



**COMMUNITY
COLLEGE**

College Catalog
Academic Year 2024-2025



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

Contents

Message from the President	3
Mission/Values/Strategic Plan	4
EEOC/Disability and Diversity	5
History of the College	6
Becoming a Student	7
Student Services	11
Student Rights and Responsibilities	12
General Education Goals	13
Class Locations	14
College Learning Center Information	16
Associated University Library Information	17
Academic Freedom Statement	18
Degree Information	19
Associate of Arts in General Studies Degree Program Description and Outcomes	20
Associate of Applied Business in Management and Entrepreneurial Thinking	20
Associate of Applied Science in Criminal Justice	21
Associate of Applied Science in Industrial Technology	21
Associate of Applied Science in Information Technology Network Systems	22
Associate of Applied Science in Information Technology Software Development	22
Associate of Applied Science in Surgical Technology	23
Certificate in Automated Electrical Systems	24
Certificate in CNC Operator & CNC Programmer	24
Certificate in Corrections	25
Certificate in Industrial Maintenance	25
Certificate in IT: Mobile App Development	26
Certificate in IT: Programming	26
Certificate in Patient Care Technician	27
Certificate in Welding	27
Associate of Arts in General Studies Degree Program Requirements	28
Associate of Applied Business in Management and Entrepreneurial Thinking Program Requirements	30
Associate of Applied Science in Criminal Justice Program Requirements	31
Associate of Applied Science in Industrial Technology	32
Associate of Applied Science in IT Network Systems Program Requirements	33
Associate of Applied Science in IT Software Development Program Requirements	35
Associate of Applied Science in Surgical Technology Program Requirements	36
Certificate in Automated Electrical Systems	37
Certificate in CNC Operator	37
Certificate in CNC Programmer	37
Certificate in Corrections	37
Certificate in Industrial Maintenance	38
Certificate in IT: Mobile App Development	38
Certificate in IT: Programming	38
Certificate in Patient Care Technician	38
Certificate in Welding	39
Definition of Degree Level and Prerequisites	40
Course Descriptions	41
Board of Trustees	54
Faculty/Staff	54



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

Welcome to EC3-Erie County Community College!

As Pennsylvania's newest community college, EC3 serves all of Erie County with sites located in downtown Erie, Millcreek and Summit Townships, the city of Corry and, of course, online. We are the community's college and are here to help you with your next steps. Whether that first step is one that helps prepare you to transfer to a four-year school, to jump right into a high-wage career, to brush up some skills, or to explore new subjects, EC3 has classes and training designed for you.

We are here to serve you! EC3 is for everyone: first-generation college students, recent high school graduates, working parents, and those returning to school. We educate veterans who have returned from deployment and are ready to embark on their next career. We welcome adult learners who are entering the world of higher learning for the first time and those who are coming back after a long break looking for a new career.

Our students are as diverse as Erie County itself -- with students coming from everywhere in the County. Diversity is a point of pride for EC3; we will listen to you, understand your unique life circumstances and experiences, and work hand-in-hand with you to reach all of your educational goals.

EC3 is built differently from other institutions of higher learning. We support, challenge, and encourage students to make the best of themselves so that they can give back and make Erie County even stronger. We partner with business and industry leaders to provide skilled workers for the ever-changing world. We truly meet students where they are, listen to their dreams, and help take them where they want to be. Let us empower you!

Let me tell you my own story. A kid from central Illinois from a family with no college education is not supposed to become a theatre professor and then a dean and then an academic administrator. And he certainly isn't supposed to become a college president. I had many barriers in my educational path. Nevertheless, I persisted. My story began one fall semester when I went to my local community college and once I got there, I just started. Then I stayed.

My community college gave me a just start and a chance to do things that no one in my family had done. It helped me realize dreams that were so far beyond me as to be unfathomable. My teachers looked past the big chip on my shoulder and saw something else there. And they helped me to see it too. That's what a community college is supposed to do: to provide a path for even the most economically disadvantaged and academically underprepared student to achieve something bigger. When afforded a just start, all students have that chance.

We are excited to work with you, and we are glad that you've chosen to make EC3 your educational home. This is your college and you belong here!

Best,

Chris Gray
Founding President

*President Gray as a
Community College student*





ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

Mission

Erie County Community College exists to develop dynamic and diverse learners to advance their quality of life and Erie County's economic growth through affordable access, innovative education and workforce training.

Vision

EC3 uplifts the region as a catalyst to transform lives, to promote social and economic stability in both rural and urban areas, and to develop lifelong learners and a strong workforce that contributes to a thriving economic landscape for all.

Values

Diversity
Community

Innovation
Excellence

Employability
Adaptability

Strategic Priorities

- **Access**- Strengthen and expand access to county residents and area partners by increasing awareness of educational opportunities that are reflective of student, business, and community needs.
- **Student Success**- Promote a student-centered environment that focuses on student achievement, engagement, personalized pathways, holistic student support, and individualized excellence.
- **Academic Excellence**- Deliver a high-quality education and measurable learning outcomes for our students by creating an innovative and engaging learning environment within a supportive, collegial culture.
- **Partnerships**- Nurture collaborative relationships with public and private K-12, universities, businesses, and community partners to develop a cohesive educational strategy that ensures seamless alignment and builds a skilled workforce that leads to economic mobility and increased educational attainment.
- **Workforce Innovations**- Achieve local, regional and national recognition as a premier college of choice for providing workforce training by delivering high-quality programs and instruction that enable students to grow, succeed, and stay globally competitive.





ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

Policy II.A.2: Equal Employment Opportunity Policy

This policy establishes and outlines Erie County Community College's clear commitment to the principle of equal employment opportunity. In making this statement, the College is recognizing both a moral and legal responsibility. Under the direction of the President, the Diversity Officer shall ensure compliance with this policy. The Diversity Officer, and all other staff in a supervisory capacity, shall implement this policy.

Statement of Commitment

EC3P is committed to and affirms a policy of equal employment opportunity to all applicants, employees, and students without regard to race, color, religion, sex, sexual orientation, age, national or ethnic origin, disability, genetic information, gender identification, status as a disabled or Vietnam era veteran, or any other legally protected characteristic and to provide each and every individual with the ability to work in a safe, productive and professional work environment that is free from discriminatory practices.

In achieving equal opportunity, we commit ourselves to:

- Recruit, hire, train, and promote the most qualified persons without regard to race, color, religion, sex, sexual orientation, age, national or ethnic origin, disability, status as a disabled or Vietnam era veteran, or any other legally protected characteristic.
- Ensure that promotion decisions are in accordance with equal employment opportunity requirements by imposing only valid, job-related requirements for promotional opportunities.
- Ensure that all personnel actions relating to compensation, benefits, transfers, retention, terminations, training, social and recreational programs and education are administered in a nondiscriminatory manner.

Classroom Accommodations

EC3 is committed to providing a welcoming, supportive, and inclusive environment for students with disabilities. If you anticipate or experience physical or academic barriers based on disability, please contact the Academic and Disability Counselor at accommodations@ec3pa.org, to schedule a confidential appointment to review accommodation requests. The college will require documentation regarding the student diagnosis and recommended accommodations.

Types of documentation can be an IEP, Section 504, Psychological Evaluation, and/or Letter from a certified provider.

Reasonable accommodation(s) will be determined by the College.

Diversity Statement

We value human diversity in all its richly complex and multi-faceted forms, whether expressed through race and ethnicity, culture, political and social views, religious and spiritual beliefs, language and geographic characteristics, gender, gender identities and sexual orientations, learning and physical abilities, age, and social or economic classes. We respect the value of every member of the college and everyone is encouraged to share his or her unique perspective as an individual, not as a representative of any category. Multicultural and intercultural awareness and competencies are key leadership skills and we intend to present opportunities that respect and celebrate diversity of thought, background, and experience. College is supposed to challenge assumptions and to provide new and sometimes uncomfortable ways of looking at issues, but if you feel



uncomfortable regarding content or perspectives that are presented or discussed by professors, guest speakers, or others, we encourage you to contact one of your instructors or College administrators immediately so that we can discuss those feelings. Also, as a means of respect, please let us know if you would like the College to refer to you by a preferred name (or the pronunciation of your name) or preferred gender pronouns while on campus and in academic and social contexts. Please be aware that your official name will be used for official college business such as your student account or any official information sent out on behalf of the College. Your suggestions on how to incorporate diversity in this college in a meaningful way are appreciated and encouraged. You can contact the diversity officer at Diversity@ec3pa.org or 814-413-7007.



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

HISTORY

Until recently, Erie County, Pennsylvania was the only metropolitan area in Pennsylvania without a community college. In October, 2016, a non-profit organization named Empower Erie was created to study the feasibility of a community college. Funded by the Erie Community Foundation, the Erie County Gaming Revenue Authority, the Susan Hirt Hagen Fund for Transformational Philanthropy, and the Erie County Council, Empower Erie produced a feasibility study on May 8, 2017. This study demonstrated conclusively that a community college was needed in Erie County and that the college would have significant positive impacts on the future of the County.

With Erie County serving as the legal sponsor of the College, an application for a new community college was submitted to the Pennsylvania Department of Education (PDE) in June, 2017. An updated application was filed in 2018. However, it was not until July, 2020 that the Pennsylvania Department of Education (PDE) held a two day evidentiary meeting to discuss the merits of a new community college in Erie, PA. That meeting ended with an initial approval of 9-6 by the PDE Board. The final vote to approve the community college occurred on July 8, 2020 with a 10-5 approval.



Upon receiving approval from the State Board of Education in July 2020, Erie County Community College prioritized the necessary steps to open for the inaugural 2021-22 school year. In accordance with PA

Law 24 P.S. Sec.19-1904-A, Erie County Council and the County Executive had 60 days to appoint a Board of Trustees in accordance with the PDE's "Guidelines for the Establishment of Public Community Colleges." Nine Trustees were appointed by the Erie County Council and convened for the first time on September 8, 2020.

PDE's "Guidelines for the Establishment of Public Community Colleges" also directs a new community college to have a planning year in which to develop all aspects of the operational plan for the college and to achieve PDE approval of the 120-Day Plan. The Erie County Community College started the planning year in September 2020 (Inaugural Board of Trustees Meeting) through August 2021. Work began on the 120 Day Plan in November 2020 and it was submitted to the PDE in April of 2021. It was subsequently approved by the Department of Education.

The Board of Trustees established a strong committee structure supplemented by a team of higher education experts and advisors to expedite progress on multiple fronts, including development of curriculum, hiring of personnel, identification of initial sites, and development of policies and best practices. In late January 2021, the Board of Trustees announced the hiring of Dr. Judith Gay, as interim president to provide leadership and expertise to the effort. Dr. Gay, who served as vice president for strategic initiatives and chief of staff for the Community College of Philadelphia, brought a wealth of experience and insight to Erie County Community College.

By the summer of 2021, the College had added administrative staff, developed major information technology systems, hired the first four full time faculty: Dr. Leatra Tate, Dr. Jennifer Robinette, Alex Wheaton, and Kimber J. Forrester who in turn aided in the development of curriculum, and designed a website. Student enrollment began in August and the EC3 began its first semester of operation on September 1, 2021.

On June 3rd, 2023 EC3 celebrated the accomplishments of its first 28 graduates. The Gov. of Pennsylvania was the Commencement Speaker and gave a stirring speech to the assembled crowd.





ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

BECOMING A STUDENT

Admission

Erie County Community College (EC3) is an open enrollment institution, with rolling admissions. Everyone is accepted and there is no application deadline.

Admission to Erie County Community College is open to the following individuals:

- High school graduates, General Equivalency/Commonwealth Diploma recipients, and transfer applicants from another college or university.
- Anyone over the age of 18 who can demonstrate the ability to benefit from post-secondary education.
- Persons not meeting the above criteria may be considered for admission on an individual basis.

Admission to EC3 does not imply or guarantee admission to any specific program of study for which more restrictive admission requirements are established in compliance with institutional expectations, accrediting-body standards, Commonwealth rules and regulations, or federal guidelines and statutes. Applicants for such programs must follow the prescribed steps for admission in each program.

The application for admission is found here: <https://www.ecccpa.org/apply/>.

Academic Placement

Students' academic preparedness for different courses is assessed using various methods to ensure that students are placed in the level of classes in which they will succeed. The College will include non-cognitive assessments as part of the placement process. These assessments and measures could include but not be limited to:

- Placement test results
- High School transcripts
- AP exam scores
- GED scores
- SAT scores
- ACT scores
- College transcripts
- CLEP examination scores
- TOEFL examination scores



Students are offered the option to take the EdReady Knowledge Assessment in a non-proctored, self-paced environment. Students will be permitted multiple attempts at these low-stakes, adaptive assessments to modify their placement. <https://www.ecccpa.org/academic-placement/>.

The following students shall be exempt from placement testing:

- Students who have prior academic experience such as an earned degree (associate's or higher) from an accredited institution
- Students who are degree candidates at another institution (visiting students)
- Students who have transferred 12 or more credits to EC3 from another institution where they received a GPA of 2.0 or above
- Students who are readmitted to the College and have received a GPA of 2.0 or above upon the completion of 12 or more credits shall be exempt from placement testing.





ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

BECOMING A STUDENT (continued)

Transfer Information

EC3 welcomes students who have completed coursework at other institutions and who wish to continue their studies at EC3. If students are transferring from another college, the EC3 Registrar's office will evaluate credit to be transferred based on the degree they intend to pursue at EC3.

EC3 will evaluate and accept credits earned at another college or university accredited by an institutional accrediting organization that is recognized by the Council for Higher Education Accreditation (CHEA). Credits earned at institutions that are not accredited may be accepted upon consideration of course equivalencies, including expected learning outcomes of the institution's curricula and standards. Credit may be awarded for courses from an institution, whether or not similar courses are offered at Erie County Community College. These courses must satisfy both general elective and graduation requirements.



No more than one-half of the credit requirements for a degree, certificate or diploma will be applied from another institution.

Only courses with a grade value of 2.0 (C) or higher will be considered for transfer. Courses with a grade value of "pass" or "satisfactory" will be accepted as transfer credits when the transcript states that a "pass" or "satisfactory" is equivalent to a C or above. Transfer courses will be awarded credit with no grade value (quality points) assigned.

Developmental coursework is not accepted for transfer credit but will be transcribed for prerequisite purposes.

Specific degree programs may establish additional guidelines for acceptance of transfer credits based on time limitations.

Transfer credit will not be granted if granting such credit is contrary to the requirements of any recognized local, state, or federal accrediting or certifying agencies. Find more information at <https://www.ecccpa.org/transfer-information/>.

Foreign educational credentials must be evaluated initially by a recognized evaluation and/or translation service.

Registration

Currently enrolled and previously enrolled students in good academic standing in credit degree or certificate programs should utilize online registration to enroll in courses. Students may also register in person.

Students will be permitted to attend only those sections of courses for which they have officially registered and paid. Students are not permitted to sit in on classes for which they have not registered.

It is the student's responsibility, in consultation with appropriate College staff or program faculty, to make certain that any registration changes will fulfill the degree requirements. Veteran students, students who are active military, and military dependents are afforded priority registration in accordance with Pennsylvania state requirements.

Each term session has specific enrollment deadlines. For more information on these dates, see the 2023-2024 Important Enrollment Dates chart under the [Academics](#) tab on the website.



