

# **Cal Poly Department of Physics: COURSE OFFERINGS 2019-2020\***

COURSES in **BOLD** are required for Physics BS

*Courses in Italics are source of advanced Physics electives; "lab" = upper division lab*

SU=Summer, F=Fall, W=Winter, SP=Spring

**\* OFFERINGS ARE SUBJECT TO CHANGE. Courses with low enrollment may be cancelled.**

ASTR-Astronomy (2019-2025)			
Course#	Units	Course Title	Qtr(s) Offered*
ASTR 101	4	Introduction to the Solar System	F, W, SP, SU
ASTR 102	4	Introduction to the Stars and Galaxies	F, W, SP
ASTR 200	1 to 2	Special Problems for Advanced Undergraduates	As needed
ASTR 301	3	The Solar System	W
ASTR 302	3	Stars and Galaxies	SP
ASTR 324	4	Time, Longitude and Navigation	W
ASTR 326	3	Relativity and Cosmology	F
ASTR 400	1 to 2	Special Problems for Advanced Undergraduates	As needed
<i>ASTR 404</i>	1 to 2	Research Experience for Advanced Undergraduates	As needed
<i>ASTR 444</i>	4	Observational Astronomy (lab)	F20, F21, F22
GEOL-Geology			
Course#	Units	Course Title	Qtr(s) Offered*
GEOL 102	4	Introduction to Geology	W, SP
GEOL 200	1 to 2	Special Problems for Advanced Undergraduates	As needed
GEOL 201	3	Physical Geology	F, W, SP
GEOL 203	4	Fossils and the History of Life	W
GEOL 205	4	Earthquakes	Not offered 2019-20
GEOL 206	1	Geologic Excursions	F, SP
GEOL 241	1	Physical Geology Laboratory	F, W, SP
GEOL 305	4	Seismology and Earth Structure	W20
GEOL 310	3	Igneous Petrology	W21 ,W23, W25
GEOL 330	4	Principles of Stratigraphy	SP20, SP22, SP24
GEOL 400	1 to 2	Special Problems for Advanced Undergraduates	As needed
GEOL 401	4	Field-Geology Methods	W
GEOL 402	4	Geologic Mapping	SP
<i>GEOL 404</i>	1 to 2	Research Experience for Advanced Undergraduates	As needed
GEOL 415	4	Structural Geology	F
GEOL 420	3	Applied Geophysics	F
PHYS-Physics (100-200 Level)			
Course#	Units	Course Title	Qtr(s) Offered*
PHYS 104	4	Introductory Physics	F
PHYS 107	4	Introduction to Meteorology	Not offered
PHYS 111	4	Contemporary Physics for Non-Scientists	F
PHYS 121	4	College Physics I	F, W, SP, SU
PHYS 122	4	College Physics II	F, W, SP, SU
PHYS 125	1	College Physics I Laboratory	F, W, SP
PHYS 123	4	College Physics III	F, W, SP
<b>PHYS 132</b>	4	General Physics II /Calculus Based	F, W, SP, SU
<b>PHYS 133</b>	4	General Physics III /Calculus Based	F, W, SP, SU
<b>PHYS 141</b>	4	General Physics/Calculus Based	F, W, SP, SU
PHYS 200	1 to 2	Special Problems for Undergraduates	As needed
<b>PHYS 202</b>	4	Physics on the Computer	SP
<b>PHYS 206</b>	4	Instrumentation in Experimental Physics	W
<b>PHYS 211</b>	4	Modern Physics I	F, W, SP
<b>PHYS 212</b>	4	Modern Physics II	SP
PHYS 220	1 (CR/NC)	Introduction to Physics Research	W

