

# Physics AS-T (CSU GE 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		(3-15 units)		
Course	Title	Units	Major and GE Courses	
<b>MATH 211</b>	<b>Calculus (FA, SP, SU)</b>	<b>5</b>	<b>Major Course and Area B4</b>	
ENGLISH 101/101H	English Composition (FA, WI, SP, SU)	4	Area A2	
Life Science	Choose one course from CSU GE Area B2 (FA, WI, SP, SU) – lecture course only	3	Area B2	
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 C2	
		<b>Term Total:</b>	<b>15</b>	

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	
<b>MATH 212</b>	<b>Calculus II (FA, SP, SU)</b>	<b>5</b>	<b>Major Course</b>	
<b>PHYSICS 220</b>	<b>Physics for Scientists and Engineers: Mechanics of Solids and Fluids (FA, SP, SU)</b>	<b>4</b>	<b>Major Course and Area B1 and B3</b>	
**Critical Thinking	Choose one course from the CSU GE A3 category (FA, WI, SP, SU)	3	Area A3	
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 D	
		<b>Term Total:</b>	<b>15</b>	

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

Third Semester		(31-45 units)		
Course	Title	Units	Major and GE Courses	
<b>MATH 213</b>	<b>Calculus III (FA, SP, SU)</b>	<b>5</b>	<b>Major Course</b>	
<b>PHYSICS 221</b>	<b>Physics for Scientists and Engineers: Electricity and Magnetism (FA, SP, SU)</b>	<b>4</b>	<b>Major Course</b>	
COMS 105/105H or COMS 120	Fundamentals of Public Speaking (FA, WI, SP, SU) or Small Group Communication (FA, WI, SP, SU)	3	Area A1	
Art Class	Choose one course from CSU GE Area C1 (FA, WI, SP, SU)	3	Area C1	
		<b>Term Total:</b>	<b>15</b>	

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
Arts or Humanities	Choose one course from CSU GE Area C1 or C2 (FA, WI, SP, SU)	3	C1 or C2
Social Science	Choose one course from CSU GE Area D (FA, WI, SP, SU)	3	Area D
Social Science	Choose one course from CSU GE Area D (FA, WI, SP, SU)	3	Area D
Lifelong Learning	Choose one course from the CSU GE Area E category that is at least 3-units (FA, WI, SP, SU)	3	Area E
<b>Term Total:</b>		<b>15</b>	

**Total Units: 60**

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

<b>Option 1</b>	One course from the following: Economics 170/170H, History 111/111H, History 112/112H, History 120/120H, or History 130 <b>AND</b> Political Science 150/150H
<b>Option 2</b>	History 111/111H <b>AND</b> History 112/112H

### Counseling Resources

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

CSU General Education Guide:

<https://www.canyons.edu/resources/documents/student-services/counseling/degrees/CSUGE20192020.pdf>

CSU/UC Articulation Agreements: [www.assist.org](http://www.assist.org)

Cal State University: [www.calstate.edu](http://www.calstate.edu)

A Degree with a Guarantee: <http://adegreewithaguarantee.com/>

Astronomy and Physics Club: [cocastronomyclub@gmail.com](mailto:cocastronomyclub@gmail.com)

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

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

### Career Resources

California Career Zone: [www.californiacareerzone.com](http://www.californiacareerzone.com)

O\*Net Online: [www.onetonline.com](http://www.onetonline.com)

Bureau of Labor and Statistics: [www.bls.gov](http://www.bls.gov)

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

Professional Associations: [www.aps.org](http://www.aps.org)