

BS in Physics

2025-2026 Catalog

Freshman Year

Sophomore Year

Junior Year

Senior Year

Semester 1

Semester 2

Semester 1

Semester 2

Semester 1

Semester 2

Semester 1

Semester 2

PHY 1090
Frontiers of Physics
(3)

COP 2271
Introduction to
Computation and
Programming
(3)

PHY 2750C
Design Techniques in
Physics
(3)

PHY 2841C
Experimental
Techniques in
Physics
(3)

PHY 3802C
Modern Physics
Design 1
(3)

PHY 3803C
Modern Physics
Design 2
(3)

PHY 4910C
Physics Capstone
Design 1
(3)

PHY 4911C
Physics Capstone
Design 2
(3)

CHM 2045
Chemistry I
(3)

PHY 2048
Physics 1
(3)

PHY 2049
Physics 2
(3)

PHY 3101
Intro to Modern
Physics
(3)

PHZ 3151
Computational
Physics
(3)

PHZ 4153
Computational
Physics 2
(3)

Social Science or
Arts and Humanities
Gen Ed Course
(3)

Arts and Humanities
Gen Ed Course
(3)

CHM 2045L
Chemistry I Lab
(1)

PHY 2048L
Physics 1 Lab
(1)

PHY 2049L
Physics 2 Lab
(1)

PHY 3221
Classical Mechanics
(3)

PHY 3323
Electricity and
Magnetism 1
(3)

PHY 4603
Quantum Mechanics
2
(3)

Social Science or
Arts and Humanities
Gen Ed Course
(3)

PHY 4324
Electricity &
Magnetism 2
(3)

IB or C in
MAC 1147
or higher,
AP for MAC
2311

MAC 2311
Analytic Geometry
and Calculus 1
(4)

MAC 2312
Analytic Geometry
and Calculus 2
(4)

MAC 2313
Analytic Geometry
and Calculus 3
(4)

MAS 3105
Linear Algebra
(3)

PHY 3602
Quantum Mechanics
(3)

PHY 4513
Thermal & Statistical
Mechanics
(3)

Concentration
Elective
(3)

Concentration
Elective
(3)

ENC 1101
English Composition I
(3,W)

ENC 2210
Technical Writing
(3,W)

COP 3337
Object Oriented
Programming
(3)

MAP 2302
Differential Equations
(3)

Concentration
Elective
(3)

Concentration
Elective
(3)

Free Elective
(3)

Free Elective
(3)

Social Science
Gen Ed Course
(3)

IDS 4941
Professional Exp.
Internship
(0)



Legend:

Grade of C or higher
pre-req or minimum
course grade

General
Education

Free Elective

Physics
Core

Engineering
Core

Foundational

Computing and
Design

Concentrations

Advanced Topics (12)

Select 2 (6 credits) 3000 level or above AST, PHY, or PHZ prefixed courses and two (6 credits) additional technical courses from the list below or any 3000 or above level approved computing, engineering, mathematics, or science courses (Prefixes include AST, CAI, CAP, CDA, CEN, CIS, CNT, COT, EAS, EEL, EGN, EML, MAA, MAC, MAD, MAS, MAT, MAP, MHF, MTG, PHY, and PHZ).

Technical Course List:

- EML 3015 - Fluid Mechanics Credits: 3
- EEL 3111 - Circuits 1 Credits: 3
- EEL 3112 - Circuits 2 Credits: 3
- EGN 3311 - Statics Credits: 3
- EGN 3321 - Dynamics Credits: 3
- EGN 3331 - Strength of Materials Credits: 3
- EGN 3343 - Engineering Thermodynamics Credits: 3
- EGN 3365 - Structure and Properties of Materials Credits: 3
- EAS 4505 - Orbital Mechanics Credits: 3

Astrophysics (12)

Select 4 courses from the list below:

- AST 3222 - Introduction to Astrophysics Credits: 3
- PHZ 3601 - Special Relativity Credits: 3
- AST 4217 - Stellar Astrophysics Credits: 3
- AST 4300 - Galaxies and the Universe Credits: 3
- EAS 4505 - Orbital Mechanics Credits: 3

Applied Quantum (12)

Select 4 courses from the list below:

- PHY 3445 - Laser Physics Credits: 3
- PHY 3650 - Quantum Information and Computing Credits: 3
- PHZ 3442 - Semiconductor Physics Credits: 3
- PHZ 4308 - Nuclear and Subatomic Physics Credits: 3
- PHZ 4444 - Solid State Physics Credits: 3

Arts, Humanities, and Social Sciences

Arts & Humanities

A total of 12 credit hours must be completed in the arts, humanities, and social sciences. Select 3 to 9 credits from the following courses:

At least one course (3 credits) from the following state required list:

- ARH 2000 - Art Appreciation Credits: 3
- HUM 2020 - Introduction to the Humanities Credits: 3
- LIT 2000 - Introduction to Literature Credits: 3
- PHI 2010 - Introduction to Philosophy Credits: 3
- MUL 2010 - Music Appreciation Credits: 3

Optional additional course elective:

- IDS 2144 - Legal, Ethical, and Management Issues in Technology Credits: 3

Social Sciences

A total of 12 credit hours must be completed in the arts, humanities, and social sciences. Select 3 to 9 credits from the following courses.

At least one course (3 credits) from the following state required list:

- AMH 2010 - American History to 1877 Credits: 3
- AMH 2020 - American History Since 1877 Credits: 3
- ECO 2013 - Principles of Macroeconomics Credits: 3
- POS 2041 - American Government Credits: 3
- PSY 2012 - General Psychology Credits: 3

Optional additional course elective:

- ECO 2023 - Principles of Microeconomics Credits: 3

