 - Therapeutic Exercise
4 Cr. Hr(s).
Theory, clinical rationale and performance of the use of basic therapeutic exercises and functional activities. Application and performance of common tests, measures and data collection procedures. One classroom, nine lab hours per week.
Prerequisite(s): PTA 1105 AND Restricted to Majors

PTA 1375 - Professional Issues II
1 Cr. Hr(s).
Professional responsibilities in the health care setting including, but not limited to: communication, ethics & values, documentation/billing, career development, business management, and cultural diversity. Exploration of specialty and niche areas of physical therapy practice. Preparation for clinical practicum.
Prerequisite(s): PTA 1100 AND Restricted to Majors

PTA 2305 - Neuromuscular Rehabilitation
2 Cr. Hr(s).
Therapeutic treatment interventions for the treatment of patients living with neurological conditions. Six lab hours per week.
Prerequisite(s): PTA 1325 AND Restricted to Majors

PTA 2315 - The Medically Complex Patient
2 Cr. Hr(s).
Theory and application of physical therapy treatment techniques for more complex and specialized diagnoses including, but not limited to, cardiovascular, pulmonary, and multisystem disorders. Four lab hours per week.

Prerequisite(s): PTA 1300 AND Restricted to Majors

PTA 2330 - Seminar for Clinical Practicum I
1 Cr. Hr(s).
Integration of didactic and clinical skills and their application of principles in the clinical setting including, but not limited to, concepts related to billing, insurance, and quality assurance.
Prerequisite(s): PTA 1375 AND Restricted to Majors

PTA 2335 - Clinical Practicum I
2 Cr. Hr(s).
Introductory experience in the clinical setting under the supervision of a clinical instructor who is a physical therapist or physical therapist/physical therapist assistant team. Application of theories and techniques for patient interventions and interprofessional collaboration. Students will complete 300 practicum hours in 8 weeks.
Prerequisite(s): PTA 1350 AND Restricted to Majors

PTA 2355 - Physical Agents
2 Cr. Hr(s).
Application of thermal, mechanical and electromagnetic physical agents, with emphasis on safe application of the treatment intervention. Four lab hours per week.
Prerequisite(s): PTA 1350 AND Restricted to Majors

PTA 2365 - Orthopedics
4 Cr. Hr(s).
Theory, clinical rationale, application and performance of commonly used tests, measures, data collection procedures, basic treatment, therapeutic exercises, and functional activities for common orthopedic and musculoskeletal diagnoses seen in a general population. Two classroom, six lab hours per week.
Prerequisite(s): PTA 1350 AND Restricted to Majors

PTA 2430 - Seminar for Clinical Practicum II
2 Cr. Hr(s).
Integration of didactic and clinical skills and their application of principles in the clinical setting including, but not limited to, career development and lifelong learning, risk management, and defensible documentation; preparation for national licensure.
Prerequisite(s): PTA 2330 AND Restricted to Majors

PTA 2435 - Clinical Practicum II
2 Cr. Hr(s).
Advanced experience in the clinical setting under the supervision of a clinical instructor who is a physical therapist or physical therapist/physical therapist assistant team. Application of theories and techniques for patient interventions, documentation, and interprofessional collaboration. Students will complete 300 practicum hours in 8 weeks.
Prerequisite(s): PTA 2335 AND Restricted to Majors

Physics

PHY 1100 - Introduction to Physics
4 Cr. Hr(s).
A survey of motion, forces, energy, thermodynamics, properties of matter, electricity and magnetism for nonscience majors. Three classroom, three lab hours per week.
Prerequisite(s): MAT 0100 or MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445
Corequisite(s): PHY 1110

PHY 1106 - Physics for Technology
3 Cr. Hr(s).
Survey of conceptual physics for technology majors. Topics include motion, forces, energy, electricity, magnetism, waves, sound, light, atomic structure and emission and absorption of radiation. Two classroom, two lab hours per week.
Prerequisite(s): MAT 0100 OR MAT 0600 OR MAT 1110 OR MAT 1130 OR MAT 1445
Corequisite(s): PHY 1107

PHY 1107 - Lab for Physics for Technology
0 Cr. Hr(s).
Corequisite(s): PHY 1106

PHY 1110 - Lab for Introduction to Physics
0 Cr. Hr(s).
Corequisite(s): PHY 1100

PHY 1141 - College Physics I
4 Cr. Hr(s).
Algebra-based university-parallel sequence in mechanics, including vectors, statics, work and energy, momentum, rotational motion, elasticity, fluids and thermodynamics. Three classroom, three lab hours per week.
This course has no textbook costs.
Prerequisite(s): MAT 1470 OR MAT 1570 OR MAT 1580

PHY 1142 - College Physics II
4 Cr. Hr(s).
Algebra-based university-parallel course in oscillations, waves, sound, optics, electricity, magnetism and electromagnetism. Three classroom, three lab hours per week.
This course has no textbook costs.
Prerequisite(s): PHY 1141

PHY 2201 - General Physics I
5 Cr. Hr(s).
Fundamentals of mechanics including kinematics, dynamics, work and energy, momentum, oscillations, gravity, fluids, waves and sound, thermodynamics and kinetic theory, using calculus as appropriate. Four classroom, three lab hours per week.
This course has no textbook costs.
Prerequisite(s): MAT 2270
Corequisite(s): PHY 2207

PHY 2202 - General Physics II
5 Cr. Hr(s).
Electrostatics, DC conduction and circuits, magnetism, electromagnetic induction, quantum mechanics, optics and special relativity. Calculus used extensively. Four classroom, three lab hours per week.
This course has no textbook costs.
Prerequisite(s): PHY 2201 AND MAT 2280
Corequisite(s): PHY 2208

PHY 2203 - Introduction to Modern Physics
3 Cr. Hr(s).
Introduction to the experimental and theoretical basis of 20th century ideas in physics including relativity, quantum mechanics, atomic, molecular and solid state physics, nuclear structure, particle physics and cosmology. Calculus used extensively.
Prerequisite(s): PHY 2202 AND MAT 2280

PHY 2207 - Lab for General Physics I
0 Cr. Hr(s).
Lab for General Physics I.
This course has no textbook costs.
Corequisite(s): PHY 2201

PHY 2208 - Lab for General Physics II
0 Cr. Hr(s).
Lab for General Physics II.
This course has no textbook costs.
Corequisite(s): PHY 2202

PHY 2210 - MATLAB for Scientists & Engineers
3 Cr. Hr(s).
Introduction to problem solving and programming using MATLAB. Topics include the MATLAB desktop, arrays, graphics, basic programming concepts and structures such as logical and relational operators, control flow statements, M files, functions and object oriented programming. Applications will be

chosen from the sciences and engineering.
Prerequisite(s): MAT 1470

PHY 2780 - Scientific Thought & Method
3 Cr. Hr(s).
Exploration of methods employed in the natural sciences primarily through an undergraduate research project designed to illustrate scientific thinking and related mathematical skills especially as they apply to physics. Intended for physics majors. Two classroom, two lab hours per week.
Prerequisite(s): PHY 2201 AND Restricted to Majors

Political Science

PLS 1121 - US Federal Government & Civics
3 Cr. Hr(s).
American political system at the national level, including process of government; democratic theory and development of the U. S. Constitution; citizen participation through voting; interest groups and political parties; structure, functions and powers of legislative, executive, and judicial branches; and issues of civil liberties and equal rights.
This course has no textbook costs.

PLS 1232 - State & Local Government
3 Cr. Hr(s).
The study of state and local governments (with emphasis on Ohio), organizational structures of state and local governments, state constitutions, county and city charters, state and local government powers and programs, financing, and taxation, and trends in government programs are all documented and analyzed.

PLS 1301 - Public Administration
3 Cr. Hr(s).
An overview of public administration, including history, federalism and intergovernmental relations, state and local government structures, state and local government political events, trends and policy issues, and organizational theory.

PLS 1302 - Public Policy & Practice
3 Cr. Hr(s).
Provides an overview of public policy, including history, actors, the policy formulation cycle, contemporary political issues, policy adoption, policy implementation, policy impact, evaluation, and change.

PLS 2200 - Political Life, Systems & Issues
3 Cr. Hr(s).
Basic political and government concepts and systems, including ideologies and comparative political systems; current political issues in Asia, Africa, Europe, Latin America, along with United States interests and policy options.

PLS 2220 - International Relations
3 Cr. Hr(s).
Principles and techniques of international politics, including theories, organizations and different world perspectives.

PLS 2270 - Political Science Internship
This course is repeatable.

1-3 Cr. Hr(s).
Provides students the opportunity to gain professional knowledge and skills from a planned work-based learning experience in their career field. In consultation with the employer and faculty, students establish learning outcomes related to their program of study and prepare documents detailing how the experience led to the application of knowledge and skills from their major. Students already working in a relevant field may apply to use that experience to meet internship requirements. Internship hours vary based on credit hours.
Prerequisite(s): Approval of department.

PLS 2860 - Model UN/International Issues
3 Cr. Hr(s).
History and structure of the United Nations with an in-depth look at selected current world issues; participation in Model UN simulations and opportunity to attend the Dayton Model United Nations Conference and/or other Model UN conferences.

Prior Learning

PLA 1130 - ATS/AIS Degree Development
1 Cr. Hr(s).
Development of the individual degree plan of study to be followed for successful completion of the ATS or AIS degree.
Prerequisite(s): Approval of Prior Learning Assessment Coordinator

PLA 2700 - Prior Learning Internship
This course is repeatable.

1 - 6 Cr. Hr(s).
Students earn credits toward degree requirements for work learning experience. Students already working may apply to use that experience to meet internship requirements. Students establish learning outcomes and prepare related reports and/or projects each term.
Prerequisite(s): Approval of Department

PLA 2780 - Study Abroad Experience
This course is repeatable.

1 Cr. Hr(s).
Provides a structured cross-cultural experience, including pre-departure cultural orientation, in-country immersion experience and culminating project. Exposes students to the culture of a specific country or region outside of the U.S. which may include geography, history, religion, philosophy, literature, fine arts, anthropology, food, language and other relevant topics. Includes a short-term study abroad experience with additional fees for travel.
Prerequisite(s): Approval of International Education Office AND Approval of a study abroad application, including references and a GPA of at least 2.0. Must have a passport or must show evidence of having made an application for a passport.

Psychology

PSY 1100 - General Psychology
3 Cr. Hr(s).
University-parallel course covering history and systems of psychology, behavioral research methods, physiology of behavior, sensation, perception, learning, memory, consciousness, cognition, personality, lifespan development, gender, social psychology, motivation, emotion, stress, mental disorders and therapies.
This course has no textbook costs.

PSY 1160 - Black Psychology
3 Cr. Hr(s).
Multidisciplinary study of theories, cultural themes and psychological constructs used to further promote understanding of thoughts, feelings and behaviors of Black Americans.

PSY 2126 - Stress Management
3 Cr. Hr(s).
Application of diverse stress management techniques. Topics covered include assertiveness, stress-related personality factors, holistic health, relaxation techniques, communication patterns, cognitive restructuring, and time management.
Prerequisite(s): PSY 1100

PSY 2180 - Psychology of Gender
3 Cr. Hr(s).
An introduction to the basic theories and principles of the psychology of gender in a multicultural context with emphasis on application of social psychology principles to professional and personal awareness. Gender perspectives are considered in a multicultural context. Topics include gender stereotypes and

social constructions, theories of gender development, biological and cognitive differences, and implications of gender for work, family, and mental and physical health.
Prerequisite(s): PSY 1100

PSY 2200 - Lifespan Human Development
3 Cr. Hr(s).
Research and theory concerning the physical, cognitive and social development of a person from conception to death, including prenatal and child development, adolescence, adult life crises, marriage, family, work, leisure and senescence.
Prerequisite(s): PSY 1100

PSY 2205 - Child Development
3 Cr. Hr(s).
Research and theory concerning the physical, cognitive and psychosocial development of children from conception to puberty. Covers the impact of genetic, prenatal and environmental factors and challenges appropriate to this age range.
Prerequisite(s): PSY 1100

PSY 2206 - Adolescent & Adult Development
3 Cr. Hr(s).
Research and theory concerning physical, cognitive, social and psychological development from adolescence through old age. Focus is on developmental issues such as identity development, cognitive growth and developmental tasks such as education, marriage, family, work, leisure, aging and facing death.
Prerequisite(s): PSY 1100

PSY 2214 - Drugs & Behavior
3 Cr. Hr(s).
An introduction to behavioral pharmacology examining the major classes of psychoactive substances. Topics include basic principles of neuropharmacology, pharmacodynamics (drug absorption, distribution and elimination) and physiology of tolerance and dependence for each class of drugs.
Prerequisite(s): PSY 1100

PSY 2217 - Abnormal Psychology
3 Cr. Hr(s).
A study of the diagnostic criteria, symptoms, causes and treatments of disorders listed in the Diagnostic and Statistical Manual of Mental Disorders, with an emphasis on current clinical research.
This course has no textbook costs.
Prerequisite(s): PSY 1100

PSY 2218 - Principles of Counseling
3 Cr. Hr(s).
An introduction to professional issues in counseling with emphasis on the development of basic interviewing and counseling skills, a survey of classic and contemporary theories and techniques of the counseling process, and a comparison of various theoretical approaches.
Prerequisite(s): PSY 1100

PSY 2220 - Personality Psychology
3 Cr. Hr(s).
An introduction to personality with emphasis on principles, research and theories, including psychodynamic, ego-psychology, object relations, trait/biological, phenomenology, behavior-environmental and cognitive/self-regulation.
Prerequisite(s): PSY 1100

PSY 2225 - Social Psychology
3 Cr. Hr(s).
A study of the interaction between individual and social environment within a multicultural context. Topics include: self-concept formation, attitudes, persuasion, attributions, group structure and processes, prejudice, aggression and violence.
Prerequisite(s): PSY 1100

PSY 2228 - Industrial Organizational Psychology
3 Cr. Hr(s).
Introduction to the theories and practices of psychology in the workplace, including human resource management, organizational science, and human factors engineering. Specific topics include motivation and satisfaction, group decision making and development, leadership, workplace politics, employee selection and training, work-related stress, performance appraisal systems, and organizational improvement.
Prerequisite(s): PSY 1100

PSY 2230 - Forensic Psychology
3 Cr. Hr(s).
An examination of the ways in which the field of forensic psychology applies psychological principles to the law and legal system.
Prerequisite(s): PSY 1100 - General Psychology

PSY 2235 - Behavioral Science Research Methods
3 Cr. Hr(s).
Basic research methods for the behavioral sciences covering: correlational/descriptive and laboratory/experimental design methodology, dependent and independent variables, principles of measurement, and reading and writing scientific research reports.
Prerequisite(s): PSY 1100

PSY 2236 - Behavioral Science Statistics
3 Cr. Hr(s).
Basic statistical techniques used in behavioral sciences, including descriptive and inferential statistics, frequency distributions, measures of central tendency and distribution, non-parametric statistics, hypothesis testing, tests of significance, analysis of variance and post-hoc tests.
Prerequisite(s): PSY 1100 AND PSY 2235

PSY 2242 - Educational Psychology
3 Cr. Hr(s).
Principles of learning and development applied to educational settings emphasizing research-supported development of effective learning in varied educational environments.
Prerequisite(s): PSY 1100

PSY 2250 - Behavior Modification
3 Cr. Hr(s).
This course will provide students with knowledge of learning principles and skills required to implement basic behavioral interventions in school, home, industry, clinical, and other social settings. Operant, respondent, and cognitive-behavior modification methods are reviewed in terms of treatment interventions, self-control strategies, and improving productivity in industry.
Prerequisite(s): PSY 1100

PSY 2270 - Psychology Internship
This course is repeatable.

1 - 3 Cr. Hr(s).
Provides students the opportunity to gain professional knowledge and skills from a planned work-based learning experience in their career field. In consultation with the employer and faculty, students establish learning outcomes related to their program of study and prepare documents detailing how the experience led to the application of knowledge and skills from their major. Students already working in a relevant field may apply to use that experience to meet internship requirements. Internship hours vary based on credit hours.
Prerequisite(s): PSY 1100 AND Approval of Department

Radiologic Technology

RAT 1101 - Introduction to Radiologic Technology
2 Cr. Hr(s).
Introduction to the field of radiologic

technology, including history, basic radiation production and safety concepts, patient communication, clinical education, ethical, legal and professional issues.