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

BECOMING A STUDENT (continued)

Student Course Load

A full-time student is one taking 12 or more credit hours in the course of one academic semester. Each 16-week long fall or spring semester will consist of one 16-week session with the potential to have additional shorter sessions. It is not recommended that students take more than two courses, 6-7 credit hours, in 8-week sessions. Students expecting to fulfill the requirements for an associates degree within two years should successfully complete 15 to 17 college level credit hours each semester or complete summer courses.

Tuition and Fees

EC3 is among the most affordable institutions of higher education in the state. Our tuition and fees are outlined here: <https://www.ecccpa.org/tuition-and-fees/>. Until EC3 has received regional accreditation, the institution is not eligible for Federal student aid. Our students who have financial barriers can speak to [Advising](#) and apply for additional assistance provided by Erie County.

Tuition rates at Erie County Community College are determined by a student's domicile. Domicile is defined as "the place where one intends to and does, in fact, permanently reside."

An applicant or student under the age of 18 is presumed to have the domicile of their parent(s) or guardian. A minor may prove emancipation and independent domicile through convincing evidence.

Commonwealth of Pennsylvania Residency

To establish Commonwealth residency, one must demonstrate continuous residence in the Commonwealth for a period of twelve (12) months prior to registration as a student.

Erie County Residency

To establish Erie County residency, an applicant must meet all of the following requirements:

1. Must be a citizen or a permanent resident alien of the United States or be admitted on an immigrant visa to the United States.
2. Must have resided in Pennsylvania for at least 12 months prior to registration.
3. Must have resided in Erie County for at least 12 months prior to registration.

The following documentation may be requested to provide evidence toward meeting the residency policy requirements:

Important Note: Name and address must be present on all documents.

1. Current apartment lease or mortgage from the permanent residence.
2. Copy of a city/state tax bill.
3. Copies of bank statements, automobile registration, or other registered property.
4. Current Pennsylvania driver's license or state ID.
5. High school transcript showing an Erie County home address.
6. Pay stubs with Erie County home address showing payment of Erie County taxes.

Cases will be decided on the basis of documentation submitted, with qualitative rather than quantitative emphasis. The determination of residency in each case is one of the subjective intentions of the student to reside indefinitely in this Commonwealth and in the County.

International Students

International students holding an F-1 or J-1 visa cannot be classified as legal residents of Erie County or Pennsylvania.



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

BECOMING A STUDENT (continued)

United States Veterans, United States Military and Civilian Personnel, and Their Dependents

All eligible veterans of the United States Armed Forces and their spouses and dependents will receive the in-county residency rate for tuition. For veterans to be eligible, they must have served in the United States Armed Forces, including reserve component or National Guard, and must have been discharged or released from service under conditions other than dishonorable.

All active United States military personnel, including their spouses and dependents, who are assigned to an active duty station in Pennsylvania and reside in Pennsylvania will receive the in-county residency rate for tuition. This provision remains in effect for each member, spouse or dependent while continuously enrolled at the College, even if there is a subsequent change in the permanent duty station of the member to a location outside of Pennsylvania. All active United States civilian personnel, including their spouses and dependents, who reside in Pennsylvania or who are employed or transferred to a United States Department of Defense facility in Pennsylvania and reside in Pennsylvania will receive the in-county residency rate for tuition. This provision remains in effect for each member, spouse or dependent while continuously enrolled at the College, even if there is a subsequent change in the assigned employment of the member to a location outside of Pennsylvania.

All active military personnel, including the spouses and dependents will receive the in-county residency rate for tuition for online courses. Veterans and active military and civilian personnel must verify their affiliation with the United States Armed Services. Spouses and dependents must verify the veteran, military or civilian member's status with the United States Armed Services and provide proof of dependent status.

Change of Residency

Change of residency for tuition and mailing purposes is the sole responsibility of the student. Any changes made to residency after the last day of the term's refund period will be reflected in the following semester.

Payment and Refunds of Tuition and Fees

The Board of Trustees sets tuition and fees and reserves the right to change them without notice. Tuition may vary based on residency. To fund the cost of student publications, student clubs and organizations, and other special services and activities for students, a general College fee for credit courses has been established. Some credit courses offered by the College are subject to additional course fees. These may include courses with laboratories, clinical instruction or additional instructional hours. Other fees may be assessed to include but are not limited to fees for late registration, credit by examination, prior learning assessment, student identification cards, technology use, transcript processing and on-line learning.

Refunds

It is the student's responsibility to submit an official drop form or drop classes via the web, even in cases of non-attendance. Students who drop credit courses prior to the start of the second week of classes for 16-week classes or within the first three (3) calendar days of a shortened session will not incur any charges.

The first day of the term marks the beginning of the refund policy regardless of the first scheduled class day for any particular student. Students who drop after the start of the second week but before the equivalent first three weeks (first 20 percent) of the term will be charged 50 percent for tuition and applicable fees and will be financially responsible for the charges incurred. Students who drop classes during the equivalent fourth week and thereafter will be charged 100 percent of tuition and applicable fees and will be financially responsible for the charges incurred.

A full refund of tuition and fees will be made if the College cancels a class.

Students may request an exception to the above refund policies in the case of extenuating circumstances.



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

STUDENT SERVICES

EC3 aims to provide student services which meet the needs of our students and support them to successfully complete coursework. The college is committed to removing barriers to student success and facilitating student connections, to faculty, staff, and to other students. Many different support services are offered which are outlined in the next sections.

Advising/Academic Counseling

Academic and career advising are available to each student upon request. Faculty and staff are aware of course and program requirements for each program offered at the institution, curriculum information is available on the website.

Advisors work closely with students to develop educational plans, review program requirements, and select appropriate courses. Advisors also assist students with understanding their program of study in terms of personal, academic, and career goals and expectations associated with those goals. Students are strongly encouraged to be an active part of the advising relationship by engaging with their advisor throughout their time at the College. Students work with advisors to plan for the transfer process by understanding policies and procedures, and referrals to college resources.

The ultimate responsibility for making decisions about personal goals and educational plans rests with each student. Advisors support and assist by helping to identify and assess options. Students who are identified as needing greater emotional, psychological, or other supports will be referred to appropriate support services in the community.

It is the student's responsibility, in consultation with appropriate College staff or program faculty, to make certain that any registration choices fulfill the degree requirements.

Tutoring/Academic Support

Tutoring and academic supports are available to students as needed. When possible, students will be grouped together to address common academic concerns. Workshops addressing study habits and academic needs are offered on a regular basis, and the Learning Center provides classroom visits, lectures, and individual consultations as a resource for research and writing. Students can request tutoring and academic support from any student services personnel, including the Learning Support Specialist.

Learning Accommodations

Any student with a documented learning difference who needs academic accommodations should contact the College Counselor for Academics and Disabilities, accommodations@ec3pa.org to schedule a confidential appointment to review accommodation requests. The College will be looking for documentation regarding the student diagnosis and recommended accommodations. Types of appropriate documentation can be an IEP, Section 504, psychological evaluation, and/or letter from a certified provider.

Reasonable accommodations will be determined by the College.

Basic Needs Support

EC3 has established connections with area agencies and service providers to help students with accessing assistance with housing and food insecurity. Students can speak with a staff member to be connected to local agencies who can help.

Public Transportation

EC3 students who are currently enrolled and have active EC3 student identification are able to ride the EMTA buses for free when the College is in session. Information is available at: <https://ride-the-e.com/university-services/>.



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

STUDENT SERVICES (continued)

Bookstore

Course Texts

EC3 is committed to keeping costs as low as possible for our students. As often as possible, our faculty choose Open Educational Resources (OER) as the texts/resources for their classes. Along those lines and in consideration of the EC3 value of diversity, as often as possible, faculty are strongly encouraged to select texts that represent the broad spectrum of diverse authors, researchers, and contributors to educational fields to enhance student exposure to a diverse understanding of the field of study.

If an OER is not available for course, student can use sites such as [Amazon](#) or [Chegg](#) to obtain their course texts.

At Erie County Community College, we will do everything we can to ensure that finances are not a barrier to furthering a student's education. If a student is experiencing financial hardship, they are invited to complete the following application for assistance: [Barrier Reduction Application Spring 2024](#).

STUDENT RIGHTS AND RESPONSIBILITIES

All students shall abide by the College's policies as well as all county, state and federal laws. Further, students shall not interfere with or disrupt the orderly educational processes at the College. All students are expected to understand and adhere to regulations in the College Catalog to include, but not limited to, degree requirements, academic progress, financial obligations, relationships with college authorities, transferability of credits for courses completed, acceptance of credits for graduation and eligibility to graduate.

Family Educational Rights and Privacy Act (FERPA)

The College accords all the rights under the Family Educational Rights and Privacy Act of 1974 to its students. This act is intended to protect the privacy of educational records, to establish the right of students to inspect and review their educational records, and to provide guidelines for the correction of inaccurate or misleading data through informal or formal hearings.

For the full explanation of FERPA see the College Policy Manual.

EC3 considers directory information to be a student's name, program of study, dates of attendance, credentials earned, enrollment status, and previous institutions attended. All other information will not be shared without a proper release in place. Students may sign a FERPA release form to allow the College to share other non-directory information. For FERPA assistance, contact the Registrar at registrar@ec3pa.org.

Student Code of Conduct

At EC3, we strive to remove barriers that impede academic and personal success. Part of our commitment to academic and personal success is ensuring an environment that encourages growth, learning, and collegiality. To this end, our student code of conduct guides acceptable behavior. It will be administered with restorative growth as its main objective.

The Student Code of Conduct applies to behaviors that take place at the College; in any of its facilities; on any of its grounds, partner sites, or program centers; or at any College related activity regardless of location. This can also include behavior conducted online or electronically via email, social media, or other electronic format.

The College reserves the right to act off-campus student behavior when such behavior adversely affects the College community, poses a threat to the health or safety of the College community or interferes with the College's pursuit of its objectives and mission.

The full Student Code of Conduct can be found at: [Student Code of Conduct](#)



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

STUDENT RIGHTS AND RESPONSIBILITIES (continued)

Students will respect College property, property belonging to a third party on a college-sponsored activity, or property belonging to a student, faculty, staff member, or campus visitor. Students will not bring to campus or any college-related activity any weapon, firearm, explosive and/or facsimile weapons, or flammable liquids such as paint, gasoline, etc., or any fireworks, ammunition, etc., except by an individual for use in a program approved by the College. Students will not knowingly give false information in response to a request from College employees; nor will students forge, alter, or misuse college documents.

Students will not misuse technology, including but not limited to, sending, distributing, posting, or displaying offensive, harassing, or threatening material, forging email messages, and other actions in violation of the College's Acceptable Use of Technology Policy as it relates to use of college technology and computing systems found on pages 22-26 of the college's [Policy Manual](#).

Complaints, Problems, Grievances and Appeals by Students

A student may submit a complaint about any matter in which he or she feels unjustly treated by following the College's appeals procedures, which can be found here <https://www.ec3pa.org/concerns/>

The College will maintain a fair, equitable, and timely procedure for addressing student complaints and grievances which will ensure that the rights of the students, the College community, and the community-at-large are protected. The student has the right to due process and all grievances and appeals must be conducted in a manner which ensures the accused student adequate notice and a fair opportunity to be heard.

If a student is found responsible for a violation of the Student Code of Conduct and refuses the administrative decision, the student has the right to request an appeal hearing.

GENERAL EDUCATION

Erie County Community College General Education Goals

- EC3 graduates will...
 - ◆ Break down arguments and recognize that different people see things differently.
 - ◆ Be able to work with other people and be able to communicate clearly with them.
 - ◆ Create unique solutions that work.
 - ◆ Evaluate solutions and plan for the future.

Erie County Community College General Education Philosophy

EC3 recognizes the fast pace of societal and technological changes and is committed to developing graduates with an entrepreneurial mindset. Our graduates will be empathetic, nimble, and possess the creativity and innovation required to succeed in the future; they will apply design thinking tenets in their approach to problem solving and the learning process.





ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

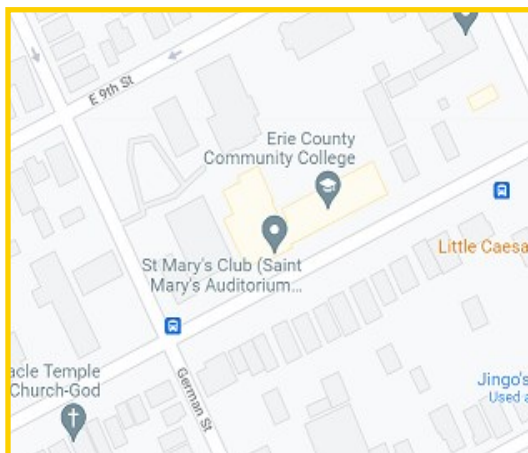
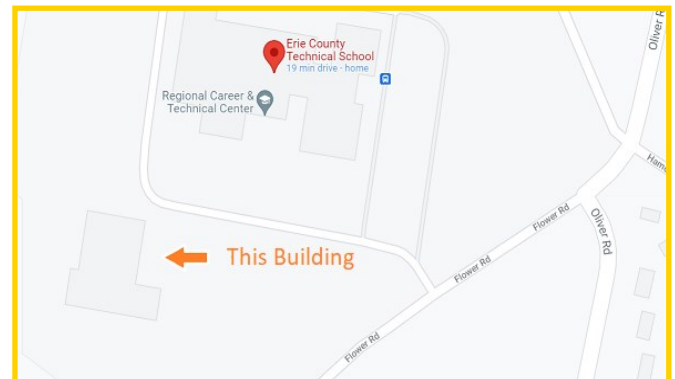
Class Locations



EC3 Erie West
2403 W 8th St.
Erie, PA 16505
814-413-7000

EC3 Summit: Erie County Technical School

8500 Oliver Road
Erie, PA 16509
814-413-7000



EC3 Erie East: St. Benedicts Education Center

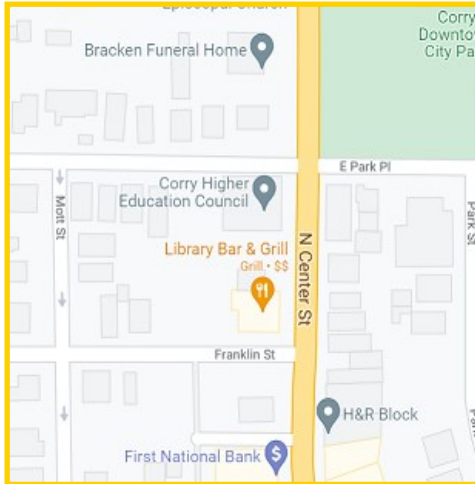
330 East 10th Street
Erie, PA 16503
814-413-7000



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

Class Locations



EC3 Corry

221 N. Center St
Corry, PA 16407
814-413-7000

EC3 @ North Coast Plaza Building I

5739 West Ridge Rd
Erie, PA 16506
814-413-7000

Hours: Scheduled to coincide with classes.
For general inquiries, please call, email, or
visit the EC3 Erie West site.

EC3 hosts classes and labs for Industrial Manufacturing Technology (IMT) and Industrial Machine Maintenance (IMM) programs in Building I of the North Coast Plaza.





ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

LEARNING CENTER

The mission of the learning center at EC3 is to provide in-person and online academic support for students and faculty. Our goal is to be an essential part of student success by providing research assistance, class support, and information literacy instruction.

