

◀ BS Phys - Bachelor of Science in Physics

CON General Physics | General Physics

Under Review | Fall 2024

Proposal Information

Workflow Status

In Progress




expand ▲


Faculty Senate, Faculty Senate

Waiting for Approval | Faculty Senate Approval

- ☐ Rick Holmes
- ☐ Nancy Middlebrook

- ✓ Approve
- ↩ Send Back
- ✗ Deny

-  Edit
-  Comments 1
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Proposal Information

Sponsoring faculty/
staff member ⓘ

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College
College
of Arts &
Sciences

Department
Physics &
Astronomy

Campus
Main
Campus

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Effective Term and Year

Proposed Effective Term and Year

Fall 2024

Justification

Concentration Justification

In the process of requesting an Applied Physics concentration, we have been asked to modify our current program to have a General Physics concentration alongside the Applied Physics concentration to make it easier for student to see their possible paths. Here we describe the General Physics concentration which is focused on PHYS/ASTR courses rather than the broader set of STEM courses allowed for the Applied Physics Concentration.

Associated Forms

**Select any
associated course
forms that exist**

**Select any
associated program
forms that exist**

Program Information

Degree Name

BS Phys - Bachelor of Science in Physics

Degree Type**Program Type**

Bachelor of
Science

Undergraduate

Program Description

No Parent Selected

Degree Hours**Minimum Major
Hours**

120

Degree Requirements

- Complete all of the following
 - Complete the following:
 - PHYS2415 -
Computational
Physics (3)
 - PHYS301 -
Thermodynamics
and Statistical
Mechanics (3)
 - PHYS307L - Junior
Laboratory (3)
 - PHYS304 - Analytical
Mechanics II (3)
 - PHYS306L - Junior
Laboratory (3)
 - PHYS307L - Junior
Laboratory (3)
 - PHYS330 -
Introduction to
Modern Physics (3)
 - PHYS366 -
Mathematical
Methods of Physics
(4)

- PHYS405 - Electricity and Magnetism I (3)
- PHYS406 - Electricity and Magnetism II (3)
- PHYS491 - Intermediate Quantum Mechanics I (3)
- PHYS492 - Intermediate Quantum Mechanics II (3)
- PHYS493L - Contemporary Physics Laboratory (3)
- Earned at least 3 credits from PHYS 300 - 499
- Complete the following:
 - CHEM1215 - General Chemistry I for STEM Majors (3)
 - CHEM1215L - General Chemistry I for STEM Majors Laboratory (1)
 - CHEM1225L - General Chemistry II for STEM Majors Laboratory (1)
 - CHEM1225 - General Chemistry II for STEM Majors (3)
 - MATH314 - Linear Algebra with Applications (3)
 - MATH316 - Applied Ordinary Differential Equations (3)
- PHYS 451, *452, and 456 cannot be substituted for the 3-credit hour elective course numbered above

300.

- No minor is required for the B.S. in Physics, although an optional minor or second major may be selected.
- Earn at least 63 credits from the following types of courses:
Completed at least 63 credits from the following types of courses: In addition to the program-specific requirements outlined here, all undergraduate students are required to fulfill UNM's General Education Program requirements. In some instances, courses included in an undergraduate degree program's requirement may also fulfill a General Education requirement. Please review the General Education Program in this Catalog for General Education information. Students within the College of Arts and Sciences must also complete 1) a major and a minor; or 2) two majors; or 3) one of the special curricula of the College that requires no minor.

Grand Total Credits: **120**

Concentration Information

Concentration Title

General Physics

Program Level

Undergraduate

Concentration Requirements

- Complete all of the following
 - Complete the following:
 - PHYS307L - Junior Laboratory (3)
 - PHYS406 - Electricity and Magnetism II (3)
 - PHYS492 - Intermediate Quantum Mechanics II (3)
 - Earn at least 12 credits from the following types of courses:
3 credit hours chosen from STEM classes at Any Level (excluding problems and research courses). CHEM 1225 + 1225L or introductory computer programming recommended depending on background and end-goals. 3 credit hours chosen from Any Level PHYS/ASTR courses. 6 credit hours chosen from Upper Level PHYS/ASTR courses. All electives should be approved in consultation with the Physics and Astronomy faculty advisor.

Grand Total Credits: **21**

Concentration Description

The B.S. in Physics with General Physics concentration is designed to prepare students for a career in physics-focused

research and technology development. Our program will prepare students to attend graduate school in physics, astrophysics, or a related field. With a strong foundation in mathematics and physics along with experimental methods, students will develop skills for qualitative and quantitative analysis of physical problems in various regimes including, for example, optics, biophysics, particle physics, quantum information, and geophysics.