PHYSICS MAJOR WITH A CONCENTRATION IN ENGINEERING PHYSICS

Suggested Plan of Study

Course	Title	Hours
First Year		
Fall		
MATH 119	Calculus I	4
PHYS 191	Foundations of Physics I	4
INTG 105	The Lookout	1
INTG 100	Learning 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
Language 112		4
Integrations Requirement (CI)		4
	Hours	**18**
Second Year		
Fall		
THEO 100	Theological Explorations	4
MATH 220	Calculus III	4
PHYS 211	Foundations of Physics III	4
PHYS 255	CAD Prototyping & Testing	2
PHYS 332	Intermediate Physics Laboratory	1
	Hours	**15**
Spring		
MATH 306	Differential Equations and Linear Algebra	4
PHYS 320	Modern Physics	4
PHYS 332	Intermediate Physics Laboratory	1
Language 211		4
Integrations Requirment (CS)		4
	Hours	**17**
Third Year		
Fall		
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 elective		2
Integrations Requirement		4
	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
Integrations Requirement		4
Integrations Requirement or Elective		4
	Hours	**15**
Fourth Year		
Fall		
PHYS 374	Senior Engineering Design Project	1
Theological Integrations		4
PHYS elective		2
Integrations Requirement		4
Integrations Requirement or Elective		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**

Integrations Curriculum Requirements

The standard requirements for the Physics major will fulfill the following integrations requirements: AS, NW, QR, WR, EX. Depending on elective course selection, it can also fulfill 1 or 2 Themes and other requirements. Please see below for a list of integrations requirements you will need to satisfy via elective courses.

Integrations Designations

See Integrations Curriculum (https://catalog.csbsju.edu/catalog/academic-programs-policies-regulations/integrations-curriculum/) under Academic Policies and Regulations for further description of the general education requirements.

Foundational Courses

Code	Integrations Requirement
CI	Cultural/Social Difference - Identity
LF	Learning Foundations (INTG 100)
	College Success (INTG 105)
TE	Theological Exploration (THEO 100)

Ways of Thinking

Code	Integrations Requirement
AE	Artistic Expression
AS	Abstract Structures
HE	Human Experience
NW	Natural World
SW	Social World

Upper-level Courses

Column1	Column2
CS	Cultural/Social Differences - Systems
LI	Learning Integrations
TI	Theological Integrations

Thematic Coursework

To complete the themes course requirement: students will successfully complete 3 courses in the same theme (Truth, Justice, or Movement), in at least 2 different departments, at least 1 of which is a thematic focus course (TF/JF/MF). The other two can be Focus or Encounter courses. Encounter courses can be identified by: T1/T3, J1/J3, M1/M3.

Code	Integrations Requirement
J1, J3, JF, or M1, M3, MF, or T1, T3, TF	Thematic Encounter or Focus Course

J1, J3, JF, or M1, M3, MF, or T1, T3, TF	Thematic Encounter or Focus Course
JF, MF, or TF	Thematic Focus Course

Global Language

Code	Integrations Requirement
111	Beginning I Course
112	Beginning II Course
211	Intermediate Course

For more details on meeting this requirement, please see the Integrations Curriculum tab on Global Language Requirements (https://catalog.csbsju.edu/catalog/academic-programs-policies-regulations/integrations-curriculum/#globallanguageproficiencydetailstext).

Engagement and Designation Requirements

Code	Integrations Requirement
AR	Artistic Engagement
BN	Benedictine Raven*
EX	Experiential Engagement
GL	Global Engagement**
QR	Quantitative Reasoning
WR	Writing Designation

* BN and WR waived for students entering during Academic Year 2020 and 2021.

** GL waived for students entering during Academic Years 2020-2025