COLLEGE OF APPLIED SCIENCE AND TECHNOLOGY

The College of Applied Science and Technology is an ideal environment for students, educators, and staff support professionals. It has a small college feel with all the benefits of a big university. Our faculty take pride in focusing on quality undergraduate (associate and bachelor degree programs) instruction that can lead to student success in the classroom and beyond.

The College of Applied Science and Technology helps you achieve your career or educational goals.

- We focus on the learner, and we commit to provide you with the tools necessary to succeed.
- We provide each student with the means to examine academic and career opportunities, considering interests, abilities, and achievements.
- We deliver pre-service and in-service training to industry, business, government agencies, health-care providers, and human-service agencies.
- We seek to develop in you a philosophy of learning as a lifelong experience.
- We provide quality instruction with credentialed, qualified, and experienced professors who routinely use the greater Akron community as a "laboratory" for achieving educational goals.
- We recommend each student for the appropriate degree in accordance with his or her level of accomplishment and interest.

Cooperative Education

Minimum requirements for cooperative education students include the following:

- Enrollment in a program of study offered by the College of Applied Science and Technology wherein cooperative education has been established.
- For the CIS Cybersecurity program, minimum grade-point average of 3.00 in all 2440, 2235, and 2030 courses. See your adviser for details.
- For all other programs, minimum grade-point average of 2.00 for all University of Akron coursework and a minimum of 2.00 for all coursework applicable to the program of study.
- Completion of specific courses and/or credits for a particular program as approved by the college faculty.

Baccalaureate Degree Programs of Instruction

Computer Information Systems, Cybersecurity Option

Students in the Computer Information Systems Cybersecurity track will learn about computer network configuration, computer network and data security, network intrusion prevention and detection, computer networking forensics, and digital forensics. Students also will benefit from in-depth study of modern cryptography and cryptanalysis (encrypting and decrypting information) as they relate to cybersecurity and computing.

Computer Information Systems, Digital Forensics Option

Students in the program will acquire the skills and knowledge that are needed by the digital forensics professional. This program requires students to study and master network security; intrusion detection; infrastructure protection; cyber attacks; cryptography; and the collection, preservation, examination, analysis, documentation, and presentation of digital artifacts.

Computer Information Systems, Networking Option (Step-Up)

Baccalaureate level graduates have learned business computer and network applications and practices consistent with the requirements of the modern information technology professional. This program emphasizes the knowledge and applied skills necessary to succeed in today's environment.

The networking option allows students to attain an in-depth study of network management, including building, securing, managing, and troubleshooting multimedia wired and wireless LAN and WAN networks.

Students entering the Computer Information Systems program must demonstrate a fundamental knowledge of computers by examination or take the necessary courses prior to enrolling in the program.

Computer Information Systems, Programming Option (Step-Up)

The bachelor of science in Computer Information Systems, Programming option, allows students to attain an in-depth study of effective business application development, client/server database application development, and database management.

Emergency Management and Homeland Security Degree Programs, Full Four Year and Step-Up

Bachelor of Science in Emergency Management and Homeland Security

Emergency Management and Homeland Security studies events or threats, such as natural disasters, terrorist incidents, and technological hazards. Students will acquire specialized knowledge in disaster management through prevention/mitigation, preparedness, response, and recovery actions utilizing an All-Hazards focused approach. This dynamic discipline prepares graduates for careers in the governmental, corporate, public health, and nonprofit sectors. Emergency Management and Homeland Security can be a career that makes a difference in people's lives.

The program offers a Bachelor of Science degree, along with a minor and certificate, which is accredited by the International Fire Service Accreditation Congress (IFSAC). Students can step-up from responder-related Associates Degrees, such as criminal justice or fire protection. Students choose to follow a traditional college program with little or no bridgework.

All university general education requirements must be completed as outlined in this Bulletin.

This program is accredited by the:

International Fire Service Accreditation Congress (IFSAC)
Oklahoma State University
1700 West Tyler
Stillwater, OK 74078-8075
Phone: (405) 744-8802
ifsac.org (https://ifsac.org)
Bachelor of Organizational Supervision (Step-Up)
The degree builds on the skills and knowledge acquired at the associate degree level. The baccalaureate program provides graduates with advanced supervisory and leadership competencies critical for professional career advancement.

Engineering and Science Technology (Step-Up)
The baccalaureate-level programs in Engineering Technology are intended to fill the widening gap in industry between the professional engineer and the engineering technician. The graduate of these programs works in close support of engineers, translating conceptual ideas into functioning systems and providing supervisory direction for the implementation of these ideas by technicians and craftspeople.

These transfer programs permit the qualified engineering technology student to continue education to the baccalaureate degree. During the first and second years of full-time study, a student follows an associate degree program in the corresponding engineering technology field. The third and fourth years of full-time study provide the additional coursework required for the baccalaureate degree. Emphasis is placed on advanced training in the student’s field of specialization, broadened knowledge of related technical fields, extended general education, and basic management training.

Programs are available in automated manufacturing engineering technology, electrical and electronic engineering technology, mechanical engineering technology, surveying and mapping, and construction engineering technology. It is intended that a graduate will find employment in manufacturing, technical sales and service, application engineering, inspection and testing, and the more standardized aspects of engineering design.

Bachelor of Science in Automated Manufacturing Engineering Technology
The Bachelor of Science in Automated Manufacturing Engineering Technology is an upper-level degree program designed to provide the student with additional education beyond an AAS degree. A Manufacturing Engineering Technology associate degree program serves as the first two years. Although an associate manufacturing program is cited, graduates from other related associate programs can frequently enter the program with little or no bridgework.

Bachelor of Science in Electrical and Electronic Engineering Technology
Accredited by the Engineering Technology Accreditation Commission of ABET (http://www.abet.org).

