Bachelor of Arts in Physics

The program for a bachelor of arts degree in physics provides basic knowledge in the main subject areas of physics as well as an opportunity for students to elect a considerable number of courses in other disciplines. This is a good choice for students planning careers in high school teaching, medical or other pre-professional schools, or other inter-disciplinary careers. The BA in Physics requires a total of 66 units listed below; of those 7 units count towards the university's General Education requirements. In addition to the General Education and the BA Physics requirements, students will need to complete 12 additional units in order to satisfy the 120 units required for graduation.

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 (66 units)

Total units required for graduation: 120

Requirements for the B.A. 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 (28)		
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 4800	Senior Thesis	2
Can substitute ASTR 4000 for PHYS 4800; both count towards the GE WI requirement		
Six units chosen from upper-division physics courses selected with the approval of the department:		6
PHYS 3600	Data Acquisition and Control	
PHYS 4400	Electricity & Magnetism II	
PHYS 4600	Electronics	
PHYS 4700	Quantum Mechanics	
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 5700	Quantum Mechanics II	
PHYS 5751-5753	Internship (max 3 units)	
PHYS 5851-585	Special Topics in Physics	
PHYS 5851L-5852	Special Topics in Physics Laboratory	
PHYS 5951-5953	Independent Study (max 3 units)	
ASTR 3300	Astrophysics of Planetary Systems	
ASTR 3310	Astrophysics of Galaxies and Cosmology	
Total Units		66