

Bachelor of Science in Physics

The bachelor of science program includes appropriate course work in physics to prepare students for employment or graduate work in a variety of physics-related fields. Students are encouraged to speak to their advisor to select elective courses that will best meet their career needs. The BS in Physics requires a total of 75 units listed below; of those 7 units count towards the university's General Education requirements.

Departmental Honors

To be awarded departmental honors in physics a student must:

1. Achieve at least a 3.5 minimum grade point average in courses required for the major taken at California State University, San Bernardino and at least a 3.0 grade point average overall;
2. Conduct advanced research on a topic approved by a faculty member who will serve as project director;
3. Obtain written approval upon successful completion of the project from the project director and the chair, and present the results of the research to the department or at a research conference, and/or publish the results in a peer-reviewed scientific journal.

Requirements (75 units)

Total units required for graduation: 120

Requirements for the B.S. in Physics

(Program Code: PHYS)

Lower-division requirements (38)

CHEM 2100	General Chemistry I	4
CHEM 2100L	General Chemistry I Laboratory	1
MATH 2210	Calculus I	4
MATH 2220	Calculus II	4
MATH 2310	Applied Linear Algebra	4
MATH 2320	Multivariable Calculus	4
PHYS 1500	Tools for Physicists	3
PHYS 2500	General Physics I	4
PHYS 2500L	General Physics I Lab	1
PHYS 2510	General Physics II	4
PHYS 2510L	General Physics II Lab	1
PHYS 2600L	Introduction to Electronics	1
PHYS 2700	Modern Physics	3

Upper-division requirements (37)

PHYS 3100	Mathematical Methods of Physics	4
PHYS 3200	Classical Mechanics	4
PHYS 3300	Computational Physics	3
PHYS 3400	Electricity & Magnetism	3
PHYS 3500	Statistical and Thermal Physics	4
PHYS 3800	Intermediate Physics Laboratory	2
PHYS 4400	Electricity & Magnetism II	3
PHYS 4700	Quantum Mechanics	4
PHYS 4800	Senior Thesis	2

Can substitute ASTR 4000 for PHYS 4800; both count towards the GE WI requirement

Eight or more units chosen from upper-division physics courses selected with the approval of the department: 8

PHYS 3600	Data Acquisition and Control
PHYS 4600	Electronics
PHYS 4851-4853	Special Topics in Physics
PHYS 4851L-4852L	Special Topics in Physics Laboratory
PHYS 5100	Mathematical Methods of Physics II
PHYS 5400	Optics
PHYS 5500	Solid State Physics
PHYS 5700	Quantum Mechanics II
PHYS 5751-5753	Internship (max 3 units)
PHYS 5851-5853	Special Topics in Physics
PHYS 5851L-5852L	Special Topics in Physics Laboratory
PHYS 5951-5953	Independent Study (max 3 unit)
ASTR 3300	Astrophysics of Planetary Systems
ASTR 3310	Astrophysics of Galaxies and Cosmology

Total Units 75