Graduates of the Electrical and Electronic Engineering Technology program will work with engineers in developing, manufacturing, testing, and servicing Electrical/Electronic components, equipment, and systems.

Bachelor of Science in Mechanical Engineering Technology
Accredited by the Engineering Technology Accreditation Commission of ABET (http://www.abet.org).

This program prepares individuals to work as Technologists in applying specific principles to the analysis, design, development, implementation, or oversight of advanced mechanical systems or processes.

Bachelor of Science in Construction Engineering Technology
Accredited by the Engineering Technology Accreditation Commission of ABET (http://www.abet.org).

The B.S. in Construction Engineering Technology is a three year, upper level degree program designed to provide the student with additional education beyond the AAS degree in Construction Engineering Technology. This degree is also designed to meet the formal education requirements for registration as a Professional Engineer in the State of Ohio. This upper degree program is defined as follows:

- The first two years are completed as an AAS degree in Construction Engineering Technology or similarly based program.
- Two of the remaining three years are for the completion of prescribed coursework.
- The remaining year of the three years is devoted to a cooperative work experience in the construction field.
- The student normally enters the co-op segment between the junior and senior years.

The B.S. in Construction Engineering Technology degree program includes classroom, laboratory, and industry experiences which prepare students for careers in the construction industry and other allied industries.

Bachelor of Science in Surveying and Mapping
Accredited by the Applied Natural Science Technology Accreditation Commission of ABET (http://www.abet.org).

The Bachelor of Science in Surveying and Mapping is an upper level degree program designed to meet the formal education requirements for registration as a Professional Surveyor (P.S.) in the State of Ohio. The first two years are completed as an Associate of Applied Science (A.A.S.) degree in Land Surveying or a program that has similar content. Two of the three remaining years are for the completion of courses for the degree. The remaining year is devoted to cooperative work experience.

Associate Degree Programs of Instruction
Specialized technical programs are offered in the following departments of the college:

- Engineering and Science Technology
- Applied General and Technical Studies
- Disaster Science and Emergency Services
- Business and Information Technology

These programs lead to the Associate in Applied Science, Associate in Applied Business (carrying a designation of the specific program), and Associate of Technical Study. In addition, programs in liberal arts leading to the Associate of Arts and Associate of Science are offered in the Department of Applied General and Technical Studies.

Requirements for Graduation
Candidates for the associate degree must:

- Complete the required courses listed in the program.
- Complete, as a minimum, the number of credits listed for each program.
- Earn a minimum grade-point average of 2.00 at The University of Akron.
- Be recommended by the faculty.
- Earn a minimum of 16 credits and spend the last semester in residence at the University unless excused by the dean of the college.
- Complete other University requirements.
• A student who expects to receive a second associate degree must earn a minimum of 16 credits in residence that have not counted toward the student's first degree.

### About General Education for Applied Associate Degrees

All applied associate degree programs* offered within the College of Applied Science and Technology align with the General Education Guidelines established by the Ohio Department of Higher Education (ODHE), with the minimum 15 credit hours distributed as follows:

- At least 1 course (3 credit hours) in Writing.
- At least 1 course (3 credit hours) in Speaking.
- At least 1 course (3 credit hours) in Quantitative Reasoning.
- At least 6 credit hours in the following categories:
  - 3 credit hours in Social Science
  - 3 credit hours in the Natural Science

Students are encouraged to use Ohio Transfer Module courses and to select General Education coursework from the College of Applied Science and Technology, as listed below.

- **CT** = Critical Thinking Tag
- **DD** = Domestic Diversity Tag
- **GD** = Global Diversity Tag
- **CS** = Complex Systems Tag
- **OTM** = Ohio Transfer Module Course

#### Writing

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<thead>
<tr>
<th>Course</th>
<th>Department</th>
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<tbody>
<tr>
<td>2020:121 English</td>
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<tr>
<td>2020:222 Technical Report Writing</td>
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#### Speaking

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<tr>
<td>2420:263 Professional Communications and Presentations</td>
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#### Quantitative Reasoning

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<td>2030:153 Technical Mathematics III</td>
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<td>2030:154 Technical Mathematics IV</td>
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<td>2030:161 Mathematics for Modern Technology</td>
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<td>2030:255 Technical Calculus I</td>
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<td>2030:356 Technical Calculus II</td>
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#### Social Science

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<tr>
<td>2040:240 Human Relations</td>
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<td>2040:242 American Urban Society</td>
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<td>2040:243 Contemporary Global Issues</td>
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<td>2040:244 Death &amp; Dying</td>
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<tr>
<td>2040:344 Death &amp; Dying</td>
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<td>2040:247 Survey of Basic Economics</td>
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<td>2040:256 Diversity in American Society</td>
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<td>2040:254 The Black Experience from 1619-1877</td>
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<td>2040:257 The Black Experience 1877 - 1954</td>
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<tr>
<td>2040:258 The Black Experience 1954 - Present</td>
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#### Natural Science

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<tr>
<td>2820:105 Basic Chemistry</td>
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<td>2820:111 Introductory Chemistry</td>
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<tr>
<td>2820:112 Introductory &amp; Analytical Chemistry</td>
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<tr>
<td>2820:160 Technical Physics: Mechanics</td>
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<td>2820:163 Technical Physics: Electricity &amp; Magnetism</td>
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2820:164 Technical Physics: Heat & Light\textsuperscript{OTM}

### Other Tagged Courses

- 2040:241 Technology & Human Values\textsuperscript{CS}
- 2040:349 Integrated Human Behavior and Health\textsuperscript{CT}

Students should consult their program curriculum guides and Degree Progress Reports, as well as meet with an advisor, for the recommended general education courses to take.

*Associate of Applied Business, Associate of Applied Science, and Associate of Technical Studies*