

# Physics, B.S. Two-Year Plan

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## First Year Fall Semester (15 Units)

- PHYS 314 - Introduction to Physics III Units: 4
- PHYS 325 - Introduction To Mathematical Physics Units: 3
- Upper Division Physics Elective (e.g., PHYS 494 - Physics Seminar) Units: 1
- Upper Division GE Area C: Arts & Humanities Units: 3
- University Elective Units: 4

## First Year Spring Semester (15 Units)

- PHYS 313/L - Electronics/Laboratory Units: 3+1\*\*
- PHYS 320 - Analytical Mechanics Units 3
- PHYS 340 - Light and Optics Units: 3
- PHYS 381 - Computer Applications for Scientists Units: 2
- University Elective Units: 3

## Second Year Fall Semester (15 Units)

- PHYS 450 - Statistical Physics Units: 2
- PHYS 460 - Quantum Mechanics Units: 3
- Upper Division Physics Elective (e.g., PHYS 495 - Special Studies ) Units: 2
- Upper Division GE Area D: Social Sciences Units: 3
- University Elective Units: 5

## Second Year Spring Semester (15 Units)

- PHYS 366 - Intermediate Experimental Physics Units: 3\*\*
- PHYS 430 - Electricity and Magnetism Units: 3
- PHYS 491 - Capstone Preparatory Seminar Units: 1
- PHYS Capstone (PHYS 492, PHYS 493, or PHYS 497) Units: 2
- University Elective Units: 6

\*\* Courses are offered in alternate years. Students should take either PHYS 313/L or PHYS 366 as available in their first Spring semester and the other in their second.

## Plan Assumptions

This two-year plan assumes students have completed:

- Math sequence of Calculus I-III, equivalent to SSU courses:
  - MATH 161 - Differential and Integral Calculus I GE Area B4 Units: 4
  - MATH 211 - Differential and Integral Calculus II Units: 4
  - MATH 261 - Multivariable Calculus Units: 4
  - MATH 241 - Linear Algebra with Applications in Differential Equations Units: 4
- Physics sequence of Calculus-based Physics, equivalent to SSU courses:
  - PHYS 114 - Introduction to Physics I GE Area B1 Units: 4
  - PHYS 116 - Introductory Laboratory Experience Units: 1
  - PHYS 214 - Introduction to Physics II Units: 4
  - PHYS 216 - Introductory Laboratory Units: 1
- Sequence of General Chemistry, equivalent to SSU courses:
  - CHEM 115A - General Chemistry
  - CHEM 115B - General Chemistry
- Lower Division GE Pattern meeting\*:
  - Lower Division GE Area A1: Oral Communication Units: 3
  - Lower Division GE Area A2: Written Communication Units: 3
  - Lower Division GE Area A3: Critical Thinking Units: 3
  - Lower Division GE Area B1: from Physics above
  - Lower Division GE Area B2 Units: 3
  - Lower Division GE Area B3: from Physics above
  - Lower Division GE Area B4: from Calculus above
  - GE Area C1: Arts Units: 3
  - GE Area C2: Humanities Units: 3
  - GE Area C1: Arts or GE Area C2: Humanities Units: 3
  - GE Area D: Social Sciences Units: 3
  - GE Area D: Social Sciences Units: 3
  - GE Area F: Ethnic Studies Units: 3
  - \* Any of these that are unmet may be completed as the University Electives identified in the two-year plan above