

## Physics

<b>Courses required for the first year:</b> Fall – MATH-160 or MATH-140, according to placement Spring - PHYS-211, MATH-160 if not taken in fall
<b>Courses recommended for the first year:</b> J-term, Spring - PHYS-200 Spring - MATH-220 (2 credits)
<b>Contact:</b> Dr. Nathan Frank, (nathanfrank@augustana.edu)

### The Major in Physics

(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
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 (co-requisite)	F/SP	4
PHYS-213	Foundational Physics III		PHYS-211 & MATH-260	SP	4
PHYS-366	Advanced Numerical Techniques		PHYS-213 and PHYS-200	F	2
PHYS-368 or PHYS-367 and PHYS-421 (SI)	Advanced Experimental Design (SI)		PHYS-366	SP	2
PHYS-300 - 400	3 additional physics courses 300 or above				12

### Additional Courses (\* Required Supporting Courses)

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
CHEM-131	General Chemistry I	PN		F/SP	4
MATH-160*	Calculus			F/SP	4
MATH-220*	Integration Methods		MATH-160	F/SP	2
MATH-260*	Multivariable Calc		MATH-160	F	4
MATH-320	Differential Equations & Linear Systems		MATH-220	SP	4

### The Minor in Physics

#### Required Courses

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
PHYS-211	Foundational Physics I	PN	MATH-160 (or co-requisite)	F/SP	4
PHYS-212	Foundational Physics II	PN	PHYS-211 & MATH-260 (co-requisite)	F/SP	4
PHYS-213	Foundational Physics III		PHYS-211 & MATH-260	SP	4
PHYS-366 <sup>1</sup>	Advanced Numerical Techniques		PHYS-213 and PHYS-200	F	2
PHYS-368 <sup>1</sup>	Advanced Experimental Design (SI)		PHYS-366	SP	2

<sup>1</sup>PHYS-366 and PHYS-368 may be substituted for another 300-400 level PHYS course (if desired)

### Additional Courses (\* Required Supporting Courses)

Course Number	Course Name	Learning Perspective/ Suffix	Prerequisites	Usually offered: F, J, SP, SU*	Credits
CHEM-131	General Chemistry I	PN		F/SP	4
MATH-160*	Calculus			F/SP	4
MATH-260*	Multivariable Calc		MATH-160	F	4

### Major Overview

- Students in Physics go into industry or on to graduate school in physics.
- Research opportunities are available with the physics faculty and through REU opportunities.
- 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.

\*Fall, J term, Spring, Summer; see [Academic Calendar](#) for specific dates

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