

Engineering Sciences Minor
Advising Sheet
The Ohio State University College of Engineering
Revised December 2015

College of Engineering
Department of Engineering Education (EED)
<https://eed.osu.edu/>
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This minor is designed for non-engineering students with an interest in learning more about technology's important role in today's society; and who may be working with engineers and technology based opportunities in the future. Specific learning goals include:

- Develop a basic understanding of the engineering design process
- Understand the capabilities and limitations of technologies and engineered systems
- Be able to make informed decisions about engineering activities and technologies
- Be able to work effectively as a member of a team including technology experts

The program advisor will work with you on selection of a suitable minor program to meet your specific career objectives. The advisor will approve and sign the Minor Program Form. You may then file the Minor Program Form with your college or school to receive a minor in Engineering Sciences.

Key Curriculum Components

- Core - Introduction to Engineering (4 credits)
- Engineering Science (2-4 credits)
- Technology and Society (3 credits)
- Capstone interdisciplinary teamwork experience (6 credits)
- Total Credits (15-17 credit minimum)

Note for students in the minor: You will be expected to complete a first calculus course (e.g., Math 1131 or 1151). This course will fulfill the math requirement of all courses for the minor. Other prerequisites will depend on courses selected.

Core: 4 Credit Hours: The Engineering Sciences Minor contains the Introduction to Engineering course sequence ENGR 1181.01 or .02 and ENGR 1182.01, .02 or .03 (Honors substitute permitted.)

ENGR 1181.xx - Fundamentals of Engineering 1
Engineering problem solving utilizing computational tools such as Excel and Matlab; hands-on experimentation; ethics; modeling; teamwork; written, oral and visual communications.

ENGR 1182.xx - Fundamentals of Engineering 2
3-D visualization and sketching; introduction to CAD; engineering design-build; teamwork; written, oral and visual communications; and project management.

Engineering Science Options: 2-4 Credit Hours

If no prior courses in Engineering, choose from: AVIATN 2000, DESIGN 3105, ENGR 4410, ISE 2040, other Engineering courses by permission of the Minor Advisor.

For students who have taken OSU Engineering courses, choose from: AEROENG 2200, BME 2000, CBE 2200, CIVILEN 2050, CSE 2221, ECE 2000, ENVENG 3200, FABENG 2100, ISE 2040, MATSCEN 2010, MECHENG 2010, WELDENG 3001, other Engineering courses by permission of the Minor Advisor.

Technology and Society Options: 3 Credit Hours

COMPSTD 2340, 2367.04, ENGR 2361, 2362, 2367, HISTORY 2701, PHYSICS 2367, SOCIOL 3302

Capstone Experience: 6 Credit Hours

ENGR 5081.01 and ENGR 5081.02- Engineering Capstone Collaboration Students contract to collaborate with an engineering capstone design team for two semesters and contribute their disciplinary expertise.

General Guidelines

- **Required for graduation:** No
- **Credit hours required:** A minimum of 15
- **Filing the Minor Program form:** The Minor Program form should be completed at the start of the minor program, but must be filled out no later than the time the application for graduation is submitted to a college/school counselor. It will require the signature of the Minor Advisor.
- **Changing the minor:** Once the minor has been filed, any changes must be approved by the Minor Advisor. This form is available on the College of Engineering website.
- **Grades required:** No grade below a C- will be permitted in courses comprising the minor
- A minimum 2.00 cumulative point-hour ratio is required for the minor
- Course work graded Pass/Non-pass cannot count on the minor
- No more than 3 hours of course work graded Satisfactory/Unsatisfactory may count toward the minor
- No more than 3 hours of xx93 allowed
- **Transfer credit hours allowed:** No more than 6 hours of transfer credit may be applied to the minor
- **Overlap with GE courses:** No more than 6 hours can overlap
- **Overlap between minors:** Each minor completed must contain 12 unique hours
- **Overlap with the major:** Not allowed and the minor must be in a different subject than the major
- **Exclusions to minor:** Not open to Engineering majors