RAT 1111 - Clinical Practicum I
1 Cr. Hr(s).
Orientation to clinical facility and radiology department, introduction to competency performance of radiographic procedures, image analysis, radiation protection, patient care and team work. Seven practicum hours per week.
Prerequisite(s): Restricted to Majors

RAT 1121 - Radiographic Procedures I
5 Cr. Hr(s).
Radiographic anatomy, equipment manipulation, positioning and image analysis of the thorax, abdomen and appendicular skeleton. Four classroom, three lab hours per week.
Prerequisite(s): Restricted to Majors
Corequisite(s): RAT 1127

RAT 1127 - Lab for Radiographic Procedures I
0 Cr. Hr(s).
Prerequisite(s): Restricted to Majors
Corequisite(s): RAT 1121

RAT 1131 - Patient Care in Radiologic Technology
3 Cr. Hr(s).
Safety and assessment techniques related to care of the patient in a radiography department, including legal and professional aspects, elements of ethical behavior and practical dilemmas, and current infection control practices. Two classroom, three lab hours per week.
Prerequisite(s): Restricted to Majors
Corequisite(s): RAT 1137

RAT 1137 - Lab for Patient Care in Radiologic Technology
0 Cr. Hr(s).
Prerequisite(s): Restricted to Majors
Corequisite(s): RAT 1131

RAT 1212 - Clinical Practicum II
2 Cr. Hr(s).
Continuation of clinical competency development to include spine, skull, contrast media procedures, mobile and surgical radiography, trauma radiography, exposure factors, radiation protection and image analysis/evaluations. Fourteen practicum hours per week.
Prerequisite(s): RAT 1111 AND Restricted to Majors

RAT 1222 - Radiographic Procedures II
5 Cr. Hr(s).
Radiographic anatomy, positioning and image analysis of the spine, skull, gastrointestinal and genitourinary systems, as well as general pharmacological principles as they pertain to radiology. Alternative positioning for trauma and mobile radiography as well as pediatric and geriatric procedures will be covered. Four classroom, three lab hours per week.
Prerequisite(s): RAT 1121 AND Restricted to Majors
Corequisite(s): RAT 1228

RAT 1228 - Lab for Radiographic Procedures II
0 Cr. Hr(s).
Corequisite(s): RAT 1222

RAT 1241 - Radiologic Sciences I
3 Cr. Hr(s).
This course is designed to help the student understand the concepts of electromagnetic energy, electricity, x-ray equipment, production of x-radiation and its interaction with matter.
Prerequisite(s): Restricted to Majors

RAT 2413 - Clinical Practicum III
3 Cr. Hr(s).
Continuation of clinical competency development to include diagnostic radiography, mobile radiography, contrast studies, pediatric, geriatric, advanced imaging, alternative shifts, radiation protection and image analysis. Twenty-one practicum hours per week.
Prerequisite(s): RAT 1212 AND Restricted to Majors

RAT 2415 - Radiographic Pathology
3 Cr. Hr(s).
Introductory concepts of disease processes and etiologies with emphasis on radiographic appearances and exposure factor compensation.
Prerequisite(s): Restricted to Majors

RAT 2423 - Radiographic Procedures III
3 Cr. Hr(s).
Radiographic considerations related to advanced imaging procedures and modalities. Includes analysis of human anatomical structures using various anatomical planes. Two classroom, two lab hours per week.
Prerequisite(s): RAT 1222 AND Restricted to Majors
Corequisite(s): RAT 2429

RAT 2429 - Lab for Radiographic Procedures III
0 Cr. Hr(s).
Imaging modalities, sectional anatomy and image analysis.
Prerequisite(s): RAT 1222 AND Restricted to Majors
Corequisite(s): RAT 2423

RAT 2442 - Radiologic Sciences II
4 Cr. Hr(s).
Principles of digital imaging technology to include applications in exposure formulation, image quality factors and variables, and image management processes. Three classroom, two lab hours per week.
Prerequisite(s): RAT 1241 AND Restricted to Majors
Corequisite(s): RAT 2448

RAT 2448 - Lab for Radiologic Sciences II
0 Cr. Hr(s).
Prerequisite(s): Restricted to Majors
Corequisite(s): RAT 2442

RAT 2514 - Clinical Practicum IV
3 Cr. Hr(s).
Final clinical competency experience, including total exposure to the health care system and entry-level radiographer skills, completion of all program requirements (including final competency evaluations). Twenty-one practicum hours per week.
Prerequisite(s): RAT 2413 AND Restricted to Majors

RAT 2526 - Capstone in Radiologic Technology
4 Cr. Hr(s).
Synthesis of current knowledge of radiologic technology concepts, professional development including certification and licensure requirements , ethical/legal responsibilities and transition from student to radiographer.
Prerequisite(s): Restricted to Majors
Corequisite(s): RAT 2514

RAT 2543 - Radiologic Sciences III
2 Cr. Hr(s).
Fundamental principles of molecular and cellular effects of x-ray interaction, along with a comprehensive study of health physics and radiation protection to include quality management and quality assurance testing of the radiographic system.
Prerequisite(s): RAT 2442 AND Restricted to Majors

RAT 2640 - Computed Tomography Practicum
This course is repeatable.

1 Cr. Hr(s).
A clinical education course that provides hands-on experience performing computed tomography procedures at an affiliate hospital and/or imaging center. Seven practicum hours per week.
Prerequisite(s): Approval of Department

RAT 2641 - Principles of Computed Tomography
3 Cr. Hr(s).
Basic instrumentation and application concepts, including computer and x-ray unit components and their application to protocols for acquiring sectional images of various body systems.
Prerequisite(s): Approval of Department

RAT 2643 - Principles of Magnetic Resonance Imaging
3 Cr. Hr(s).
Basic physics concepts involving the generation and construction of human planar images using magnetic resonance imaging technology.
Prerequisite(s): Approval of Department

RAT 2645 - Magnetic Resonance Imaging Practicum
This course is repeatable.

1 Cr. Hr(s).
A clinical education course that provides hands-on experience performing magnetic resonance imaging procedures at an affiliate hospital and/or imaging center. Seven practicum hours per week.
Prerequisite(s): Approval of Department

RAT 2647 - Principles of Mammography
2 Cr. Hr(s).
Comprehensive overview of mammographic concepts and equipment, including patient care/education, communication, anatomy and physiology, epidemiology, pathology, positioning techniques, interventional procedures, image analysis, imaging media and processing, quality assurance testing and principles of exposure.
Prerequisite(s): Approval of Department

RAT 2649 - Mammography Practicum
This course is repeatable.

1 - 4 Cr. Hr(s).
A variable credit clinical education course that provides hands-on experience performing mammographic procedures and quality assurance testing at an affiliate hospital and/or imaging center. Seven practicum hours per week for each semester credit hour.
Prerequisite(s): Approval of Department

Real Estate

RES 1101 - Real Estate Principles
3 Cr. Hr(s).
This course develops skills in areas encompassed in the real estate industry, including the market, investment, brokerage, contractual and property rights, as they affect both the investor and the purchaser. Agency law, fair housing and environmental issues as they concern the field will also be explored. This course is part of Sinclair's Ohio Real Estate Sales Associate pre-licensure program. Successful completion of the courses in Sinclair's Ohio Real Estate Sales Associate pre-licensure program meets the educational requirement for you to sit for the Ohio Real Estate Salesperson Examination only (further state requirements must also be satisfied). Sinclair's pre-licensure program is not intended to meet requirements for license examination in any other state.

RES 1102 - Real Estate Abstracting
3 Cr. Hr(s).
Examine how recorded documents affect real estate, terms used in abstracting, and the function of public offices in the process. Additionally, demonstrate procedures in real estate abstracting for title search examination from public records indexes to determine ownership, outstanding interests and rights in interest.

RES 1201 - Real Estate Law
3 Cr. Hr(s).
Explanation of the legal phases of a realty transaction. Examination of types of estates in land, co-ownership, mortgages, Ohio license law, landlord/ tenant law and legal factors in financing. This course is part of Sinclair's Ohio Real Estate Sales Associate pre-licensure program. Successful completion of the courses in Sinclair's Ohio Real Estate Sales Associate pre-licensure program meets the educational requirement for you to sit for the Ohio Real Estate Salesperson Examination only (further state requirements must also be satisfied). Sinclair's pre-licensure program is not intended to meet requirements for license examination in any other state.

RES 1302 - Real Estate Investment: Analysis & Financing
3 Cr. Hr(s).
An analytical approach to investment in real estate. Analysis and financing is emphasized. The use of leverage, tax considerations, appraisal, internal rate of return, acquisitions and exchanges. Case studies are used to provide examples of investment analysis techniques. Completion of MAT 1120 is strongly encouraged prior to attempting this course.

RES 1402 - Property Management
3 Cr. Hr(s).
Management of residential, business, and commercial properties. Topics presented are real estate taxes, public relations, utilities, sustainability, taxes, leasing, accounting and insurance.

RES 1501 - Real Estate Finance & Appraisal
2 Cr. Hr(s).
Exploration of the methods and procedures involved in the financing of real estate. Comparison of various loan programs and their unique characteristics. A detailed review of the loan application and closing process as it relates to residential real estate transactions. The role and methodology involved in an appraisal report and its position in the loan approval process. Understanding the three most common approaches to value, the application of each in residential transactions, and the analysis of investment properties.

RES 2170 - Real Estate Internship
This course is repeatable.

2 Cr. Hr(s).
Students will earn credits towards a degree requirement for work learning experience. Students establish learning outcomes and prepare related reports and/or projects each term. Twenty internship hours per week.
Prerequisite(s): RES 1101 AND RES 1201 AND RES 1501 AND RES 1402 AND RES 1302 AND RES 1102 AND Approval of Department

RES 2401 - Real Estate Capstone
2 Cr. Hr(s).
Apply knowledge and practice skills acquired in real estate courses concerning principles, law, finance, appraisal, investing and property management through the use of case studies, simulations and role playing.
Prerequisite(s): RES 1101 AND RES 1102 AND RES 1201 AND RES 2301 AND RES 2302

Religion

REL 1111 - Eastern Religions
3 Cr. Hr(s).
Introduction to Far Eastern religions and cultural traditions, including beliefs, practices, stories and rituals, and historical context.

REL 1112 - Western Religions

3 Cr. Hr(s).
Introduction to Western religions and cultural traditions, including beliefs, practices, stories, rituals and historical context.

REL 2204 - Great Books: The Bible & Western Culture
3 Cr. Hr(s).
An exploration of how and why the Bible is viewed as a great book. Both the Old and New Testaments will be explored in their respective historical contexts.
This course has no textbook costs.

REL 2255 - People & Religion
3 Cr. Hr(s).
Overview of the rich diversity of human religiosity and the key beliefs, practices, stories and rituals that serve to connect humans to the sacred. Special attention to unique individuals within each religious tradition. A comparative look at religion in our society.
This course has no textbook costs.

Respiratory Care

RET 1100 - Introduction to Respiratory Care
1 Cr. Hr(s).
Respiratory Care as a profession to include standards of practice, regulating agencies, ethics and legal issues, education and program requirements, communication in health care and areas of clinical focus and employment outlook for a respiratory therapist.

RET 1101 - Respiratory Care Fundamentals I
5 Cr. Hr(s).
Respiratory care theory, physical assessment, equipment and skill development of procedures required for clinical practice, including vital signs, isolation precautions, body mechanics, respiratory vitals, airway management, oxygen therapy, humidity and aerosol therapy, medicinal therapy, bronchoscopy and charting. Four classroom, three lab hours per week.
Prerequisite(s): RET 1100 AND Restricted to Majors
Corequisite(s): RET 1102

RET 1102 - Lab for Respiratory Care Fundamentals I
0 Cr. Hr(s).
Corequisite(s): RET 1101

RET 1124 - Cardiopulmonary Pharmacology I
1 Cr. Hr(s).
Actions, effects, dosages and indications for drug classes commonly used to treat pulmonary and cardiovascular diseases.
Prerequisite(s): CHE 1111 AND Restricted to Majors

RET 1125 - Respiratory Care Sciences
4 Cr. Hr(s).
Advanced study of adult lung, heart and renal anatomy and physiology, including: ventilation, pulmonary mechanics, diffusion, gas transport, cardiac function and pulmonary perfusion, acid-base balance and interpretation, control mechanisms and physiological stressors; microbiology and infection control methods; emphasis on application/integration of respiratory sciences to patient scenarios.
Prerequisite(s): BIO 1107

RET 1201 - Respiratory Care Fundamentals II
5 Cr. Hr(s).
Respiratory care theory, equipment and skill development of procedures required for clinical practice, including fluidics, hyperinflation therapy, Non-Invasive Ventilation (NIV), bronchopulmonary hygiene therapy, arterial blood gas puncture and analysis, pulse oximetry, electrocardiographs (ECGs), capnography, home care, cardiopulmonary rehabilitation and smoking cessation techniques. Four classroom, three lab hours per week.
Prerequisite(s): RET 1101 AND Restricted to Majors
Corequisite(s): RET 1202

RET 1202 - Lab for Respiratory Care Fundamentals II
0 Cr. Hr(s).
Prerequisite(s): Restricted to Majors
Corequisite(s): RET 1201

RET 1203 - Respiratory Care Clinic I
2 Cr. Hr(s).
Acquire and evaluate clinical data, initiate prescribed respiratory care treatments, manage life support activities, evaluate and monitor patient responses to therapy and modify the prescribed therapy to achieve the desired therapeutic objectives. Fifteen directed practice hours per week.
Prerequisite(s): RET 1101 AND Restricted to Majors

RET 1205 - Cardiopulmonary Disease Processes
4 Cr. Hr(s).
Diseases and disorders affecting the cardiopulmonary systems emphasizing diagnosis, selection and implementation of therapeutic modalities and the role of the respiratory care practitioner in treatment.
Prerequisite(s): RET 1101 AND Restricted to Majors

RET 1301 - Respiratory Care Fundamentals III
2 Cr. Hr(s).
Diseases and disorders affecting the cardiopulmonary systems emphasizing diagnosis, selection and implementation of therapeutic modalities and the role of the respiratory care practitioner in treatment.
Prerequisite(s): RET 1201 AND Restricted to Majors

RET 1303 - Respiratory Care Clinic II
1 Cr. Hr(s).
Enhance clinical skills by performing prescribed therapy, evaluating clinical data, assessing patient status and observing/performing diagnostic studies, rehabilitation, hyperbaric oxygen therapy and patient education in multiple health care settings. Seven practicum hours per week.
Prerequisite(s): RET 1201 AND Restricted to Majors

RET 2101 - Critical Care I
5 Cr. Hr(s).
Assessment and treatment of patients in respiratory failure to include the following categories: airway management and emergencies, physiology and treatment of oxygenation/ventilation failure, physiology of lung mechanics, ventilator classification and management, positive pressure ventilation including volume and pressure control ventilation modes, ventilator troubleshooting, weaning from mechanical ventilation, and the application of ventilator graphic interpretation in the management of the mechanically ventilated patient. Four classroom, three lab hours per week.
Prerequisite(s): RET 2250 AND Restricted to Majors
Corequisite(s): RET 2102

RET 2102 - Lab for Critical Care I
0 Cr. Hr(s).
Lab to accompany RET 2101
Prerequisite(s): Restricted to Majors
Corequisite(s): RET 2101

RET 2103 - Respiratory Care Clinic III
2 Cr. Hr(s).
Enhance clinical skills by performing prescribed mechanical ventilation within the critical care environment, diagnostic studies and evaluating clinical data on the adult and pediatric patient. Fifteen directed practice hours per week.

Prerequisite(s): RET 1303 AND Restricted to Majors

RET 2124 - Cardiopulmonary Pharmacology II
1 Cr. Hr(s).
Actions, effects, dosages and indications for drug classes commonly used to treat pulmonary and cardiovascular disease.
Prerequisite(s): RET 1124 AND Restricted to Majors

RET 2201 - Critical Care II
5 Cr. Hr(s).
Assessment, management, and treatment of critically-ill patients to include the following categories: Management of neonatal/pediatric mechanical ventilation, advanced modes of ventilation, non-conventional oxygenation and ventilation strategies, diagnostics, special procedures for the respiratory therapist in the critical care setting, critical conditions, nutritional considerations, transport, and home care ventilation/disease management.
Four classroom, three lab hours per week.
Prerequisite(s): RET 2101 AND Restricted to Majors
Corequisite(s): RET 2202

RET 2202 - Lab for Critical Care II
0 Cr. Hr(s).
Lab to accompany RET 2201
Corequisite(s): RET 2201

RET 2203 - Respiratory Care Clinic IV
1 Cr. Hr(s).
Apply adult, pediatric and neonatal clinical skills, including respiratory care procedures, diagnostics and mechanical ventilation within the critical care environment. Ten practicum hours per week.
Prerequisite(s): RET 2101 AND Restricted to Majors

RET 2204 - Respiratory Care Clinic V
2 Cr. Hr(s).
Summative skills performance to include initiating prescribed respiratory care treatments, managing life-support activities, evaluating patient responses to such therapy and modifying therapy, performing diagnostic studies, rehabilitation, hyperbaric oxygen therapy, providing education for in-patient and home care environment, performing mechanical ventilation on adults, pediatrics and neonates and completing a communication skills assessment. Review of credentialing and licensing requirements, as well as resume writing. One classroom, seven practicum hours per week
Prerequisite(s): RET 2101 AND Restricted to Majors

RET 2220 - Respiratory Care Emergency Preparedness
2 Cr. Hr(s).
Advanced resuscitation techniques for the adult and pediatric patient with additional focus on disaster and epidemic preparedness/treatment and transport of the critically ill patient. One classroom, three lab hours per week.
Prerequisite(s): RET 2101 AND RET 2250 AND Restricted to Majors
Corequisite(s): RET 2222

RET 2222 - Lab for Respiratory Care Emergency Preparedness
0 Cr. Hr(s).
Corequisite(s): RET 2220

RET 2250 - Pediatrics & Neonatology
2 Cr. Hr(s).
Development of the fetus, anticipation of high-risk pregnancies and care of the newborn infant, emphasizing neonatal and pediatric physiology and diseases, and pertinent diagnostics.
Prerequisite(s): RET 1201 AND Restricted to Majors

Sinclair Student Success Experience

SCC 1100 - Life Skills I
4 Cr. Hr(s).
The purpose of this course is to facilitate students with attaining skills to be successful college students. Topics include: self-care, time management, and study skills.
Prerequisite(s): Approval of Department

SCC 1101 - First Year Experience
1 Cr. Hr(s).
This course is designed to help new students make a successful transition to Sinclair Community College. Topics include college resources; academic, career and personal services available through Sinclair; learning styles; the learning process; financial responsibility; stress and wellness; and computer literacy through eLearn and library resources.
This course has no textbook costs.

SCC 1200 - Life Skills II
4 Cr. Hr(s).
The purpose of this course is to provide students with the knowledge and skills needed to become self-sufficient and competitively-employed adults.
Prerequisite(s): Approval of Department

SCC 1300 - Work Skills I
4 Cr. Hr(s).
The purpose of this course is to provide students with the knowledge and skills needed to be successful in the workplace. This course will focus on students understanding of aspects such as professionalism, ethics, communication skills, and personal qualities in a workplace environment.
Prerequisite(s): Approval of Department

SCC 1400 - Work Skills II
4 Cr. Hr(s).
The purpose of this course is to provide students with the knowledge and skills needed to be successful in the workplace. This course will focus on aspects such as independence, personal goals, interpersonal skills, and listening skills in a workplace environment.
Prerequisite(s): Approval of Department

SCC 2100 - Inclusive Internship
2-4 Cr. Hr(s).
The purpose of this inclusive internship course is to provide students with an opportunity to gain work experience through an on- or off-campus employer. The internship experiences will be established in an inclusive environment with both non-disabled work colleagues and peer mentors. Two classroom, twenty internship hours per week.
Prerequisite(s): Approval of Department

Social Work

SWK 1206 - Introduction to Social Work
3 Cr. Hr(s).
Explore how historical events have shaped the social work profession. Recognize personal values in the context of one's practice as a social worker and identify roles and knowledge base required, in alignment with the NASW Code of Ethics (2021) and CSWE (2022). Recognize social, cultural, and economic justice issues related to vulnerable groups and the impact of inequality. Describe social work settings and various fields of practice.

