

# COLLEGE OF ENGINEERING AND POLYMER SCIENCE

The College of Engineering and Polymer Science (CEPS) provides educational opportunities at both the undergraduate and graduate levels for students who wish to pursue careers in engineering, engineering technology, computing, and polymer science. Faculty perform research with the purpose of contributing new knowledge to the fields encompassed by engineering principles. Professional service is in concert with the objectives of the University.

The College's co-operative education program, one of the oldest in the nation, enables student engineers to integrate classroom learning with on-the-job experience while they earn their degrees. Students can alternate semesters of paid employment in their major fields of interest with semesters on campus after they have completed five semesters of study.

## College Admission Requirements

All students who meet the minimum requirements for admittance into The University of Akron and intend to pursue a major offered by the College are accepted into the College to work towards the major. Program-specific requirements must be met before taking upper-level coursework for the major; these requirements are based on successful completion of early foundational courses for the major, and are set to ensure that a student is well prepared for success in the major. Some programs require that students achieve certain minimum GPAs, minimum grades in foundational courses, or other early milestones before taking upper-level coursework.

## Academic Standing in the College of Engineering and Polymer Science

Students are subject to University of Akron probation and dismissal policies (<https://bulletin.uakron.edu/undergraduate/important-policies/grade-policy-credit/>). Students not in academic good standing have enrollment holds placed on their account to prevent registration until they have worked with their College academic advisor.

## Requirements for Graduation

- Compliance with University requirements (<https://bulletin.uakron.edu/undergraduate/important-policies/graduation-requirements/>)
- Completion of all degree requirements for the specific program, including completion of the appropriate list of courses, completion of a required minimum number of credits, and achievement of required minimum GPAs (both overall and program-specific).
- Recommendation of the student's department

## Accreditation in the College of Engineering and Polymer Science

Engineering is a profession in which knowledge of mathematics and natural sciences, gained by study, experience, and practice, is applied, with judgment, to develop ways to economically utilize the materials and forces of nature for the benefit of mankind. Entrance to the engineering profession is normally through a university undergraduate program in one of the disciplines of engineering and engineering technology.

Accreditation ensures that the graduates of our programs have a solid educational foundation and are ready to enter the profession. More on the importance of accreditation in engineering can be found here (<http://www.abet.org/accreditation/what-is-accreditation/why-abet-accreditation-matters/>).

### Engineering

The College is home to eight undergraduate Bachelor of Science programs accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org>): Aerospace Systems Engineering, Biomedical Engineering, Chemical Engineering, Civil Engineering, Computer Engineering, Corrosion Engineering, Electrical Engineering, and Mechanical Engineering.

### Engineering Technology

The College is home to three undergraduate Bachelor of Science programs accredited by the Engineering Technology Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org>): Construction Engineering Technology, Electrical and Electronic Engineering Technology, and Mechanical Engineering Technology.

### Surveying and Mapping

The College's Associate of Applied Science in Land Surveying and Bachelor of Science in Surveying and Mapping programs are accredited by the Applied and Natural Science Accreditation Commission of ABET, [www.abet.org](http://www.abet.org) (<http://www.abet.org>).

## Cooperative Education

The cooperative education program provides for a coordinated sequence of alternating periods of classroom instruction and employment during a five-year program. Students in many of the Engineering and Polymer Science's undergraduate programs may pursue their degree with the cooperative education option, for a nominal five years of study, or without cooperative education, for a nominal four years of study. The exception is Aerospace Systems Engineering; in this program, cooperative education is required.

The cooperative education program simultaneously provides for the development of fundamental principles in the classroom and for their application in practice. The student has the opportunity to find the type of work and organization in which the student can best apply individual ability. The student gains an appreciation of the problems of labor and management by first-hand experience. The student develops mature judgment by coping with everyday problems. The employer of a co-op student has the ability to train and select a student whose abilities and aptitudes can be adapted to the needs of technical staff requirements.

While a student is at work, all rules and regulations prescribed by the employer must be obeyed. In addition, the student is subject to all current labor laws and conditions. The student is considered a full-time student by the University while on industrial assignments.

The University does not guarantee employment, but makes every effort to place a student in the best learning situation that is consistent with the acquisition of sound professional experience.

