

PHYSICS, B.A. FOR ASSOCIATES DEGREE TRANSFER(ADT) STUDENTS

Note that all lower-division Physics and Mathematics courses will be transferred in from the community college. Students will bring in 24 units of Mathematics (8 units are FE).

Program Learning Outcomes

Graduates of the program will demonstrate:

- an ability to identify, formulate, and solve complex problems by applying principles of science and mathematics.
- an ability to apply physical principles, mathematical reasoning, and computational techniques to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- an ability to communicate effectively with a range of audiences.
 - Students will effectively communicate complicated technical information in writing.
 - Students will effectively communicate complicated technical information orally.
 - Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
- an ability to recognize ethical and professional responsibilities and make informed judgments, which must consider the impact of scientific solutions in global, economic, environmental, and societal contexts.
- an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use scientific judgment to draw conclusions.
- an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Code	Title	Units
Lower-Division Requirements		
Twenty four (24) units of transferred Mathematics ¹		24
Upper-Division Requirements		
PHY 3004 and PHY 3004L	Modern Physics and Modern Physics Lab	4
PHY 3043	Analytical Mechanics: Dynamics	3
PHY 3063	Electricity, Magnetism, and Waves I	3
PHY 4013	Thermodynamics	3
PHY 4053	Quantum Mechanics	3
PHY 4072	Senior Project I	2
MTH 3033	Differential Equations	3
Elective Courses		
Choose a minimum of eleven (11) units from the following:		11
PHY 3083	Electricity, Magnetism, and Waves II	
PHY 4063	Solid State Physics	

CHE 1052 General Chemistry I (FE)
and and General Chemistry I Lab (FE)
CHE 1052L

EGR 1043 Introduction to Computer Programming
and and Introduction to Computer Programming Lab
EGR 1043L

Total Units **56**

¹ Transferred in from the community college; 8 units are FE.

Total Units for the Degree: 57 (49 without FE)

Note(s): Associate Degree for Transfer (ADT) (<https://pointloma-public.courseleaf.com/tug-catalog/colleges-schools-departments/ad/>) students only.