SWK 1213 - Introduction to Social Welfare
3 Cr. Hr(s).
Explore history, values, ideologies, and ethics in development of social welfare in the United States in alignment with NASW Code of Ethics (2021) and CSWE (2022). Identify the role of government in the delivery of social services and learn how institutional structures, including forms of oppression and discrimination, and human diversity issues influence the delivery of social services.
Prerequisite(s): ENG 1101 AND SWK 1206

SWK 2207 - Anti-Oppressive Social Work
3 Cr. Hr(s).
Explore how historical events have shaped the social work profession. Recognize personal values in the context of one's practice as a social worker and identify roles and knowledge base required, in alignment with the NASW Code of Ethics (2021) and CSWE (2022). Recognize social, cultural, and economic justice issues related to vulnerable groups and the impact of inequality. Describe social work settings and various fields of practice.

Sociology

SOC 1101 - Introduction to Sociology
3 Cr. Hr(s).
A critical analysis of contemporary American society with review of major sociological theories, research methods, culture, socialization, groups, social structure, social institutions, deviance, social inequalities, social processes and social change.
This course has no textbook costs.

SOC 1108 - Appalachian Families
3 Cr. Hr(s).
A critical and analytical examination of the Appalachian experience from the 1700s through the present day with emphasis on the Appalachian family (both rural and urban) as a varied and complex social system, including an examination of the diverse populations within the Appalachian region.

SOC 1115 - Sociology of Marriage & Family
3 Cr. Hr(s).
This course is a sociological examination of theoretical perspectives on the institution of family. Topics include the historical context of the family, the role of marriage and family in society, family formation, socialization, divorce, parenting, family issues, family throughout the life course and social policy. Variations in family types and lifestyles among diverse groups worldwide are examined.
Prerequisite(s): SOC 1101

SOC 1117 - Popular Culture
3 Cr. Hr(s).
Exploration of contemporary popular culture and popular culture in a historical context: examination of influence of popular culture on the development of a unique American society and culture through media, music, sports, entertainment and/or food.

SOC 1145 - Introduction to Cultural Anthropology
3 Cr. Hr(s).
An examination of what is meant by culture and a review of the various theories and methods in Cultural Anthropology. Includes a comparison of the similarities and differences among world cultures as well as comparative analysis of family organization, religious beliefs, educational systems, economics and governmental systems.

SOC 1160 - Sociology of Aging
3 Cr. Hr(s).
Orientation to the sociological, biological and psychological dimensions of the aging process and society's response to its older members and social concerns. Examination of social forces that impact the aging process.
Prerequisite(s): SOC 1101

SOC 2130 - Sociology of Family Violence
3 Cr. Hr(s).
Sociological explanation of the nature and scope of family violence: child abuse, spousal abuse, elder abuse, sexual abuse, neglect and emotional abuse. Analysis of social and legal implications; intervention and prevention will be explored.
Prerequisite(s): SOC 1101

SOC 2205 - Social Problems
3 Cr. Hr(s).
An introduction to social problems facing large, complex societies using sociological theories and methodology to examine causes, treatments and solutions. Among the topics discussed are: mental illness, health care, alcohol and drug abuse, violence, crime, delinquency, inequality, poverty, immigration, family, global and environmental issues.
Prerequisite(s): SOC 1101

SOC 2210 - Cultural Humility for Working with Youth
3 Cr. Hr(s).
Examines historical and current racial, ethnic, gender, sexual orientation, linguistic, and social class stereotypes and biases as related to youth in the United States and globally. Students identify personal preconceptions and learn ways of becoming culturally responsive working with youths.

SOC 2215 - Race & Ethnicity
3 Cr. Hr(s).
Sociological exploration of American racial and ethnic diversity. Emphasis given to the social construction of race and ethnicity, patterns of intergroup contact and global migration. Historical comparative analysis of selected groups with emphasis given to economic, political and structural inequalities.
Prerequisite(s): SOC 1101 OR OTA 1111

SOC 2226 - Criminology
3 Cr. Hr(s).
This course presents a framework for studying the nature and the causes of crime and criminal behavior. Focus is provided through criminal typologies and the myriad of theories using multi-disciplinary perspectives.
Prerequisite(s): SOC 1101

SOC 2270 - Sociology Internship
This course is repeatable.

1-3 Cr. Hr(s).
Provides students the opportunity to gain professional knowledge and skills from a planned work-based learning experience in their career field. In consultation with the employer and faculty, students establish learning outcomes related to their program of study and prepare documents detailing how the experience led to the application of knowledge and skills from their major. Students already working in a relevant field may apply to use that experience to meet internship requirements. Internship hours vary based on credit hours.
Prerequisite(s): Approval of department.

Spanish

SPA 1100 - Conversational Spanish I
3 Cr. Hr(s).
A foundation for gaining knowledge about Hispanic culture and basic phrases related to simple spoken Spanish, including travel situations.

SPA 1101 - Elementary Spanish I
4 Cr. Hr(s).
Foundation for understanding, speaking, reading and writing Spanish. Work outside of class and/or in the language laboratory is required.

SPA 1102 - Elementary Spanish II
4 Cr. Hr(s).
Foundation for understanding, speaking, reading, and writing Spanish. Work outside of class and/or in the language laboratory is required.
Prerequisite(s): SPA 1101

SPA 2201 - Intermediate Spanish I
3 Cr. Hr(s).
Reviews and extends basic principles through composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required.
This course has no textbook costs.
Prerequisite(s): SPA 1102

SPA 2202 - Intermediate Spanish II
3 Cr. Hr(s).
Reviews and extends basic principles through composition and conversation, stressing fluency. Work outside of class and/or in the language laboratory is required.
This course has no textbook costs.
Prerequisite(s): SPA 2201

Surgical Technology

SUT 1100 - Sterile Processing I
4 Cr. Hr(s).
An introduction to the principles, techniques and issues in the surgical and sterile processing environment. Topics include, sterile technique, packaging and wrapping techniques, sterilization methods, basic surgical instruments, basic microbiology, and hospital equipment identification. Three classroom, three lab hours per week.

SUT 1110 - Theory & Fundamentals
5 Cr. Hr(s).
Discusses the framework and environment for the practice of Surgical Technology. Focuses on safety through the impact of sterile technique and sterilization practices, patient care, anesthesia, 'all hazards', and introduces the use of therapeutic communication, professionalism, group process, and critical thinking.
Prerequisite(s): ALH 1101 AND (BIO 1121 OR BIO 1141) AND ENG 1101 AND HIM 1101 AND MAT 1130 AND Restricted to Majors
Corequisite(s): SUT 1117

SUT 1117 - Laboratory for Theory & Fundamentals
1 Cr. Hr(s).
Beginning competencies in aseptic technique, surgical hand preparation, gowning and gloving techniques, patient positioning, patient skin preparation, patient draping, preoperative patient care techniques to include chart review, vital signs, and intraoperative surgical case management. Three lab hours per week.
Prerequisite(s): ALH 1101 AND BIO 1121 AND ENG 1101 AND HIM 1101 AND MAT 1130 AND Restricted to Majors
Corequisite(s): SUT 1110

SUT 1120 - The Surgical Process
2 Cr. Hr(s).
Advances the framework and environment for the practice of Surgical Technology. Focuses on wound healing and management, surgical approaches, and advanced specialty equipment and supplies.
Prerequisite(s): (BIO 1222 OR BIO 1242)AND BIO 2205 AND SUT 1110 AND SUT 1117 AND Restricted to Majors
Corequisite(s): SUT 1127

SUT 1127 - Lab for the Surgical Process
2 Cr. Hr(s).
Advances the techniques for preparing the patient, operating room, instruments, supplies, and the equipment to be used during a surgical procedure. Applies these techniques to basic abdominal surgeries. Thirteen lab hours per week.
Prerequisite(s): BIO 1222 AND BIO 2205 AND SUT 1110 AND SUT 1117 AND Restricted to Majors

SUT 1200 - Sterile Processing II
3 Cr. Hr(s).
Offers advanced principles of inventory control, materials management, information technology, and quality control systems integral to the Sterile Processing department in health-care facilities. Introduces specialty surgical instrumentation and patient care equipment. Prepares the student to take the CRCST exam upon graduation and completion of 400 work related hours.
Prerequisite(s): ALH 1101 AND SUT 1100

SUT 1207 - Practicum for Sterile Processing II
2 Cr. Hr(s).
Provides 'hands on' experience in a clinical environment to assist in integration of all concepts basic to the field of Sterile Processing. Students will participate in all areas of the Sterile Processing department to include decontamination, instrument set preparation, sterilization, case cart preparation, business technologies for storage and distribution, and quality control and monitoring processes. Twenty-four practicum hours per week.
Prerequisite(s): ALH 1101 AND SUT 1100

SUT 2110 - Surgical Procedures I
2 Cr. Hr(s).
Discusses specific surgical procedures of the gastrointestinal and biliary systems.
Prerequisite(s): Restricted to Majors
Corequisite(s): SUT 2117

SUT 2117 - Directed Practice for Surgical Procedures I
1 Cr. Hr(s).
Implements the surgical process in the operating room for general surgery procedures. Thirteen directed practice hours per week.
Prerequisite(s): SUT 1120 AND SUT 1127 AND Restricted to Majors

SUT 2120 - Surgical Procedures II
5 Cr. Hr(s).
Discusses OB-GYN, genitourinary, ophthalmic, ear/nose/throat, head and neck, oral, plastic, vascular and neuro surgical procedures. Explains the role of the scrub technologist when intraoperative emergencies occur.
Prerequisite(s): SUT 2110 AND SUT 2117 AND ALH 2201 AND Restricted to Majors
Corequisite(s): SUT 2127

SUT 2127 - Directed Practice for Surgical Procedures II
4 Cr. Hr(s).
Implements the surgical process in the operating room for OB-GYN, Genitourinary, Eye-Ear-Nose-Throat, Ophthalmology, Plastics, Vascular and Neuro surgical procedures. Twenty directed practice hours per week.
Prerequisite(s): SUT 2110 AND SUT 2117 AND ALH 2201 AND Restricted to Majors
Corequisite(s): SUT 2120

SUT 2200 - Surgical Procedures III
5 Cr. Hr(s).
Emphasizes a common systematic approach to all surgeries and focuses on role transition to beginning Surgical Technologist. Discusses specific orthopedic, cardiothoracic, trauma and pediatric procedures. Examines immediate postanesthesia care. Discusses the Surgical Technologist's role on specialty teams, as a second circulator, in ambulatory surgery centers, and in pediatrics. 18 clinical hours per week.
Prerequisite(s): SUT 2120 AND SUT 2127 AND PSY 1100 AND Restricted to Majors
Corequisite(s): SUT 2207

SUT 2207 - Directed Practice for Surgical Procedures III
4 Cr. Hr(s).
Implements the surgical process in the operating room for orthopedic, thoracic, open heart, trauma, pediatrics. Implements the role transition to beginning Surgical Technology practitioner. Twenty directed practice hours per week.
Prerequisite(s): SUT 2120 AND SUT 2127 AND PSY 1100 AND Restricted to Majors
Corequisite(s): SUT 2200

SUT 2300 - Surgical Technology Review
1 Cr. Hr(s).
This course will offer the Surgical Technology major the opportunity to review all program content in preparation for the national certification exam. Provides systematic review of all course material with related exams

similar in design to the Certified Surgical Technologist (CST) Exam. Two lab hours per week.
Prerequisite(s): SUT 2120 AND SUT 2127 AND Restricted to Majors

SUT 2500 - RN Scrub
1 Cr. Hr(s).
The RN Scrub course is designed specifically for Perioperative Nurses to increase their skills and knowledge in the role of the surgical Scrub. It will give the Perioperative Nurse the opportunity to learn the technical skills required to perform in the role of the Scrub during surgical intervention of the intraoperative period. Must be a Registered Nurse (RN) trained in Perioperative Nursing to take this course. Five lab hours per week. Course taught in an 8-week term.
Prerequisite(s): Approval of Department

Theatre

THE 1101 - Theatre Appreciation
3 Cr. Hr(s).
Theatre as an art form presented from the historical, literary and production points of view. Includes an exploration into the creative processes associated with the production of plays and the collaborative contributions of the actor, director, designers, playwright, critic and audience.
This course has no textbook costs.

THE 1103 - Principles of Acting
3 Cr. Hr(s).
Introduction to the art of acting, focusing on building an effective performance ensemble, while introducing the vocal, physical and creative communicate process used by the actor. Two classroom, two lab hours per week.

THE 1105 - Introduction to Theatre
3 Cr. Hr(s).
An exploration of the artists, innovators and techniques that have influenced theatrical practices in historical and contemporary productions through research, script analysis and viewing theatre productions.
Prerequisite(s): Approval of Department

THE 1106 - Stagecraft
2 Cr. Hr(s).
A study of techniques for building and handling theatrical scenery. Covers tools, materials and hardware used, along with standard safety practices and the artistic and practical considerations of scenery construction.
Prerequisite(s): MAT 0050 AND Approval of Department
Corequisite(s): THE 1107

THE 1107 - Lab for Stagecraft
1 Cr. Hr(s).
A study of techniques for building and handling theatrical scenery. Covers tools, materials and hardware used, along with standard safety practices and the artistic and practical considerations of scenery construction. Three lab hours per week.
Corequisite(s): THE 1106

THE 1111 - Acting I
3 Cr. Hr(s).
Basic training and practice in vocal, physical and creative processes used by the actor. One classroom, four lab hours per week.
Prerequisite(s): Approval of Department

THE 1114 - Live Sound Fundamentals
2 Cr. Hr(s).
This course focuses on the fundamentals of live audio. Areas of focus include microphones, consoles, speakers, amplifiers, recording, acoustics, playback, and reinforcement.
Prerequisite(s): THE 1115

THE 1115 - Live Sound Fundamentals Lab
1 Cr. Hr(s).
Lab component of THE 1114: Live Sound Fundamentals. Study of theatrical audio equipment, materials, methods, and techniques. Emphasis on technical aspects of the proper usage of audio hardware with an introduction to the principals of sound design. Three lab hours per week.
Corequisite(s): THE 1114

THE 1116 - Stage Lighting Fundamentals
2 Cr. Hr(s).
Study of theatrical lighting equipment, materials, methods and techniques. Emphasis on technical aspects of stage lighting, with an introduction to the principles of lighting design.
Corequisite(s): THE 1117

THE 1117 - Lab for Stage Lighting Fundamentals
1 Cr. Hr(s).
Study of theatrical lighting equipment, materials, methods and techniques. Emphasis on technical aspects of stage lighting, with and introduction to the principles of lighting design. Three lab hours per week.
Corequisite(s): THE 1116

THE 1118 - Costume Fundamentals
2 Cr. Hr(s).
Basic training in fundamental concepts and practices of costume design and construction.
Corequisite(s): THE 1119

THE 1119 - Lab for Costume Fundamentals
1 Cr. Hr(s).
Three lab hours per week.
Corequisite(s): THE 1118

THE 1194 - Applied Theatre Technology I
This course is repeatable.

1 Cr. Hr(s).
Lab experience in theatre technology; positions can include production assistant, front of house, run crew and construction crews for theatre department productions. Assignments are made through department faculty and staff.
Prerequisite(s): Approval of Department

THE 1196 - Applied Theatre Technology II
This course is repeatable.

1 Cr. Hr(s).
Continued lab experience in theatre technology; positions can include production assistant, front of house, run crew and construction crews for theatre department productions. Assignments are made through department faculty and staff.
Prerequisite(s): Approval of Department

THE 1199 - Applied Theatre Performance
This course is repeatable.

1 Cr. Hr(s).
Applied Theatre Performance provides the student the opportunity to receive credit for practical experience.
Prerequisite(s): Approval of Department

THE 1212 - Voice For The Actor
3 Cr. Hr(s).
Introduces the techniques of training the voice for the stage. Designed to develop an awareness of the physical instrument through vocal production. One classroom, four lab hours per week.
Prerequisite(s): THE 1111 with a grade of C or better AND Approval of Department

THE 2115 - Movement For The Actor
3 Cr. Hr(s).
Introduces the techniques of training the body for the stage. Designed to develop an awareness of the physical instrument through movement. One classroom, four lab hours per week.

Prerequisite(s): THE 1212 with a grade of C or better AND Approval of Department

THE 2201 - History of Theatre I
3 Cr. Hr(s).
Theatre in its purest form is storytelling. Discover how it has evolved throughout the ages from tribal rituals to producing the high-tech blockbusters of today. Explore a wealth of world cultures that influence theatrical traditions. Who are the authors, actors, directors, and designers creating these stories? Read the scripts and explore the spaces that share these stories. This course will explore theatre from tribal origins through the 1700s.

THE 2202 - History of Theatre II
3 Cr. Hr(s).
Theatre in its purest form is storytelling. Discover how it has evolved throughout the ages from tribal rituals to producing the high-tech blockbusters of today. Explore a wealth of world cultures that influence theatrical traditions. Who are the authors, actors, directors, and designers creating these stories? Read the scripts and explore the spaces that share these stories. This course will explore theatre from the 1700s to present day.

THE 2206 - Script Analysis
3 Cr. Hr(s).
Focus on discovering creative, in-depth techniques of script analysis and realizing different methods for researching the script. Techniques can be applied to understanding the script as an actor, director, designer, dramaturg or playwright. One classroom, four lab hours per week.
Prerequisite(s): THE 1105 with a grade of C or better AND Approval of Department

THE 2216 - Acting II
3 Cr. Hr(s).
Intermediate training and practice in vocal, physical and creative processes used by the actor. One classroom, four lab hours per week.
Prerequisite(s): THE 2115 with a grade of C or better AND Approval of Department

THE 2220 - Theatre Portfolio
2 Cr. Hr(s).
Process for creating a theatre resume and portfolio: development of presentation and interview skills.
Prerequisite(s): Approval of Department

THE 2240 - Stage Management
3 Cr. Hr(s).
An introduction to the creative and administrative work of the stage manager, including hands-on activities in learning the principles and practices of stage management. Attendance at department production rehearsals and performance required. Two classroom, two lab hours per week.
Prerequisite(s): THE 1105 with a grade of C or better AND Approval of Department

THE 2255 - Theatre Workshop
This course is repeatable.

