



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:

Fall, J-Term, Spring - PHYS-200
Spring - MATH-220 (2 credits)

Contact: Dr. Nathan Frank or 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
ENGR-190	Intro to Design			F, SP	4
ENGR-290	Experimentation and Design		PHYS-200	SP	4
ENGR-390	Junior Design		ENGR-290	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/SP	4
PHYS-211	Foundational Physics I	PN	MATH-160 (or co-requisite)	SP	4

PHYS-212	Foundational Physics II	PN	PHYS-211 & MATH-260 (or co-requisite)	F	4
MATH-160	Calculus	Q		F/SP	4
MATH-220	Integration Methods		MATH-160	F/SP	2
MATH-260	Multivariable Calc	Q	MATH-160	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

Engineering-Bachelor of Science-Environmental & Sustainability Concentration

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: Fall, J-Term, Spring - PHYS-200 Spring - MATH-220 (2 credits)
Contact: Dr. Nathan Frank or Dr. Mike Augspurger

The Major in Engineering- Bachelor of Science

Required Courses

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU	Credits
ENGR-190	Intro to Design			F, SP	4
ENGR-290	Experimentation and Design		PHYS-200	SP	4
ENGR-390	Junior Design		ENGR-290	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/SP	4
PHYS-211	Foundational Physics I	PN	MATH-160 (or co-requisite)	Foundational Physics I	4
MATH-160	Calculus	Q		F/SP	4
MATH-220	Integration Methods		MATH-160	F/SP	2
MATH-260	Multivariable Calc	Q	MATH-160	F	4
ENVR-100	Ecological Systems			F/J/SP	4
GEOL-101	Physical Geology			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 BSE in general engineering is an ABET-accredited degree in general engineering, with possible concentrations in mechanical, environmental engineering, and civil.
- We recommend meeting with the engineering advisor ASAP to map out a course plan.
- 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 so means that students *may* not be able to finish the degree in four years.
- 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 October 2025