## Department of Biomedical Engineering

More information on the Department of Biomedical Engineering and the undergraduate programs in Biomedical Engineering are available at:

- department Undergraduate Bulletin page (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/biomedical-engineering/>)
- department website (<https://www.uakron.edu/engineering/BME/>)

## Department of Chemical, Biomolecular, and Corrosion Engineering

More information on the Department of Chemical, Biomolecular, and Corrosion Engineering and the undergraduate programs in Chemical Engineering and Corrosion Engineering are available at:

- department Undergraduate Bulletin page (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/chemical-biomolecular-corrosion-engineering/>)
- department website (<https://www.uakron.edu/engineering/CBE/>)

## Department of Civil Engineering

More information on the Department of Civil Engineering and the undergraduate programs in Civil Engineering are available at:

- department Undergraduate Bulletin page (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/>)
- department website (<https://www.uakron.edu/engineering/CE/>)

## Department of Computer Science

More information on the Department of Computer Science and the undergraduate programs in Computer Science are available at:

- department Undergraduate Bulletin page (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/>)
- department website (<https://www.uakron.edu/computer-science/>)

## Department of Electrical and Computer Engineering

More information on the Department of Electrical and Computer Engineering and the undergraduate programs in Electrical Engineering and Computer Engineering are available at:

- department Undergraduate Bulletin page (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/electrical-computer/>)
- department website (<https://www.uakron.edu/engineering/ECE/>)

## Department of Mathematics

More information on the Department of Mathematics and the undergraduate programs in Mathematics are available at:

- department Undergraduate Bulletin page (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mathematics/>)
- department website (<https://www.uakron.edu/math/>)

## Department of Mechanical Engineering

More information on the Department of Mechanical Engineering and the undergraduate programs in Mechanical Engineering and Aerospace Systems Engineering are available at:

- department Undergraduate Bulletin page (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mechanical-engineering/>)
- department website (<https://www.uakron.edu/engineering/ME/>)

## School of Polymer Science and Polymer Engineering

More information on the School of Polymer Science and Polymer Engineering and the undergraduate programs in Polymer Science and Polymer Engineering are available at:

- school Undergraduate Bulletin page (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/polymer-science-polymer-engineering/>)
- school website (<https://www.uakron.edu/polymer/>)
- Cooperative Education, College of Engineering and Polymer Science (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/cooperative-education/>)
- Biomedical Engineering (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/biomedical-engineering/>)
  - Biomedical Engineering, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/biomedical-engineering/biomedical-engineering-biomechanics-track-bs/>)
  - Biomedical Engineering, Minor (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/biomedical-engineering/biomedical-engineering-minor/>)
  - Medical Device Management and Regulation, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/biomedical-engineering/medical-device-management-regulation-certificate/>)
- Chemical, Biomolecular, and Corrosion Engineering (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/chemical-biomolecular-corrosion-engineering/>)
  - Biotechnology Specialization, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/chemical-biomolecular-corrosion-engineering/biotechnology-specialization-certificate/>)
  - Chemical Engineering, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/chemical-biomolecular-corrosion-engineering/chemical-engineering-bs/>)
  - Chemical Engineering/Polymer Engineering, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/chemical-biomolecular-corrosion-engineering/chemical-engineering-polymer-certificate/>)
  - Corrosion Engineering Technology, AAS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/chemical-biomolecular-corrosion-engineering/corrosion-engineering-technology-aas/>)
  - Corrosion Engineering, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/>)