The College has subscribed to e-book databases and general article databases to provide trusted sources of information targeted for community college students. The learning center also has a collection of reference materials and select physical textbooks to support the classes at EC3

The learning center is located on the 2nd floor of EC3 Erie West and the 3rd floor of EC3 Erie East.



Students will be encouraged to apply for an Erie County Public Library (ECPL) card if they do not already have one. With the card, they can choose to borrow materials from ECPL's extensive physical collection and they will have access to numerous electronic databases.



ERIE COUNTY PUBLIC LIBRARY ACCESS

- Access all available print, digital, and audio-visual collections and materials at public library locations across Erie County.
- Use internet-connected computers. These devices provide access to a range of databases, including POWER Library.
- Participate in interlibrary loan services to gain access to even more materials not available within the ECPL catalog.
- Have study time in study rooms or collaborate with classmates and peers.
- Access printing, scanning, and fax services (some additional charges may apply).
- Receive assistance from Reference Librarians.

BRANCHES

Blasco Memorial Library
160 East Front Street
Erie, Pa 16507
(814) 451-6900

Millcreek Branch Library
2088 Interchange Rd., Suite 280
Erie, PA 16565
(814) 451-7084

Edinboro Branch Library
413 W. Plum St
Edinboro, PA 16412
(814) 451-7081

Iroquois Avenue Branch
4212 Iroquois Ave
Erie, PA 16511
(814) 451-7082

Lincoln Community Center
1255 Manchester Rd
Erie, PA 16505
(814) 451-7085

Corry Public Library
117 Washington St
Corry, PA 19407
(814) 664- 7611



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

UNIVERSITY LIBRARY ACCESS

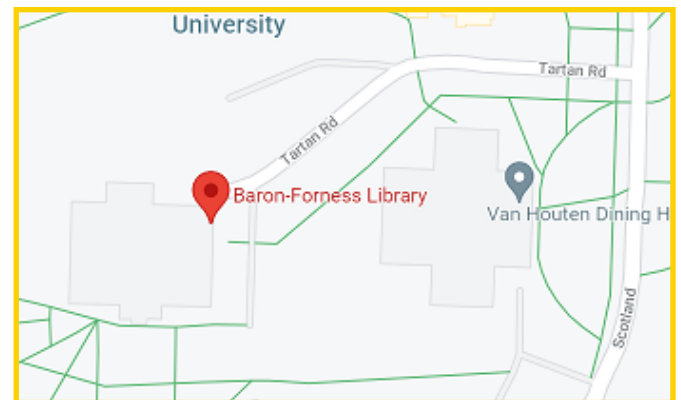
EC3 students can register for library cards at associated universities, which allow them to benefit from the vast print collection available at each library. Students will also have access to all of Penn State's databases when visiting any of their campuses. Additionally, EC3 students can use public and private study areas and spaces at these facilities.



[John M. Lilley Library](#)
4951 Behrend College Dr.,
Erie, PA 16563
(814) 898-6106



[Baron-Forness Library](#) 200 Tartan Rd.
Edinboro, PA
(814) 732-2273





Academic Freedom

Erie County Community College fosters an environment for excellence in teaching, learning, and inquiry by sustaining freedom of expression, scholarly pursuit of knowledge, spirited and open debate, and intellectual exchange in a culture of mutual respect.

Academic freedom is essential to the shared goal of the pursuit of knowledge and is fundamental to the exploration of new ideas. Academic freedom encompasses both the individual's and College's right to maintain academic standards and ensure intellectual integrity, while ensuring faculty members' rights to freedom of discussion in the classroom, encourage intellectual integrity, and sustain pedagogical approaches consistent with the discipline taught.

Academic freedom does not involve expression that substantially impairs the rights of others or the imposition of political, religious, or philosophical beliefs on individuals of the college community. Academic Freedom also does not provide protection for faculty who demonstrate professional incompetence or dishonesty regarding their assigned discipline.

Members of the College community, as individuals and groups, have the right to exercise their full freedom of expression and association. The College is committed to creating an educational environment that is free from intolerance directed towards individuals or groups. Respect for the rights, privileges, and sensibilities of each other is essential in preserving the College community. The College recognizes that all students are bound by the EC3 Student Code of Conduct relative to freedom of expression and alleged instances of code violations are addressed according to the process outlined within the Student Code of Conduct.

For more information on academic freedom, see the [College Policy Manual](#).



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

DEGREE INFORMATION

At EC3 we currently offer 7 Associate Degrees in both the Liberal Arts and Applied fields as well as 9 Certificate Programs.

ASSOCIATE DEGREES:

- Associate of Arts in General Studies
- Associate of Applied Business in Management and Entrepreneurial Thinking
- Associate of Applied Science in Criminal Justice
- Associate of Applied Science in Industrial Technology
- Associate of Applied Science in Information Technology: Network Systems
- Associate of Applied Science in Information Technology: Software Development
- Associate of Applied Science in Surgical Technology

CERTIFICATE PROGRAMS:

- Automated Electrical Systems
- Corrections
- CNC Operator
- CNC Programmer
- Industrial Maintenance
- IT Mobile App Development
- IT Programming
- Patient Care Technician
- Welding

DEFINITION OF DEGREES

Associate of Arts Degrees:

An Associate of Arts degree is designed to prepare students with the foundational knowledge and skills to pursue further study at a four-year college or university. Associate of Arts degrees require students to complete approximately sixty credit hours.

Associate of Applied Degrees:

Associate of Applied degrees are designed to prepare the student with the skills and abilities to enter the workforce immediately upon graduation. Students receiving this degree have completed approximately sixty credit hours and may be eligible to test for industry credentials.

Certificates:

Certificate programs are short-term training leading to immediate employment or advancement in a current position. Credit hour requirements for certificates vary but are usually less than sixty credit hours.



ASSOCIATES DEGREE PROGRAMS

Associate of Arts in General Studies

A General Studies associate degree equips students with written and verbal communication, and critical thinking skills. After two years of full-time study, general studies graduates can apply their knowledge to careers in social services, business administration, marketing, healthcare, and many other fields. A General Studies degree includes courses in subjects like English, communications, history, psychology, economics, and mathematics and science. Rather than zeroing in on one subject, students focus on learning to think critically.

General Education Goals

- Break down arguments and recognize that different people see things differently.
- Be able to work with other people and be able to communicate clearly with them.
- Create unique solutions that work.
- Evaluate solutions and plan for the future.

Associate of Applied Business in Management and Entrepreneurial Thinking

Graduates with an associate degree in Management and Entrepreneurial Thinking are trained in financial management, human resources and marketing which prepares them to start their own businesses or to work for an established business.

Program Outcomes

- Apply managerial theory and practices to the key functional areas within an organization in today's business environment, such as accounting, computer information systems, finance, economics, and marketing.
- Examine the social, legal, and ethical principles that guide appropriate and responsible managerial decision-making.
- Demonstrate entrepreneurial critical-thinking and analytical acumen to determine appropriate effective business actions.
- Exhibit professional and proficient communication skills: verbal, written and interpersonal for business situations.





ASSOCIATES DEGREE PROGRAMS

Associate of Applied Science in Criminal Justice

The Associate of Applied Science in Criminal Justice provides students with a comprehensive practical and professional knowledge of the Criminal Justice System, consisting of law enforcement, courts, and corrections. Students will develop a knowledge of the application of the law, social sciences, and criminology to prepare them to advance to the ACT120 Police Academy or transfer to a four-year college or university to obtain a bachelor's degree.

Program Outcomes

- Identify and analyze the core principles, practices and skills required for a successful career in criminal justice.
- Demonstrate a thorough understanding of the functions and roles of all major aspects of the United States criminal justice system in society.
- Describe and evaluate the role of the criminal justice concepts of reasonable suspicion, probable cause, and proof beyond a reasonable doubt from interrogation, arrest, prosecution, and conviction.
- Demonstrate an appreciation of and sensitivity toward the ethnic, racial and gender diversity of American society, and an understanding of how these values can be reflected and projected by the criminal justice system.
- Identify and analyze the ethical issues that arise in each component of the criminal justice system.

Associate of Applied Science in Industrial Technology

Graduates with an Associate of Applied Science in Industrial Technologies are trained in a skilled trade and equipped with practical and professional knowledge that enables successful entry and growth in the technical industries in and around Erie County.

Program Outcomes

- Apply technology effectively as a tool in business and industry.
- Apply safety principles in workplace and industry settings.
- Effectively communicate appropriately for business and industry.
- Apply mathematical and scientific principles
- Develop a technical skill applicable to Erie County industries.



ASSOCIATES DEGREE PROGRAMS

Associate of Applied Science in Information Technology: Network Systems

A two-year degree in Information Technology Network Systems is a versatile degree that can help you get your foot in the door with a wide variety of companies and industries in your own backyard. Information technology plays a key role in any organization. It helps organizations design, utilize and support the computer systems that help streamline their production processes. Technology is part of nearly every company in every industry, and they are aware of the value you can bring to an IT department with a two-year degree.

Program Outcomes

- Demonstrate knowledge of computer and network systems terms and concepts.
- Be able to set up, install, configure, and troubleshoot hardware and software for desktop and wireless computer systems.
- Understand how to set up a Local Area Network (LAN), Wide Area Network (WAN), and wireless network (WiFi).
- Understand how to set up and implement security controls.

Associate of Applied Science in Information Technology: Software Development

Graduates with the A.A.S. degree in Software Development will have the ability to focus on either Programming with entry-level proficiency in either C#, Python, Java, HTML/CSS and JavaScript, or Mobile App Development. Graduates will be able to enter an entry-level position as a programmer or software quality assurance technician or as a mobile app developer, programmer, or software quality assurance technician. Students completing the Software Development A.A.S. degree will be prepared to transfer to a four-year institution for further studies in Information Technology.



Program Outcomes

- Demonstrate knowledge of computer and network systems terms and concepts.
- Be able to set up, install, configure, and troubleshoot hardware and software for desktop and wireless computer systems.
- Understand how to set up a Local Area Network (LAN), Wide Area Network (WAN), and wireless network (WiFi).
- Understand how to set up and implement security controls.



ASSOCIATES DEGREE PROGRAMS

Associate of Applied Science in Surgical Technology

Through a partnership with UPMC School of Surgical Technology, Erie County Community College's Surgical Technology Program prepares students to perform various activities to assist doctors during surgery, including sterilizing and setting up equipment, positioning patients for procedures, handing instruments to doctors during surgery, and preparing the operating room for patients. Program graduates leave school prepared for entry-level work at one of the UPMC facilities in Erie County, in other locations in PA, Maryland, and New York, and internationally in Italy and Ireland.

Program Outcomes

- Use appropriate ethical and professional values when providing surgical technology services to diverse populations.
 - Perform appropriate activities to prepare patients for surgery utilizing the principles of aseptic technique, critical thinking, and problem solving in adapting to the changing surgical environment.
 - Demonstrate the ability to prioritize and organize the surgical field, while considering the physiology and urgency of the patient care needs.
 - Incorporate technical skills to assemble and operate instruments, equipment, and supplies for the delivery of patient care during all specialties of surgery.
 - Integrate knowledge from the required courses within this program to the role of the surgical technologist in caring for diverse clients.
-



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

CERTIFICATE PROGRAMS

Automated Electrical Systems

Have you already been working in the Industrial Maintenance industry and are looking to expand your skills to different programmable logic controllers (PLCs)? If the answer is yes, the EC3 Automated Electrical Systems is for you. Attaining this certificate signifies that you have the knowledge and skill to program an Allen Bradley SLC500 PLC.



Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Troubleshoot and repair a Programmable Logic Controller (PLC) when a fault is inserted.
- Program an Allen Bradley SLC500 PLC for advanced sequencing operation.
- Write a PLC program using advanced math and data functions.

CNC Operator and CNC Programmer

Erie County Community College's Industrial Manufacturing Technology Program prepares students for high-demand careers in operating and programming Computer Numeric Controlled (CNC) machines. Students gain the skills needed to succeed as a programmer in advanced manufacturing machine safety, blueprint reading, math, metrology, and proper part inspection methods as part of the production and planning process. Students learn the techniques, hardware, software menus and computer system practices associated with a Computer-Aided Machining/ Distributed Numerical Control (CAM/DNC) system to manually write, save, retrieve, and transfer CNC machine tool programs. The initial CNC Machinist/Operator Certificate consists of 16 credits with the option to obtain the CNC Programmer certification for an additional nine credits.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Describe and demonstrate shop safety practices.
- Demonstrate proficiency with various tools and machines.
- Identify and describe the purpose and function of precision measurement systems.
- Identify and describe basic functions of precision measurement tools.
- Describe the importance of precision in manufacturing.
- Perform complex machine tool making activities commonly used in manufacturing.
- Perform basic Computer Numerical Control (CNC) programming, set up, and operations of CNC, conventional machine tools, precision tools and general tools.
- Demonstrate knowledge of print reading.
- Use mathematical knowledge to solve machining problems.
- Develop, document, and implement project plan for machining parts.





ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

CERTIFICATE PROGRAMS

Corrections

The Corrections Program develops practical and professional knowledge and skills within the correctional field including the application of the law, social sciences, and criminology. The Certificate prepares students for entry level careers in corrections and employment opportunities within the correctional system.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify and analyze the core principles, practices and skills required for a successful career in corrections.
- Demonstrate a thorough understanding of the functions and roles of the correctional system as it exists within the United States criminal justice system.
- Demonstrate an appreciation of and sensitivity toward the ethnic, racial and gender diversity of American society, and an understanding of how these values can be reflected and projected within the penal system.
- Identify and analyze the ethical issues that arise in corrections.



Industrial Maintenance

EC3's industrial maintenance program is suitable for those with no previous experience, for those who seek specialization or skills upgrade, and/or for those who seek quick entry into the workforce. The program will build strong troubleshooting and problem-solving skills while participants gain foundational skills in the fields of electricity, automation, mechanical systems, pneumatics, and hydraulics.

Program Learning Outcomes

Upon completion of the Industrial Maintenance Certificate, students will be able to:

- Demonstrate and explain the fundamentals of basic (DC) electricity, including series, parallel, and combination circuits, as well as inductors, and capacitors.
- Troubleshoot a 3-phase motor control system with practical faults inserted.
- Troubleshoot real world faults in fluid power systems/hydraulics, air-powered systems/pneumatics.
- Read and interpret symbols and schematics, flow control devices, and actuators.
- Read pressure gauges and assemble simple hydraulic, pneumatic, and electrical systems.
- Wire an electro-pneumatic device using a ladder logic diagram.
- Align and level shafts to a motor, install drive belts and drive chains to a motor, and utilize tools to measure belt and chain tension.
- Utilize specialized tools and measuring devices when installing mechanical devices.
- Troubleshoot and repair a Programmable Logic Controller (PLC) when a fault is inserted.
- Program an Allen Bradley SLC500 PLC for advanced sequencing operation.
- Write a PLC program using advanced math and data functions.



CERTIFICATE PROGRAMS

IT: Mobile App Development

Graduates with the Certificate in Mobile App Development will have the basic knowledge, skills, and abilities to obtain an entry-level position as a mobile app developer, programmer, or software quality assurance technician. In addition, many of the credits earned can be applied to bachelor's degree programs in computer science at participating PA TRAC colleges.



Program Learning Outcomes

- Students will acquire the skills to relate the states of App Development Life Cycle (SDLC) in managing a given project.
- Students will be able to analyze, design, develop and test both web and mobile applications to resolve needs of business and other sectors.
- Students will design native (platform specific) mobile apps that incorporate good User Interface / User Experience (UI/UX) principles and meet the standards of the Google Play and Apple iOS stores.
- Student will be able to use both procedural and Object-Oriented Programming (OOP) principles to provide underlying user interaction to process input and provided formatted output.