1 - 3 Cr. Hr(s).
Focused on a specialized area in theatre. This course is designed to bring together performance, direction and design/technology.
Prerequisite(s): Approval of Department

THE 2270 - Theatre Internship
This course is repeatable.

1 - 4 Cr. Hr(s).
Students earn credit toward certificate requirements for work learning experience related to the discipline of theatre. Students establish learning outcomes related to theatre and prepare reports and/or projects each term, detailing how the experience allowed for the application of theatre theory and/or skills. One (1) credit hour will be earned for a minimum of seven (7) practicum hours per week.
Prerequisite(s): Approval of Department

THE 2296 - Applied Theatre Technology IV
This course is repeatable.

1 - 3 Cr. Hr(s).
Advanced practical experience in theatre design and technology. Participation in department production required. Assignments made through department faculty and staff.
Prerequisite(s): Approval of Department

THE 2298 - Applied Theatre Technology V
This course is repeatable.

1 - 3 Cr. Hr(s).
Further advanced practical experience in theatre design and technology. Participation in department production required. Assignments made through department faculty and staff.
Prerequisite(s): Approval of Department

Veterinary Technology

VET 1000 - Introduction to Veterinary Medicine
1 Cr. Hr(s).
Introduction to professions within veterinary medicine. The student will learn about the history and practice of veterinary medicine, veterinary technology/nursing, veterinary assisting, office management and client services at a veterinary hospital. After completing this course, the student will understand the pros and cons of entering this profession and the benefits and risks involved in working with animals in this medical field.

VET 1102 - Topics in Veterinary Technology
2 Cr. Hr(s).
This course will introduce the student to select topics in veterinary medicine: Students will learn to identify a variety of species of animals and breeds within those species. Students will discuss reproductive practices, nutritional impact of feedstuffs, animal husbandry, animal behavior, preventive care and common diseases seen with a wide variety of animal species. Finally, students will be introduced to the human-animal bond and the impact of geriatric medicine and euthanasia on the veterinary technician. This course is taught in conjunction with a hands-on laboratory. Students in this course must be able to attend 5-8 hours within a veterinary clinic as a job shadow experience to complete this course.
Prerequisite(s): VET 1000

VET 1107 - Topics in Veterinary Medicine Laboratory
1 Cr. Hr(s).
Accompanies Topics in Veterinary Medicine course to provide hands-on learning opportunities. Students will learn how to evaluate a veterinary clinic for safety, prepare an examination room for an animal's visit, check in a patient, gather a history from a client, draw up vaccines, prepare medications, perform basic behavioral analysis and animal restraint techniques, and perform basic diagnostic procedures for a routine preventive care visit. Two lab hours per week.
Prerequisite(s): VET 1000

VET 1202 - Introduction to Veterinary Technology II
2 Cr. Hr(s).
This course will continue the education of the veterinary technical student in the subjects of: Clinical Sciences, Medical Nursing, Emergency and Critical Care, Pain Management, and the basics of Surgical Nursing.
Prerequisite(s): VET 1102

VET 1205 - Clinical Practice I: Hospital Practices & Professionalism
1 Cr. Hr(s).
An introduction to veterinary laws, record-keeping, hospital management, communication, and professionalism. The course will cover such topics as OSHA, state

and nationwide veterinary laws, record keeping, and effective communication between coworkers and clients.
Prerequisite(s): VET 1102

VET 2005 - Veterinary Terminology & Ethics
1 Cr. Hr(s).
An introduction to veterinary medical terminology, veterinary ethics, ethical situations, and a continued focus on professionalism.
Prerequisite(s): VET 1000

VET 2008 - Veterinary Assisting Laboratory
1 Cr. Hr(s).
This laboratory prepares the student for entering clinical rotation in a veterinary clinic. Students will practice clinical skills with animals, in the diagnostic laboratory, and in a vaccine or surgical clinic on campus. Students must complete assigned clinical skills and critical thinking tasks in order to be assigned to a clinical rotation. Two lab hours per week.
Prerequisite(s): VET 1102

VET 2101 - Comparative Anatomy & Physiology, Animal Husbandry and Disease
6 Cr. Hr(s).
Discussion of anatomy and physiology of multiple species. Proper use of medical and common terminology when discussing animal anatomy. Development and understanding of different physiologies on disease development, diagnoses, and treatment of animals Discusses the care and keeping of companion animals, farm animals, equines, exotic animals, and laboratory animals. Three classroom, six lab hours per week. Blended course in which much of the material is presented in an online format for home-review prior to in-class discussion/laboratory work.
Prerequisite(s): VET 2107 OR Approval of Department

VET 2104 - Animal Husbandry & Disease
2 Cr. Hr(s).
This course discusses a variety of common diseases - diagnosis, treatment, and prevention; and the care of a variety of species of animals. This course has a blended curriculum which involves online work and in-class discussions.
Prerequisite(s): Restricted to Majors

VET 2106 - Comparative Anatomy & Physiology
3 Cr. Hr(s).
Discussion of the Anatomy and Physiology of all major systems in mammalian, reptilian, and avian species. Special attention will be paid to anatomy and physiology as it pertains to common diseases encountered in companion and production animals. Proper use of medical and common terminology when discussing animal anatomy. This is a hybrid course in which some material will be presented online for the student, while discussion of more difficult material will be done in the classroom.
Prerequisite(s): Restricted to Majors

VET 2107 - Veterinary Technical Practice II
1 Cr. Hr(s).
Practicum course in which the student is paired with a screened veterinary practice in order to develop beginning practical skills within a hospital setting. Students will not be assigned to their place of work if they currently work in a Veterinary Clinic. Ten directed practice hours per week for eight weeks in an assigned veterinary clinic.
Prerequisite(s): VET 2108 AND Restricted to Majors

VET 2108 - Veterinary Technical Practice I
This course is repeatable.

1 Cr. Hr(s).
The student will successfully and confidently complete NAVTA-accredited clinical skills for safe animal handling and basic clinical tasks. Students will not be assigned to their place of work if they currently work in a Veterinary Clinic. Ten directed practice hours per week for eight weeks in an assigned veterinary clinic.
Prerequisite(s): VET 2008

VET 2110 - Veterinary Parasitology
1 Cr. Hr(s).
This course will cover internal and external parasites found in veterinary medicine. Areas of content to include life cycles, pathogenesis, treatment, control, and public health concerns.
Prerequisite(s): Restricted to majors

VET 2111 - Large Animal Husbandry & Veterinary Techniques
2 Cr. Hr(s).
This course will cover the basics of the care and husbandry of large animal species, as well as specific techniques that the students are required to learn in the care of these animals. The class will be conducted both in lecture as well as lab format, with multiple field trips off-campus for live-animal simulations. All students will be required to develop the essential psychomotor skills required for passage of the course as well as the program. This is an 8-week, limited enrollment course. Four hours of classroom and/or laboratory time per week.
Prerequisite(s): Restricted to major

VET 2113 - Laboratory for Comparative Anatomy & Physiology
1 Cr. Hr(s).
Hands-on learning of comparative anatomy using dissection, 3-D imaging, and 4-D modeling. Two lab hours per week.
Prerequisite(s): Restricted to major

VET 2114 - Exotic & Pocket Pet Health & Disease
1 Cr. Hr(s).
The student will learn about care and handling of exotic animals and pocket pets such as pet birds, hamsters, guinea pigs, reptiles, ferrets, rabbits, etc. As a Veterinary Technician, they may be required to educate clients as to the care and feeding of such pets as well as handle these pets when they come into a veterinary hospital. This course is taught in an online format, but may have one or more scheduled virtual class times for presentations. Check with your instructor for more information.
Prerequisite(s): Restricted to majors

VET 2115 - Veterinary Anesthesia & Surgical Skills
3 Cr. Hr(s).
In this course, the student develops an understanding for the role diagnostic testing plays in the treatment of animals. Discusses the techniques employed to retrieve, handle, and evaluate laboratory samples. Develops the student's understanding of sterile technique, surgical technique and assistance, and anesthesia application and monitoring. Identifies and discusses the use records management and different surgical procedures in veterinary medicine. This is a lecture course with some hands-on applications.
Prerequisite(s): Restricted to Majors

VET 2116 - Large Animal Husbandry & Disease Laboratory
1 Cr. Hr(s).
This course follows the didactic portion of Large Animal Husbandry and Disease and provides the student the opportunity to practice and complete veterinary nursing skills on large animals. Several Field trips to a variety of farms will be required. Three lab hours per week.
Prerequisite(s): VET 2111 AND Restricted to majors

VET 2117 - Laboratory for Veterinary Anesthesia & Surgical Skills
1 Cr. Hr(s).
Laboratory to accompany VET 2115 in order to teach and evaluate clinical skills taught in

VET 2115. Two lab hours per week.
Prerequisite(s): Restricted to Majors

VET 2205 - Veterinary Dentistry, Advanced Radiology & Diagnostics
2 Cr. Hr(s).
This course will offer a review previously discussed veterinary technologies and continue instruction in dental anatomy and techniques, advanced diagnostic imaging, and advanced diagnostic laboratory techniques. It will also review surgical assisting procedures such as gowning, gloving, and passing instruments, and anesthesia monitoring. Classroom hours will be blended with online/virtual learning.
Prerequisite(s): VET 2115 AND VET 2117 AND Restricted to major

VET 2207 - Veterinary Technical Practice III
1 Cr. Hr(s).
Practicum course in which the student is paired with a screened veterinary practice in order to advance practical skills within a hospital setting. Included are observational experiences to large, laboratory, and exotic animal facilities to advance experience with a wide variety of animals. Student will be assigned to a suitable clinic in which they have not yet been placed. Ten directed practice hours per week for eight weeks in a Veterinary Practice.
Prerequisite(s): VET 2107 AND Restricted to Majors

VET 2211 - Veterinary Case Studies
1 Cr. Hr(s).
Using examples of real-life veterinary cases, the student will formulate technical assessments, calculate appropriate doses of medications, develop treatment plans, and integrate previously learned knowledge from different courses into cases of animals with systemic and/or multiple diagnoses.
Prerequisite(s): Restricted to Majors

VET 2217 - Veterinary Dentistry, Radiology, & Diagnostics Laboratory
2 Cr. Hr(s).
In the Advanced Techniques Lab, Veterinary Technology students will learn the physics behind diagnostic imaging in order to help them produce a diagnostic radiograph or ultrasound image. Students will review dental anatomy and learn all tools and techniques to properly perform a complete dental prophylaxis procedure on a dog or cat, and to produce appropriate oral radiographic images. In addition, they will learn about advanced diagnostic procedures in order to better care for animals in a clinical environment. Four lab hours per week.
Prerequisite(s): VET 2115 AND VET 2117 AND Restricted to Majors

VET 2250 - Veterinary Pharmacology
4 Cr. Hr(s).
Veterinary Pharmacology, the development, uses, and administration of specific classes of drugs used within veterinary medicine. This will include (but not be limited to) discussions on antibiotics, antiseptics, anti-inflammatories, analgesics, and medications used for the treatment of systemic diseases.
Prerequisite(s): VET 2104 AND VET 2106 AND Restricted to major

VET 2300 - Preceptorship
2 Cr. Hr(s).
During this 8-week period, each student will be partnered with an affiliate veterinary hospital. Within each practice, students will uphold proper professional attire and attitude and perform duties as set to them by the practice. This will be an unpaid preceptorship with twenty-five hours expected per week within the hospitals, the additional three hours a week to be used for research and preparation in order to present a senior capstone project. The student will meet weekly with the instructor to discuss progress and concerns.
Prerequisite(s): VET 2207 AND Restricted to Majors

VET 2301 - Veterinary Technician National Exam Preparation
1 Cr. Hr(s).
This course provides the veterinary technology student a guide to prepare for the national licensing exam (VTNE) required to register as a veterinary technician in many states across the country. The course will contain a review of relevant material as well as tips and tricks for different learning styles. Tools to overcome testing anxiety will also be discussed. This course provides the student the opportunity to purchase a test preparation subscription at a discount as well as guided mentoring through the test preparation and test-taking process.
Prerequisite(s): Restricted to majors

Visual Communication

VIS 1100 - Design Foundations
4 Cr. Hr(s).
Students are introduced to the fundamental principles and elements of design, through the application of critical and creative thinking skills, messaging, and storytelling; understanding of social and cultural context, human behavior, color, typography, image and modeling, resulting in traditional and digital conceptualization of visual communication projects. Two classroom, four lab hours per week.

VIS 1140 - Design Processes I
4 Cr. Hr(s).
Introduction to the design development process, including research, ideation, and iteration for use in computer illustration, digital imaging, photo manipulation, page layout, and digital video using industry-based software.

VIS 1150 - Design Processes II
4 Cr. Hr(s).
Students will be introduced to page layout and design utilizing Adobe InDesign and other industry standard tools. This course will explore the principles and elements of design, the design process, fundamentals of typographic: history, anatomy, classifications, and legibility, grid systems hierarchy, color, and professional design practices. Through a series of exercises and projects, students will explore page layout, typography, and color to solve communication problems.
Prerequisite(s): Other - Interior Design student only should see an advisor for a prerequisite waiver for VIS 1140
Corequisite(s): VIS 1140

VIS 1180 - History & Theory of Graphic Design
3 Cr. Hr(s).
History of graphic design covering major designers and their work, as well as design movements. From the origins of graphic art including printing and typography through the rise of the Internet, this course will explore the connection between culture and technology in the evolution of graphic design.

VIS 1210 - Design Drawing
4 Cr. Hr(s).
Introduction to drawing techniques as applied to design, including stylization, perspective, application of color and texture, design processes, shading and light to create depth and dimension in a 2-D rendering or illustration. Two classroom, four lab hours per week.

VIS 1220 - Typographic Design
4 Cr. Hr(s).
Students will expand their fundamental understanding of typography by exploring research, establishing emotional connections with audiences, grid systems, hierarchy, color, and professional design practices. Through a series of exercises and projects, students will explore the advanced language of typography by examining, analyzing, and experimenting with the letterform, word, sentence, paragraph,

column, and pages. Two classroom, four lab hours per week.
Prerequisite(s): VIS 1100 AND VIS 1140 AND VIS 1150

VIS 1250 - Print Production
4 Cr. Hr(s).
This course provides students with practical knowledge in modern print production workflows. Students will explore the print production process from concept to finished product, including digital prepress operations, color management, file preparation, preflighting procedures, and various printing technologies.
Prerequisite(s): VIS 1140 AND VIS 1150

VIS 1310 - History & Theory of Web Design
3 Cr. Hr(s).
This course introduces students to the planning and development of interactive media, with a special emphasis web design.

VIS 1320 - User Experience/User Interface
4 Cr. Hr(s).
The course will explore fundamental concepts in human-computer interaction (HCI) theory and usability and learn about various cutting-edge technologies to measure digital media environment design effectiveness. The coursework will allow students to learn to pay specific attention to user expectations and how they drive user behavior. The course's primary outcome is the design and management of usability study, then reporting that study's results.
Prerequisite(s): VIS 1140 AND VIS 1310

VIS 1330 - Web Design
4 Cr. Hr(s).
This course is an introduction to web design. Students will learn how to evaluate and develop quality websites by applying various web concepts. Students will learn how to use software to design and develop websites.
Prerequisite(s): VIS 1140 AND VIS 1310 AND CSC 1350

VIS 1410 - History & Theory of Video Production
3 Cr. Hr(s).
This course introduces and explores types of video production and the process of creating a video, including pre-production (budgeting, storytelling, scripting and storyboarding), production and post-production concepts. The course will explore essential video equipment, terminology related to video production, and an historical background in the field of video production.

VIS 1420 - Video Production
4 Cr. Hr(s).
This course introduces professional production of digital video, from concept to completion, including planning, storyboarding, recording, editing, and publishing for broadcast and online use.

