Augustana College

Engineering-Bachelor of Science-Mechanical and Civil Concentrations

Courses required for the first year: Fall – Engr 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: J-Term - Phys 200 Spring - Math 220 (2 credits)
Contact: Dr. Joshua M. Dyer, (joshuadyer@augustana.edu)

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
Engr 190	Intro to Design			F	4
Engr 290	Experimentation and Design		Phys 200	SP	4
Engr 390	Junior Design		Engr 290	F or SP	4
Engr 490	Senior Inquiry		Engr 390	F	2
Engr 491	Senior Inquiry		Engr 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	4
Phys 211	Foundational Physics I	PN	Math 160 (or co-requisite)	SP	4

Phys 212	Foundational Physics II	PN	Phys 211 & Math 260 (co-requisite)	F	4
Math 160	Calculus			F/SP	4
Math 220	Integration Methods		Math 160	F/SP	2
Math 260	Multivariable Calc		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 PHYS213: Phys 211 & Math 260	F/SP or F/SP or SP	4

Major Overview

- The BSE in engineering is an ABET-accredited degree in 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.
- A Study Abroad program of interest to engineers that travels to the Alps and carries PH and PA perspectives is offered in the spring term of odd years (2023, 2025, etc…)
- 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

Updated December 2023

Augustana College

Engineering-Bachelor of Science-Environmental & Sustainability Concentrations

Courses required for the first year: Fall – Engr 190, Math 160; Spring - Phys 211
Courses recommended for the first year: J-term - Phys 200; Spring - Math 220
Contact: Dr. Joshua M. Dyer, (joshuadyer@augustana.edu)

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
Engr 190	Intro to Design			F	4
Engr 290	Experimentation and Design		Phys 200	SP	4
Engr 390	Junior Design		Engr 290	F or SP	4
Engr 490	Senior Inquiry		Engr 390	F	2
Engr 491	Senior Inquiry		Engr 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	4
Phys 211	Foundational Physics I	PN	Math 160 (or co-requisite)	Foundational Physics I	4
Math 160	Calculus			F/SP	4
Math 220	Integration Methods		Math 160	F/SP	2
Math 260	Multivariable Calc		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 PHYS213: Phys 211 & Math 260	F/SP or F/SP or SP	4

Major Overview

-A Study Abroad program of interest to engineers that travels to the Alps and carries PH and PA perspectives is offered in spring term of odd years.
-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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