IT: Programming

Graduates with the Certificate in Programming will have entry-level proficiency in C#, Python, Java, HTML/ CSS and JavaScript and be able to enter an entry-level position as a programmer or software quality assurance technician.

Program Learning Outcomes

- Demonstrate a basic level of competency in programming and logic skills.
- Utilize web technologies.
- Develop, administer, and maintain a web programming system solution.
- Administer and maintain a website.
- Present conclusions effectively, orally and in writing.





CERTIFICATE PROGRAMS

Patient Care Technician

This program you will be prepared to function as a member of the healthcare team under the supervision of an assigned registered nurse, to perform general duties to help patients establish and maintain comfort with the health care setting. Along with generalized care, you will be trained as the first level of medical support as you prepare to handle more technical tasks within the patient care plan and communicate with other nursing team members to meet patient needs.

Program Learning Outcomes

The PCT Certificate prepares students for entry-level careers in patient care and nurse assisting. Graduates are eligible to sit for the National Healthcareer Association exam which provides credentialing opportunities in Certified Patient Care Technician (CPCT).

Upon successful completion of this program, students will be able to:

- Effectively communicate with patients, families, and other health care team members
- Display professional conduct, appearance, and ethical behavior when providing PCT care.
- Provide basic care to patients of all age groups in a variety of healthcare settings.
- Perform PCT procedures in a safe and therapeutic manner in line with federal and state mandates.
- Implement basic safety and infection control practices in the health care setting.
- Use relevant technology in the implementation of patient care while maintaining compliance with applicable laws and regulations.

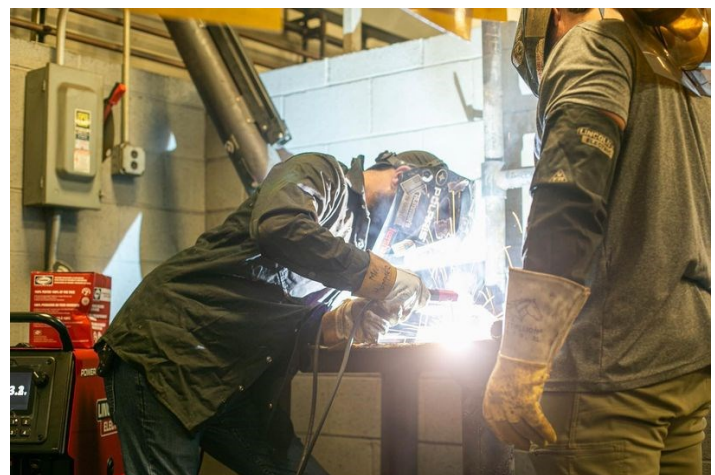
Welding

EC3s Basic Certificate in Welding can be completed in one year and prepares students for entry level careers in welding. In EC3's welding program, you will learn oxygen-acetylene cutting (OFC) plasma arc cutting (PAC), shielded metal arc or "stick" welding (SMAW), gas metal arc welding—also known as metal inert gas welding (GMAW/MIG), flux core arc welding (FCAW) and gas tungsten arc welding—also known as tungsten inert gas welding (GTAW/TIG).

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Identify equipment and safety procedures related to equipment, processes, and materials used in the major welding processes of Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW) and Gas Tungsten Arc Welding (GTAW).
- Read and interpret blueprints with basic manufacturing and welding symbology.
- Weld SMAW, GMAW, and GTAW in various positions primarily on steel and aluminum





ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

Associate of Arts in General Studies

I. General Education Course Requirements - 10 courses from the following:

- | | | |
|-----|---|--|
| A. | FYE 101 | First Year Experience (3 cr. hrs.) Required |
| B. | ENG 101 | English Composition I (3 cr. hrs.) Required |
| C. | One of the following: | |
| 1. | COM 110 | Fundamentals of Public Speaking (3 cr. hrs.) |
| 2. | ENG 102 | English Composition 2 (3 cr. hrs.) |
| D. | Social & Behavioral Sciences - One of the following: | |
| 1. | ANT 201 | Survey of Anthropology (3 cr. hrs.) |
| 2. | COM 120 | Media Literacy (3 hrs.) |
| 3. | ECO 101 | Macroeconomics (3 cr. hrs.) |
| 4. | ECO 102 | Microeconomics (3 cr. hrs.) |
| 5. | POL 203 | Survey of American Politics (3 cr. hrs.) |
| 6. | PSY 101 | Introduction to Psychology (3 cr. hrs.) |
| 7. | PSY 201 | Social Psychology (3 cr. hrs.) |
| 8. | PSY 210 | Lifespan Development (3 cr. hrs.) |
| 9. | SOC 101 | Introduction to Sociology (3 cr. hrs.) |
| 10. | SOC 250 | Contemporary Social Problems (3 cr. hrs.) |
| E. | Artistic Expression - One of the following: | |
| 1. | ART 101 | Art Appreciation (3 cr. hrs.) |
| 2. | ENG 201 | Poetry (3 cr. hrs.) |
| 3. | ENG 207 | Survey of Literature (3 cr. hrs.) |
| 4. | MUS 101 | Introduction to Music (3 cr. hrs.) |
| F. | Cultural Awareness - One of the following: | |
| 1. | HIS 122 | History of the Western World: Renaissance through WW II (3 cr. hrs.) |
| 2. | HIS 201 | History of the US to 1865 (3 cr. hrs.) |
| 3. | MUS 114 | World Music (3 cr. hrs.) |
| 4. | PHL 111 | Religions of the World (3 cr. hrs.) |
| 5. | POL 112 | Introduction to International Relations (3 cr. hrs.) |
| 6. | SOC 211 | Race and Ethnicity (3 cr. hrs.) |
| G. | Mathematics - One of the following: | |
| 1. | MAT 102 | Mathematical Concepts (3 cr. hrs.) |
| 2. | MAT 111 | College Algebra (3 cr. hrs.) |
| 3. | MAT 202 | Introduction to Statistics (3 cr. hrs.) |
| H. | Natural Science - One of the following: | |
| 1. | BIO 101 | General Biology with Lab (4 cr. hrs.) |
| 2. | CHM 110 | Introduction to Chemistry I |
| 3. | CHM 111 | Introduction to Chemistry II |
| 4. | EAS 101 | Earth Science Meteorology with Lab (4 cr. hrs.) |
| 5. | EAS 110 | Earth Science with Lab (4 cr. hrs.) |
| 6. | GLG 220 | Environmental Geology with Lab (4 cr. hrs.) |
| 7. | PHY 111 | Conceptual Physics with Lab (4 cr. hrs.) |



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

- I. **Technology Skills**
 - 1. CIS 100 Computer Applications and Concepts (3 cr. hrs.)
- J. **Ethics**
 - 1. PHL 101 Introduction to Philosophy (3 cr. hrs.)
- II. **Elective Course Options– 10 courses to be selected from all available courses**
 - A.
 - B.
 - C.
 - D.
 - E.



PROGRAM REQUIREMENTS

Associate of Applied Business in Management and Entrepreneurial Thinking

I. Major Requirements - 30 Credits

- A. ACC 111 Business Accounting (3 cr. hrs.)
- B. ACC 150 The Legal Environment of Business (3 cr. hrs.)
- C. BUS 101 Introduction to Business (3 cr. hrs.)
- D. BUS 103 Principles of Management (3 cr. hrs.)
- E. BUS 230 Principles of Marketing (3 cr. hrs.)
- F. CIS 100 Computer Applications and Concepts (3 cr. hrs.)
- F. ENT 110 Fundamentals of Entrepreneurship (3 cr. hrs.)

Choose 3 of the following courses:

- A. BUS 203 Labor Relations (3 cr. hrs.)
- B. BUS 210 Supervisory Management (3 cr. hrs.)
- C. BUS 221 Production Management (3 cr. hrs.)
- D. BUS 222 Purchasing and Supply Chain Management (3 cr. hrs.)
- E. ENT 130 Entrepreneurial Finance Intelligence (3 cr. hrs.)
- F. ENT 140 Business Plan Development for the Entrepreneur (3 cr. hrs.)
- G. ENT 150 New Business Development (3 cr. hrs.)
- H. ENT 230 QuickBooks (3 cr. hrs.)

II. General Education Core Requirements - 15/16 Credits

- A. Communication and/or English Courses (6 credits)
 - 1. ENG 101
 - 2. One of the following ENG 102, COM 110, or COM 201
- B. Math or Science Course (3-4 credits)
- C. ECO 101 Macroeconomics
- D. Philosophy/Language/Artistic Expression: (3 credits)

III. Electives - 15 Credits (any course not already a part of the program plan)

- A.
- B.
- C.
- D.
- E.

Total Credit Hours: 60 –61 hours



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

Associate of Applied Science in Criminal Justice

I. Major Requirements - 30 Credits

- | | | |
|----|---------|---|
| A. | CJS 100 | Introduction to Criminal Justice (3 cr. hrs.) |
| B. | CJS 103 | Juvenile Justice (3 cr. hrs.) |
| C. | CJS 150 | Criminal Law (3 cr. hrs.) |
| D. | CJS 170 | Introduction to Corrections (3 cr. hrs.) |
| E. | CJS 180 | Introduction to Policing (3 cr. hrs.) |
| F. | CJS 190 | Race, Crime, and Justice (3 cr. hrs.) |
| G. | PSY201 | Social Psychology (3 cr. hrs.) |
| H. | PSY 210 | Lifespan Development (3 cr. hrs.) |
| I. | SOC 250 | Contemporary Social Problems (3 cr. hrs.) |

Choose 1 of the following options:

- | | | |
|----|---------|--|
| A. | CJS 298 | Criminal Justice Internship (3 cr. hrs.) |
| B. | CJS 299 | Criminal Justice Capstone (3cr. hrs.) |

II. General Education Core Requirements - 15/16 Credits

- | | | |
|----|--|---|
| A. | Communication and/or English Courses (6 credits) | |
| 1. | ENG 101 | |
| 2. | One of the following ENG 102, COM 110, or COM 201 | |
| B. | Math or Science Course (3-4 credits) | |
| 1. | Any General Education BIO, CHM, EAS, GLG, MAT or PHY course. | |
| C. | Social & Behavioral Sciences/History Course (3 credits) | |
| 1. | PSY 101 | Introduction to Psychology (3 cr. hrs.) |
| 2. | SOC 101 | Introduction to Sociology (3 cr. hrs.) |
| D. | Philosophy/Language/Artistic Expression (3 credits) | |
| 1. | Any course with ART, ENG 201, ENG 207, MUS, or PHL prefix | |

III. Electives - 15 Credits (any course not already a part of the program plan)

- | | | | |
|----|---------|---|---------------|
| A. | CIS 100 | Computer Applications and Concepts (3 cr. hrs.) | (Recommended) |
| B. | | | |
| C. | | | |
| D. | | | |
| E. | | | |

Total Credit Hours: 60 –61 hours



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

Associate of Applied Science in Industrial Technology

I. Major Requirements - 30 Credits in Industrial Technology

- A. At least ONE fully completed for-credit CERTIFICATE in an EC3 Applied Program, including, but not limited to: IMT, IMM, WEL (9-25 cr. hrs)
- B. Additional Applied Program coursework, totaling 30 credits, including the above certificate
- C. IMT 114 Intro To Print Reading (3 cr. hrs.) *

II. General Education Core Requirements - 16 Credits

- A. **Any ENG or COM course (3 credits)**
- B. **Computer Literacy (3 credits)**
 - 1. CIS 100 Computer Applications and Concepts (3cr. hrs.)
- C. **Math (3 credits)**
 - 1. MAT 107 Technical Math (3cr. hrs.)
- D. **Social & Behavioral Sciences/History Course (3 credits)**
 - 1. Any ECO, HIS, PHL, POL, PSY or SOC course.
- E. **Science with Lab (4 credits)**
 - 1. Any General Education BIO, CHM, EAS, GLG, or PHY course. (The department recommends one of the following: **CHM 110 or PHY 111**)

III. Electives - 15 Credits (any course not already a part of the program plan)

- A.
- B.
- C.
- D.
- E.

Total Credit Hours: 61 hours

* If not already taken as part of the required certificate



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

Associate of Applied Science in Information Technology: Network Systems

I. Major Requirements – 8 courses from the following courses:

- | | | |
|----|---------|--|
| A. | CIS 113 | IT Hardware Essentials and Support (3 cr. hrs.) |
| B. | CIS 115 | Information Technology Fundamentals (3 cr. hrs.) |
| C. | CIS 117 | Operating Systems Interfaces (3 cr. hrs.) |
| D. | CIS 119 | Introduction to Programming - Python (4 cr. hrs) |
| E. | CIS 120 | Network Integration and Management (3 cr. hrs.) |
| F. | CIS 125 | Introduction to Artificial Intelligence and Robotics |
| G. | CIS 185 | Introduction to Network Security (3 cr. hrs.) |
| H. | CIS 215 | Database Design and Application Development (3 cr. hrs.) |
| I. | CIS 220 | Systems Development (3 cr. hrs.) |
| J. | CIS 250 | Internet/Intranet Networking (3 cr. hrs.) |

II. General Education Course Requirements - 10 courses from the following:

- | | | |
|-----|---|--|
| A. | FYE 101 | First Year Experience (3 cr. hrs.) Required |
| B. | ENG 101 | English Composition I (3 cr. hrs.) Required |
| C. | One of the following: | |
| 1. | COM 110 | Fundamentals of Public Speaking (3 cr. hrs.) |
| 2. | ENG 102 | English Composition 2 (3 cr. hrs.) |
| D. | Social & Behavioral Sciences - One of the following: | |
| 1. | ANT 201 | Survey of Anthropology (3 cr. hrs.) |
| 2. | COM 120 | Media Literacy (3 hrs.) |
| 3. | ECO 101 | Macroeconomics (3 cr. hrs.) |
| 4. | ECO 102 | Microeconomics (3 cr. hrs.) |
| 5. | POL 203 | Survey of American Politics (3 cr. hrs.) |
| 6. | PSY 101 | Introduction to Psychology (3 cr. hrs.) |
| 7. | PSY 201 | Social Psychology (3 cr. hrs.) |
| 8. | PSY 210 | Lifespan Development (3 cr. hrs.) |
| 9. | SOC 101 | Introduction to Sociology (3 cr. hrs.) |
| 10. | SOC 250 | Contemporary Social Problems (3 cr. hrs.) |
| E. | Artistic Expression - One of the following: | |
| 1. | ART 101 | Art Appreciation (3 cr. hrs.) |
| 2. | ENG 201 | Poetry (3 cr. hrs.) |
| 3. | ENG 207 | Survey of Literature (3 cr. hrs.) |
| 4. | MUS 101 | Introduction to Music (3 cr. hrs.) |
| F. | Cultural Awareness - One of the following: | |
| 1. | HIS 122 | History of the Western World: Renaissance through WW II (3 cr. hrs.) |
| 2. | HIS 201 | History of the US to 1865 (3 cr. hrs.) |
| 3. | MUS 114 | World Music (3 cr. hrs.) |
| 4. | PHL 111 | Religions of the World (3 cr. hrs.) |
| 5. | POL 112 | Introduction to International Relations (3 cr. hrs.) |
| 6. | SOC 211 | Race and Ethnicity (3 cr. hrs.) |



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

Continued from Previous Page

General Education Course Requirements (Continued)

- G. **Mathematics - One of the following:**
1. MAT 102 Mathematical Concepts (3 cr. hrs.)
 2. MAT 111 College Algebra (3 cr. hrs.)
 3. MAT 202 Introduction to Statistics (3 cr. hrs.)
- H. **Natural Science - One of the following:**
1. BIO 101 General Biology with Lab (4 cr. hrs.)
 2. CHM 110 Introduction to Chemistry I
 3. CHM 111 Introduction to Chemistry II
 4. EAS 101 Earth Science Meteorology with Lab (4 cr. hrs.)
 5. EAS 110 Earth Science with Lab (4 cr. hrs.)
 6. GLG 220 Environmental Geology with Lab (4 cr. hrs.)
 7. PHY 111 Conceptual Physics with Lab (4 cr. hrs.)
- I. **Technology Skills**
1. CIS 100 Computer Applications and Concepts (3 cr. hrs.)
- J. **Ethics**
1. PHL 101 Introduction to Philosophy (3 cr. hrs.)
- III. **Elective Course Options– 2 courses to be selected from any available courses**
- A.
 - B.



