



BS Degree in Engineering Physics

The following is a sample schedule to help students plan their coursework. These are suggestions and the schedule is flexible. This degree lends itself to an engineering dual degree, contact the department for more information. In addition to fulfilling the courses specifically required for this Physics degree, it is important that students also fulfill Liberal Arts and Sciences Curriculum requirements, Writing Intensive, and all other normal graduation requirements.

FIRST YEAR			
FALL	PHYS 200	General Physics I with Lab ¹	4
	MATH 261	Calculus I ²	4
	FYE 101	First Year Experience	1
	CSIS 152	Intro to Computers & Prog. I-A	3
		LASC Electives ³	3
	TOTAL CREDITS		15

FIRST YEAR			
SPRING	PHYS 201	General Physics II with Lab	4
	MATH 260	Computer Calculus	1
	MATH 262	Calculus II	4
	CSIS 153	Intro to Computers & Prog. I-B	3
		LASC Electives	3
	TOTAL CREDITS		15

SOPHOMORE YEAR			
FALL	PHYS 202	20th Century Physics	3
	PHYS 305	Experimental Physics I	3
	PHYS 315	Physics Seminar	1
	MATH 323	Multi-Variable & Vector Calc	4
		LASC Electives	3
	TOTAL CREDITS		14

SOPHOMORE YEAR			
SPRING	PHYS 322	Elem Modern Physics	3
	PHYS 350	Comp. Methods for Physical Science	3
	MATH 366	Differential Equations	3
	ENG 387	Technical Report Writing	4
		LASC Electives	3
	TOTAL CREDITS		16

JUNIOR YEAR			
FALL	PHYS 330	Intermediate Mechanics	4
	PHYS 312	Analog Electronics	3
	MATH 327	Intro to Linear Algebra ⁴	3
	CHEM 150	General Chemistry I	3
	CHEM 150L	General Chemistry I Lab	1
		LASC Electives (WI)	3
	TOTAL CREDITS		17

JUNIOR YEAR			
SPRING	PHYS 325	Optics	3
	PHYS 306	Experimental Physics II	3
	CHEM 210	General Chemistry II	3
	CHEM 150L	General Chemistry II Lab	1
		LASC Electives	6
		TOTAL CREDITS	

SENIOR YEAR			
FALL	ENG 469	Engineering Internship	3
	CSIS 252	Intro to Computer Programming II ⁴	3
	PHYS ###	Physics Elective	3
		LASC Electives ³	6
		TOTAL CREDITS	

SENIOR YEAR			
SPRING	PHYS ###	Physics Elective	3
		LASC Electives	6
		Electives	4
		TOTAL CREDITS	

¹ If a student cannot take Calculus in the fall of freshman year, please consult your Advisor or the Department Chair about appropriate course(s) to take.
² ACT math scores or a mathematics placement exam is needed to decide whether a student should begin directly in calculus or a different math class.
³ In considering electives, keep in mind that all of the LASC requirements as well as Writing Intensive requirements must be fulfilled.
⁴ Recommended but not required.
⁵ Phys 399 offered on alternating year basis (only during odd years)
⁶ Phys 370 and Phys 430 are offered on alternating year basis (Phys 370 in even years, Phys 430 in odd years)

Core Requirements (31 credits)

Students may substitute PHYS 160 & 161 for PHYS 200 & 201. Students may substitute PHYS 342 and PHYS 492 for ENG 469.

COURSE	CREDITS	✓	COURSE	CREDITS	✓
PHYS 200: General Physics I and Lab	4	<input type="checkbox"/>	PHYS 350: Computational Methods for Physical Science	3	<input type="checkbox"/>
PHYS 201: General Physics II and Lab	4	<input type="checkbox"/>	PHYS 330: Intermediate Mechanics	4	<input type="checkbox"/>
PHYS 202: Intro to 20th Century Physics	3	<input type="checkbox"/>	PHYS 315: Physics Seminar	1	<input type="checkbox"/>
PHYS 305: Experimental Physics I (WI)	3	<input type="checkbox"/>	PHYS 306: Experimental Physics II (WI)	3	<input type="checkbox"/>
PHYS 322: Elementary Modern Physics	3	<input type="checkbox"/>	ENG 469: Engineering Internship	3	<input type="checkbox"/>

Related Requirements (32 credits)

Students are encouraged to take MATH 260 with MATH 261. Students are also encouraged to take Math 327 Linear Algebra (3 credits) and MATH 466 Differential Equations II (3 credits).

COURSE	CREDITS	✓	COURSE	CREDITS	✓
ENG 387: Technical Report Writing (WI)	4	<input type="checkbox"/>	MATH 366: Differential Equations	3	<input type="checkbox"/>
MATH 261: Calculus I	4	<input type="checkbox"/>	CSIS 152: Introduction to Computers & Programming I-A (3)	3	<input type="checkbox"/>
MATH 262: Calculus II	4	<input type="checkbox"/>	CSIS 153: Introduction to Computers & Programming I-B	3	<input type="checkbox"/>
MATH 323: Multi-Variable & Vector Calculus	4	<input type="checkbox"/>	CHEM 150/150L: General Chemistry I	4	<input type="checkbox"/>
MATH 327: Linear Algebra	3	<input type="checkbox"/>	CHEM 210/210L: General Chemistry II	4	<input type="checkbox"/>

Restricted Electives (9 credits)

Students may substitute an appropriate engineering course at the 300 level or higher for any of the courses listed.

Students must complete 6 credits from the list below.

Students must complete 3 credits from the list below.

COURSE	CREDITS	✓	COURSE	CREDITS	✓
PHYS 312: Analog Electronics	3	<input type="checkbox"/>	PHYS 370: Electromagnetic Theory	4	<input type="checkbox"/>
PHYS 318: Biophysics and Medical Imaging	3	<input type="checkbox"/>	PHYS 399: Thermodynamics	3	<input type="checkbox"/>
PHYS 325: Optics	3	<input type="checkbox"/>	PHYS 430: Quantum Mechanics	3	<input type="checkbox"/>
			CHEM 450/455: Physical Chemistry I & Lab	4	<input type="checkbox"/>

Recommended Electives

COURSE	CREDITS	✓	COURSE	CREDITS	✓
CSIS 252: Introduction to Computer Programming II	3	<input type="checkbox"/>	MATH 327: Linear Algebra	3	<input type="checkbox"/>
			MATH 466: Differential Equations II	3	<input type="checkbox"/>