

Cal Poly Department of Physics: **COURSE OFFERINGS 2022-2023**

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 (2020-2025)			
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 270	1 to 4	Selected Topics	As needed
ASTR 301	3	Planetary Systems	W22, W23, W24
ASTR 302	3	Stars and Galaxies	SP
ASTR 324	4	Time, Longitude and Timekeeping	W
ASTR 326	3	Cosmology	F23, F24, F25
ASTR 400	1 to 2	Special Problems for Advanced Undergraduates	As needed
ASTR 404	1 to 2	Research Experience for Advanced Undergraduates	As needed
ASTR 444	4	Observational Astronomy (lab)	F22, F23, F24
ASTR 470	1 to 4	Selected Advanced Topics.	As needed
ASTR 471	1 to 2	Selected Advanced Laboratory (lab)	As needed
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	The Geologic Record: Fossils and the History of Life	W
GEOL 206	1	Geologic Excursions	F, SP
GEOL 241	1	Physical Geology Laboratory	F, W, SP
GEOL 270	1 to 4	Selected Topics	As needed
GEOL 301	4	Physical Models in the Geosciences	F
GEOL 303	3	Computation and Visualization in the Geosciences	W
GEOL 305	4	Seismology and Earth Structure	SP
GEOL 309	3	Igneous Petrology	SP
GEOL 311	3	Metamorphic Petrology	SP
GEOL 330	4	Principles of Stratigraphy	SP22, SP24
GEOL 400	1 to 2	Special Problems for Advanced Undergraduates	As needed
GEOL 404	1 to 2	Research Experience for Advanced Undergraduates	As needed
GEOL 415	4	Structural Geology	F
GEOL 416	4	Field-Geology Methods	W
GEOL 417	4	Geologic Mapping	SP
GEOL 420	3	Applied Geophysics	F
GEOL 470	1 to 4	Selected Advanced Topics	As needed
GEOL 471	1 to 4	Selected Advanced Laboratory	As needed
PHYS-Physics (100-200 Level)			
Course#	Units	Course Title	Qtr(s) Offered*
PHYS 101	1	Introduction to the Physics Major	F
PHYS 104	4	Introductory Physics	F
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 123	4	College Physics III	F, W, SP

PHYS 125	1	College Physics I Laboratory	F, W, SP
PHYS 141	4	General Physics/Calculus Based	F, W, SP, SU
PHYS 142	4	General Physics II /Calculus Based	F, W, SP, SU
PHYS 143	4	General Physics III /Calculus Based	F, W, SP, SU
PHYS 200	1 to 2	Special Problems for Undergraduates	As needed
PHYS 202	4	Physics on the Computer	SP
PHYS 206	4	Instrumentation in Experimental Physics	W
PHYS 211	4	Modern Physics I	F, W, SP
PHYS 212	4	Modern Physics II	SP
PHYS 220	1 (CR/NC)	Introduction to Physics Research	W
PHYS 270	1 to 4	Selected Topics	As needed

PHYS-Physics (300-400 Level)

Course#	Units	Course Title	Qtr(s) Offered*
PHYS 301	4	Thermal Physics I	W
PHYS 305	4	Classical Mechanics I	F
PHYS 306	3	Classical Mechanics II	W
PHYS 310	3	Physics of Energy	SP25
PHYS 313	3	Introduction to Atmospheric Physics	Not offered
PHYS 314	3	Ocean Dynamics	SP23, SP25
PHYS 315	3	Introduction to Lasers and Laser Applications	
PHYS 318	3	Special Theory of Relativity	
PHYS 320	4	Methods of Theoretical Physics I	F
PHYS 321	4	Methods of Theoretical Physics II	W
PHYS 322	3	Vibrations/Waves	F
PHYS 323	4	Optics (lab)	W
PHYS 330	4	Teaching Physics	SP22
PHYS 340	2	Quantum Physics Lab I (lab)	F
PHYS 341	2	Quantum Physics Lab II (lab)	W
PHYS 342	1	Quantum Physics Lab III (lab)	SP
PHYS 345	4	Quantum Computing	SP
PHYS 357	3	Advanced Instrumentation in Experimental Physics (lab)	SP23, SP25
PHYS 400	1 to 2	Special Problems for Advanced Undergraduates	As needed
PHYS 401	3	Thermal Physics II	SP20, SP22, SP24
PHYS 403	3	Nuclear and Particle Physics	SP23, SP25
PHYS 404	1	Research Experience for Advanced Undergraduates	As needed
PHYS 405	4	Quantum Mechanics I	SP
PHYS 406	3	Quantum Mechanics II	F
PHYS 408	4	Electromagnetic Fields and Waves I	F
PHYS 409	3	Electromagnetic Fields and Waves II	W
PHYS 410	3	Physics of the Solid Earth	W21, W23, W25
PHYS 418	3	Introduction to General Relativity	SP21
PHYS 423	4	Advanced Optics (lab)	SP23, SP25
PHYS 425	3	Solid State Physics	F
PHYS 426	1	Solid State Physics Laboratory (lab)	SP
PHYS 427	3	Advanced Topics in Solid State Physics	SP
PHYS 428	4	Nonlinear Dynamical Systems (lab)	SP22, SP24
PHYS 461	2	Senior Project I	F, W, SP, SU
PHYS 462	2	Senior Project II	F, W, SP, SU
PHYS 470	1 to 4	Selected Advanced Topics	As needed
PHYS 471	1 to 4	Selected Advanced Laboratory	As needed
PHYS 485	6	Cooperative Education - Part-time	As needed
PHYS 495	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	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

SCM - Science and Math

Course#	Units	Course Title	Qtr(s) Offered*
SCM 230	2	Seminar for Learning Assistants	F, W, SP
SCM 302	2	The Learn By Doing Lab Teaching Practicum	W, SP

Revised 1/23/23 MHK