

PHYSICS MAJOR WITH A CONCENTRATION IN ENGINEERING PHYSICS

Acceptance to Major Requirements

Course Requirements:

Code	Title	Hours
PHYS 191	Foundations of Physics I	4
PHYS 200	Foundations of Physics II	4
PHYS 211	Foundations of Physics III	4
PHYS 332	Intermediate Physics Laboratory	1
MATH 120	Calculus II	4
MATH 239	Linear Algebra	4

Minimum Grade and/or GPA for required courses: 2.00 GPA

Minimum Cumulative GPA: 2.00

Code	Title	Hours
PHYS 155	Introduction to Engineering	2
PHYS 191	Foundations of Physics I	4
PHYS 200	Foundations of Physics II	4
PHYS 211	Foundations of Physics III	4
PHYS 255	CAD Prototyping & Testing	2
PHYS 320	Modern Physics	4
PHYS 217	Digital Electronics	2
PHYS 338	Analog Electronics for Scientists	2
PHYS 339	Physical Mechanics	4
PHYS 343	Thermodynamics	2
PHYS 355	MATLAB for Physical Applications	2
PHYS 374 or PHYS 372	Senior Engineering Design Project Senior Research	1
PHYS 373	Senior Thesis	1
PHYS 332	Intermediate Physics Laboratory (two semesters) ¹	2
PHYS 370	Advanced Physics Laboratory (two semesters) ²	2
PHYS (300-Level)	additional electives	4
MATH 119	Calculus I	4
MATH 120	Calculus II	4
MATH 239	Linear Algebra	4
MATH 305	Multivariable Calculus	4
CHEM 125	Introduction to Chemical Structure and Properties	4
CHEM 201	Purification and Separation Lab I	1
PHYS XXX	Comprehensive Exam ³	
Total Hours		63

¹ Take both semesters Sophomore year

² Take both semesters Junior year

³ The Major Field Test in Physics is to be taken in the spring semester of the senior year

Suggestions

The following courses are recommended: CHEM 125 Introduction to Chemical Structure and Properties and CHEM 201 Purification and Separation Lab I.

Additional Requirements:

General Education Requirements:

All undergraduate students must complete the requirements of the Integrations Curriculum (IC) which is designed to ensure all of our students receive a liberal arts education. Please review details of the Integrations Curriculum (<https://catalog.csbsju.edu/catalog/academic-programs-policies-regulations/integrations-curriculum/>) requirements here (<https://catalog.csbsju.edu/catalog/academic-programs-policies-regulations/integrations-curriculum/>).

Graduation Requirements:

In addition to the Integrations Curriculum, all undergraduate students must meet the following minimum degree requirements to earn their degree from CSB and SJU.

Credits: 124 total credits, 40 of which must be from upper division coursework

GPA: 2.0 or higher*

Residency: At least 24 of your last 32 credits must be completed at CSB/SJU

Please visit Graduation (<https://catalog.csbsju.edu/catalog/academic-programs-policies-regulations/graduation/>) under the Academic Policies and Regulations (<https://catalog.csbsju.edu/catalog/academic-programs-policies-regulations/>) portion of the catalog for additional details regarding degree requirements.

* Cumulative GPA as well as major(s)/minor(s) GPA. Please note some majors/minors may require a higher GPA to earn their degree.

Four Year Plan

Course	Title	Hours
First Year		
Fall		
MATH 119	Calculus I	4
PHYS 191	Foundations of Physics I	4
INTG 105	College Success	1
INTG 100	Foundations	4
Language 111		4
		Hours
		17
Spring		
MATH 120	Calculus II	4
PHYS 155	Introduction to Engineering	2
PHYS 200	Foundations of Physics II	4
CSD 100	Cultural and Social Difference: Identity	4
Language 112		4
		Hours
		18
Second Year		
Fall		
THEO 100	Theological Explorations	4
MATH 239	Linear Algebra	4
PHYS 211	Foundations of Physics III	4
PHYS 255	CAD Prototyping & Testing	2
PHYS 332	Intermediate Physics Laboratory	1
		Hours
		15

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Spring		
CSD 300	Cultural and Social Difference: Systems	4
PHYS 320	Modern Physics	4
PHYS 332	Intermediate Physics Laboratory	1
Language 211		4
Way of Thinking		4
Hours		17
Third Year		
Fall		
MATH 305	Multivariable Calculus	4
CHEM 125	Introduction to Chemical Structure and Properties	4
CHEM 201	Purification and Separation Lab I	1
PHYS 339	Physical Mechanics	4
PHYS 370	Advanced Physics Laboratory	1
PHYS electives		2
Hours		16
Spring		
PHYS 355	MATLAB for Physical Applications	2
PHYS 370	Advanced Physics Laboratory	1
PHYS 217	Digital Electronics (odd years)	2
PHYS 338	Analog Electronics for Scientists (odd years)	2
Way of Thinking		4
Free electives		4
Hours		15
Fourth Year		
Fall		
PHYS 374	Senior Engineering Design Project	1
Theological Integrations		4
PHYS electives		2
Way of Thinking		4
Free electives		4
Hours		15
Spring		
INTG 300	Learning Integrations	4
PHYS 343	Thermodynamics	2
PHYS 355	MATLAB for Physical Applications	2
PHYS 373	Senior Thesis	1
Free electives		8
Hours		17
Total Hours		130