Augustana College

Engineering-Bachelor of Science-Mechanical and Civil Concentrations

Courses required for the first year: Fall – ENDE-190, MATH-160 or MATH-140, according to placement** Spring - PHYS-211**,** MATH-160 if not taken in fall**
Courses recommended for the first year: Fall, J-Term, Spring - PHYS-200 Spring - MATH-220 (2 credits)
Contact: Dr. Nathan Frank, Dr. Mike Augspurger

The Major in Engineering- Bachelor of Science

The engineering program strongly recommends that any student interested in engineering contact an engineering or physics faculty member as soon as possible. For many students, the ENGR-190 professor will be the easiest person to contact. Additional information about each concentration will be provided by the Physics, Engineering, and Astronomy department.

Required Courses

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
ENDE-190	Intro to Design			F	4
ENDE-290	Experimentation and Design		PHYS-200	SP	4
ENDE-390	Junior Design		ENDE-290	F or SP	4
ENDE-490	Senior Inquiry		ENDE-390	F	2
ENDE-491	Senior Inquiry		ENDE-490	SP	2
	Ethics Requirement	PH			

Required Supporting Courses

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
PHYS-200	Modeling and Simulation		MATH-140	F/J/SP	4
PHYS-211	Foundational Physics I	PN	MATH-160 (or co-requisite)	F/SP	4
PHYS-212	Foundational Physics II	PN	PHYS-211 & MATH-260 (or co-requisite)	F/SP	4
MATH-160	Calculus	Q		F/SP	4
MATH-220	Integration Methods		MATH-160	F/SP	2
MATH-260	Multivariable Calc	Q	MATH-220	F	4
MATH-320	Differential Equations & Linear Systems		MATH-220	SP	4
PHYS-201 or CHEM-131 or PHYS-213	Materials Science or General Chemistry I or Foundational Physics III	PN	For PHYS-213: PHYS-211 & MATH-260	F/SP or F/SP or SP	4

Major Overview

- The BSE in general engineering is an ABET-accredited degree in general engineering, with possible concentrations in mechanical, environmental engineering, and civil.
- It is among the largest majors on the Augustana campus in terms of credit hours required (78 total), which means it is important that students complete the required courses during their first year. Failure to do this means that students *may* not be able to finish the degree in four years.
- The department supports the Physics and Engineering Society, which is a student-led group to provide opportunities for networking, leadership, professional development, research projects, social activities, outreach, and other activities.
- A minor in Engineering is not offered. However, there is a minor in Physics.
- Students may not double-major in Engineering Physics and Engineering (BSE).

**For students not eligible to enroll in MATH-140 Precalculus or higher in their first fall semester at Augustana, the BSE cannot be completed in four years. They are encouraged to consider other options like the BA in Engineering Physics or the BA in Physics.

*Fall, J term, Spring, Summer; see Academic Calendar for specific dates

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Augustana College

Engineering-Bachelor of Science-Environmental & Sustainability Concentrations

Courses required for the first year: Fall – ENDE-190, MATH-160 or MATH-140, according to placement** Spring - PHYS-211**,** MATH-160 if not taken in fall**
Courses recommended for the first year: Fall, J-Term, Spring - PHYS-200 Spring - MATH-220 (2 credits)
Contact: Dr. Nathan Frank, Dr. Mike Augspurger

The Major in Engineering- Bachelor of Science

A minor in Engineering is not offered. Students may not also major in Engineering Physics.

Required Courses

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU	Credits
ENDE-190	Intro to Design			F	4
ENDE-290	Experimentation and Design		PHYS-200	SP	4
ENDE-390	Junior Design		ENDE-290	F or SP	4
ENDE-490	Senior Inquiry		ENDE-390	F	2
ENDE-491	Senior Inquiry		ENDE-490	SP	2
ENGR-340	Principles of Environmental Engineering		PHYS-211	F	4
	Ethics Requirement	PH			

Required Supporting Courses

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU	Credits
PHYS-200	Modeling and Simulation			F/J/SP	4
PHYS-211	Foundational Physics I	PN	MATH-160 (or co-requisite)	F/SP	4
MATH-160	Calculus	Q		F/SP	4
MATH-220	Integration Methods		MATH-160	F/SP	2
MATH-260	Multivariable Calc	Q	MATH-220	F	4
ENVR-100	Ecological Systems		MATH-160	F/J/SP	4
GEOL-101	Physical Geology		MATH-220	F/J/SP/SU	4
PHYS-201 or CHEM-131 or PHYS-213	Materials Science or General Chemistry I or Foundational Physics III	PN	For PHYS-213: PHYS-211 & MATH-260	F/SP or F/SP or SP	4

Major Overview

-The department supports the Physics and Engineering Society, which is a student-led group to provide opportunities for networking, leadership, professional development, research projects, social activities, outreach, and other activities.
-We recommend meeting with the engineering advisor ASAP to map out a course plan.

Note: Fall, J term, Spring, Summer; see Academic Calendar for specific dates

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