COLLEGE OF ENGINEERING

Objectives
The College of Engineering (https://www.uakron.edu/engineering) provides educational opportunities for students at both the undergraduate and graduate levels who wish to pursue careers in engineering. The faculty in the College of Engineering (https://www.uakron.edu/engineering) 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.

College Requirements

Direct Admission
A new first-year student can be a Direct admit to the College of Engineering (https://www.uakron.edu/engineering) if they meet the following requirements:

- High school GPA of 3.4 or higher
- At least 24 composite ACT or at least 1110 composite SAT
- At least 24 math ACT or at least 560 math SAT

University Admissions
Students interested in engineering who do not meet the academic requirements for direct admission to the College of Engineering (https://www.uakron.edu/engineering) can still be admitted to The University of Akron as a student with an intended major in engineering, with a pre-admission status. After certain criteria are met, students with pre-admission status can apply for full admission to the College of Engineering (https://www.uakron.edu/engineering).

For Current UA Students and Transfer Students
Current UA students who have not yet been admitted to the College of Engineering (https://www.uakron.edu/engineering) and students transferring to UA from another institution may apply for the College of Engineering (https://www.uakron.edu/engineering) when they meet the following criteria:

- Complete at least 30 semester hours of coursework post high school
- Complete Calculus 2 with a C- or higher
- Have a 2.3 grade point average in at least three of the following categories:
  - in all coursework
  - in all engineering coursework
  - in all required mathematics coursework
  - in all required science coursework (chemistry, physics, computer science, biology)

Admission of students who do not meet the above requirements will be considered by the dean or representative only if the request originates by an Engineering department head or representative.

Continuation in the Baccalaureate Programs

Academic Warning/Probation/Suspension/Dismissal
A student’s term and cumulative GPA determine if a student is in “good standing” or on “academic warning”, “probation”, “suspension” or dismissed from the College of Engineering (https://www.uakron.edu/engineering). Evaluation is done at the end-of-term based on the term GPA and the cumulative GPA. Specific details on the process are found at http://www.uakron.edu/engineering/academics/images/COE_WPSD_policy.pdf

Students are on academic warning if their term GPA drops below a 2.0, but their cumulative GPA is above a 2.0. Continued poor performance or if a student’s cumulative GPA drops below a 2.0, they are placed on academic probation. Students on academic probation may not register for classes without first consulting a faculty advisor and obtaining permission to take an approved group of courses. Those students will have academic “holds” placed on their account and cannot register for classes until such a meeting occurs. Students whose performance does not improve on academic probation are suspended from the College; while suspended, they are provided a contract (agreed to by the Associate Dean for Undergraduate Studies and the student). If the student does not meet the terms of the contract, they are dismissed from the College of Engineering (https://www.uakron.edu/engineering). If the student’s cumulative GPA at the time of dismissal is below a 2.0, they are also dismissed from The University of Akron.

Degrees

Requirements for Graduation

- Compliance with University requirements (https://bulletin.uakron.edu/undergraduate/important-policies/graduation-requirements)
- Completion of the requirements in the appropriate list of courses and a minimum of 136-140 credits of coursework
- Recommendation of the student’s department
- Achievement of 2.00 grade point average in all engineering coursework attempted with 4XXX course prefix

Engineering Accreditation

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.

Admission to the engineering profession is normally through a university undergraduate program in one of the disciplines of engineering. Curricular criteria are established by academic and industrial representatives that sit on the accrediting board, ABET, Inc. The curricular criteria under which Akron’s Engineering programs are currently accredited are:

- One year of mathematics and basic science
- One-half year of humanities and social sciences
• One year of engineering science
• One-half year of engineering design

In addition, the ABET Criteria requires that (1) each program shall make a formal assessment of each student’s ABET Required Abilities and (2) that a process must exist by which the student assessments can be used to modify the educational delivery process. The ABET Required Student Outcomes are:

• An ability to apply knowledge of mathematics, science, and engineering
• An ability to design and conduct experiments, as well as to analyze and interpret data
• An ability to design a system, component, or process to meet desired needs
• An ability to identify, formulate, and solve engineering problems
• An ability to communicate effectively
• An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
• An ability to function on multidisciplinary teams
• An understanding of professional and ethical responsibility
• The broad education necessary to understand the impact of engineering solutions in global and societal context
• A recognition of the need for, and an ability to engage in life-long learning
• A knowledge of contemporary issues

The Biomedical Engineering, Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Mechanical Engineering, Mechanical Polymer Engineering, and Aerospace Systems Engineering programs are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

Programs of Instruction

• 4200: Chemical Engineering (https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering/chemical-engineering)
• 4250: Corrosion Engineering (https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering/corrosion-engineering)
• 4300: Civil Engineering (https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering/civil-engineering)
• 4400: Electrical Engineering (https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering/electrical-engineering)
• 4450: Computer Engineering (https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering/computer-engineering)
• 4600: Mechanical Engineering (https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering/mechanical-engineering)
• 4800: Biomedical Engineering (https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering/biomedical-engineering)
• 4900: Aerospace Systems Engineering (https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering/aerospace-systems-engineering)

Cooperative Education

The optional cooperative education program provides for a coordinated sequence of alternating periods of classroom instruction and employment during a five-year program.

The cooperative 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 coop 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.