

Physics AS-T (IGETC GE STEM Track)

Program Description: The Physics program provides curriculum concerned with the properties of matter and energy, and their interactions and transformations. The Physics program includes both major and non-major courses. The following is a sample of career options available for physics. Most require a baccalaureate degree, and some require a graduate degree: air pollution operations, consumer safety officer, engineer, teacher, astrophysicist and physicist.

Program SLO: 1) Reason conceptually and logically about physical phenomena using scientific models involving the fundamental physics principles of kinematics, kinetics, energy conservation, electromagnetism, thermodynamics, optics and modern physics 2) Utilize appropriate instruments to measure and examine examples of physics phenomena and relate the results of experimental data to the concepts discussions in the lecture portion of class.

Important Transfer Information: Connect with a counselor to develop an individualized student education plan through the Counseling Department @ <https://www.canyons.edu/counseling> or (661) 362-3288. The sequence listed below, may not meet all your transfer admissions requirements.

Major courses are sequenced and **BOLDED** based on recommendations by the Physics Department.

First Semester	(0-15 units)		
Course	Title	Units	Major and GE Courses
MATH 211	Calculus (FA, SP, SU)	5	Major Course and Area 2
ENGLISH 101/101H	English Composition (FA, WI, SP, SU)	4	Area 1A
Biological Science	Choose one course from IGETC GE Area 5B (FA, WI, SP, SU) – lecture course only	3	Area 5B
American Institutions – Choose Option I or II	Complete first course in chosen option – (note: must take both classes within one option) (FA, WI, SP, SU)	3	American Institutions and Area 3B
	Term Total:	15	

Check the Honors website for most recent course offerings. Must be enrolled in the Honors program to take courses, see below

Second Semester	(16-30 units)		
Course	Title	Units	Major and GE Courses
MATH 212	Calculus II (FA, SP, SU)	5	Major Course
PHYSICS 220	Physics for Scientists and Engineers: Mechanics of Solids and Fluids (FA, SP, SU)	4	Major Course and Area 5A and 5C
**Critical Thinking	Choose one course from the IGETC GE 1B category (FA, WI, SP, SU)	3	Area 1B
American Institutions	Complete second course in chosen option – (note: must take both classes within one option) (FA, WI, SP, SU)	3	American Institutions and Area 4
	Term Total:	15	

****Some UC's will require a second semester of English Composition.**

Third Semester	(31-45 units)		
Course	Title	Units	Major and GE Courses
MATH 213	Calculus III (FA, SP, SU)	5	Major Course
PHYSICS 221	Physics for Scientists and Engineers: Electricity and Magnetism (FA, SP, SU)	4	Major Course
COMS 105/105H	Fundamentals of Public Speaking (FA, WI, SP, SU)	3	Area 1C
Art Class	Choose one course from IGETC GE Area 3A (FA, WI, SP, SU)	3	Area 3A
	Term Total:	15	

Fourth Semester	(46-60 units)		
Course	Title	Units	Major and GE Courses
PHYSICS 222	Physics for Scientists and Engineers: Wave, Motion, Heat, Optics and Modern Physics (FA, WI, SP, SU)	4	Major Course
Social Science	Choose one course from IGETC GE Area 4 (FA, WI, SP, SU)	3	Area 4
UC Elective	Choose one course that is UC transferable (FA, WI, SP, SU)	3	Elective
UC Elective	Choose one course that is UC transferable (FA, WI, SP, SU)	3	Elective
UC Elective	Choose one course that is UC transferable (FA, WI, SP, SU)	3	Elective
Term Total:		15	

Total Units: 60

Note: Foreign language is required as part of the transfer general education breadth. Please see the Counseling Office for additional information.

American Institutions Requirement – Select one of the options below and complete a total of 6 units

Option 1	One course from the following: Economics 170/170H, History 111/111H, History 112/112H, History 120/120H, or History 130 AND Political Science 150/150H (FA, WI, SP, SU)
Option 2	History 111/111H AND History 112/112H (FA, WI, SP, SU)

Counseling Resources

Physics Department: <https://www.canyons.edu/physics>

IGETC General Education Guide:

https://www.canyons.edu/_resources/documents/student-services/counseling/degrees/IGETC20192020.pdf

CSU/UC Articulation Agreements: www.assist.org

University of California: www.universityofcalifornia.edu

UC Transfer Pathway: <http://admission.universityofcalifornia.edu/transfer/preparation-paths/index.html>

Astronomy and Physics Club: cocastronomyclub@gmail.com

COC Honors Program: <https://www.canyons.edu/academics/honors/index.php>

Math, Engineering, and Science Achievement (MESA): www.canyons.edu/mesa

Career Resources

California Career Zone: www.californiacareerzone.com

O*Net Online: www.onetonline.com

Bureau of Labor and Statistics: www.bls.gov

What Can I Do With a Major In... <https://whatcanidowiththismajor.com/major/physics/>

Professional Associations: www.aps.org