The Ohio State University
College of Engineering
Approved by the College of Arts and Sciences

Engineering Sciences Minor (ENGRSCI-MN)

College of Engineering
Engineering Education Innovation Center (EEIC)
http://engineering.osu.edu/eeic/index.php
244 Hitchcock Hall; 2070 Neil Ave
Columbus, OH 43210-1278; 614-247-8953
Advisor: Robert J. Gustafson

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. Upon completion of the minor, 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.

Note for students in the minor:
You will be expected to complete a first calculus (e.g. Math 117, 131, or 151). This course will fulfill the math requirement of all courses for the minor. Other prerequisites will depend on courses selected.

Key Curriculum Components (minimum 21 credits)

Core - Introduction to Engineering (6-8 credits)
The core of the Engineering Sciences Minor is the Introduction to Engineering course sequence:
ENG 181 and ENG 183 (Honors substitute permitted; H191 and H193): 6-8 hours.

ENG 181 - Introduction to Engineering I
Visualization and sketches, intro to spreadsheets and CAD, working drawings, experimental design and data analysis, problem solving approaches, hands-on lab, reporting and production dissection
ENG 183 - Introduction Engineering II
Team building, design/build project; project management, intro to MATLAB, written and oral presentations, preparation of visual aids, hands-on lab and reporting

Complementary Engineering Science Options: (3 credit minimum)
Aero 200, CE 410, 511, Educ: T&L 220, FABE 481, I&VCD 230, ISE 311, 406, 504, MSE 205, 281, WE 300, WE 350, Other Engineering courses by permission of the Minor Coordinator

Computational Technology Competence: (4-5 credits)
CSE 200, 201, 202, 203, 204 or Higher Level CSE Class Permitted

Technology and Society Options: (4-5 credits)
Comparative Studies 272, 597.01, ENG 360.02, 367, History 362, Physics 367, Soc 302

Capstone Interdisciplinary Teamwork Experience: (4-8 credits)
ENG 581 - Engineering Capstone Collaboration
Students contract to collaborate with an engineering capstone design team for at least one quarter and contribute their disciplinary expertise.

General Guidelines
Required for graduation: No
Credit hours required: Minimum of 21 hours
Filing the minor program form: A minor program form 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 student and the student’s major program advisor.
Grades required: No grade below a C- will be permitted in courses comprising the minor.
Course work graded Pass/Non-pass cannot count on the minor.
Transfer credit hours allowed: No more than 10 hours of transfer credit may be applied to the minor.
Overlap with the GEC: Permitted
Exclusions to minor: Not open to Engineering majors

Additional Guidelines for ASC Students
Overlap between minors: Each minor completed must contain 20 unique hours.
Changing the minor: Once a minor is on file in the college/school office, any changes must be discussed with the faculty advisor and/or the college/school counselor.
Overlap with the major: Not allowed and the minor must be in a different subject than the major.

Guidelines for Engineering Students
Exclusions to minor: Not open to Engineering majors

Changing the minor: Once the minor has been filed, any changes must be approved by the Chair of the Minors Oversight Committee. This form will be available on the CoE website.

Overlap Policy: Engineering places no restrictions on the use of a course both in a minor and major program. However, students should consult their major program for any constraints that may be applied there.

College of Arts and Sciences
Curriculum and Assessment Services
154 Denney Hall, 164 W. 17th Ave.
http://artsandsciences.osu.edu
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