

# Natural Science

In the College of Sciences  
Administered by the Department of Physics

**OFFICE: Physics 131**  
**TELEPHONE: 619-594-6240**  
**<http://physics.sdsu.edu>**

## Faculty

Emeritus: Dowler, Feher, Fisher, Goldberg, May, Roeder, P., Wallace  
Professor: Kimbrough (Geological Sciences)

## Offered by Natural Science

Teaching major in physical science for the single subject teaching credential in science/physical science.

## The Major

The physical science major is offered as an interdisciplinary approach to the study of science. It stresses the interrelationship of physics with chemistry, geology, astronomy, biology, and mathematics. The major is designed primarily for students who intend to become high school teachers of both interdisciplinary science and physics.

One of the requirements for acceptance into the College of Education's post-baccalaureate credential program is to either pass the appropriate CSET examinations or complete an approved academic program. The single subject teaching credential in science subject matter preparation program described below satisfies the academic requirements for a student planning to teach integrated science and physics at the secondary level. Entrance into the post-baccalaureate credentialing program in part requires certification of subject matter competency by this program. This certification requires completion of the academic program with the required grades, submission of a satisfactory portfolio, and the recommendation of the department. Contact the subject matter preparation program adviser. In addition, all candidates for a Single Subject Teaching credential at San Diego State University must complete the requirements outlined in the catalog under Teacher Education or Dual Language and English Learner Education. Contact the School of Teacher Education or the Dual Language and English Learner Education department for up-to-date information on prerequisites.

## Impacted Program

The physical science major is an impacted program. To be admitted to the physical science major, students must meet the following criteria:

- Complete preparation for the major;
- Complete a minimum of 60 transferable semester units;
- Have a minimum cumulative GPA of 2.0.

To complete the major, students must fulfill the degree requirements for the major described in the catalog in effect at the time they are accepted into the premajor at SDSU (assuming continuous enrollment).

## Major Academic Plans (MAPs)

Visit <http://www.sdsu.edu/mymap> for the recommended courses needed to fulfill your major requirements. The MAPs website was created to help students navigate the course requirements for their majors and to identify which General Education course will also fulfill a major preparation course requirement.

## Physical Science Major

### In preparation for the Single Subject Teaching Credential in Science/Physical Science

### With the B.A. Degree in Applied Arts and Sciences

### (Major Code: 19011) (SIMS Code: 777303)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of the catalog on "Graduation Requirements." Candidates may complete one of their two American Institutions courses at the upper division level or satisfy the California state and local government portion of American Institutions by passing the California Government examination available through the Testing Services office.

A minor is not required for this major.

**Preparation for the Major.** Africana Studies 140 or Chicana and Chicano Studies 111A or Communication 103; Astronomy 109, 201; Biology 203, 203L, 204, 204L; Chemistry 200, 201; Mathematics 150, 151, 252; Physics 195, 195L, 196, 196L, 197, 197L; Teacher Education 211B (1 unit). (50 units)

**Graduation Writing Assessment Requirement.** Passing the Writing Placement Assessment with a score of 10 or completing one of the approved upper division writing courses (W) with a grade of C (2.0) or better. See "Graduation Requirements" section for a complete listing of requirements.

**Major.** A minimum of 32 upper division units to include Geological Sciences 412; Mathematics 342A; Physics 311, 317, 350, 354, 357, 360, 400A, 499 (History of Science and Technology).

### Additional Requirements for Subject Matter Preparation Certification

**Satisfactory Grades.** A 2.0 or better grade point average based on all upper division courses is required for the major. At most one course with a C- or lower among the courses listed under Preparation for the Major, and at most one course with a C- or lower among the courses listed under the Major. If a course is repeated, the highest grade will count.

**Formative Assessment.** Completion of a satisfactory, preliminary portfolio two semesters prior to graduation. Contact the subject matter preparation adviser for information.

**Summative Assessment.** Completion of a satisfactory, final portfolio and a positive recommendation from the instructor of Physics 357.

## Courses (N SCI)

Refer to *Courses and Curricula* and *University Policies* sections of this catalog for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### LOWER DIVISION COURSE

#### **N SCI 100. Physical Science (3) [GE]**

Conceptual approach to major issues in physics and chemistry, including principles of motion and energy and structure and properties of matter. Effects of physical science and technology on individuals and human society.

### UPPER DIVISION COURSE (Also Acceptable for Advanced Degrees)

#### **N SCI 596. Special Topics in Natural Science (1-4)**

Prerequisites: Minimum ten units of natural science.

Selected topics in natural science for preservice and inservice elementary and secondary teachers and candidates for the M.A. in education. May be repeated with consent of instructor. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

Refer to the *Graduate Bulletin*.

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