VIS 1430 - Lighting & Cinematography
4 Cr. Hr(s).
This course introduces students to the foundational principles and technical skills of cinematography and lighting for video production. Emphasizing visual storytelling, students will gain functional competence in composition, camera operation, lens selection, lighting design, and exposure control. By the end of the course, students will demonstrate the ability to collaborate on set, translate conceptual ideas into visual form, and produce technically sound footage that meets professional entry-level standards.
Prerequisite(s): VIS 1410 AND VIS 1420

VIS 1440 - Sound Design
3 Cr. Hr(s).
This course will introduce students to the technical aspect of recording, editing, processing, and mixing audio for use in video production. Students will learn about best practices in capturing audio, industry standard hardware, and editing professional audio for output.
Prerequisite(s): VIS 1410 AND VIS 1420

VIS 2110 - Design Principles
4 Cr. Hr(s).
Development of an identity system, visual language, stationery system and identity manual. Exploration of advanced elements and principles of design; introduction to symbology. Two classroom, four lab hours per week.
Prerequisite(s): VIS 1210 AND VIS 1220 AND VIS 1250

VIS 2120 - Design Applications I
4 Cr. Hr(s).
Design Applications I will cover the development of a pictogram and wayfinding system that will be used as a component to an overall Identity Manual developed in Design Principles. Two classroom, four lab hours per week.
Prerequisite(s): VIS 1210 AND VIS 1220 AND VIS 1250

VIS 2130 - Motion Design
4 Cr. Hr(s).
This course introduces basic principles of animation (squash and stretch, anticipation, easing, etc.); the motion design process, including scripting, storyboarding, animatics, and final animation; and, industry-standard motion design software.
Prerequisite(s): VIS 1140

VIS 2140 - Web Principles
4 Cr. Hr(s).
This course will cover advanced techniques, practical guidelines, and best practices for building web applications. Student will have strong knowledge of design principles and elements in relation to designing user interface (UI) for the web. Two classroom, four lab hours per week.
Prerequisite(s): CSC 1350 AND VIS 1320 AND VIS 1330

VIS 2150 - Web Applications
4 Cr. Hr(s).
This course incorporates elements from each of the core program courses to allow students to talk through the entire web design process, including design/project documentation, wireframing, creating mock-ups, revisions, pages and final deliverables. Upon completion, students will have a professional website that can serve as part of their professional portfolio. Two classroom, four lab hours per week.
Prerequisite(s): VIS 1320 AND VIS 1330 AND CSC 1350

VIS 2160 - Design Applications II
4 Cr. Hr(s).
Advanced application of design principles. Emphasis will be placed on information design to include creating print and fully developed digital media. Two classroom, four lab hours per week.
Prerequisite(s): VIS 2110 AND VIS 2120 OR Approval of Department

VIS 2170 - Web Content Management
4 Cr. Hr(s).
This course focuses on web design utilizing industry-standard, database-driven, content management systems. Two classroom, four lab hours per week.
Prerequisite(s): VIS 2140 AND VIS 2150

VIS 2180 - Video Principles
4 Cr. Hr(s).
This course serves to introduce students to the planning, execution, and revision of long-form video projects from concept to completion. Two classroom, four lab hours per week.
Prerequisite(s): VIS 1430 AND VIS 1440

VIS 2190 - Video Applications I
4 Cr. Hr(s).
This course serves to introduce students to

advance post-production projects with an emphasis on long-form narrative works. Two classroom, four lab hours per week.
Prerequisite(s): VIS 1430 AND VIS 1440

VIS 2200 - Video Applications II
4 Cr. Hr(s).
This course focuses on academic research and data driven video content. Students will learn about target audience and consider the best way for a brand to advertise to that audience. Students will also learn about academic research and create a data driven video or documentary. Two classroom, four lab hours per week.
Prerequisite(s): VIS 2180 AND VIS 2190

VIS 2260 - Design Portfolio
4 Cr. Hr(s).
Graphic design business practices including individualized portfolio development, work experience and development of professional practice skills; including cost estimating, contract writing, sales and communication techniques. Two classroom, four lab hours per week.
Prerequisite(s): VIS 2110 AND VIS 2120 OR VIS 2140 AND VIS 2150 OR VIS 2180 AND VIS 2190

VIS 2270 - Design Internship
This course is repeatable.

1 - 3 Cr. Hr(s).
Students earn elective credits toward Visual Communications or Interior Design degree requirements for work-learning experience. Students establish learning outcomes and prepare related reports and/or projects in consultation with the employer and faculty. Internship hours vary based on credit hours.
Prerequisite(s): Approval of Department

Policies & Procedures

Fraudulent Identification Policy

The purpose of these policies and procedures is to help students succeed at Sinclair. Please carefully review and address any questions to instructors or the contacts provided.

The college reserves the right to appeal, change, or amend rules, regulations, tuition, and fees and may withdraw, add to, or modify the policies, courses, and programs listed herein.

For current information:

- (937) 512-3000
- (800) 315-3000
- policies.sinclair.edu

Academic Petition Process

If you experienced an emergency situation which affected your ability to withdraw before the deadline date or your ability to finish course requirements, you may ask the Academic Petitions Committee to consider your circumstances. You must file a petition through the Office of the Assistant Provost **as soon as possible, but no later than two years following the term when the grade was recorded. Please note that this process can only be used to change a grade of F or Z to a grade of W.**

Examples of emergency situations which might support your petition are:

- Accident or sudden, severe illness for which medical treatment was received
- Unexpected hospitalization
- Death of a family member
- Unanticipated out-of-town assignment by employer
- Incarceration
- Other emergencies*
- Other medical or mental health emergencies (fill out a medical or mental health withdrawal see information below)*

With your petition you **must submit documentation of your circumstances** that prevented you from withdrawing before the deadline and/or impacted your ability to attend class and complete coursework. Documentation from your physician, employer, agency, etc. must be on letterhead and contain the dates pertaining to your situation to verify your inability to withdraw or attend class.

Once a petition is submitted, it is logged in and placed on the agenda for the next Academic Petition Committee meeting. This cycle can take up to three months to complete. Additionally, the Committee does not meet during the summer months.

The results of the Committee's petition decision, whether granted or denied, will be communicated to you by a letter sent to the address on the petition you submit.

The online Academic Petition form can be accessed at **www.sinclair.edu/medical-health-withdrawal**

If you are interested in filing a Tuition Refund Appeal, a separate process must be initiated through the Bursar's office. You may contact the Bursar's office directly at 937-512-2568.

For any issues that may fall under the Sexual Harassment and Sexual Misconduct policy resulting in students requiring resources, contact the Title IX office at 937-512-2961 or at TitleIX@sinclair.edu.

******For other medical or mental health emergencies see the Mental/Medical Health Withdrawal policy prior to contacting academic petitions.*

Adding/Dropping Courses

Before adding or withdrawing from one or more classes, students should consult an academic advisor and the Welcome Center if using financial aid. The financial aid status of any student may be affected by withdrawing from one or more classes. Current or returning students must have a 2.0 cumulative grade point average to add or drop a course online.

A student who registers for 12 or more credit hours is considered full-time. A student who registers for 11 credit hours or less is considered part time. Students may withdraw online, in person or by phone.

To withdraw from a full term course:

- Withdraw during the first eight (8) calendar days of the term for 100% tuition refund and no record of the class on the transcript.
- Withdrawal later than the first eight (8) calendar days, but prior to the Friday of the thirteenth week of the fall and spring term; and prior to the Friday of the tenth week of the summer term, results in no refund and a grade of "W" on the permanent record.
- Courses that are not full term in length have special deadlines. Students should check their term statement or the Registration Calendar at: **www.sinclair.edu/registration-calendar**

In order to complete the Add/Drop/Withdrawal Form visit the Welcome Center, Dayton Campus, or any regional center.

- Withdraw online through **my.sinclair.edu** or **regportal.sinclair.edu**
- To drop or withdraw from all classes for the term, students may also use the Welcome Center at 937-512-3000 or 1-800-315-3000.
- A copy of the processed Withdrawal will be emailed to the student. This is proof of withdrawal and should be kept for the student's records. Failure to follow one of these processes means the student will receive a grade, usually an F/Z, in the class.

Note to Military Family:

- Military education benefits will be affected by withdrawal from one or more classes. Please contact the Military Family Education Center (formerly Veteran Services) in person at the Dayton Campus, Building 10, Room 10444 or via email at: **mfec@sinclair.edu** before dropping course sections.
- For information on Financial Aid Add/Drop Census Date Policy, see Financial Aid policy.

Administrative Withdrawal

Students may be administratively withdrawn from a class by their faculty member for nonattendance. Faculty must advise students in writing at the first class meeting what attendance record would constitute cause for administrative withdrawal. If a student does not attend the first class, it is the student's responsibility to obtain a copy of all materials distributed at the first class meeting.

Students may also be administratively withdrawn from classes as a result of a student conduct hearing with either a hearing officer or the Student Conduct Hearing Panel. Administrative withdrawals may be made when it has been determined that the student's presence on campus is potentially detrimental to the college, faculty, staff, students or themselves.

Assessment Policy

Prior to initial registration, students designating themselves as degree or certificate-seeking must be assessed for writing ability and numerical skills. Transfer students who are degree or certificate-seeking and who do not have transferable equivalent math or English courses must be assessed. Students may be exempt from assessment by providing proof of a qualifying college entrance exam score or qualifying high school transcript. No degree or certificate seeking students can register for credit-bearing courses until they have test scores or other qualifying measures on file. All students taking a mathematics or English course must be assessed through Sinclair College prior to enrollment.

Exceptions include:

- Qualifying entrance exam scores.
- Qualifying high school transcripts.
- Qualifying ACT/SAT scores.

- Prior Learning Assessment.
- Transferring credits for appropriate level math and English courses.

For more information on specifics related to the above assessment, contact an academic advisor.

Students must begin mathematics and/or English course sequences no higher than the level indicated by their assessment results.

Students taking classes with prerequisites must meet them, either by assessment, transfer credit, or a qualified prior learning assessment option. Students requiring testing accommodations should make arrangements with the department of Accessibility Services. English as a second language (ESL) students should meet with the ESL coordinator prior to assessment to determine the appropriate assessment steps.

International students must meet with the International Education Department prior to assessment to determine eligibility and appropriate assessment steps.

Students taking non-prerequisite courses for personal interest or career development and not pursuing a degree or certificate are exempt from assessment.

Associate Degree

To be an associate degree candidate, a student must:

- Fulfill requirements of the degree program and the institution.*
- Complete a minimum of 60 semester hours.**
- Maintain a cumulative grade point average of at least 2.0 either overall or within their program of study.

*Generally, a student meeting all associate degree requirements in effect at the time they begin their coursework toward a specific degree program will qualify for graduation. However, if the course of study is prolonged beyond six years after beginning, a student is required to consult academic advising to work with the appropriate department chairperson to determine graduation requirements. If a student has been enrolled continuously at Sinclair College for more than six years, and the degree program has not significantly changed, the student may request approval to graduate under their initial catalog requirements.

**Generally, the requisite 60 semester hours must be earned at Sinclair College or through other arrangements with other regionally accredited institutions or contractual relationships approved by the Higher Learning Commission (HLC). Additionally, unless a higher number of semester hours are specified by individual academic programs, students earning an associate degree from Sinclair College must earn a minimum of 15 semester hours of their academic program from Sinclair College. Programs requiring additional hours of residency (for accreditation, licensure, etc.) will provide an explanation or justification for any variations of the minimum credit hour requirements in their program literature and college catalog.

To earn more than one associate degree at Sinclair College, a student must take a minimum of 12 credit hours in one associate degree program that are different from another associate degree program, and a minimum of 24 credit hours in one bachelor degree program that are different from another bachelor degree program. If a student qualifies for more than one degree during the same semester using the same curriculum and does not take the minimum hours difference, the student may choose the degree to be awarded.

For more information about degree related policies mandated by Higher Learning Commission (HLC), visit: https://www.hlcommission.org/Policies/assumed-practices.html

Attendance

Students are expected to be present at all class sessions. It is the student's responsibility to read and understand the class attendance policy or the Sinclair Online course participation policy that will be defined in the syllabus for each course. It is the faculty member's responsibility to define attendance or participation requirements and to monitor and record the students' fulfillment of these requirements. It is a program's prerogative to have specific policies across multiple sections due to the unique requirements of that program. Attendance for traditional classes or participation for Sinclair Online classes may affect final grades, financial aid eligibility, and VA Education Benefits. This policy differs from the "Financial Aid Student Attendance Policy", which may be found under financial aid.

Auditing a Course

To audit a course means:

- Students may attend class
- Students are not required to take exams
- Students do not receive a grade or credit

To register for a class to be audited:

- Registration in audit status will be accepted only during designated late registration periods and before the first meeting of a class. Registration can only be done in person at the Dayton Campus Welcome Center (First Floor, Building 10) or at any of the regional centers. Check **www.sinclair.edu/registration-calendar** for deadlines.
- The fee for auditing is the same as that for enrolling for credit. VA Educational Benefits may not be used to audit a course. In addition, financial aid may not be used to pay for courses that are audited.

Note: Audit status cannot be changed to credit status, nor can credit status be changed to audit status once registration has been completed.

Baccalaureate Degree

To be a baccalaureate degree candidate, a student must:

- Fulfill requirements of the degree program and the institution.*
- Complete a minimum of 120 semester hours.**
- Maintain a cumulative grade point average of at least 2.0 either overall or within their program of study.

*Generally, a student meeting all baccalaureate degree requirements in effect at the time they began their coursework toward a specific degree program will qualify for graduation. However, if the course of study is prolonged beyond eight years after beginning, a student is required to consult academic advising to work with the appropriate department chairperson to determine graduation requirements. If a student has been enrolled continuously at Sinclair College for more than eight years, and the degree program has not significantly changed, the student may request approval to graduate under their initial catalog requirements.

**Generally, the requisite 120 semester hours must be earned at Sinclair College or through other arrangements with other regionally accredited institutions or contractual relationships approved by the Higher Learning Commission (HLC). Additionally, unless a higher number of semester hours are specified by individual academic programs, students earning a baccalaureate degree from Sinclair College must earn a minimum of 30 semester hours of their academic program from Sinclair College. Programs requiring additional hours of residency (for accreditation, licensure, etc.) will provide an explanation or justification for any variations of the minimum credit hour requirements in their program literature and college catalog.

To earn more than one baccalaureate degree at Sinclair College, a student must take a minimum of 24 credit hours in the second program that are different than the first. If a student qualifies for more than one degree during the same semester using the same curriculum and does not take the

minimum credit hour difference, the student may choose the degree to be awarded.
For more information about degree related policies mandated by Ohio's Higher Learning Commission (HLC) visit:
https://www.hlcommission.org/Policies/assumed-practices.html

Certificate Programs
Certificate programs recognized by the Ohio Department of Higher Education require completion of a minimum of 30 semester hours of a specific curriculum with a grade point average of at least 2.0 either overall or within the program of study. To qualify for a Certificate of Completion, students must complete at least 9 credit hours of Sinclair course work within the area of study to fulfill the institutions requirements.
To qualify as a certificate candidate (30-37 credit hours), a student must:

- Fulfill requirements of the certificate program and the institution.*
- Complete a minimum of 30 semester hours.**
- Maintain a cumulative grade point average (GPA) requirements by either:
- Maintaining a cumulative GPA of at least 2.0

or

- Maintaining a GPA of at least 2.0 within their program of study.

*Generally, a student meeting all certificate requirements in effect at the time they began their coursework for an academic program will qualify for a credential.
**Generally, the requisite semester hours must be earned at Sinclair College or through other arrangements with other regionally accredited institutions or contractual relationships approved by the Higher Learning Commission (HLC). To qualify for a certificate of completion, students must complete at least 9 credit hours of Sinclair coursework within the area of study to fulfill the institution's requirements.
For more information about degree related policies mandated by the Ohio Department of Higher Education (ODHE),
visit: https://www.ohiohighered.org/certificates-and-credentials

Changing an Academic Program
A student is permitted to select only one active program of study. To change from one academic program to another, a student should meet with an academic advisor, academic coach, or faculty advisor. The advisor will activate the new program, inactivate previous program(s), and ensure the student fully understands any implications or consequences that may occur as a result of such changes. Students may also initiate this process online by emailing academicadvising@sinclair.edu
Any change in academic program will be indicated on the student record and will not affect the cumulative grade point average.

Changing Sections of a Course
Students may request to change to any open section of the same course until the last day to drop the course with a "W." Acceptable reasons for changing sections may include class conflict with work schedule, childcare, transportation, or health issues.
To change to a different section, the student must:

- First, discuss their situation with the instructor teaching the course section in which the student is currently enrolled to determine if accommodations can be made.
- Speak with the appropriate department chair for assistance with changing course sections, if the instructor does not believe a reasonable accommodation can be made.
- Present a letter from their employer verifying a work schedule change, or other official documentation regarding qualifying reasons, to the appropriate academic department chair for approval.

If the change is approved, the student will forward the email, with the department chair's signature, to the office of registration at registration@sinclair.edu.

Children in Classes
Children (and others who are not officially enrolled) are not permitted in classrooms or laboratories when classes are in session. Additionally, children cannot be left unattended on campus at any time.

Degree Audit (or Program Evaluation)
The degree audit (or program evaluation) is a tool that indicates students' progress toward the completion of a program of study, degrees and certificates. Students request a degree audit from an academic advisor/coach to determine which requirements they have completed and which requirements are remaining for a specific academic program and catalog year. If a student chooses change academic programs, they will have a new degree audit for their new program. Students can run a degree audit for their declared major, or any other Sinclair major, in the Sinclair portal (my.sinclair.edu).

Equal Opportunity/Non-Discrimination Policy

Policy Statement:
Sinclair Community College does not discriminate on the basis of race, color, creed, religion, age, sex, sexual orientation, gender identity, marital status, veteran status, national origin, ancestry, citizenship or disability. Sinclair Community College is strongly committed to a policy of equal opportunity in its employment practices, educational programs and activities, and the many services it offers to the community.

Scope:
This Policy applies to all employees, applicants for employment, students, applicants for admission, contractors and others associated with Sinclair Community College who are governed by any applicable nondiscrimination laws.
Notice of this Policy shall be posted and provided as required by law.

Provisions:
The Policy Statement above shall be used as the official statement of Sinclair Community College about non-discrimination and/or equal opportunity whenever such statement is required.
Employment advertising for Sinclair Community College shall include the phrase: "an equal opportunity employer."

Prohibitions and Affirmations/Declarations regarding Diversity, Equity, and Inclusion Required By Ohio Revised Code Section 3345.0217 (Senate Bill 1, 136th Ohio General Assembly):

A. Definitions
1. No definition of "diversity, equity, and inclusion" is provided in Senate Bill 1. In a good faith effort to comply with the law, the following operational definition of "diversity, equity, and inclusion" was adopted by the Sinclair Board of Trustees in Board Resolution #2025-18, May 13, 2025: "using the race or of using the sex of individuals (students or of employees), in decisions related to the awarding or to the denying of resources, opportunities, grading, evaluations, or other benefits," with this definition being in effect until future official State of Ohio legal guidance may cause the Board to modify the operational definition.

2. For purposes of this Policy, the following terms have the same definitions as in Ohio Revised Code Section 3345.0217(A):

- **Controversial belief or policy** means any belief or policy that is the subject of political controversy, including issues such as climate policies, electoral politics, foreign policy, diversity, equity, and inclusion programs, immigration policy, marriage, or abortion.
- **Intellectual diversity** means multiple, divergent, and varied perspectives on an extensive range of public policy issues.