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

Associate of Applied Science in Information Technology: Software Development

I. Major Requirements

- | | | |
|----|---------|--|
| A. | CIS 113 | IT Hardware Essentials and Support (3 cr. hrs.) |
| B. | CIS 117 | Operating Systems Interfaces (3 cr. hrs.) |
| C. | CIS 125 | Introduction to Artificial Intelligence and Robotics |
| D. | CIS 135 | HTML/CSS Web Development (3 cr. hrs.) |
| E. | CIS 138 | JavaScript for Web Development (3 cr. hrs.) |
| F. | CIS 140 | Windows Development Level I [C#] (4 cr. hrs.) |
| H. | CIS 215 | Database Design and App Development (3 cr. hrs.) |
| I. | CIS 220 | Systems Development (3 cr. hrs.) |
| J. | CIS 240 | Windows Development Level II [C#] (3 cr. hrs.) |
| K. | CIS 250 | Internet/Intranet Networking (3 cr. hrs.) |

II. General Education Course Requirements - 15 Credits:

- A. One of the following ENG 101, COM 110, or COM 201
- B. CIS 100 Computer Applications and Concepts (3 cr. hrs.)
- C. **Math or Science Course (3-4 credits)**
1. Any General Education BIO, CHM, EAS, GLG, MAT or PHY course.
- D. **Social & Behavioral Sciences/History Course (3 credits)**
1. Any ECO, HIS, PHL, POL, PSY or SOC course.
- E. **Philosophy/Language/Artistic Expression: (3 credits)**
1. Any course with ART, ENG 201, ENG 207, MUS, or PHL prefix

III. Electives - 15 Credits (May be any course not already a part of the program plan) The Department suggests some or all of the following be considered: CIS 119, CIS 130, CIS 150, CIS 245, and CIS 248

- A.
B.
C.
D.
E.



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

Associate of Applied Science in Surgical Technology

I. First Semester

A.	MAT 102	Mathematical Concepts	3 credits
B.	BIO 201	Anatomy and Physiology I with Lab	4 credits
C.	HSC 100	Medical Terminology	3 credits
D.	FYE 101	First Year Experience	3 credits
E.	ENG 101	English Composition I	3 credits

II. Second Semester

A.	BIO 202	Anatomy and Physiology II with Lab	4 credits
B.	CIS 100	Computer Applications and Concepts	3 credits
C.	COM 201	Interpersonal and Professional Comm.	3 credits
D.	BIO 210	Microbiology	4 credits

III. Third Semester

A.	PSY 101	Introduction to Psychology	3 credits
B.	SUR 100	Surgical Theory I	6 credits
C.	SUR 120	Surgical Procedures I	6 credits

IV. Fourth Semester

A.	SUR 200	Surgical Theory II	6 credits
B.	SUR 220	Surgical Procedures II	6 credits
C.	SUR 270	Clinical Externship I	7 credits

V. Fifth Semester

A.	SUR 271	Clinical Externship II	7 credits
----	---------	------------------------	-----------

Total Credit Hours: 71 hours includes UPMC Surgical Technology transfer credit.



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

Certificate in Automated Electrical Systems

Course Requirements			Credits
IMM	112	Programmable Controllers I	3
IMM	113	Programmable Controllers II	3
IMM	114	Advanced Programmable Controllers	<u>3</u>
Certificate Total			9

Certificate in CNC Operator

Course Requirements			Credits
IMT	102	Industrial Manufacturing Tech I	3
IMT	104	Industrial Manufacturing Tech II	3
MAT	107	Technical Math	3
IMT	112	Metrology – the Study of Measurement with GD&T	3
IMT	114	Intro to Print Reading	1
IMT	200	Introduction to CNC Programming I	<u>3</u>
Certificate Total			16

Certificate in CNC Programmer

Course Requirements

All of the course listed above in the CNC Operator Certificate, plus: 16

			Credits
IMT	202	Introduction to CNC Programming II	3
IMT	204	Introduction to CNC Toolpath	3
MAT	206	Advanced CNC Programming	<u>3</u>
Certificate Total			25

Certificate in Corrections

Program Course Requirements: First Semester

			Credits
CJS	100	Introduction to Criminal Justice	3
CJS	103	Juvenile Justice	3
CIS	100	Computer Applications and Concepts	3
		Communications Elective	3

Second Semester

CJS	150	Criminal Law	3
CJS	170	Introduction to Corrections	3
CJS	190	Race, Crime, and Justice	3
		Social Science Elective	<u>3</u>
Certificate Total			27



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

Certificate in Industrial Maintenance

Course Requirements			Credits
IMM	102	Electrical Control Circuits	3
IMM	103	Electrical Motor Control	3
IMM	104	Hydraulics: Fluid Power Systems	3
IMM	105	Pneumatics: Air Power Systems	3
IMM	110	Basic Mechanical Drives	3
IMM	112	Programmable Controllers I	3
IMM	113	Programmable Controllers II	3
IMT	107	Technical Math I	3
Certificate Total			24

Certificate in IT: Mobile App Development

Course Requirements			Credits
<u>Semester 1:</u>			
CIS	100	Computer Applications and Concepts	3
CIS	113	IT Hardware Essentials and Support	3
CIS	215	Database Design and Application Development	3
CIS	130	Adobe Photoshop	3
<u>Semester 2:</u>			
CIS	135	HTML/CSS Web Development	3
CIS	140	Windows Development Level I (C#)	4
CIS	240	Windows Development Level II (C#)	3
CIS	138	JavaScript for Web & Mobile	3
<u>Semester 3:</u>			
CIS	245	Android App Development [Kotlin]	4
CIS	248	iOS App Development [Swift]	4
Certificate Total			33

Certificate in IT: Programming

Course Requirements			Credits
<u>Semester 1:</u>			
CIS	100	Computer Applications and Concepts	3
CIS	113	IT Hardware Essentials and Support	3
CIS	119	Introduction to Programming: Python	4
CIS	130	Adobe Photoshop	3
<u>Semester 2:</u>			
CIS	135	HTML/CSS Web Development	3
CIS	140	Windows Development Level I (C#)	4
CIS	240	Windows Development Level II (C#)	3
CIS	138	JavaScript for Web & Mobile	3



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

PROGRAM REQUIREMENTS

Certificate in IT: Programming (continued)

CIS	215	Database Design and Application Development	3
CIS	150	Java Programming Level I	3
CIS	250	Internet/Intranet Networking	3
Certificate Total			35

Certificate in Patient Care Technician

Course Requirements			Credits
HSC	101	Introduction to Allied Health	3
HSC	110	Medical Terminology and Body Systems	4
PCT	111	Patient Care Technician Skills 1	3
PCT	112	Patient Care Technician Skills 2	3
PCT	115	Clinical Practicum for Patient Care Technicians	<u>3</u>
Certificate Total			16

Certificate in Welding

Course Requirements			Credits
IMT	114	Introduction to Print Reading	1
MAT	107	Technical Math	3
WEL	101	SMAW I Theory	1
WEL	102	SMAW I - Lab 1a	1
WEL	103	SMAW I - Lab 1b	1
WEL	104	GMAW I - Theory	1
WEL	105	GMAW I - Lab 1a	1
WEL	106	GMAW I - Lab 1b	1
WEL	107	GMAW II – Lab 2a	1
WEL	108	GMAW II – Lab 2b	1
WEL	109	GMAW II – Lab 2c	1.5
WEL	110	GTAW I -Theory	1
WEL	111	GTAW I – Lab 1a	1
WEL	112	GTAW I – Lab 1b	1
WEL	114	Print Reading for Welders	<u>1</u>
Certificate Total			17.5



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

DEFINITION OF COURSE LEVELS/PREREQUISITES

000-level course designation

- Developmental- courses: placement determined by college-wide testing of entering students or through illustration of coursework and grades from other institutions (multiple measures).
- Intended to improve student performance to meet college-level expectations
- Examples are ENG 090, MAT 090, CIS 090

100-level course designation

- Courses with no prerequisites, survey courses, courses defining basic concepts or presenting the terminology of a discipline.
- Examples are ENG 101, CIS 100, PSY 101
- **Assumptions and Expectations:**
 1. Students possess college-level writing ability sufficient to compose definitions, paragraphs, or essays where appropriate.
 2. Students possess reading skills sufficient to comprehend college-level material in textbook and supplemental material.

200-level course designation

- Courses of intermediate college-level difficulty; courses with 100-level course(s) as prerequisite(s); or survey courses devoted to specific areas or fields within a discipline.
- Examples are HIST 201 (with no prerequisite) and SOC 211 (with SOC 101 prerequisite)
- **Assumptions and Expectations:**
 1. Students possess general skills such as recognition, reading, appropriate quantitative skills, and varying degrees of fluency in writing and articulateness in expression.
 2. Students are acquainted with the basic language, terminology, or methodology of the subject itself.
 3. Students are, in that subject, at a stage of understanding where they can progress towards significant conclusions, experiments, and/or explorations.
 4. Students can successfully complete assignments involving reading and comprehending a specified amount of material and/or preparing organized papers.
 5. Students will accomplish a substantial amount of work, for example: study a number of books or work through a textbook, write several papers, or demonstrate an in-depth knowledge of the material covered.

Prerequisites

A prerequisite is a course that teaches the skills, knowledge, and abilities that will be necessary for the successful completion of another specified course.



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

ACC 111 - Business Accounting: This course provides an introduction to basic accounting principles, concepts, and methods for understanding general purpose financial statements and the accounting process. Students learn basic accounting concepts utilized in daily business operations, such as financial statement preparation, allowing them to collect financial data and make decisions based on that data 3 Credits

ACC 150– Legal Environment of Business: Students study the regulatory environment in which business operates and the political, social, and economic forces behind and evolution of the forms and types of law that govern disputes and transactions between individuals (including business organizations). The Constitutional foundation of law and the role played by administrative agencies in regulating business activity are studied including remedies in and out of court. Issues of crimes, torts, contracts, property, business organizations, consumer rights, employment, intellectual property rights, and international transactions will be discussed. 3 Credits

ANT 201– Survey of Anthropology: This course is a scientific inquiry into human variability across space and time. The evolution of humanity’s biocultural nature from prehistory to present times is examined. This draws upon evidence from archaeology, physical anthropology/ human paleontology, ethnography and linguistic anthropology. 3 Credits

ART 101- Art Appreciation: The Visual Communication course is designed to introduce students to the fundamental issues involved in the production and understanding of works of art within the broad context of human interaction and communication. The course introduces the student to the concepts, ideas, forms, and qualities of art and art appreciation, while simultaneously connecting the images that appear in everyday life to history, culture and visual aesthetics. Themes include ethical issues and censorship of art. 3 Credits

BIO 101- Introduction to Biology with Lab: Emphasizes biological organization; basic biochemistry; biophysics of living systems; membrane dynamics; cellular structures and functions; cellular reproduction, photosynthesis; cellular respiration; chromosomal and molecular inheritance. *Prerequisite: ENG 101 pre/co-req* 4 Credits

BIO 201– Human Anatomy and Physiology with Lab: This course studies the structural relationships of the body at the molecular, cellular, tissue, organ, and system levels with an emphasis on the integration of human function. Laboratory exercises in anatomy and physiology are part of this course. *Prerequisite: ENG 101 pre/co-req* 4 Credits

BIO 202- Human Anatomy and Physiology II with Lab: This course is a continuation of BIO201 that studies the structural and functional relationships and interdependence of body systems. Laboratory exercises in anatomy and physiology are part of this course. *Prerequisite: BIO 201* 4 Credits

BIO 210– Microbiology with Lab: Emphasizes biological organization; basic biochemistry; biophysics of living systems; membrane dynamics; cellular structures and functions; cellular reproduction, photosynthesis; cellular respiration; chromosomal and molecular inheritance. *Prerequisite: ENG 101 pre/co-req* 4 Credits

BUS 101- Introduction to Business: This course provides a foundation in modern business and business practices including principles of management, marketing and human resource management. The operation of business in a free enterprise system, the government’s role in business and forms of business ownership are discussed. *Prerequisite: ENG 101 placement or ENG 090 completed* 3 Credits

BUS 103- Principles of Management: This course introduces the theory and basic principles of management. Students examine the management process including the areas of planning, leading, organizing and controlling. 3 Credits

BUS 130- Business Communications: This course develops a student's skills in writing effective business letters, reports, and research projects. Verbal communication skills and the preparation of resumes and other job-related materials are studied. *Prerequisite: ENG 101 placement* 3 Credits



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

BUS 203– Labor Relations: This course is an analysis of the causes and possible solutions to conflict between management and labor as well as collective bargaining strategies and possible outcomes. The course includes the following topics: wages, pensions, working conditions, safety and union recognitions, wage and salary administration practices, recruitment, training programs and procedures. *3 Credits*

BUS 210– Supervisory Management: This course prepares students to plan, organize, influence, and control the day-to-day operations of a business enterprise. This course will focus on techniques to work with and through people to meet organizational goals. Students will apply business administration principles including human resources functions, customer service evaluation, office management techniques, employee conflict management, and managerial ethics. *3 Credits*

BUS 221- Production Management: This course is an introduction to the characteristics and techniques applicable to product or operations management. The emphasis is on decision making in operational areas such as planning and control, cost reduction techniques, inventory control, production engineering, quality control, materials management, value engineering and the use of statistics and quantitative techniques in arriving at sound business decisions. *3 Credits*

BUS 222– Purchasing and Supply Chain Management: This course provides an overview of the purchasing process, which includes the responsibilities of procurement professionals, sourcing, logistics, pricing policies, legal considerations, and standards of performance and overall supply chain management activities. This course develops an understanding of the competitive advantage through the strategic sourcing, purchasing/procurement, and supply chain management processes. *3 Credits*

BUS 230– Principles of Marketing: This course prepares students to understand and manage the process of developing consumer audiences and moving products from producers to consumers. This includes instruction in buyer behavior and dynamics, principles of marketing research and the marketing mix, demand analysis, cost-volume and profit relationships, pricing theory, marketing campaign and strategic planning, market segments, advertising methods, sales operations and management, consumer relations, retailing, and applications to specific products and markets. *3 Credits*