PHYS-Physics (300-400 Level)			
Course#	Units	Course Title	Qtr(s) Offered*
<b>PHYS 301</b>	4	Thermal Physics I	W
<b>PHYS 302</b>	4	Classical Mechanics	F
<i>PHYS 303</i>	3	Classical Mechanics II	W
<i>PHYS 310</i>	3	Physics of Energy	SP21, SP23, SP25
<i>PHYS 313</i>	3	Introduction to Atmospheric Physics	Not offered 2019-2020
<i>PHYS 314</i>	3	Ocean Dynamics	SP21
<i>PHYS 315</i>	3	Introduction to Lasers and Laser Applications	SP20
<i>PHYS 318</i>	3	Special Theory of Relativity	W20
<b>PHYS 322</b>	3	Vibrations/Waves	F
<i>PHYS 323</i>	4	Optics (lab)	W
<i>PHYS 330</i>	4	Teaching Physics	SP20, SP22
<b>PHYS 340</b>	2	Quantum Physics Lab I (lab)	F
<b>PHYS 341</b>	2	Quantum Physics Lab II (lab)	W
<i>PHYS 342</i>	1	Quantum Physics Lab III (lab)	SP
<i>PHYS 357</i>	3	Advanced Instrumentation in Experimental	SP21, SP23, SP25
<i>PHYS 400</i>	1 to 2	Special Problems for Advanced Undergraduates	As needed
<i>PHYS 401</i>	3	Thermal Physics II	SP20, SP22, SP24
<i>PHYS 403</i>	3	Nuclear and Particle Physics	SP21, SP23, SP25
<i>PHYS 404</i>	1	Research Experience for Advanced Undergraduates	As needed
<b>PHYS 405</b>	4	Quantum Mechanics I	SP
<i>PHYS 406</i>	3	Quantum Mechanics II	F
<b>PHYS 408</b>	4	Electromagnetic Fields and Waves I	F
<i>PHYS 409</i>	3	Electromagnetic Fields and Waves II	W
<i>PHYS 410</i>	3	Physics of the Solid Earth	W21, W23, W25
<i>PHYS 412</i>	3	Solid State Physics	F
<i>PHYS 413</i>	3	Advanced Topics in Solid State Physics	SP20, SP22, SP24
<i>PHYS 417</i>	4	Nonlinear Dynamical Systems (lab)	SP20, SP22, SP24
<i>PHYS 418</i>	3	Introduction to General Relativity	SP21
<i>PHYS 422</i>	1	Polymer Electronics Laboratory (lab)	SP21, SP23, SP25
<i>PHYS 423</i>	4	Advanced Optics (lab)	SP21, SP23, SP25
<i>PHYS 424</i>	3	Theoretical Physics	SP20, SP22, SP24
<i>PHYS 452</i>	1	Solid State Physics Laboratory (lab)	SP20
<b>PHYS 461/462</b>	2, 2	Senior Project	F, W, SP, SU
<b>PHYS 463/464</b>	2, 2	Senior Project-Laboratory Research	F, W, SP, SU
<i>PHYS 470</i>	1 to 4	Selected Advanced Topics	As needed
<i>PHYS 471</i>	1 to 4	Selected Advanced Laboratory	As needed
<i>PHYS 485</i>	6	Cooperative Education - Part-time	As needed
<i>PHYS 495</i>	12	Cooperative Education - Full-time	As needed
PSC-Physical Science			
Course#	Units	Course Title	Qtr(s) Offered*
PSC 101	4	The Physical Environment: Matter and Energy	F, W, SP
PSC 102	4	The Physical Environment: Atoms and Molecules	W
PSC 103	4	The Physical Environment: Earth and the Universe	SP
PSC 201	4	Physical Oceanography	F, W, SP
PSC 307	4	Nuclear Weapons in the Post-Soviet World	SP20, SP22
PSC 320	4	Energy and the Environment for the New Millennium	W
PSC 391	4	Appropriate Technology for the World's People; Development	F
PSC 392	4	Appropriate Technology for the World's People: Design	SP
PSC 424	4	Organizing / Teaching PSC	F
PSC 425	2	Clinical Experience in Teaching Science Seminar	W, SP
PSC 491	4	Appropriate Technology for the World's People; Development	F
PSC 492	4	Appropriate Technology for the World's People: Design	SP
PSC-Physical Science			
Course#	Units	Course Title	Qtr(s) Offered*
SCM 302	2	The Learn By Doing Lab Teaching Practicum	W, SP
SCM 360	4	Selected Environmental Issues of California's Central Coast	SP21, SP23
Revised 7/29/19 MHK ; JJJ			