B. Sinclair prohibits the following:

- Any orientation or training course regarding diversity, equity, and inclusion.
- The continuation of existing diversity, equity, and inclusion offices or departments.
- Establishing new diversity, equity, and inclusion offices or departments.
- Using diversity, equity, and inclusion in job descriptions.
- Contracting with consultants or third parties whose role is or would be to promote admissions, hiring, or promotion based on race, ethnicity, religion, sex, sexual orientation, gender identity, or gender expression.
- The establishment of any new institutional scholarships that use diversity, equity, and inclusion in any manner. For any institutional scholarships existing on June 27, 2025, Sinclair shall, to the extent possible, eliminate diversity, equity, and inclusion requirements. If Sinclair is unable to do so because of donor requirements, Sinclair may continue to offer those institutional scholarships. However, Sinclair shall not accept any additional funds for the operation of institutional scholarships that have diversity, equity, and inclusion requirements.

C. Sinclair shall not replace

any orientation, training, office, or position designated for the purpose of diversity, equity, and inclusion that is prohibited under Ohio Revised Code Section 3345.0217 with an orientation, training, office, or position under a different designation that serves the same or similar purposes, or that uses the same or similar means.

D. Sinclair affirms and declares that:

1. Its primary function is to practice, or support the practice, discovery, improvement, transmission, and dissemination of knowledge and citizenship education by means of research, teaching, discussion, and debate.
2. It shall ensure the fullest degree of intellectual diversity.
3. Faculty and staff shall allow and encourage students to reach their own conclusions about all controversial beliefs or policies and shall not seek to indoctrinate any social, political, or religious point of view.
4. It shall demonstrate intellectual diversity for course approval, approval of courses to satisfy general education requirements, student course evaluations, common reading programs, annual reviews, strategic goals for each department, and student learning outcomes.
5. It will not endorse or oppose, as an institution, any controversial belief or policy, except on matters that directly impact the institution's funding or mission of discovery, improvement, and dissemination of knowledge.
6. It will not encourage, discourage, require, or forbid students, faculty, or administrators to endorse, assent to, or publicly express a given ideology, political stance, or view of a social policy, nor will the institution require students to do any of those things to obtain an undergraduate degree.
7. It prohibits political and ideological litmus tests in all hiring, promotion, and admissions decisions, including diversity statements and any other requirement that have applicants describe their commitment to any ideology, principle, concept, or formulation that requires commitment to any controversial belief or policy.
8. No hiring, promotion, or admissions process or decision shall encourage, discourage, require, or forbid students, faculty, or administrators to endorse, assent to, or publicly express a given ideology or political stance.
9. It will not use a diversity statement or any other assessment of an applicant's political or ideological views in any hiring, promotions, or admissions process or decision.
10. No process or decision regulating conditions of work or study, such as committee assignments, course scheduling, or workload adjustment policies, shall encourage, discourage, require, or forbid students, faculty, or administrators to endorse, assent to, or publicly express a given ideology or political stance.
11. It will seek out invited speakers who have diverse ideological or political views.
12. It will post prominently on its web site a complete list of all speaker fees, honoraria, and other emoluments in excess of five hundred dollars for events that are sponsored by Sinclair in the manner set forth in Ohio Revised Code Section 3345.0217(B)(13).

E. Per Ohio Revised Code Section 3345.0217(D), nothing in this section prohibits:

- Sinclair faculty or students from classroom instruction, discussion, or debate, so long as faculty members allow students to express intellectual diversity.
- Sinclair from complying with any state or federal law to provide disability services or to permit student organizations, including fraternities and sororities.

F. Complaints

Sinclair shall respond to complaints from any student, student group, or faculty member about an alleged violation of the prohibitions and requirements included in this Policy using the process established under Ohio Revised Code Section 3345.0215(C) pertaining to Sinclair's Free Speech Policy and Procedure.

Responsibility, Complaints, and Enforcement:

Various offices at Sinclair are responsible for receiving complaints and enforcing this Policy. (All offices are located on Sinclair's Dayton campus, with a mailing address of 444 West Third Street, Dayton, OH 45402-1460.)

Discrimination related to Employment:
Office of Human Resources
Chief Human Resources Officer / Equal Employment Officer
937-512-2514

Sexual Harassment and Sex Discrimination (Employee, Students, Others):
Title IX Coordinator
937-512-2961

Disability Discrimination (Students):
ADA/504 Coordinator
937-512-3400

Harassment - Other than Sexual Harassment (Student on Student):
Vice President for Student Services
937-512-5502

Complaints Related to Prohibitions and Affirmations/Declarations regarding Diversity, Equity, and Inclusion:
Office of Human Resources
Chief Human Resources Officer
937-512-2514
Approved by Sinclair Board of Trustees, Board Resolution #2009-17, September 15, 2009.
Revised, Board Resolution #2025-36, September 9, 2025.

Family Education Rights & Privacy Act (FERPA)
The Family Education Rights & Privacy Act (FERPA) grants four specific rights to current or former students with respect to their educational records at Sinclair. Those rights are a) the right to inspect and review all the information about them held by Sinclair; b) the right to seek amendment of incorrect records; c) the right to some control over disclosure of the students' education records; and d) the right to file a complaint with the U.S. Department of Education's FERPA office in Washington, D.C. For more information about students rights under FERPA, review the Sinclair Student Records Policy, available in the Registration & Student Records office or at: **www.sinclair.edu/registration-policies**
Problems or questions concerning the Sinclair Student Records Policy may be brought to the FERPA coordinator, director of Registration & Student Records.

Fraudulent Identification Policy
A Sinclair Community College student account may be administratively removed (i.e., courses, IT accounts disabled, etc.) if deemed fraudulent. For purposes of this policy, fraudulent means that the account contains false, misleading, or intentionally inaccurate information.
To administratively remove a student account based on fraud, the college will use the following procedures:

1. If college officials determine a student account is fraudulent based on a reasonable interpretation of available information and records pertaining to the student and other relevant circumstances, the fraud procedure and checklist can be referenced for this purpose.
2. After a determination of fraud has been made, the Vice President for Student Development or the designee will send an "Administrative Removal Letter" to the Sinclair e-mail account, which will serve as notification of the impending course withdrawal and removal from enrollment systems. A copy of this communication will be kept with the Registration and Student Records Office.
3. The "Administrative Removal" e-mail will inform the student that they are being removed as a student unless they verify their identity and provide other information requested by Sinclair to establish their identity. The student will have seven calendar days from the date the e-mail is sent to provide this information.
4. If the student does not respond to the "Administrative Removal Letter," the Vice President for Student Development or the designee will submit a request to the Registration and Student Records Office to process the withdrawal/drop from all course sections, and IT will remove system access. The notation "Administrative Withdrawal" will be notated on the course section in the student information system. The student will receive a "W" on their transcript, which will be assigned by the Registration and Student Records Office.
5. A student who has been administratively withdrawn from the course(s) is not eligible for a refund of tuition and fees for the course(s).
6. If a student is administratively removed and later provides sufficient information or documentation satisfactory to the Vice President for Student Development or the designee to verify their identity and/or not to be engaged in fraud, the student will be referred to the Office of the Provost. The Office of the Provost will work with the Department Chair and the Registration and Student Records Office to re-register the student for the course(s) they were administratively withdrawn from, if deemed appropriate or to take such other actions which may be appropriate to enable the student to continue their education at Sinclair. Such actions will be carried out in accordance with other applicable Sinclair policies, and the student may be required to follow the procedures in those other policies.

Fresh Start Policy
"Fresh Start" allows a student, who has returned to the college after an absence of at least two years (6 semesters), and has completed specific requirements, a "one time only" option of having his or her grade point average recalculated from the point of re-enrollment without losing credit for previous course work for which a grade of *S, P, C* or better was earned. Financial Aid & Scholarships policies do not recognize the Fresh Start Policy or any changes it may have on a student's record.
The academic Fresh Start Policy and its conditions are as follows:
1. To be eligible for Fresh Start, a student must:

- Re-enroll in the college after an absence of at least 6 consecutive semesters (including summers).
- Successfully complete any required Development (DEV) courses based on an assessment of language usage, writing and mathematical skills.
- Successfully complete a minimum of six credit hours after re-enrollment with grades of S, P, C or better. DEV courses do not count toward the 6 credit hours.
- Complete a Fresh Start form requesting to apply this policy.

2. The policy can be applied only once and only to classes taken before re-enrollment. Once approved, the application of this policy to the student's record is irrevocable.
3. After a student elects Fresh Start and eligibility is verified, a notation will be added to the student's transcript indicating that all Sinclair credit hours earned prior to policy enactment will be subject to the following conditions:

- Previous cumulative GPA is recalculated based upon the elimination of *D, F,* and *Z* grades.
- Credit earned at Sinclair with a grade of at least *S, P, C* or higher is carried over.
- Credit earned at Sinclair with a grade of *"D"* is forfeited
- Grades from all course work taken at Sinclair will be shown on the transcript

4. Fresh Start may not be applied to any course previously used by the student to complete a degree or certificate.
The academic transcript will show: The Fresh Start Policy has been applied for academic work taken at Sinclair prior to Term/Year.

Grades
The grade point average is computed by dividing the total points earned by the total credit hours attempted. Courses in which a student earns grades of X, I, W, P, N, S, IP, U, Y are not computed in the total credit hours attempted.
For example:

Course	Credit hours	Grade	Points
English Composition I	3	B	9
College Algebra	5	C	10

General Psychology I	3	A	12
Western Civilization I	3	B	9
Physical Education	1	A	4
TOTALS	15		44
44 • 15 = 2.933 Grade Point Average			

The Financial Aid & Scholarships office may evaluate grades differently when determining Satisfactory Academic Progress. For additional information, review the Financial Aid & Scholarships policy.
Students may be given an "I" grade if their work has not been completed. The students must contact their instructor and request an I grade. If the instructor agrees, the students and instructor must sign the "Incomplete Grade Contract." When the required work is completed within 30 calendar days after the beginning of the next term, a grade will be submitted for the "I" grade. If this is not removed within this time, the "I" becomes an "F." This time limit may be extended by special permission of the instructor. If the student fails to contact the instructor to arrange an incomplete grade, the instructor is required to assign an "F" instead of an "I" for the term's work. For cases in which hardships are involved, the student may make up the work which could change the "F" to the grade otherwise deserved. The instructor's permission is required and must be done before term ends.

Exception: *Flight Lab Completion Requirements/Registration in subsequent labs*
You have two consecutive semesters to complete the Private, Instrument, Commercial-Multi, CFI, and CFII courses and three consecutive semesters to complete the Commercial rating. If your flight training is not complete at the end of the semester limit, you will be removed from the flight lab. At the end of the initial semester, if you are not complete, your flight instructor will schedule your new flight slots for the next semester and you will fill out an incomplete request form so that the "I" grade can be issued. If the form is not filled out and you do not schedule flight slots for the next semester, you will be issued a grade of "F" and you will be dropped from the flight lab.
If you do not complete the course in the allotted semester time limit, you will need to re-enroll in the course in its entirety. If the program is full at the time you seek to re-enroll, you will be put on the waitlist. Additional time for completion will be allotted if you are on place on active duty military-orders. Extensions to the semester time limit for other reasons will be considered on a case by case basis.
Based on the above guidance the requirement to maintain an Incomplete (I) grade is as follows:

1. Additional semester plus 30 days for AVT 1124, 1126, 1224, 1226, 2266, 2269, 2271, 2277, 2278 AND 2286.
2. Additional semesters plus 30 days for AVT 2263, 2264 AND 2265

An "N" grade indicates the student attended classes and made satisfactory progress but did not complete all course requirements. A "Z" grade indicates the student was registered for class but never attended. To challenge a grade the student believes is incorrect he/she must contact the instructor as soon as possible.
Under no circumstance will a grade be changed after two years have elapsed from the end of the term in which the grade was recorded. Within the two-year limitation, a petition may be filed with the office of the Associate Provost asking consideration for change of "F" grade to "W," ONLY if emergency circumstances supported by documentation prevented either withdrawal by deadline date or completion of class requirement after that date.

Dean's List
To be eligible for the Dean's List in any term, students must have:

- Six or more credit hours of college level course work for the term
- A grade point average of 3.4 with no grade below a C for that term
- Good academic standing

Courses for which students earn grades of X, IP, I, W, P, N, S, or Y are not computed into total credit hours attempted. Their placement on the Dean's List will be notes on their academic transcript.

Academic Intervention, Probation, Dismissal
1. All students must maintain a minimum academic performance of at least a 2.0 GPA cumulatively (2.0 or greater).
2. Students will be placed on the following academic standards:
   - First semester below 2.0 GPA-Academic Intervention
   - Second consecutive semester below 2.0 GPA-Academic Probation
   - Third consecutive semester below 2.0 GPA-Academic Dismissal If the term GPA is 2.0 or above, the student will remain on Academic Probation
3. Students will be returned to good academic standing when a cumulative GPA of 2.0 or greater is earned.
4. Students who are on academic intervention or academic probation will receive correspondence that refers students to academic/faculty advisors/coaches, and Student Affairs for advising, academic assistance, and information on the impact on financial aid.
5. Students who are on academic probation must be seen by an academic/faculty advisor/coaches to:
   - Register or add classes
   - Receive additional support information or assistance.

Students whose semester GPA is 2.0 or greater, but whose cumulative GPA would cause them to be dismissed, will be granted an additional probationary period for each semester in which the semester GPA is 2.0 or greater.
NOTE: Financial aid considers all assigned grades when calculating cumulative grade point average for satisfactory academic progress evaluation.

Grade	Quality Points	
A	Excellent	4
B	Good	3
C	Average	2
D	Passing	1
F	Failure	0
Z	Non-Attendance	0
U	Unsatisfactory	0
I	Incomplete	0
Y	Proficiency Credit	0
W	Withdrawal	0
P	Pass	0
N	Progress	0
IP	In Progress	0
X	Audit	0

Grades not used in calculation of grade point averages

AA	Articulation Agreement
AP	Advanced Placement
CL	College Level Examination Program (CLEP)
CT	Career Tech Credit Transfer
DS	DANTES (DSST) (Standardized Subject Test)
WC	WEBCAPE

W Withdrawal

A/B/C# Proficiency Credit

-- No grade was assigned

Graduation

The Registration & Student Records office is responsible for identifying students who have met all their credential requirements. Once a student is listed as a candidate for graduation *and completes all required coursework* the credential will be awarded even if the student requests a change of study but still completes the previous program.

Students will receive an email from the Registration & Student Records office during the term in which they are enrolled in the final courses needed to complete their degrees, certificates or short term certificates. This email will simply confirm that the student has indeed registered for the necessary courses and, pending successful completion of those courses, can expect to receive their diplomas or certificates at the end of the term. Once those courses have been completed successfully, students will be graduated. They will receive their diplomas or certificates through the U.S. Postal Service in approximately eight weeks after the end of the term. Diplomas and certificates will be available electronically 4-6 weeks after the end of the term. Once posted, an email will be sent to the student's Sinclair email address with information on how access. Students will be able to claim and share.

Important points for graduating students to do during their last term:

- Check with an academic advisor to ensure their academic programs are correctly recorded.
- Check their Sinclair emails.
- Be sure the Registration & Student Records office has their correct mailing addresses.

Student must earn a minimum of 15 semester credit hours of their academic program from Sinclair or must earn the last 15 semester credit hours of their academic program at Sinclair.

Graduation honors are also noted on the transcript. Sinclair awards "graduation honors" for a cumulative grade point average of 3.4 to 3.899. The college awards "high honors" for a cumulative grade point average of 3.900 and above.

Participation in Commencement

Students earning their associate degrees or bachelor degrees will be offered the opportunity to participate in Sinclair's annual commencement ceremony for the current academic year (Fall, Spring and Summer). This ceremony takes place in May. Participation in the commencement ceremony is limited to those students earning bachelor or associate degrees.

Honors and high honors for the commencement ceremony are determined by the cumulative grade point average at the end of the Fall Semester. To qualify for honors a student must have a cumulative grade point average between 3.400 and 3.899. To qualify for high honors a student must have a cumulative grade point average 3.9 or better. Graduates with Honors or High Honors will wear a gold honor cord draped along their shoulder.

Guarantees

Sinclair Guarantee -What happens after graduation? The Sinclair Guarantee of Graduate Quality gives graduates two guarantees they can count on:

- A guarantee of transfer credit for graduates receiving Associate of Arts and Associate of Science degrees at Sinclair Community College, for entering a university parallel/transfer program with confidence.
- A guarantee of job competency for those who have obtained an Associate of Applied Science degree at the college and wish to enter a technical career program

This tuition-free education as described below constitutes the sole and exclusive remedy under the Sinclair Guarantee of Graduate Quality.

Guarantee of Transfer Credit (AA and AS Degrees)

For students thinking about pursuing a four-year degree, Sinclair Community College guarantees to its Associate of Arts and Associate of Science graduates the transfer of course credits to those Ohio colleges or universities that have articulation agreements with Sinclair Community College.

The guarantee applies only to courses included in a written transfer/articulation plan that must be on file in the Provost office. Limitations on the total number of credits accepted in transfer, grades required, relevant grade point average, and duration of transferability apply as stated in the catalog of the receiving institution. Cost of books, insurance, laboratory and activity fees, and other course related expenses are the responsibility of the graduates. For details about the guarantee, see an academic advisor.

Guarantee for Job Competency (AAS Degrees)

Graduates looking for a technical job should be sure to tell potential employers that they are Sinclair graduates. Many of them know that Sinclair Community College guarantees appropriate technical job skills identified in the program outcomes for a specific degree to its Associate of Applied Science graduates. And, if the employer feels the graduates are lacking in technical job skills identified by the program outcomes for the specific degree program, the college will provide the graduates with up to nine (9) tuition free credit hours of additional training by Sinclair Community College, under the conditions of the guarantee policy.

The guarantee applies only to graduates employed on a full-time basis directly related to the area of program concentration as certified by the Provost. Employment must commence within twelve (12) months of graduation.

Cost of books, insurance, uniforms, laboratory and activity fees, and other course related expenses are the responsibility of the graduates and/or the employers.

Special Conditions for the Job Competency Guarantee

The employer must:

- Certify in writing the employee is lacking job skills related directly to the degree's program outcomes.
- Specify areas of deficiency within six months of the initial employment.
- Develop a written educational plan for retraining the graduate in cooperation with the appropriate academic department at the college.
- Retraining will be limited to nine (9) semester hours of credit related to the identified skill deficiency and to those classes regularly scheduled during the period covered by the retraining plan, and must be completed within a calendar year from the time the educational plan is agreed upon.
- The guarantee does not imply the graduate will pass any licensing or qualifying examination for a particular career.