CHM 110– Introduction to Chemistry I: This course introduces students to general chemistry and includes topics such as the nature of matter, atomic structure, chemical bonds and reactions, and stoichiometry. This course will prepare students for studies in various health professions, including nursing, pharmacy, and dentistry and will also fulfill the general chemistry requirement for science majors. The laboratory component includes exercises that put this knowledge into practice. *4 Credits*

CHM 111– Introduction to Chemistry II: This course introduces students to general chemistry and includes topics such as the nature of matter, atomic structure, chemical bonds and reactions, and stoichiometry. This course will prepare students for studies in various health professions, including nursing, pharmacy, and dentistry and will also fulfill the general chemistry requirement for science majors. The laboratory component includes exercises that put this knowledge into practice. *4 Credits*

CIS 100- Computer Applications and Concepts: This course is an exploration of modern computer technology used for communication, collaboration, problem solving, decision making, and increasing personal productivity. Topics covered include word processing, electronic spreadsheet, presentation, and database management software; collaboration and networking software; the Internet of Things; and ethical issues related to technology. This is a Windows based hands-on course. *3 Credits*

CIS 113- IT Hardware Essentials and Support: Students develop the necessary skills to support personal computers by solving common PC hardware and software problems. Students will learn to install and maintain a variety of processors, operating systems, and applications. Successful completion of the course prepares students for the A+ Certification examination sponsored by the Computing Technology Industry Association. *3 Credits*



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

CIS 115- Information Technology Fundamentals: This course explores technical issues involved with computers and information technology. Students will be able to set up a basic workstation, conduct basic software installation, establish basic network connectivity, identify compatibility issues, identify/prevent basic security risks and demonstrate knowledge in the areas of safety and preventative maintenance of computers. This course prepares students considering a career in Information Technology (IT) or desiring a more detailed knowledge of IT fundamentals. *3 Credits*

CIS 117– Operating Systems Interfaces: In this course, students acquire an understanding of how a computer system’s hardware components impact performance of software. Students also learn about the impacts of parallelism and latency on performance as well as tradeoffs with various components such as processor clock speed, cycles per instruction, memory size and average memory access time. Problem solving is emphasized through the use of assembly language. *Prerequisites: CIS 113 or Instructor Consent* *3 Credits*

CIS 119– Introduction to Programming: Python: This course introduces computer programming using the Python programming language. Emphasis is placed on common data types, control flow, object-oriented programming and graphical user interface driven applications utilizing the standard library distributed with Python. *Prerequisites: CIS 113 or Instructor Consent* *4 Credits*

CIS 120- Network Integration and Management: This course introduces students to computer networking fundamentals. Topics include: network design, network hardware, network operating systems software, data communications, configuration and installation, internetworking, and troubleshooting basic network problems. Using a Microsoft Windows Server-based LAN environment, students practice network administration concepts and activities. *Prerequisites: CIS 113 or Instructor Consent* *3 Credits*

CIS 125- Introduction to Artificial Intelligence and Robotics: This course will introduce Artificial Intelligence, the theory and development of computer systems that normally require human intelligence, such as visual perception, speech recognition, decision– making, and translation between languages. It will focus on the symbolic inference, representation, and simulation by computers and software of human learning and reasoning processes and capabilities, and the computer modeling of human motor control and motion. Includes instruction in computing theory, cybernetics, human factors, natural language processing, and applicable aspects of engineering, technology, and specific end-use applications. *3 Credits*

CIS 130- Adobe Photoshop: Use of Adobe Photoshop to edit digital photographs and create bitmap images, with emphasis on selection techniques, making tonal adjustments, and compositing with layers. *3 Credits*

CIS 135- HTML/CSS Web Development: Create the foundational display structure of web pages, sites and web apps with HyperText Markup Language (HTML) code and Cascading Style Sheets (CSS) for formatting. Covers HTML5 and CSS3 tags, web standards, best practices, Web fonts, and responsive design. *3 Credits*

CIS 138- JavaScript for Web & Mobile: An introduction to JavaScript for enhancing web pages and creating interactive web applications. Covers JavaScript programming fundamentals and the use of a JavaScript framework such as JQuery Mobile or React Native to create mobile device web apps. *Prerequisites: CIS 135 or Instructor Consent* *3 Credits*

CIS 140– Windows Development Level I (C#): Introduction to C# programming including planning, UI design, algorithm development. Focusing on structured programming (data containers, data types, processing operators, expressions, and methods, string methods and formatting, flow control structures, functions, and debugging), this course introduces Object Oriented Programming techniques and accessing external data sources. *Prerequisites: CIS 113 or Instructor Consent* *4 Credits*

CIS 150– Java Programming Level 1: Introduction to Java programming to construct Java Applets and Java Applications. Covers structured and Object-Oriented Programming techniques, including control flow structures, data containers and structures, string manipulation, methods, classes and graphics. *Prerequisites: CIS 113* *3 Credits*



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

CIS 185- Introduction to Network Security: This course highlights the models and protocols essential to securing wired and wireless networks. Students also learn to capture and analyze network traffic, identify network security threats, and apply and evaluate network security controls. *Prerequisites: CIS 113 or Instructor Consent* 3 Credits

CIS 215- Database Design and Application Development: This course provides students with a foundation of knowledge needed to work with database management systems and to create applications utilizing current development strategies. Students examine various types of database techniques with emphasis on relational designs. Students design and implement solutions to business-related problems. *Prerequisites: CIS 113 or Instructor Consent* 3 Credits

CIS 220- Systems Development: In this course, students utilize a system development methodology through team-based projects that demonstrate their Information Technology skills. The focus of the course includes the Systems Development Life Cycle (SDLC) phases, user system requirements, logical and physical design, test and implementation planning, performance evaluation, software package evaluation and acquisition, prototyping, structured and object-oriented methodologies, development and adherence to the system life cycle standards and designing interfaces and dialogues. This course encourages interpersonal skill development with clients, users, team members and others associated with development, operation and maintenance of the system. *Prerequisites: CIS 113 or Instructor Consent* 3 Credits

CIS 240- Windows Development Level II (C#): Advanced C# programming with emphasis on data structures, object-oriented programming, user interfaces, and database processing. Introduction to using C# and Visual Studio for cross-platform projects (Android, iOS, and Mac), client-side and server-side web development (ASP.NET and Blazor), and gaming (Unity game engine). *Prerequisites: CIS 140 with C or better grade* 3 Credits

CIS 245- Android App Development (Kotlin): Foundational knowledge, skills, and abilities to develop mobile apps for Android devices using the Kotlin programming language. Covers tools of the trade, creating user interfaces, coding events, activities and intents, working with internal and external data sources, accessing device services, Object Oriented Programming (OOP) practices, navigating multiple layouts, testing, debugging, and deploying applications. The course culminates with each student creating a custom Android app of their own design. 4 Credits

CIS 248- iOS App Development (Swift): Foundational knowledge, skills, and abilities to develop mobile apps for IOS devices using the Swift programming language from concept to deployment. Covers the Xcode IDE, creating user interfaces, coding events, iOS frameworks, working with internal and external data sources, incorporating media, accessing device services, Object Oriented Programming (OOP) practices, navigating multiple screens, testing, debugging, and deploying applications. The course culminates with each student creating a custom iPhone and/or iPad app of their own design. 4 Credits

CIS 250- Internet/Intranet Networking: This course introduces students to the essential concepts and technical skills necessary to establish an Internet or Intranet within an enterprise, and the use of TCP/IP as a routable network protocol. Windows Server is used as a vehicle for both discussion and related lab activities. Topics include planning and installation, diverse client support, multiple protocol support, domain management, Novell and Macintosh connectivity, Remote Access Server, Active Directory Services and troubleshooting. Detailed coverage is also provided on TCP/IP issues such as IP addressing, bridging and routing, DHCP and naming services. *Prerequisites: CIS 113 or Instructor Consent* 3 Credits

CJS 100 - Introduction to Criminal Justice: This course provides students with a general introduction to the concepts, phenomena, and issues in the study of criminal justice. A survey of criminal law, criminal procedures, law enforcement agencies, the criminal courts, and corrections (both institutional and community-based) will be conducted to understand the dynamics of the justice system. 3 Credits



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

CJS 103 - Juvenile Justice: This course is a study of the juvenile justice process. Topics include specialized juvenile law, role of the juvenile, role of the juvenile courts, role of police agencies, role of correctional agencies and theories. Concerning delinquency. In addition, students will study the history, philosophy, organization, processes and functions of the juvenile justice systems in the United States and Pennsylvania. Emphasis is placed on jurisdiction, treatment and juvenile court proceedings in juvenile justice decision making. In addition, students will study child abuse and neglect and how the system is designed to deal with these serious issues. 3 Credits

CJS 150 - Criminal Law: This course is a study of the nature of criminal law; philosophical and historical development; major definitions and concepts; classification of crime; elements of crimes and penalties using Pennsylvania statutes as illustrations; and criminal responsibility. *Prerequisites: CJS 100 (C or better)* 3 Credits

CJS 170- Introduction to Corrections: This course examines the American correctional system; the study of administration of local, state, and federal correctional agencies. The examination also includes the history and development of correctional policies and practices, criminal sentencing, jails, prisons, alternative sentencing, prisoner rights, rehabilitation, and community corrections including probation and parole. Current philosophies of corrections and the debates surrounding the roles and effectiveness of criminal sentences, institutional procedures, technological developments, and special populations are discussed. 3 Credits

CJS 180- Introduction to Policing: This course focuses on the philosophy and history of policing, limitations imposed on law enforcement in a democratic society in accordance with the Constitution, and the role and place of law enforcement in the total criminal justice process. Students study law enforcement agencies; examine the current challenges facing the contemporary police officer and practical police problems. Areas of study include homeland security, community policing, and crime control concepts. 3 Credits

CJS 190 - Race, Crime, and Justice: This course examines the nature, function, and causes of crime in society and examines how race and criminology intersect. The course will define criminal acts, apply theory that can be used to explain the participation or reason for perpetrating criminal acts, and explore the public policies that are developed to respond to the threat and existence of criminal behavior. *Prerequisites: SOC 101 or Instructor Consent* 3 Credits

CJS 298 - Criminal Justice Internship: Provides the student with an opportunity to gain knowledge and skills from a planned work experience in criminal justice. Students are expected to gain a minimum of forty hours of work-based learning experience in a pre-approved criminal justice employer. Students will coordinate specific activities and assignments with the faculty member. *Prerequisites: Instructor Consent* 3 Credits

CJS 299- Criminal Justice Capstone: This course allows students the opportunity to explore the different career pathways within the Criminal Justice system as an alternative to the traditional Internship placement. Students will apply the collective knowledge gained throughout the program and explore their potential future career in criminal justice by conducting research and interviewing individuals in the field. Through this, students will obtain the necessary knowledge and realistic expectations for their future career and create a guide they can use to achieve their career goal. This course is intended to be completed at the end of the student's second year. *Prerequisites: Instructor Consent* 3 Credits

COM 110- Fundamentals of Public Speaking: This course introduces students to the essential strategies and techniques employed by effective public speakers. The course covers strategic audience adaptation throughout the communication process. It provides suggestions for improving speeches in all facets, including invention, organization, style, and delivery. The course emphasizes the critical analysis of the effective and ineffective practices of historical, cultural, and contemporary speakers. The course stresses the importance of using unbiased and effective evidence to support an argument. It also provides opportunities for students to gain practical experiences in the art of self-expression. *This course is cross-listed and equivalent to ENG 110* 3 Credits

COM 120- Media Literacy: Students will develop skills to become critical consumers and producers of media. Students will learn how to analyze and evaluate different forms of media to identify credible, essential sources of information. Students will break down arguments and recognize that different people see things differently. 3 Credits



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

COM 201-Interpersonal and Professional Communication: This introductory course helps students become better communicators in both personal and professional settings and emphasizes roles, skills, strategies, and activities that help develop effective interpersonal relationships. Lectures, discussions, and multiple speaking opportunities enable students to critically assess and demonstrate the impact that gender, culture, perception, conflict, self-disclosure, listening, language, non-verbal expression, and relationships have on interpersonal communication. *3 Credits*

EAS 101-Earth Science Meteorology with Lab: This lecture and laboratory-based course investigates the principles and processes that produce weather and climate on earth. It covers the basic elements of meteorology-temperature, pressure, moisture and wind-and analyzes severe storms such as tornadoes and hurricanes. Lab work focuses on basic weather forecasting and weather conditions that affect our daily lives. *4 credits*

EAS 110- Earth Science with Lab: This interdisciplinary science course introduces students to the study of environmental problems and proposed solutions to these problems. Topics covered include ecosystem health, water and air pollution, land use, and climate change. Toward this goal students will explore a broad scope of sciences including earth science, ecology, chemistry, and environmental law. Laboratory exercises and field trips are included. *4 credits*

ECO 101- Macroeconomics: This course is an introduction to the economic activity of the nation, introducing basic concepts and institutions. The emphasis is on aggregate income and spending, the government fiscal and monetary policy, national income accounting, economic growth and comparative economic systems. *3 Credits*

ECO 102- Principles of Microeconomics: This course is an introduction to the activities of individual economic units, such as industries, companies, households and consumers. The course emphasis is on markets, the price system and the allocation of resources as they affect the consumer, the producer and the economy. *3 Credits*

ENG 090- Fundamentals of College Writing: English 090 develops written communication skills, beginning with the ability to detect, diagnose, and correct error patterns in focused writings. Students practice sentence mechanics in the context of their own writing, while learning to develop paragraphs and short essays that clarify and support a point of view in preparation for college-level writing. Students then progress to planning, drafting, revising, and editing of short essays, some of which will be reading-based. *3 Credits*

ENG 101- English Composition I: This course introduces students to college-level, academic writing. Emphasis is placed on critical analysis, argumentation, intellectual honesty and revision. Through the writing process, students will refine arguments; develop and support ideas; investigate, evaluate, and integrate appropriate sources; revise and edit for effective style and usages; and develop an awareness of the variety of contexts, audiences, and purposes of academic writing. Students produce multi-paragraphed argumentative essays of increasing difficulty. *Prerequisite: ENG 101 placement or ENG 090 completed* *3 Credits*

ENG 102- English Composition II: This course builds upon the concepts introduced in English Composition I, with a focus on research-based, college-level, academic writing. Emphasis is placed on critical and ethical analysis, the research process, proper citation practices, intellectual honesty, and revision. Through the writing process, students will determine an appropriate topic for research; investigate, evaluate, and integrate multiple sources; revise and edit for effective style and usages; and develop an awareness of the variety of contexts, audiences, and purposes of academic writing. Students will produce several writing projects that culminate in a signature research essay. *Prerequisite: ENG 101 with a C or better grade* *3 Credits*

ENG 110- Fundamentals of Public Speaking: This course introduces students to the essential strategies and techniques employed by effective public speakers. The course covers strategic audience adaptation throughout the communication process. It provides suggestions for improving speeches in all facets, including invention, organization, style, and delivery. The course emphasizes the critical analysis of the effective and ineffective practices of historical, cultural, and contemporary speakers. The course stresses the importance of using unbiased and effective evidence to support an argument. It also provides opportunities for students to gain practical experiences in the art of self-expression. *This course is cross-listed and equivalent to COM 110* *3 Credits*

ENG 201- Poetry: This is a course in the study of poems of various periods and types. Emphasis is on the meaning of individual poems and the interplay of sensory images. The course will examine how social and philosophical culture dictate how poetry is written and establish what qualities make great poetry. *3 Credits*



