Physics

School of Mathematics, Science, and Engineering

Dean Janet Mazzarella, M.A., Office 215A, 619-482-6344
Faculty Hok Kong Lee, Ph.D.; Jeffrey Veal, Ph.D.
Department Chair Tinh-Alfredo V. Khuong, Ph.D.

General Description

Physics is the most fundamental science and underlies our understanding of nearly all areas of science and technology. In a broad sense, physics is concerned with the study of energy, space, matter, the interactions between matter and the laws which govern these interactions. More specifically, physicists study mechanics, heat, light, electric and magnetic fields, gravitation, relativity, atomic and nuclear physics, and condensed-matter physics.

Career Options

Below is a sample of the career options available for the physics major. A few of these require an associate degree, some require a bachelor's degree, and most require a graduate-level degree: research assistant, laboratory technician, high school or college instructor, technical writer and research or applied physicist in acoustics, atmospheric physics, astrophysics, astronomy, atomic and molecular physics, electricity and magnetism, electronic instrumentation, energy conservation, geophysics, health physics, mechanics, heat or light physics, medical imaging, nuclear medicine, solar energy, nuclear physics, engineering, and scientific computing.

Degree/Certificate Options	Major Code
Associate in Science Degree: Transfer Preparation	
Physics	01680
Physics (SB 1440)	01685

Consult with a counselor to develop a Student Education Plan (SEP), which lists the courses necessary to achieve your academic goal.

Web sites for physics majors:

SDSU	http://physics.sdsu.edu/
UCSD	http://physics.ucsd.edu/
CSU, San Marcos	http://physics.csusm.edu/
Articulation	http://assist.org

ASSOCIATE IN SCIENCE DEGREE

Physics

Transfer Preparation* (Major Code: 01680)

Physicists are engaged in applying the fundamental principles of science to problems ranging from understanding life processes to exploring the universe. Specializations include mechanics, heat, optics, acoustics, electrodynamics, astrophysics, atomic physics, biophysics, and geophysics.

First Semester		
CHEM 200	General Chemistry I	5
MATH 250	Analytic Geometry and Calculus I	5
Second Semester		
MATH 251	Analytic Geometry and Calculus II	4
PHYS 270	Principles of Physics I	3
PHYS 271	Principles of Physics Laboratory I	1
Third Semester		
MATH 252	Analytic Geometry and Calculus III	4
PHYS 272	Principles of Physics II	3
PHYS 273	Principles of Physics II	1
Fourth Semester		
PHYS 274	Principles of Physics III	3
PHYS 275	Principles of Physics III	1
	Total units	**30**

To earn an associate degree, additional general education and graduation requirements must be completed. See page 49.

* Students planning to transfer to a four-year college or university should complete courses specific to the transfer institution of choice. University requirements vary from institution to institution and are subject to change. Therefore, it is important to verify transfer major preparation and general education requirements through consultation with a counselor in either the Counseling Center or Transfer Center. See catalog TRANSFER COURSES INFORMATION section on page 32 for further information.

Physics
Student Transfer Achievement Reform (STAR) Act (SB1440)

Associate Degree for Transfer
A Degree with a Guarantee.℠

Transfer Preparation * (Major Code: 01685)

Physicists are engaged in applying the fundamental principles of science to problems ranging from understanding life processes to exploring the universe. Specializations include mechanics, heat, optics, acoustics, electrodynamics, astrophysics, atomic physics, biophysics, and geophysics.

Required Core:

PHYS 270	Principles of Physics I	3
PHYS 271	Principles of Physics Laboratory I	1
PHYS 272	Principles of Physics II	3
PHYS 273	Principles of Physics Laboratory II	1
PHYS 274	Principles of Physics III	3
PHYS 275	Principles of Physics Laboratory III	1
MATH 250	Analytic Geometry and Calculus I	5
MATH 251	Analytic Geometry and Calculus II	4
MATH 252	Analytic Geometry and Calculus III	4
	Total units	**25**

* Students planning to transfer to a four-year college or university should complete courses specific to the transfer institution of choice. University requirements vary from institution to institution and are subject to change. Therefore, it is important to verify transfer major preparation and general education requirements through consultation with a counselor in either the Counseling Center or Transfer Center. See catalog TRANSFER COURSES INFORMATION section on page 32 for further information.

Political Science

School of Social Sciences, Business and Humanities

Dean Mark Meadows, Ph.D., Office 470K, 619-482-6582
Faculty Alma Aguilar, M.A.; Norris S. Nagao, Ed.M.; Phil Saenz, J.D.
Department Chair Stanley James, M.A.

General Description

Political science is the study of the theory and practice of government. Prelaw is the preparation for the study of application of law within the juridical system of government. Public administration is the study of the implementation practices of the governmental agencies and legal bodies. These three departments are closely related through the common interests of the people and in service of the populace either at the local, state, or national level. These departments explore social behavior, customs, rules, and practices within the context of the self-defined common good of the community and the willingness of the members of the community to delegate authority under proscribed conditions to individuals, groups, and agencies.

Career Options

Below is a sample of the career options available for the political science, prelaw, or public administration major. A few of these require an associate degree, most require a bachelor's degree, and some require a graduate-level degree: politician, political scientist, political campaign worker, lawyer, legal assistant, legal researcher, government employee, agency director, historian, high school or college instructor, research assistant, consultant, administrative aide to a public official, budget analyst, lobbyist, city planner, administrator, and foreign service officer

Degree/Certificate Options	Major Code
Associate in Arts Degree: Transfer Preparation	
Political Science	01840
Political Science (SB 1440)	01845
Public Administration	01860

Consult with a counselor to develop a Student Education Plan (SEP), which lists courses necessary to achieve your academic goal.