

Physics, B.S.

DEPARTMENT

MN in Physical Science, Minor
MS in Physics, M.S.
BS in Physics, B.S.
MN in Physics, Minor
MN in Medical Physics, Minor
MN in Astronomy, Minor
BS in Biomedical Physics, B.S.
CRED in Single Subject Credential - Physical Science

REQUIREMENTS

Department

Bachelor of Science Degree Requirements

Physics Major

1. Physics Major requirements (47 units)

(see note 1)

Physics core (36 units)

PHYS 4A, 4AL, 4B, 4BL, 4C, 102, 104, 105A, 105B, 107A, 110, 115, 140

Upper-division electives (11 units)

Includes courses in physics and, with approval, in related fields. Students planning to pursue graduate study in physics are strongly encouraged to take courses from the following list: PHYS 107B, 135, 136, 137, 150, 151, 155, 156, 157, 158, 162, 163, 168S, 170A, 171, and 180 (see note 2)

Additional requirements (28-29 units)*

(see notes 1, 3, and 4)

MATH 75, 76, 77, 81; CHEM 1A, 1AL, 1B, 1BL (25 units)

Plus one of the following

CSCI 40 (4 units) or ECE 71 (3 units)

2. General Education requirements (49 units)*

3. Other requirements (6 units)

Upper-division writing and Multicultural and International (MI)

4. Sufficient elective units to meet required total units (varies)

5. Total units (120)**

*7 units will be satisfied by the following two courses in additional requirements: 4 units of CHEM 1A/1AL in G.E. Breadth B1 and 3 units of MATH 75 in G.E. Foundation B4.

** G.E. and MI courses can be double-counted with major requirements. The writing requirement may be met by taking the upper-division writing exam. See advisor for details.

Advising Notes

1. CR/NC grading is not permitted in the physics major. Additional requirements, however, may be taken CR/NC (see Credit/No Credit Grading).
2. PHYS 190 and PHYS 175T as well as courses outside the Department of Physics may be substituted for physics upper-division electives with prior approval of the department chair.

3. It is important to fulfill the upper-division writing skills requirement by exam or W class after completing 60 units which a student may request 1 unit of credit.
4. All math and physics prerequisites for the physics major should be completed with a grade of C or better.

Suggested Sequence of Courses for the B.S. in Physics

The list below is a suggested schedule of courses for the major for students planning to complete the suggested pregraduate study sequence in four years.

In addition to the specific courses listed below, General Education requirements and electives should be included to bring the average total of units to 15 per semester. A minimum total of 120 units must be completed for the Bachelor of Science degree. (See Degree Requirements.)

1st Year: PHYS 4A, 4AL; CHEM 1A, 1B; MATH 75, 76; Computer Programming

2nd Year: PHYS 4B, 4BL, 4C; MATH 77, 81

3rd Year: PHYS 102, 104, 105A, 105B, 110, 150, 151, 170A

4th Year: PHYS 107A, 107B, 115, 140, 162, 171; plus upper-division electives

FACULTY

Our faculty members are here to teach and to do research. Several faculty members have research projects involving students.

Our classes are small: our upper-division and graduate classes usually have 10-15 students or less. Physics majors get to know each other very well. They develop friendships with peers, faculty, and staff, which extend well beyond graduation.

There are eight research/creative activity areas that are part of our current efforts: (1) Computational Physics, (2) High Energy Physics (HEP), (3) Strongly Correlated Electron Physics, (4) Nanotechnology, (5) Astronomy and Astrophysics, (6) Microbeam X-ray Fluorescence (XRF), (7) Theoretical Physics, (8) Physics Outreach.

For faculty phone numbers and e-mail, see the campus directory.

For more on the faculty, see the faculty pages.

The faculty pages are updated by the department or program.