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

ENG 207- Survey of Literature: Explores literature in a variety of genres such as short fiction, poetry, and drama. The focus of this course is on the elements of the literature studied, including character, style, structure, form, tone, and theme. The historical and cultural context of the works studied, including history, geography, culture, race, gender, class, ethnicity, and religion are also considered. Literature studied in this course is drawn from various literary periods as well as from a range of writers, including American, British, western European, and world literary figures. *3 Credits*

ENT 110- Fundamentals of Entrepreneurship: This course provides an overview of the challenges of starting a new venture or strengthening an existing one. Students will learn the characteristics of an entrepreneur and how to use the tools that an entrepreneur needs to evaluate a business concept and, if it is viable, how to take the steps needed to make it a reality. The course covers key aspects of entrepreneurship, including planning, operations, human resources, finance, marketing, and ethical responsibilities. *3 Credits*

ENT 130- Entrepreneurial Financial Intelligence: This course is designed to familiarize entrepreneurs with key financial and accounting concepts that are essential in starting and running a business and help them acquire the tools they need to manage an entrepreneurial venture effectively. This course will cover basic accounting terms and ratios, financial statements, cash flow and budgets, and review the accounting software available for a prospective business entity. This course is designed for small business owners and entrepreneurs, rather than those seeking to work as professional accountants. *3 Credits*

ENT 150- New Business Development: This course adopts the marketing philosophy that new products/services will be profitable if the extended product/service line or new product/service provides customers with highly valued benefits. The goal is to help students learn how to use innovative techniques to identify new markets for existing products/services as well as help students develop new product/service ideas, the goals using available resources and networks. *3 Credits*

ENT 140- Business Plan Development: In this course, entrepreneurs learn the process of preparing and implementing a business plan and presenting it to potential lenders and investors. That process includes creating concept statements, developing feasibility studies, and designing business models. Students will learn how to anticipate and solve both typical and atypical problems that entrepreneurs encounter. *3 Credits*

ENT 230- QuickBooks: This course presents an overall framework in accounting for small businesses and start-ups. This course provides hands-on experience in QuickBooks as students set up a chart of accounts, reconcile bank accounts, create estimates, and generate reports. This course shows students how to create and print invoices, receipts, and statements as well as track payables, inventory, and receivables through the QuickBooks program. *3 Credits*

FYE 101- First Year Experience: This course introduces first-year students to ideas and strategies required for college-level academic inquiry and college success, including critical thinking, communication, cultural competence, problem-solving, data interpretation, and institutional knowledge. Students develop college preparedness skills such as time management, note taking, study methods, test taking, information literacy, and an understanding of academic integrity. Students apply critical thinking and communication skills to areas such as cultural diversity, media literacy and financial literacy and gain an understanding of campus and community resources. Students create an appropriate academic plan, financial plan, and career/transfer plan in the course of the semester. *3 Credits*

GLG 220- Environmental Geology with Lab: Environmental Geology is an examination of geologic processes which have impact upon humans and of the impact humans have upon those processes. Topics such as coastal erosion, flooding, earthquakes, radon, greenhouse effect, water quality, and waste disposal will be investigated. Environmental Geology should be considered by the following students: those needing a lab-science elective, those preparing for a career as an environmental technician, and those considering a Geology major seeking a geology elective. Class time and optional field trips aligned with the course topics will be taken. This course is subject to a course fee. *4 Credits*

HIS 122- History of the Western World: Renaissance through World War II: This course provides a comprehensive survey of Western civilization, spanning the Renaissance to World War II. Emphasizing both cultural and political history, we explore the transformative events, ideas, and movements that shaped the modern world. Topics include the rise of humanism, scientific advancements, political revolutions, the secularization of Western culture and the impact of global conflicts. Students will gain insights into the interplay of social, economic, and intellectual forces that have influenced Western societies. *3 Credits*

HIS 201- U.S. History to 1865: The Foundation of the English settlements, the American Revolution, the early National Period, Jacksonian Democracy, Abolitionism, expansion to the Pacific, immigration, the Civil War, and the role of minorities are emphasized. *3 Credits*



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

HSC 100– Medical Terminology: This course introduces prefixes, suffixes, and word roots used in the language of medicine. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. 3 Credits

HSC 101- Intro to Allied Health: This course teaches the basics of confidentiality under the Health Insurance Portability and Accountability Act (HIPAA), basic life support (CPR), mandatory reporting (Act 31) and abuse prevention. Will give the student a working knowledge of Occupational Safety and Health Administration (OSHA) standards and to educate them on bloodborne pathogen safety as well as other important OSHA standards relative to infection control for health care workers. Students will be instructed on the use of personal protective equipment (PPE) related to disease transmission as well as infection control concepts and strategies for preventing occupational exposure. This course also focuses on patient safety and provides the student with instruction on body mechanics, patient transfer, restraints, and fall precautions. Instruction will be provided on the proper use of medical equipment and supplies related to maintaining a safe patient environment. Student will also be educated on how to respond to emergency situations during this course. 3 Credits

HSC 110 Medical Terminology and Body Systems: This course introduces the student to medical terminology and human anatomy and physiology. Body systems and related terminology are discussed in a primary learning level. Related disease processes, diagnostic procedures, therapeutic measures, and appropriate abbreviations and acronyms are included. This is a basic foundational course for students entering the field of health care, both clinical and administrative. 4 Credits

IMM 102– Electrical Control Circuits: Students will learn the fundamentals of basic (DC) electricity, including series, parallel, and combination circuits. The fundamentals of inductors and capacitors are also studied. 3 Credits

IMM 103– Electrical Motor Control: In this course, students will learn lockout-tag- out procedures and how to read and develop ladder logic diagrams. Students will study 3- phase motor control systems, and the components of a 3-phase motor control system. Students will learn to troubleshoot a 3-phase motor control system with practical faults inserted
Prerequisite: IMM 102 3 Credits

IMM 104 - Hydraulics: Fluid Power Systems: In this course the students will learn about fluid power systems. This will include principles of fluid power systems. This course will also cover hydraulic and pneumatic systems, symbols and schematics, flow control devices, and actuators. The student will learn to read pressure gauges, along with working with the different formulas associated with hydraulic and pneumatic systems. Besides the lecture the students will have a hands-on lab portion to help with the understanding of the material. 3 Credits

IMM 105 - Pneumatics: Air Power Systems: This course covers introduction to air-powered, pneumatic system maintenance and pneumatic system construction. Students will learn how a pneumatic system works, how to read pneumatic schematics, and how to identify different pneumatic components in a system. Students will learn how to read pressure gauges and how to assemble a simple pneumatic system. Students will also learn how to wire an electro-pneumatic device using a ladder logic diagram. 3 Credits

IMM 110– Basic Mechanical Drives: Students will learn how to align and level a motor and how to align various shafts to a motor. Students will also install drive belts and drive chains to a motor. Students will learn how to use various tools to measure belt and chain tension and how to use various specialized tools and measuring devices such as calipers and micrometers when installing mechanical devices. 3 Credits

IMM 112– Programmable Controllers I: This course offers students the fundamentals of a Programmable Logic Controller (PLC) using the Allen Bradley SLC 500 PLC. Students learn the basic parts of a PLC system, digital fundamentals, and PLC addressing. Students also learn how to troubleshoot and repair a PLC when a "real world" fault is inserted. *Prerequisite: IMM 103 or Instructor Consent* 3 Credits

IMM 113– Programmable Controllers II: This course is an extension of IMM 112. Students learn to program an Allen Bradley SLC500 PLC for advanced sequencing operation. Students also learn to program timers and counters that are used in a PLC application, as well as to write a PLC program using advanced math and data functions. The troubleshooting section from IMM 112 is also used during the course. *Prerequisite: IMM 112* 3 Credits



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

IMM 114– Advanced Programmable Controllers: This is an advanced Programmable Logic Controllers (PLC) course. In this course, students will learn to program an Input/Output Allen Bradley Analog module card. They will learn how data sampling takes place and how this module card interfaces with 'real world' devices. Students will also learn how to set up and program the Allen Bradley PLC for DH485 and RIO Communication. In the final part of this course, students will learn how to set up and program Panelview software to communicate with an Allen Bradley PLC program. *Prerequisite: IMM 113*
3 Credits

IMT 102 - Industrial Manufacturing Technology I: This course provides classroom and laboratory learning experiences related to fundamental machine tool technology by focusing on power saws, drill presses, basic lathes and related tooling. Course includes speed and feed calculation, part layout, basic measuring tools and related manufacturing theory. Safe work practices are strongly stressed.
3 Credits

IMT 104 - Industrial Manufacturing Technology II: This course is a continuation of IMT 102 beginning with engine lathes and introducing horizontal mills, vertical mills, and CNC basics. Course includes related information on tooling, speeds and feeds, measuring instruments and manufacturing theory. *Prerequisite: IMT 102 or Instructor Consent*
3 Credits

IMT 112– Metrology: Study of the proper use of modern precision measurement tools and the interpretation of the data obtained from their use. Topics include the use of traditional precision measurement tools such as micrometers and calipers, surface plate work, modern measurement tools such as laser micrometers, digital height gages and coordinate measuring machines to determine angular and linear dimensions. Measurements from these tools will determine the acceptability of machined parts as specified on geometric dimensioning and tolerancing (GD&T) prints.
3 Credits

IMT 114– Introduction to Print Reading: Introduction to Print Reading teaches students how to read and interpret shop blueprints in order to fabricate parts and perform assembly operations, including but not limited to welding, HVAC/R, machining and construction trades.
1 Credit

IMT 200- Introduction to CNC Programing I: A survey of the tools and theory regarding computer integrated manufacturing (CIM). CIM is the union of hardware and software, database management, and communications to automate and control production activities from planning and design to manufacturing and distribution. Introduces basic CNC lathe set up and operation. Includes safety, turning, grooving, drilling, boring, threading, and cutting tools. Programs are written, developed, simulated, run, and debugged on actual machine tools. *Prerequisite: IMT 104 or Instructor Consent*
3 Credits

IMT 202- Introduction to CNC Programing II: This course is a continuation of IMT 200, Introduction to CNC programming. The use of M & G code programming to produce CNC programs for machined parts will be taught. Specific areas of programming including linear and circular interpolation, canned cycles, drilling, reaming, tapping, boring, face milling, end milling and the use of sub programs will be covered. Setup and operation of CNC milling machine controls will be covered and used to proof run programs. *Prerequisite: IMT 200, or Concurrent Enrollment in IMT 200 or Instructor Consent*
3 Credits

IMT 204- Introduction to CNC Toolpath: The student will bring together his/her knowledge of geometry generation using CAD and conventional CNC program generation to learn computer generated toolpathing. The student will generate geometry, initiate computer toolpaths and output executable CNC programs using CAD/MasterCam toolpathing software on personal computers. Additionally, post processor generation will be discussed. *Prerequisite: IMT 200, and IMT 202 or Concurrent Enrollment in IMT 202 or Instructor Consent*
3 Credits

IMT 206– Advanced CNC Programing: This course builds on the knowledge gained in the IMT 204 Introduction to CNC Toolpath course and expands the knowledge of design and production of CNC programming. Advanced programming are simulated off-line and run on multi-axis CNC machines Students apply advanced precision machining skills, complex setup, and programming advanced part geometry. Canned cycles, cutter compensation, subroutines, probing functions, and high-speed machining processes will be introduced. *Prerequisite: IMT 204 or Instructor Consent*
3 Credits

MAT 090- Arithmetic Fundamentals: This is a course in the fundamentals of arithmetic, including topics such as: operations with whole numbers, fractions, and decimals; percentages; ratio and proportion; computations involving measurement and unit conversion; geometric formulas; and an introduction to algebra.
3 Credits



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

MAT 102- Mathematical Concepts: A course in contemporary mathematics for liberal arts and other students not majoring in business or the sciences. Topics include basic mathematical concepts: problem solving and critical thinking, sets, elementary logic, numeration systems, elementary geometry, counting techniques, and elementary probability and statistics. Topics are selected at the discretion of the Mathematics Department. 3 Credits

MAT 107- Technical Math: The course emphasizes the mathematical knowledge needed to be successful in the workplace, including number systems, geometry, algebra, and trigonometry. Students will engage in problem-solving activities using real-world career examples that help students learn not only the needed mathematical skills, but also how those skills are used in specific fields of interest. 3 Credits

MAT 111- College Algebra: This is a course in College Algebra for students not intending to take Calculus. Topics include equations and inequalities, polynomial and rational functions and their graphs, equations and graphs of conic sections, the theory of equations and systems of equations. *Prerequisite: MAT 111 placement or MAT 090 completed* 3 Credits

MAT 202- Introduction to Statistics: This course focuses on the mathematical skills needed by students enrolled in technical, business, and liberal arts curricula. This course covers describing and summarizing single and bi-variate data, both graphically and numerically. Also, discrete and continuous probability distributions are covered. In addition, parametric estimation and tests of significance are studied. *Prerequisite: MAT 090 Completed or MAT 102 Placement* 3 Credits

MUS 101- Introduction to Music: This course surveys the form, style and basic structure of art, world and popular music. It is designed to enhance students' appreciation and understanding of music by focusing on influential composers and their compositions. Lectures highlight the characteristics, history and performance practice of many genres of music. 3 Credits

MUS 114- World Music: Introduction to World Music Cultures is an entry-level course in the study of World Music. These musical traditions will be explored both on the basis of their intrinsic characteristics, as well as in connection with their social, economic, and political contexts. Students will also be introduced to the discipline of Ethnomusicology. As a term project, each student will be required to visit and document a local music culture selected by the student and approved by the instructor. 3 Credits

PCT 111- Patient Care Technician Skills: This course is designed to prepare students with the basic knowledge of patient health assessment. Students who successfully complete this course will be able to provide vital patient care under the direct supervision of a nurse or physician. This course will provide instruction on how to assess vital signs and measurements, how to care for catheters, how to provide oxygen therapy. Students will learn about the supplies and equipment needed to assist with basic patient care needs such as bathing, toileting, and other activities of daily living (ADL). It is important that students have the opportunity to apply the knowledge learned in this course; therefore, students will be expected to participate in role play, simulation skills, and hands-on practice activities during class time. 3 Credits

PCT 112- Advanced Patient Care Technician Skills: Skill development in the performance of a variety of blood collection methods using proper techniques and standard precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, patient identification, specimen labeling, quality assurance, specimen handling, processing, professionalism, ethics, and medical terminology. This course will prepare students for the phlebotomy certification exam. Students will also learn the skills necessary to obtain quality 12 lead electrocardiograms (ECG) in a variety of medical settings. A blended course including both theory and hands-on instruction. This course will also assist students in preparing for the ECG certification exam. This course is designed to meet the needs of students with the ability to interpret both normal and abnormal ECG, as well as provide an overview of heart anatomy and function. Instruction will be provided on proper use of medical equipment and supplies related to maintaining a safe patient environment. 3 Credits

PCT 115- Clinical Practicum for Patient Care Technicians: This course is a credit worthy clinical experience that will provide the students with the ability to transfer knowledge and skill sets from the classroom to the clinical setting through direct patient care in the acute care setting environment. Students will be supervised by a qualified instructor that has had recent clinical experience in the acute care setting. *Prerequisite: HSC 101 & PCT 111 with C grade or better* 3 Credits

