

PHYSICAL SCIENCE

Bachelor of Science degree with a major in Physical Science

Minor in Physical Science

Department Chair

Robert W. Zoellner, Ph.D.

Department of Physics and Astronomy

Science Complex A 470
(707) 826-3277 or 826-3244

The Program

The BS in physical science is a liberal arts program with emphasis in the sciences. Five departments offer introductory material. For upper division (junior and senior) requirements there is considerable flexibility, allowing pursuit of topics of interest within the sciences.

Those who complete the BS will have a broad science background applicable in many industrial and business occupations. This program also may be helpful in preparing for state examinations for entry into the secondary education science credential program.

Preparation

In high school take English, mathematics, chemistry, and physics.

REQUIREMENTS FOR THE MAJOR

A minimum grade of C- is required for all courses with the "PHYX" prefix for the B.S. physical science major degree.

Lower Division

BIOL 105 Principles of Biology
CHEM 109 General Chemistry
CHEM 110 General Chemistry
GEOL 109 General Geology
MATH 105 Calculus for the Biological Sciences & Natural Resources
or MATH 109 Calculus I (recommended)

MATH 110 Calculus II
PHYX 111 General Physics III:
Optics, Modern Physics

Plus one of these physics series:
PHYX 106 College Physics: Mechanics & Heat, **and**
PHYX 107 College Physics: Electromagnetism & Modern Physics, **and**
PHYX 399 Supplemental Work in Physics

OR

PHYX 109 General Physics I:
Mechanics (recommended) **and**
PHYX 110 General Physics II:
Electricity, Heat

Upper Division

PHYX 304 Cosmos (recommended
early in your program)
PHYX 320 Modern Physics
PHYX 340 Symbolic Computation in
the Sciences **or** approved
alternative

Plus one of these physics courses:

PHYX 300 Frontiers of Modern
Physical Science
PHYX 302 Light & Color
PHYX 310 Space, Time & Relativity
PHYX 315 Introduction to Electronics
& Electronic Instrumentation
PHYX 340 Symbolic Computation in the
Sciences
PHYX 360 Physics of Stars & Planets
PHYX 380 Micrometeorology

Plus nine units from the following courses:

CHEM 305 Environmental Chemistry
CHEM 328 Brief Organic Chemistry
CHEM 364 Introductory Physical
Chemistry
CHEM 367 Introductory Physical
Chemistry Lab
GEOL 300 Geology of California
GEOL 300L Geology of California Field Trip
GEOL 303 Earth Resources & Global
Environmental Change
GEOL 310 Mineralogy & Optical
Crystallography
GEOL 350 General Geomorphology
PHYX 300 Frontiers of Modern Physical
Science
PHYX 302 Light & Color
PHYX 310 Space-Time & Relativity
PHYX 315 Introduction to Electronics
& Electronic Instrumentation
PHYX 316 Electronic Instrumentation
& Control Systems
PHYX 340 Symbolic Computation in
the Sciences
PHYX 360 Physics of Stars & Planets
PHYX 380 Micrometeorology

REQUIREMENTS FOR THE MINOR

A minimum grade of C- is required for all courses with the "PHYX" prefix for the physical science minor degree.

Choose Path 1 or Path 2.

Path 1

Lower Division

PHYX 109 General Physics I:
Mechanics
PHYX 110 General Physics II:
Electricity, Heat
PHYX 111 General Physics III:
Optics, Modern Physics

Upper Division

Six approved upper division units in physics, chemistry, oceanography, or geology.

Path 2

Lower Division

MATH 105 Calculus for the Biological
Sciences & Natural Resources
or MATH 109 Calculus I

PHYX 104 Descriptive Astronomy

Plus one of these physics series:

PHYX 106 College Physics: Mechanics
& Heat **and**
PHYX 107 College Physics:
Electromagnetism & Modern
Physics **or**
PHYX 106 College Physics: Mechanics
& Heat, **and**
PHYX 118 College Physics: Biological
Applications **or**
PHYX 109 General Physics I: Mechanics
and
PHYX 110 General Physics II:
Electricity, Heat

Upper Division

One of these physics courses:

PHYX 111 General Physics III:
Optics, Modern Physics
PHYX 300 Frontiers of Modern
Physical Science
PHYX 302 Light & Color

Plus:

PHYX 304 The Cosmos (recommended
early in your program)

Plus one approved upper division course in physics, chemistry, oceanography, or geology.