Honors Program

Academic Honors offers many rewards:

- Availability of Sinclair Academic Excellence Scholarships
- Opportunity to participate in Service Learning
- Academic challenge and personal enrichment
- Honors designation on transcript
- Special commendation as an Honors Scholar after completing required courses

- Attendance at regional meetings of Honors students and faculty from other colleges and universities
- Better preparation for entering baccalaureate and advanced programs
- Increased opportunities for financial aid and membership in honor organizations like Phi Theta Kappa
- Scholarships and/or transfer articulations with Miami University, University of Dayton and Wright State University.

Students can participate in Honors in two ways:

Individual Honors Courses
Students with a 2.8 GPA may enroll in individual Honors courses whether or not they plan to become Honors Scholars. To receive Honors credit, a student must earn a minimum of "B" in the course. What honors courses will be offered next term? Ask your instructor! Any course on campus or online beyond the Developmental level may be taken with an Honors option, with the approval of the instructor and the department chair. To find courses, students can search the online course schedule planner by keyword. Enter "honors" in the search box under keyword and a list of courses offering honors options will come up.

Honors Scholars Program
Students may apply to become Honors Scholars. Interviews take place each term. Upon acceptance, scholars undertake to complete four honors experiences while maintaining an overall 3.25 GPA. Two of the four honors courses must be in different disciplines and one course must be Interdisciplinary. The interdisciplinary requirement may be waived if courses are taken from four different disciplines.
In addition to other financial aid and scholarships, Honors Scholars may apply for up to six Academic Excellence Scholarships on a per-term basis during their time in the program.
Honors Scholars are required to fulfill a Service Learning requirement before completing the program. Students will perform unpaid community service as part of a selected Honors course or just on their own. Students seeking help in choosing a service project are encouraged to contact Sinclair's Service Learning office at: www.sinclair.edu/service-learning
Find the application and other Honors Program forms at: www.sinclair.edu/academics/honors-program/honors-forms/
More details about Service Learning visit: www.sinclair.edu/service-learning

Late Registration
Students may register for open classes during Sinclair's official late registration period after first payment due and before first day of the semester.

- Late registration period is the week before each term begins. See the online class schedule for exact dates for each term.
- To audit a class, students register during late registration; there is no late fee charge. Register in person only.

NOTE: Sinclair classes are considered to have met as of midnight on the second day of the term.

Medical or Mental Health Withdrawal
A medical or mental health withdrawal is defined as withdrawal from classes due to a severe medical condition, either physical or emotional. It is intended for use only in extraordinary circumstances in which unanticipated serious illness or injury prevents a student from continuing to attend or participate in one or more classes and **must be submitted no later than two years following the term when the grade was recorded.**
Request Process:

1. Withdrawals requests based on physical or emotional issues should be completed as soon as possible by the student or the student's legal guardian and submitted electronically **www.sinclair.edu/about/offices/provost/academic-petition-form-medical-or-mental-health-withdrawal/.**
2. Medical statement must be completed by physician and/or therapist **www.sinclair.edu/medical-health-withdrawal**. All application materials will be confidentially maintained.
3. If you receive financial aid or veterans benefits, discuss the impact of your withdrawal on your eligibility for the assistance received.

a) Students receiving financial aid or military-related funding should speak with departmental staff members in the Military Family Education Center or with an enrollment specialist in the Welcome Center to have an understanding how it may impact their current financial aid, or future financial aid.
b) Students requesting to be withdrawn from classes may be required to return their financial aid refund amount for that semester.

4. If the withdrawal is approved, the student will receive a W on the transcript for all courses approved.

For more information, or assistance in initiating this process, contact the office Student Affairs (937) 512-2291

Military Training
In accordance with Isakson and Roe: Section 1018, VA Benefits® cannot be used until the Joint Service Transcript (JST) has been received and evaluated. To learn more about sending military transcripts to Sinclair, please visit: www.sinclair.edu/MFEC
Sinclair evaluates military training according to the American Council on Education (ACE) recommendations and the Military Transfer Assurance Guides (MTAGs) from the Ohio Department of Higher Education.
GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at http://www.benefits.va.gov/gibill.

My Schedule
My Schedule provides students with their course schedule for the term in a weekly format. **My Booklist** provides students with a list of required and/or recommended books for their courses as well as the ISBNs and prices for each book. This book list provides a direct link purchase books from **eCampus**. To use these tools, log into **my.sinclair.edu**, click on the registration portal, and select My Schedule or My Booklist on the left side of the page.
Students can also access their schedule by logging in to **my.sinclair.edu**, selecting the Term Statement on the student finance portlet, and clicking View Statement. This term statement includes dates classes begin, dates to withdraw without records, dates to withdraw with record, and end of term dates for each class.

National Change of Address
In accordance with the United States Postal Service regulations effective January 4, 2010 all addresses are required to go through a Post Office approved validation process. A process is run every 90 days to verify a student's address matches with the United States Postal Office. If there is a discrepancy, a student's address will be updated and could affect your residency/tuition.

One Year Time Limit on Math Prerequisites
The following policy applies to all math courses with a MAT course designation except for MAT 1110, MAT 1120, and MAT 1130.
Students registering for a MAT course are required to have completed the prerequisite course not more than one calendar year prior to the semester in which they are taking the given MAT class. This means the prerequisite

course must have been taken in one of the three consecutive semesters (including summer) immediately prior to the semester in which they want to take the given MAT class. For example, in order to register for MAT 1570 in the fall of 2026, a student must have taken the prerequisite course MAT 1470 no earlier than the fall 2025 semester.
Students whose prerequisites for MAT courses were completed more than one calendar year ago should see an academic advisor for assistance in registering for a MAT course.
NOTE: This policy does not *apply to courses offered by other departments that have a MAT course as a prerequisite.*

Personal Data
To change a name or address:

- Apply online at: **my.sinclair.edu**, or
- Complete the online Change of Information Form at **https://www.sinclair.edu/services/welcome-center/rsr/forms/name-address-phone-changes/change-of-information-form/**

To change a social security number, students can log into my.sinclair.edu, select Registration and Student Records in the Secure Document Upload tile, and upload a copy of the social security card.
A change of address does not automatically change residency for fee purposes. For that, students must file a separate application for a change of residency and show proof of eligibility at Registration & Student Records. For deadline dates, see Registration at: **www.sinclair.edu/registration-calendar**; call (937) 512-3000 or (800) 315-3000.
To change a name, proper court documentation for Name Change can be submitted in-person or through my.sinclair.edu through the Secure Documents Upload tile.

Prerequisites
Some courses have prerequisites which are other courses that must be successfully completed prior to taking these courses. Many beginning classes require the placement testing or completion of developmental or remedial courses before students may enroll in them.
Transfer and transient (visiting) students who have completed prerequisites courses at another institution may bring an unofficial transcript or a grade card to an academic advisor for review. If the students wish to receive credit for those courses at Sinclair, they must have their transcript sent from their former institution to the Sinclair Registration & Student Records office.

Prior Learning Assessment Programs
The Prior Learning Assessment (PLA) Program offers students a variety of options to demonstrate learning they've done outside the college classroom. Assessments available include course specific proficiency exams, evaluation of industry training and credentials, portfolio assessment, and standardized exams.
Students interested in PLA should review the different PLA opportunities Sinclair offers to understand the processes, forms, and policies associated with each option. Students should also meet with an Academic Advisor to determine which PLA option best suits their academic goals and program requirements.

Students should know before starting PLA:

- Students must have an active record with Sinclair.
- Any credit earned through PLA does not count toward institutional residency requirements.
- Credit will be awarded regardless of the active declared program; applicability is based on individual program requirements.
- All fees charged for the cost of assessment for proficiency exams or portfolio assessments are non-refundable.
- Courses awarded via PLA will be added to students' transcripts and may factor into GPA and SAP calculations.
- PLA credit is recommended to transfer to other Ohio institutions; however, it is not guaranteed. Students must confirm with the accepting institution and program to determine how PLA credit may transfer and apply.

Advanced Placement (AP) Program
The College Board's AP Program (**http://apcentral.collegeboard.com**) offers high school students the opportunity to earn college course credit by providing examinations in 34 introductory courses in 20 fields. To have AP scores reported to Sinclair Community College, use school code 1720. For AP exams taken previously, contact the College Board at (888)-225-5427 or via the College Board website (**https://apstudent.collegeboard.org**) to request that an official score report be sent to Sinclair. Students with an AP exam score of 3 or above will be awarded the aligned course(s) and credits for the AP exam(s) successfully completed. Additional information can be found on the PLA website.

American Council on Education (ACE)
ACE provides credit recommendations for a variety of industry training, examinations, and coursework. Students are encouraged to send their official ACE transcripts to Sinclair for evaluation. Information on ordering transcripts, organizations served, courses and exams can be found at National Guide resource (**http://www2.acenet.edu**).

Articulated Credit
Articulated credit is earned through evaluation of industry credentials, non-credit training, certifications, or other approved work force pathways. Students should submit a request via the PLA website, and once received the request will be evaluated by the appropriate department for approval. This evaluation process is completely free. To see our ever growing list of eligible credentials, please visit the Credit for Training and Credentials website.

College Level Examination Program (CLEP)
CLEP offers standardized exams that can equate to specific Sinclair courses with a qualifying score. To determine the score needed to earn credit at Sinclair, please visit the PLA website. Interested students are able to purchase exams, find testing locations, and submit official transcripts via the College Board website. Sinclair school code: 1720.

DANTES Subject Specific Test (DSST)
DANTES Standardized Subject Tests are standardized exams that can equate to specific Sinclair courses with a qualifying score. To determine the score needed to earn credit at Sinclair, please visit the PLA website. Interested students are able to purchase exams, find testing locations, and submit official transcripts via the Get College Credit website Sinclair school code: 9309.

Portfolio Based Evaluations
Portfolio assessment allows students to build an academic portfolio tying their prior learning and experience to the outcomes of a specific course. This option is typically pursued for upper-level classes, capstones, or other classes for which there is no other PLA option. Students should verify their eligibility with an Academic Advisor and can submit their request via the PLA website.

Proficiency Exams
Sinclair offers over 150 different proficiency exams in several academic departments. Students who meet course prerequisites are eligible for course specific proficiency testing, and grades of C or higher will be awarded. Students should verify their eligibility with an Academic Advisor and can submit their request via the PLA website.

Readmission Policy for Dismissed Students
If you have been dismissed from Sinclair for academic reasons and would like to be readmitted, you must petition for readmission. The petition must be submitted to an academic advisor at least three weeks before the first day of classes for the term you would like to attend.
If you are dismissed for the first time, you must remain out of school for a minimum of one term, including summer. For example, if the dismissal was at the end of fall term, you cannot attend spring term but may petition for readmission to summer term. If you are dismissed a second time, you must remain out of school for an academic year (three terms).
If you are dismissed for the third time, you will not be readmitted to Sinclair unless there are documented, extenuating circumstances.
To be considered for readmission, you must:

- Meet with an Academic Advisor a minimum of two times
- Complete a readmission petition
- Meet with a representative from Counseling Services as referred by your advisor
- Take any required placement tests

Call 937-512-3700 to schedule an appointment with an academic advisor on the Dayton campus to begin the readmission process or meet with an academic advisor at one of our regional centers.
Petitions for readmission are available from the student's academic advisor.
VETERANS NOTE:
To re-establish VA educational benefits, a student must submit a copy of the readmission paperwork to the Military Family Education Center (formerly Veteran Services) in person, Dayton Campus, Building 10, Room 10-444, or via email to mfec@sinclair.edu, after readmission to the college.

Refund of Tuition and Refundable Fees
To receive a refund of tuition and refundable fees for withdrawn courses, students must withdraw from the course(s) through the Student Self-Service Portal within the stated withdraw with refund and without record date for that course(s). These dates are published online through the registration calendar and on the student's term statement for each of their specific courses which is located on their Student Portal.
If students withdraw by the eighth calendar day (the last day to withdraw with a refund and without record stated date) from a full-term course (including Saturday and Sunday) of fall, spring, and summer terms, a 100 percent refund will be issued (see refund information at the end of this section). After that date, students will not receive a refund for withdrawn full-term courses. Please Note: Different withdraw with refund schedules apply for courses with beginning and ending dates that do not correspond to the full-length term dates. It is the student's responsibility to be aware of their course information and other matters related to their registration. For more information, contact the Dayton Campus Welcome Center (First Floor, Building 10 or 937-512-3000), any of the regional centers, or visit the registration calendar at www.sinclair.edu -or- visit your term statement through your Student Portal for your specific course/term dates.
If students withdraw after the eighth day of a full-term course(s) and/or after the withdraw with refund date for other courses outside of full-term, they will not receive a refund of tuition or refundable fees unless the withdrawal was due to extenuating circumstances such as a medical emergency, family death, military deployment, etc. For consideration of refund of a specific circumstance within the stated tuition refund appeal criteria, students must submit a *tuition refund appeal request form with supporting documentation* **online**. Students may access the Tuition Refund Appeal form and policy at: www.sinclair.edu/bursar-refund-policy, select the Tuition Refund Appeal Form link, and follow the steps accordingly.
Financial aid or third-party funding may be adjusted due to course drops or withdrawals and could also be impacted with an approved tuition refund appeal. Refer to the Financial Aid Add/Drop Census Date Policy, the Withdrawal & Return of Title IV funds, and Veterans & Military Benefits for additional information.
If Sinclair College cancels the student's course, the student or third-party funding source will receive a 100 percent refund.
Sinclair utilizes BM Technologies, Inc., a technology solution, to deliver student refunds. For more information about BM Technologies, Inc., please visit: **https://www.firstcarolinabank.com/disbursements/refund-choices**. The first refund disbursement of each term begins approximately four to six weeks after the start of the term. Refunds are processed weekly after the first refund of each term. All students are required to select a refund delivery preference through BM Technologies, Inc. All refunds will be disbursed by BM Technologies, Inc. and is dependent upon the refund delivery preference selected by the student. If a selection is not made, a significant delay could take place if a student is due a refund. Instructions for making a refund preference can be found at www.sinclair.edu/bursar-refund-policy. If payment was made by a credit or debit card, the refund *may* be issued back to the card used for payment through Sinclair. If payment was made by a third party or Financial Aid the refund may need issued back to them and not to the student.

Repeating a Course
A student may repeat a course for any reason. When a course is repeated, the most recent grade will be used in calculating the cumulative grade point average (GPA) in place of the original grade. All grades will remain on the transcript even if they are not counted in the cumulative GPA.
There are some courses which will be counted in the cumulative GPA each time they are taken; the original grade is not replaced by the second one. Such courses are designated in the course descriptions with an R. If a student wants to have the previous grade in such a course replaced by a later grade, special arrangements must be made with the department chairperson.
Financial aid will only pay for one repetition of a passed course. For financial aid purposes, a "D" grade is considered passing. Review the Financial Aid policy section for additional information.

Residency Rules
Residency status of each student is determined during the admissions process. Tuition surcharges to the student and college's subsidy payments are based upon that decision. The definitions and rules used by all Ohio educational institutions are contained within the document entitled Ohio Board of Regents 3333-1-10, generically known as Rule 10.
A student who is a non-resident of Ohio must pay a tuition surcharge in addition to other fees. The following rules determine who can be considered an Ohio resident:

- To be considered a resident of Ohio a person must maintain residence in Ohio for 12 months, be qualified to vote in Ohio and to receive state welfare benefits, and be subject to tax liability under Section 5747.02 of the Ohio Revised Code. A person is not permitted to remain a resident of any other state or nation for any purpose within the time prescribed.
- A person who has established a place of residence in Ohio for the purpose of attending a college or university will be considered a non-resident for fee purposes.

- A person admitted to this country as a resident alien may establish Ohio residency in the same manner as any other non-resident.
- An alien admitted to this country on a student visa or other visas, which do not qualify the person to remain in this country on a permanent basis, will be considered a non-resident for fee purposes.

Within the above stated general rules, a student will be considered a resident for fee purposes if the student:

- Has resided in Ohio for at least 12 consecutive months immediately preceding enrollment and is not receiving, and has not received in that time period, financial support from persons or entities who are not residents of Ohio.
- Is a dependent student and at least one of his or her parents or legal guardians has been a resident for at least 12 consecutive months immediately preceding enrollment.
- Is living in Ohio and employed on a self-sustaining basis in Ohio, and is attending college on a part-time basis. The students spouse who is a full-time homemaker will also be considered gainfully employed.
- Has a parent or spouse who has accepted full-time employment and has established a place of residence in the state of Ohio as of the first day of the term the student enrolls.

Specific Exceptions

The student, his or her dependents, and spouse are considered residents of Ohio if the person:

- Is on active duty in the armed forces of the United States and is stationed and resides in Ohio.
- Forever Buckeye extends the in-state resident tuition rate to any public or private Ohio high school graduate who leaves the state but returns to enroll in an undergraduate or graduate program at an Ohio college and also establishes residency in Ohio. The Forever Buckeyes provision of law removes the 12-month period of establishing domicile in Ohio before becoming eligible for in-state tuition rates.
- Is on active duty in the armed forces of the United States, and Ohio is the state of residence for legal purposes.
- Is transferred by his or her employer beyond the territorial limits of the 50 states of the United States and the District of Columbia, and Ohio is the state of residence for legal purposes.
- Has been employed as a migrant worker in Ohio and has worked in the state at least four months during each of the three years preceding the date of enrollment.

Montgomery County

A student who qualifies as a resident of Ohio, but does not qualify for Montgomery County residency, must pay an instructional surcharge in addition to other fees.

- The student must qualify as a resident of the state of Ohio in order to qualify as a resident of Montgomery County.
- A person who has established a place of residence in Montgomery County for the purpose of attending Sinclair will be considered a non-resident for fee purposes.
- A student who has been classified as a Montgomery County resident shall be considered to have lost his or her residency after he or she (or in the case of a minor), his or her parents or legal guardian move out of the county.