PHL 101- Introduction to Philosophy: This course is a study of basic philosophical problems including: the existence of God, the immortality of the soul, knowledge, the mind-body problem, ethics in society, subjectivism, objectivism and pragmatism, political problems arising from philosophical ideas and the theory of beauty. 3 Credits



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

PHL 111- Religions of the World: This course is a description of the origins, development and manifestations of major world religions. Students explore how people of different faiths practice and express their beliefs. Similarities and differences of different faiths are emphasized. *3 Credits*

PHY 111– Conceptual Physics: This is a one semester introductory course in fundamental physics available to all students. In addition to fulfilling general education requirements, this course is useful for those considering technical/science fields such as allied health majors. Topics covered include basic kinematics, forces, energy, momentum, fluids, electricity, magnetism, waves and light. Emphasis is placed on qualitative understand of the material with quantitative calculations at the high-school math level. This course greatly strengthens problem analysis and solving skills directly applicable to everyday situations. *4 Credits*

POL 112- Introduction to International Relations: The course will cover the theories of international relations (IR) and apply them to the broader context of global politics. Students will learn key concepts and ideologies. They will make comparative analyses of the types of political systems and ideologies found in both the developed and developing countries and identify patterns of political behavior. These patterns can then be linked to theories, concepts and ideologies that have been studied. The contents of this course will be placed in historical and socio-cultural contexts. *3 Credit*

POL 203- Survey of American Politics: This course investigates the development and evolution of the American political system. Students will be introduced to the unique structure, functions, and problems of the national government within the federal system. Close attention is given to the nature of and the controversies emerging from the interaction between political institutions. This includes analysis of the following concepts and topics: federalism, separation of power, check and balances, Bill of Rights, democracy, civil liberties, civil rights and political parties. *3 Credit*

PSY 101- Introduction to Psychology: This course provides the student with an understanding of how the scientific method is applied to the study of human and animal behavior. Topics include: research results, the major principles and perspectives of psychology, applications of contemporary psychology, the structure and function of the nervous system, foundations of learning, intelligence, social behavior, personality, feeling and emotion, motivation, abnormal psychology and its causes and therapies, developmental patterns and the measurement of behavior. *3 Credits*

PSY 201– Social Psychology: The basic psychological principles involved in the scientific study of individual behavior in social and group situations are examined. Emphasis is placed on understanding attitude formation and change, conformity, group interaction, leadership roles, altruism, aggression and prejudice. *Prerequisite: PSY 101* *3 Credits*

PSY 210– Lifespan Development: Students will develop an increased understanding of the influences that shape a person's, or group's attitudes, beliefs, emotions, symbols, and actions, and how these systems of influence are created, maintained, and altered by individual, familial, group, situational or cultural means. Students will identify ethical principles that guide individual and collective actions and apply those principles to the analysis of contemporary social and political problems. Classes will consist of lecture, in-class activities, and between-class activities. Learning outcomes will be assessed through multiple choice or short-answer quizzes and exams, writing assignments, in-class discussion, and the viewing and discussion of video material; these assessments may vary slightly per instructor to suit their course needs. *Prerequisite: PSY 101* *3 Credits*

SOC 101- Introduction to Sociology: An introduction to the science of sociology, including a discussion of sociological theory and method, social structure, culture, and socialization. Also emphasized are social stratification, race, ethnicity, and gender. Social institutions and their change dynamics are examined. *3 Credits*

SOC 211– Race and Ethnicity: This course will investigate the construction of the social categories of race and ethnicity. Discussion will revolve around the history, process and effects of these constructions. A major focus will be on interracial and interethnic relations in the United States. *Prerequisite: SOC 101* *3 Credits*

SOC 250– Contemporary Social Problems: This course will help students to further develop skills to interpret current events as part of general patterns and learn about their own societies. Contemporary Social Problems often reflects and constitutes major trends in society, including but not limited to racism, poverty, unemployment, environmental issues, marriage and divorce, and more. Students will be helped to examine, clarify, and make explicit their values as they participant in in-class discussions during lecture, in-class activities, and between-class activities. Learning outcomes will be assessed through multiple choice or short-answer quizzes and exams, writing assignments, in-class discussion, and the viewing and discussion of video material; these assessments may vary slightly per instructor to suit their course needs. *Prerequisite: SOC 101* *3 Credits*



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

SUR 100– Surgical Theory I: This course provides general introductory information for the surgical technology student. The student will learn the history and development of surgery, healthcare facilities organization and accreditation, physical environment and safety, biomedical science, surgical technologist and other team members job descriptions, medical/legal aspects of surgery including informed consent, risk management, patient’s Bill of Rights, the surgical patient and treatment of “special populations” of patients, professional management, communication skills and teamwork, and microbiology related to the perioperative environment. *Prerequisite: HSC 100, BIO 202, BIO 210* 6 Credits

SUR 120– Surgical Procedures I: This course is the focuses on the General, Obstetric and Gynecologic, Otorhinolaryngologic, Genitourinary, and Ophthalmic procedures. The student will learn to identify the names and uses of instruments, supplies, and drugs of each specialty; describe the pathology and related terminology of each system or organ that prompts surgical intervention, discuss preoperative diagnostic procedures related surgical procedures. *Prerequisite: HSC 100, BIO 202, BIO 210* 6 Credits

SUR 200– Surgical Theory II: In-depth coverage of perioperative concepts such as aseptic principles and practices, infectious processes, wound healing, creation and maintenance of the sterile field, surgical pharmacology and anesthesia, instrumentation, equipment, supplies, surgical case management, hemostasis, wound healing, wound closure, diagnostic procedures. *Prerequisite: SUR 100* 6 Credits

SUR 220– Surgical Procedures II: This course is the logical continuation of Surgical Procedures I and will focus on the Genitourinary, Plastic and Reconstructive, Oral Maxillofacial, Cardiothoracic, Peripheral Vascular, and Neurosurgery Surgeries. The student will learn the names and uses of instruments, supplies, and drugs of each specialty; describe the pathology and related terminology of each system or organ that prompts surgical intervention, discuss preoperative diagnostic procedures related surgical procedures. *Prerequisite: SUR 120* 6 Credits

SUR 270– Clinical Externship I: This course is a supervised clinical experience in local hospital surgical settings focusing on gaining surgical technologist experience on minor surgical procedures and fulfilling the weekly objectives. Students will complete a minimum of 120 surgical cases across 2 terms of clinical experiences with each course introducing a new variety of case types for students to meet the required number of total cases, total first scrubs, and total second scrubs. *Prerequisite: SUR 220* 7 Credits

SUR 271– Clinical Externship II: This course is a supervised clinical experience in local hospital surgical settings focusing on gaining surgical technologist experience on minor surgical procedures and fulfilling the weekly objectives. Students will complete a minimum of 120 surgical cases across 2 terms of clinical experiences with each course introducing a new variety of case types for students to meet the required number of total cases, total first scrubs, and total second scrubs. *Prerequisite: SUR 270* 7 Credits

WEL 101- SMAW Theory I : Safety and Operation: Shielded Metal Arc Welding (SMAW) 1 focuses on the safety, theory and techniques needed for shielded metal arc welding in the flat and horizontal positions to meet the standards of the American Welding Society. Safety and the use of proper personal protective gear are emphasized. 1 Credit

WEL 102- SMAW I: Lab 1A: Shielded Metal Arc Welding (SMAW) Lab 1a focuses on shielded metal arc welding in the flat and horizontal positions to meet the standards of the American Welding Society. Topics covered include striking an arc, beads, surfacing welds, butt welds - 1G, lap welds - 2F, tee welds - 2F, and Oxy-Acetylene cutting. 1 Credit

WEL 103- SMAW I: Lab 1B: Shielded Metal Arc Welding (SMAW) La 1b focuses on metal arc welding in the flat and horizontal positions to meet the standards of the American Welding Society. Topics covered include: vee groove 3/8 plate - 1G, vee groove 3/8 plate - 2G, AWS D1.1 3/8 groove certification - 1G. 1 Credit

WEL 104– GMAW Theory I : Safety and Operation: Gas Metal Arc Welding (GMAW) I focuses on the theory, safety and techniques needed for gas metal arc welding in the flat and horizontal positions to meet the standards of the American Welding Society. Safety and the use of proper personal protective gear are emphasized. 1 Credit

WEL 105- GMAW I: Lab 1A: Gas Metal Arc Welding (GMAW) Lab 1a focuses on gas metal arc welding in the flat and horizontal positions to meet the standards of the American Welding Society. Topics covered include: Machine set up, beads, surfacing welds, butt welds - 1G, lap welds - 2F, tee welds - 2F. 1 Credit



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

COURSE DESCRIPTIONS

WEL 106- GMAW I: Lab 1B: Gas Metal Arc Welding (GMAW) Gas Metal Arc Welding (GMAW) Lab 1b focuses on gas metal arc welding in the flat and horizontal positions to meet the standards of the American Welding Society. Topics covered include: vee groove 3/8 plate - 1G, vee groove 3/8 plate - 2G, AWS D1.1 3/8 groove certification 1G. 1 Credit

WEL 107- GMAW II: Lab 2A: Gas Metal Arc Welding (GMAW) II Lab 2a focuses on gas metal arc welding in the vertical and overhead positions to meet the standards of the American Welding Society. Safety and the use of proper personal protective gear are emphasized. Topics covered include: machine set up, beads, surfacing welds - vertical up, butt welds - 3G, tee welds - 3F, butt welds - 4G, tee welds - 4F. 1 Credit

WEL 108- GMAW II: Lab 2B: Gas Metal Arc Welding (GMAW) II Lab 2b focuses on gas metal arc welding in the vertical and overhead positions to meet the standards of the American Welding Society. Topics covered include: vee groove 3/8 plate - 3G, vee groove 3/8 plate - 4G, AWS D1.1 3/8 vee groove certification 3G GMAW. 1 Credit

WEL 109- GMAW II: Lab 2C: Gas Metal Arc Welding (GMAW) II Lab 2c focuses on gas metal arc welding in the vertical and overhead positions to meet the standards of the American Welding Society. Topics covered include: tee welds - 3F, tee welds - 4F, vee groove 3/8 plate - 3G, vee groove 3/8 plate 4G, AWS D1.1 1" vee groove certification - 3G FCAW. 1.5 Credits

WEL 110- GTAW Theory I: Gas Tungsten Arc Welding (GTAW) I focuses on the theory, safety and techniques needed to gas tungsten arc weld in all position on ferrous materials to meet the standards of the American Welding Society. Safety and the use of proper personal protective gear are emphasized. 1 Credit

WEL 111- GTAW I: Lab 1A: Gas Tungsten Arc Welding (GTAW) I focuses on gas tungsten arc weld in all position on ferrous materials to meet the standards of the American Welding Society. Topics covered include: machine set up, puddles: beads, surfacing welds - flat, butt welds - 1G, autogenous lap welds - 2F, autogenous outside corner welds - 2F, lap welds with filler - 2F, tee welds with filler - 2F. 1 Credit

WEL 112- GTAW I: Lab 1b: Gas Tungsten Arc Welding (GTAW) I focuses on gas tungsten arc weld in all position on ferrous materials to meet the standards of the American Welding Society. Topics covered include: butt welds - 3G, lap welds - 3F, tee welds - 3F, AWS D1.1 3/8 groove certification - 1G. 1 Credit

WEL 114- Print Reading For Welders: Print Reading for Welders teaches students about structural steel shapes, welding symbols, joint design and the proper procedures to read and interpret welding symbology. 1 Credit



ERIE COUNTY COMMUNITY COLLEGE

Live Here, Learn Here

BOARD OF TRUSTEES

Cheryl Rush Dix
Chair

Kurt Hersch
Secretary

Christina M. Vogel

Dr. Annette Wagner

Msrg. David A Rubino

Dr. Michael Victor
Vice –Chair

Justin M. Gallagher
Finance Chair

Reverend Dr. Charles Mock

Bob Merrill



FACULTY/STAFF DIRECTORY

President

Dr. Christopher Gray Founding President Ph.D. Illinois State University

Vice-Presidents

Guy Goodman Executive Vice President M.A. University of Iowa

Dr. Keri Bowman Assistant Vice President Ed.D. North Carolina State University

William Jeffress VP of Community Engagement M.B.A. University of New Haven

Administration

Dr. Stuart Blacklaw Dean of Academics Ph.D. Capella University

Matthew Cettin Director of Planning, Research, and Development M.S. Drexel University

Carolyn Dunn Director of Advancement B.A. Dominican University

Bridget Daugherty Director of Human Resources
Diversity Officer BA Mercyhurst University

Elise Michaux Marketing & Communication Director M.A. Slippery Rock University of PA

Frank Moore Chief Financial Officer M.B.A. Thomas Jefferson University

Chris Ray Director of Information Technology
Director of Facilities A.A.S. Fortis Institute



ERIE COUNTY COMMUNITY COLLEGE OF PENNSYLVANIA

Live Here, Learn Here

FACULTY/STAFF DIRECTORY

Bailey Shafer	Program Director: Allied Health Programs	M.A.	Aspen University
Staff			
Jamila Abraham	Data System Coordinator	M.A.	Gannon University
Brandon Borgia	Innovation Center Technician		Mentor High School
Andrea Campbell	Academic and Disabilities Counselor	M.A.	Bloomsburg University
Jordan Pool	Custodian		
Andrew Dick	Registration & Student Success Specialist	A.S.	Penn State Behrend
David DiSanza	Accountant	B.S.	Gannon University
Anthony Dombkowski	Facilities Manager	B.A.	Edinboro University of PA
Kenneth Getschow III	Construction Trades Program Coordinator		
Julie Hofmann	Assistant to the Deans		Shelton High School
Mari Howells	Library & Learning Support Specialist	M.A., M.L.S.	Bowling Green State University, Kent State University
Dianne Kuhar	Site Administrator	M.A.	Gannon University
Yavette Miller	College Recruiter	M.A.	Edinboro University of PA
Claudia Mokwa	Student Success Coach	M.A.	Edinboro University of PA
Tara Murphy	Student Success Coach	A.A.S.	Erie County Community College
Omotola Olusanya	College Recruiter	M.A.	Gannon University
Gregory Peterson	Help Desk Technician	A.A.S.	Fortis Institute
Raymond Romanski	Accounting Manager	B.A.	Penn State Behrend
Clarissa Stewart-Baker	Coordinator of Student Success	M.A.	Edinboro University of PA
Tacie Thomas	UAA Program Coordinator	B.A.	Edinboro University of PA
Renee Triana	Assistant to the President Secretary to the Board of Trustees	B.S.	Mercyhurst University
Jennifer Vargo	IT Administrative Assistant		Gannon University
Carter Vollant	IT Systems Administrator		



ERIE COUNTY COMMUNITY COLLEGE OF PENNSYLVANIA

Live Here, Learn Here

FACULTY/STAFF DIRECTORY

Full-Time Faculty

Dr. Sheldon Bailey	Math/Physics	Ph.D.	Ohio State University
Kimber Forrester	Communication & History General Studies Division Chair	M.A., M.A.	Edinboro University of PA, American Military University
Luke Hummer	Welding	C.W.I.	American Welding Society
Toni Mazanowski	Computer Science	B.S.	Western Governors University
Catherine Robertson	Business & Entrepreneurship	M.B.A.	Gannon University
Dr. Jennifer Robinette	English	Ph.D.	University of North Dakota
Alex Wheaton	English	M.A., M.S. M.S.	Gannon University Mercyhurst University