- chemical-biomolecular-corrosion-engineering/corrosion-engineering-bs/)
- Corrosion Engineering, Minor (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/chemical-biomolecular-corrosion-engineering/corrosion-engineering-minor/>)
  - Corrosion Technology, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/chemical-biomolecular-corrosion-engineering/corrosion-technology-certificate/>)
  - Civil Engineering (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/>)
    - Civil Engineering, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/civil-engineering-bs/>)
    - Construction Engineering Technology, AAS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/construction-engineering-technology-aas/>)
    - Construction Engineering Technology, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/construction-engineering-technology-bs/>)
    - Construction Field Operations, AAS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/construction-field-operations-aas/>)
    - Construction Field Operations, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/construction-field-operations-certificate/>)
    - Geographic and Land Information Systems, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/geographic-land-information-certificate/>)
    - Land Surveying, AAS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/land-surveying-aas/>)
    - Surveying and Mapping, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/surveying-mapping-bs/>)
    - Surveying for Civil Engineers, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/surveying-civil-engineers-certificate/>)
    - Surveying, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/civil-engineering/surveying-certificate/>)
  - Computer Science (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/>)
    - Artificial Intelligence and Machine Learning, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/artificial-intelligence-machine-learning/>)
    - Computer Information System, Software Development Option, AAB (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-information-system-programming-option-aab/>)
    - Computer Information Systems, Cybersecurity Option, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-information-systems-cybersecurity-option-bs/>)
    - Computer Information Systems, Networking Option, AAB (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-information-systems-networking-option-aab/>)
    - Computer Information Systems, Networking Option, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-information-systems-networking-option-bs/>)
    - Computer Information Systems, Networking, Minor (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-information-systems-networking-minor/>)
    - Computer Information Systems, Software Development Option, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-information-systems-programming-option-bs/>)
    - Computer Information Systems, Software Development, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-information-systems-programming-certificate/>)
    - Computer Information Systems, Software Development, Minor (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-information-systems-programming-specialist-minor/>)
    - Computer Science, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-science-systems-bscs/>)
    - Computer Science, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-science-certificate/>)
    - Computer Science, Minor (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-science-minor/>)
    - Computer Security, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-security-certificate/>)
    - Computer Security, Minor (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/computer-science/computer-security-minor/>)
  - Electrical and Computer Engineering (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/electrical-computer/>)
    - Assured Digital Microelectronics, Certificate ([https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/electrical-computer/assured\\_digital\\_microelectronics\\_certificate/](https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/electrical-computer/assured_digital_microelectronics_certificate/))
    - Computer Engineering, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/electrical-computer/computer-engineering-bs/>)
    - Digital Electronics & Microprocessors, Certificate ([https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/electrical-computer/digital\\_electronics\\_microprocessors/](https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/electrical-computer/digital_electronics_microprocessors/))
    - Electrical and Electronic Engineering Technology, AAS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/electrical-computer/electrical-electronic-engineering-technology-aas/>)

- engineering-polymer-science/electrical-computer/electronic-engineering-technology-aas/)
- Electrical and Electronic Engineering Technology, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/electrical-computer/electronic-engineering-technology-bs/>)
- Electrical Engineering, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/electrical-computer/electrical-engineering-bs/>)
- Mathematics (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mathematics/>)
  - Applied Mathematics, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mathematics/applied-mathematics-bs/>)
  - Applied Mathematics, Minor (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mathematics/applied-mathematics-minor/>)
  - Mathematics, Minor (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mathematics/mathematics-minor/>)
  - Technical Mathematics, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mathematics/technical-mathematics-certificate/>)
- Mechanical Engineering (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mechanical-engineering/>)
  - Aerospace Systems Engineering, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mechanical-engineering/aerospace-systems-engineering-co-op-bs/>)
  - Automated Manufacturing Engineering Technology, AAS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mechanical-engineering/adv-manufacturing-engineering-tech/>)
  - Automated Manufacturing Engineering Technology, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mechanical-engineering/automated-manufacturing-engineering-technology-bs/>)
  - Drafting and Computer Drafting, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mechanical-engineering/drafting-computer-certificate/>)
  - Mechanical Engineering Technology, AAS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mechanical-engineering/mechanical-engineering-technology-aas/>)
  - Mechanical Engineering Technology, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mechanical-engineering/mechanical-engineering-technology-bs/>)
  - Mechanical Engineering, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mechanical-engineering/mechanical-engineering-bs/>)
- Polymer Science and Polymer Engineering (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/polymer-science-polymer-engineering/>)
  - Polymer Science and Polymer Engineering, BS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/polymer-science-polymer-engineering-bs/>)
  - Polymer Science and Polymer Engineering, Minor (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/polymer-science-polymer-engineering-minor/>)
  - Undergraduate Research in Polymer Science and Polymer Engineering, Certificate (<https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/polymer-science-polymer-engineering/undergraduate-research-certificate/>)
- Science, Construction Management Option, AS (<https://bulletin.uakron.edu/undergraduate/colleges-programs/arts-sciences/interdisciplinary-programs/associate-science-construction/>)