Within the above stated general rules, a student will be classified as a resident of Montgomery County for fee purposes if the student:

- Has resided in Montgomery County for at least 12 consecutive months immediately preceding enrollment at Sinclair and is not receiving, and has not directly or indirectly received during that time, financial support from persons or entities who are not residents of Montgomery County.
- Is a dependent student and at least one of his or her parents or legal guardians has been a resident of Montgomery County for at least 12 consecutive months preceding enrollment.
- Is gainfully employed on a self-sustaining basis and resides in Montgomery County and is enrolled on a part-time basis (less than 12 credit hours). The spouse who is a full-time homemaker will also be considered gainfully employed.
- Has a parent or spouse who has accepted full-time employment and has established a place of residence in Montgomery County as of the first day of the term the student enrolls.

Specific Exceptions

The student, his or her dependents, and spouse will be considered residents of Montgomery County if the person:

- Is on active duty in the armed forces of the United States and is assigned to Wright-Patterson Air Force Base.
- Entered active duty in the armed forces of the United States as a resident of Montgomery County and can provide proof of eligibility to vote in the county and intends to maintain Montgomery County as the legal residence.
- Has been employed as a migrant worker in Montgomery County and has worked in the county at least four months during each of the three years preceding the date he or she enrolled.

If a student has been classified as a non-resident of the State of Ohio or Montgomery County, he or she must apply for reclassification when the student meets the qualifications for residency. A change of address does not automatically change residency.

The student must present evidence to support the request for reclassification, including proof of place of residence, place of employment, and sources of financial support. If the student is reclassified from nonresident to resident of Ohio or Montgomery County, he or she will be eligible to pay the resident fees from the date of reclassification; the reclassification will not be retroactive to any previous term.

Information concerning residency, and residency forms are available at https://www.sinclair.edu/services/welcome-center/rsr/forms/change-of-residency/. Requests for reclassification and supporting documents must be submitted prior to the deadline listed on the residency application.

Residency information obtained from the application for admission (more than the current address) will be used to determine residency for tuition purposes. If students feel they qualify as a State of Ohio or Montgomery County resident, contact the Registration & Student Records office, (937) 512-3000, for specific policies, procedures, time frames, and required documentation.

Selective Service Fees

Ohio law requires that all males who are not in compliance with the federal Selective Service laws pay out-of-state fees. All males who are 18 through 25 years of age must be registered with Selective Service. Men who are on active duty in the U.S. military service are exempt. Students who are not in compliance will be assessed out-of-state fees and, if the fees are not paid within the specified period, the students may be withdrawn from all classes.

Students may register at any U.S. post office or at: **www.sss.gov**

For information concerning status, call (708) 688-2576, Monday-Friday, 8:30 a.m.-6:45 p.m.

Sexual Harassment and Sex Discrimination Policy & Procedure (Title IX)

Policy

1. Sinclair fully complies with Title IX of the Education Amendments of 1972, and its implementing regulation, 34 C.F.R. Part 106. Title IX provides:

- No individual in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any Sinclair education program or activity receiving Federal financial assistance.

2. Sex discrimination is conduct or procedure which has the purpose or effect of restricting or denying access to opportunities, programs, or resources on the basis of sex, and is prohibited at Sinclair.
3. All at Sinclair shall work and study in an environment free of discrimination on the basis of sex, including sexual harassment. All Sinclair students and employees are protected under and subject to the guidelines of Sinclair's Title IX policy and related procedures.
4. There are six types of Title IX Sexual Harassment prohibited at Sinclair:

- Quid pro quo sexual harassment,
- Unwelcome conduct sexual harassment,
- Sexual assault,
- Dating violence,
- Domestic violence, and
- Stalking on the basis of sex.

5. Sinclair shall have a full U.S. Department of Education-compliant set of procedures to duly and fairly process and adjudicate accusations, questions, complaints, false accusations, retaliation, and the proactive training needed related to Title IX-prohibited behavior.
6. Sanctions and corrective actions for non-compliance with Sinclair's policies and procedures will be applied and based on the severity of the offending actions in each case.
7. The President shall establish procedures to administer this Policy in compliance with applicable statutes, regulations, and official guidance. The procedures shall include the designation of a Title IX Coordinator and periodic training of employees and students.
8. The President of Sinclair shall periodically report to the Sinclair Board of Trustees the aggregate results of processing Title IX cases at Sinclair.

Scope

This Procedure applies to the Prohibited Conduct, defined below, that takes place within Sinclair's educational programs or activities within the United States. For purposes of this Procedure, Sinclair's "educational programs or activities" include locations, events, or circumstances over which Sinclair exercises substantial control over both the Respondent, as defined below, and the context in which the Prohibited Conduct occurred. For the conduct to fall under this Procedure, the Complainant must be participating in or attempting to participate in the education program or activity of Sinclair at the time the formal complaint is filed.

Designation of Title IX Coordinator

Sinclair has designated and authorized specific employees to coordinate its efforts to comply with Title IX. This includes but is not limited to a Title IX Coordinator. For purposes of this Procedure, the term "Title IX Coordinator" includes any Deputy Title IX Coordinator, unless otherwise specified.

The Title IX Coordinator is responsible for overseeing the investigation of complaints under this Procedure, and monitoring/coordinating the response of other campus offices that may respond to complaints of sex-based offenses under this Procedure, including complaints of retaliation for filing a complaint on the basis of this Procedure.

In addition to addressing complaints of Prohibited Conduct by specific individuals under this Procedure, the Title IX Coordinator also facilitates Sinclair's response to complaints or reports that Sinclair policies or practices discriminate on the basis of sex, gender, gender identity, gender expression, or sexual orientation. The Title IX Coordinator will review such concerns and, using procedures the Title IX Coordinator determines to be appropriate given the circumstances, 1 including referral to other employees or offices at Sinclair, work to address the complaint or report and ensure that Sinclair's policies and practices do not discriminate on the basis of sex.

The contact information for the Title IX Coordinator is:
Title IX Coordinator
444 West Third Street
Dayton, Ohio 45402
Office Phone: 937-512-2961
Office Fax: 937-512-2777
Email: TitleIX@sinclair.edu

Procedure

Sinclair's Title IX procedures can be found online at https://www.sinclair.edu/title-ix.
To download Sinclair's procedures, click this link.

Short-Term Certificate Programs

To qualify as a short-term certificate (1-29 credit hours) candidate, a student must:

- Fulfill requirements of the short-term certificate program and the institution.*
- Complete the minimum program hours.**
- Maintain a cumulative grade point average of at least 2.0 either overall

or

- Maintaining a GPA of at least 2.0 within their program of study.

*Generally, a student meeting all short-term certificate (STC) requirements in effect at the time they began their coursework for an academic program will qualify for a credential.

**Generally, the requisite semester hours must be earned at Sinclair College or through other arrangements with other regionally accredited institutions or contractual relationships approved by industry partners and educational entities. To qualify for a short-term certificate of completion consisting of 18 credit hours or less, students must complete at least 50% of Sinclair course work at Sinclair Community College within the area of study to fulfill the institution's requirements. Students are required to take a minimum of 9 semester hours of Sinclair College coursework to complete a short-term certificate consisting of 19 hours or more.

Due to the specialized structure of short-term certificates consisting of 19-29 credit hours, students may be required to take a minimum of 9 semester hours of Sinclair coursework within the area of study to fulfill institutional requirements.

If the short-term certificate is a lecture/lab combination or only 1 course is required, 100% of the coursework must be completed at Sinclair.

Disclaimer: *If the short-term certificate is regulated by an agency outside of Sinclair, then the student must complete the minimum curricular requirements as defined by that agency.*

For more information about degree related policies mandated by the Ohio Department of Higher Education (ODHE),

visit: https://www.ohiohighered.org/content/short_term_certificate_program

Smoking, Tobacco, Related Products Prohibition Policy

Policy Statement:
Smoking and the use of any smokeless tobacco products, electronic cigarettes or products intended to mimic tobacco products are prohibited on any property owned, leased or controlled by Sinclair Community College. This policy does not prohibit the use of nicotine patches, pills, gum or other products specifically designed to assist individuals with the cessation of smoking or tobacco use.

Scope:
This policy applies to all Sinclair employees, Sinclair students, and visitors to Sinclair facilities.

Enforcement:
This policy will be enforced by Sinclair police officers and security officers.
Employees or students who violate this policy may be subject to discipline under applicable college policies or procedures.
Visitors who violate this policy may be required to leave the property and/or be issued a notice of trespass.

Responsibility:
Employees, students and visitors shall be knowledgeable of this policy and adhere to its provisions.
References:

- Ohio Revised Code 3794.01 - 3794.09
- *Revised by Board of Trustees - June 24, 2016; revisions effective January 1, 2017*
- *Revised: November 2013*
- *Revised: December 2008*
- *Policy originally approved by Board of Trustees - December 12, 1995*

Standards of Academic Progress: Academic Intervention, Probation, Dismissal
Students who earn/maintain a GPA of 2.0 or higher are defined, by college policy, to be in good standing.
Cumulative GPA is calculated each term a student is enrolled in courses for credit. The grade point average is computed by dividing the total points earned by the total credit hours attempted.
Semester GPA is calculated each term a student is enrolled in courses for credit. The grade point average is computed by dividing the points earned for the term by the credit hours attempted for the term.

- All students must maintain a minimum academic performance of at least a 2.0 cumulative GPA (2.0 or greater).
- Students who do not meet the 2.0 requirement will be placed on the following academic standards:
    - First semester cumulative GPA below 2.0 GPA - academic intervention
    - Second consecutive semester cumulative GPA below a 2.0 GPA - academic probation
    - Third consecutive semester cumulative GPA and semester GPA below a 2.0 GPA - academic dismissal

Note: Students whose semester GPA is 2.0 or greater, but whose cumulative GPA would cause them to be dismissed, will be granted an additional probationary period for each semester in which the semester GPA is 2.0 or greater.

- Students will be returned to good academic standing when a cumulative GPA of 2.0 or greater is earned.
- Students who are on academic intervention or probation will receive correspondence that refers them to academic advisors for course permissions and the Welcome Center for academic assistance and information on the impact to financial aid.
- Students who are on academic intervention or probation must consult with an academic advisor to register or add classes.

Student Religious Accommodation Policy

I. INTRODUCTION
This Policy is adopted by the Board of Trustees of Sinclair Community College ("Sinclair") in compliance with Ohio Revised Code Section 3345.026, known as "The Testing Your Faith Act." This statute requires each state institution of higher education to "adopt a policy that reasonably accommodates the sincerely held religious beliefs and practices of individual students with regard to all examinations or other academic requirements and absences for reasons of faith or religious or spiritual belief system."
The requirements set forth in Ohio Revised Code Section 3345.026 and this Policy are in addition to the general obligations Sinclair has under the Constitutions and laws of the United States and the State of Ohio, and this Policy is not intended to limit or restrict Sinclair's compliance or students' rights under those provisions.

II. SCOPE AND APPLICABILITY
This Policy applies to all Sinclair students enrolled in courses for academic credit and to the instructors teaching those courses. For purposes of this Policy "instructor" includes tenured or tenure track faculty, annually contracted faculty, adjunct instructors (regardless of whether they are employed directly by Sinclair), and any other employee, such as a program coordinator or laboratory technician, serving as an instructor for any course or portion of a course for which Sinclair awards academic credit.

III. STUDENTS' RIGHTS UNDER THIS POLICY TO RELIGIOUS ACCOMMODATION
A. A student shall be permitted to be absent for up to three (3) days each academic semester to take holidays for reasons of faith or religious or spiritual belief system or participate in organized activities conducted under the auspices of a religious denomination, church, or other religious or spiritual organization. Sinclair shall not impose an academic penalty as a result of a student being absent as permitted in this Policy.
B. Instructors shall include in each course syllabus a statement regarding this Policy. The statement shall include both of the following:
1. A description of the general procedure for requesting accommodations (Section IV. A-D, below.
2. The following contact information for Sinclair's Associate Provost, who is designated as the Sinclair employee a student may contact for more information about this Policy and for processing student grievances/complaints as set forth below:
Associate Provost
444 West Third Street
Dayton, Ohio 45402-1460
937-512-2522
Provost@sinclair.edu

IV. GENERAL PROCEDURE FOR REQUESTING RELIGIOUS ACCOMMODATIONS
A. All Instructors must provide students with alternative accommodations regarding examinations and other academic requirements missed due to an absence described under this Policy to take holidays for reasons of faith or

religious or spiritual belief system or participate in organized activities conducted under the auspices of a religious denomination, church, or other religious or spiritual organization if both of the following apply:
1. The student's sincerely held religious belief or practice severely affects the student's ability to take an examination or meet an academic requirement. 2. Not later than fourteen (14) days after the first day of instruction in a particular course, the student provides the instructor with written notice of the specific dates for which the student requests alternative accommodations.
B. The instructor shall accept without question the sincerity of a student's religious or spiritual belief system.
C. The instructor shall keep requests for alternative accommodations confidential. However, in accordance with the Family Educational Rights and Privacy Act, 20 U.S.C. 1232g, 34 C.F.R. Part 99, this requirement of confidentiality does not prevent the disclosure of records and information about any request for accommodations among Sinclair officials who have a legitimate educational interest in that information.
D. The instructor shall schedule a time and date for an alternative examination or assignment, which may be before or after the time and date the examination or other academic requirement was originally scheduled, but shall do so without prejudicial effect.
E. For a course that includes clinical experience, internship, or other supervised activities outside the classroom, the instructor of the course and/or the academic department chair or program coordinator or other Sinclair employee involved in the outside activity, will assist as needed in communicating and coordinating with the outside preceptor, supervisor, or other persons involved in scheduling or supervising the student's outside activities to provide accommodations under this Policy.

V. STUDENT GRIEVANCE PROCEDURE

A. A student who has a grievance with regard to Sinclair's implementation of this Policy may submit a complaint using the Academic Complaint Form available on Sinclair's website at https://www.sinclair.edu/services/help/complaint/ under "Academic Concerns."
B. The complaint must include the following information:
Student's Name
Student's Tartan ID Number
Course Name and Number and Section Number
Instructor's Name
Copies of any written communications or records about the accommodation request and the substance of the student's complaint.
C. The complaint will be forwarded to the Associate Provost, who will notify the Provost of each complaint received. The Provost may designate a Sinclair employee other than the Associate Provost or an outside consultant to review the complaint.
D. The Associate Provost or other person designated to review the complaint will communicate with the student, the instructor, and others who may have relevant information about the request for accommodation and the issues stated in the complaint.
E. The student, the instructor, and any other Sinclair employees shall cooperate with and respond promptly to the Associate Provost or other person designated to review the complaint.
F. The Associate Provost or other person designated to review the complaint will communicate the results of the review to the student in writing.
G. The results of the review of a complaint may include a requirement that the instructor provide accommodations to the student, including but not limited to opportunities or extensions of time for completion of exams or coursework, adjustment(s) in grade(s) (to be made in consultation with the instructor and the Chair of the Department of the course(s) at issue in the complaint), or such other accommodations that the Associate Provost deems appropriate.

VI. LIST OF MAJOR RELIGIOUS HOLIDAYS

A. Sinclair will post both of the following in a prominent location on the Sinclair web site:
1. A copy of this Policy;
2. A non-exhaustive list of major religious holidays or festivals for the next two academic years.
B. The non-exhaustive list of major religious holidays will be based on the list provided by the chancellor of higher education to each state institution of higher education and may include additional holidays designated by Sinclair's President.
C. Each time the list is posted, printed, or published it shall include a statement that the list is non-exhaustive.
D. The list may not be used to deny accommodation to a student for a holiday or festival of the student's faith or religious or spiritual belief system that does not appear on the list.
E. No inclusion or exclusion of a religious holiday or festival on the list posted by Sinclair, shall preclude a student from full and reasonable accommodations for any sincerely held religious beliefs and practices with regard to all examinations or other academic requirements and absences for reasons of faith or religious or spiritual belief system provided under this section.

VII. AMENDMENT OF POLICY

Sinclair's President may amend this Policy as the President deems appropriate, so long as the Policy maintains all of the elements required by Ohio Revised Code Section 3345.026. If any amendment is made, the President shall provide a copy of the amended Policy to the Board of Trustees, cause it to be posted on Sinclair's website, and communicate it to faculty and other employees involved in the administration of the Policy.

The Tartan Card (Student I.D.)

The Tartan Card, proof of student status, is required to use college services or participate in college sponsored activities. The card electronically stores information about the students' enrollment status.
To get the first Tartan Card at no charge, present a term statement and another photo I.D.to Registration and Student Records, the Dayton Campus Welcome Center (First Floor, Building 10) or at any regional centers.
Card readers located on Sinclair campuses scan the information and provide access for such transactions as checking out materials in the Library and using the Physical Activity Center (PAC).
There is a $5 replacement fee for damaged, lost, or stolen cards.

Transcripts

For official transcripts of academic work completed at Sinclair, choose from these methods:

- Online--For the quickest way to order transcripts, visit www.sinclair.edu/transcripts. Transcripts ordered online will be produced and sent in one to two (1-2) business days.
- Mail--Mail the transcript request found on the Sinclair web page to Registration & Student Records office. Include the student I.D. number, birth date, the term last attended at Sinclair, legal signature, day time telephone number, and payment. Cost is $5.00 per mailed transcript. Transcripts ordered by mail will be produced and mailed in five business days.
    - Payment for transcripts can also be made at the Bursar office or at any of the regional centers.
- A financial hold on your student account will prevent you from receiving transcripts (with the exception of sending to employer or potential employer).

Waitlisting

Students can electronically "waitlist" for the next available seat. As a vacancy becomes available, the next students on the waiting list will be automatically registered for the section.

Waitlist Feature Overview

- You can join a waitlist for a full class and hold your place in line.
- If a seat opens, the system will **automatically register you** for the class.
- You'll be notified through your **Sinclair email**.

Important Responsibility

- By joining a waitlist, you're agreeing to **pay for the class if you get enrolled**.

Student will be notified if seats are not available before the course section meets.

For more information visit: **www.sinclair.edu/services/registration**