

# Science

Science, Mathematics & Engineering

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## DEGREE

A.S. — Science, General

### See also:

Professional Applications of Geographic Information Systems (GIS) (Geography - page 192)

### Areas of Study:

Biology .....	p. 90
Chemistry .....	p. 109
Engineering.....	p. 165
Geography.....	p. 190
Geology .....	p. 196
Physics, Physical Science, Astronomy .....	p. 286

### Program Description

CRC students may choose courses in the various disciplines of science to meet any of several objectives. Courses are designed to:

- Prepare students for transfer and continuation of studies at other colleges or universities (chemistry, biology, medicine, etc.)
- Meet general education requirements for non-science majors
- Prepare students for immediate entry into a science-based technology career
- Provide for career advancement and continuing education

Many courses include hands-on practical experience and/or opportunities for work experience in local industry and business.

The student, in consultation with a counselor, should choose science courses to meet his or her program, transfer, or general education requirements. The Counseling Center also has information regarding science requirements for transfer to other four-year institutions.

### NOTE TO TRANSFER STUDENTS:

If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an associate's degree in this major may be different from the requirements needed for the bachelor's degree.

**For information about the student learning outcomes for this program, see <http://www.crc.losrios.edu/pslo>**

## DEGREE

**A.S. — Science, General**

CODE #1229

This degree is designed to meet common lower division requirements for a general science major.

**REQUIRED PROGRAM..... Units**  
Eighteen (18) units of transfer level course work in science. Two laboratory courses must be included: one in the physical sciences and one in the biological sciences. Courses may be selected from astronomy, biology, chemistry, geology, physical geography, physical anthropology, physics, and physical science.

**TOTAL UNITS REQUIRED ..... 18**

**G.E. Graduation Requirements for this degree - see pages 20-21**

## PRE-PROFESSIONAL HEALTH SCIENCE EDUCATION

Students planning to attend a dental, medical, veterinary or optometry school are not required to complete a prescribed undergraduate major. Many students have the misconception that "pre-dental," "pre-med," etc., are academic majors. They are not. A student's undergraduate degree might be achieved in anything, as long as appropriate courses required for dental/medical/veterinary/optometry school admission are completed. Professional schools are looking for well-rounded students who have taken courses in the humanities and social sciences and who have participated in school activities and community work. Generally, admission criteria include: completion of required courses; cumulative GPA; science courses GPA only; extracurricular activities, including work experience related to the health science specialization; test scores; application, which includes a personal statement; letters of recommendation; and an interview.

In addition to a good GPA, a student must be self-motivated, have social concern, communication skills and maturity. An applicant, however, does not need a 4.0 GPA for admission, as a GPA is an impersonal reflection of a student's ability to handle university work.

Students planning to enroll in a professional health science school may complete at Cosumnes River College:

- (1) transfer general education courses,
- (2) transfer courses for the student's chosen major,
- (3) a basic core of courses which is required for all health science students, and
- (4) other courses required for the chosen speciality, i.e., dental, medical, optometry, and/or veterinary.

The basic core courses are:

BIOL 400, 420  
CHEM 400, 401  
ENGWR 300, 301, 302  
PHYS 350, 360  
MATH 335, 350 (or high school equivalent)

### Pre-dental

Although a student may be admitted to a dental school upon completion of 90 units, a baccalaureate degree is recommended. A student should have at least a 3.0 GPA. The Dental Aptitude Test (DAT) is a requirement.

In addition to the basic core courses, the required PSYC 300 and 320 and a minimum of 12 units of social sciences, humanities, and foreign languages may be completed at Cosumnes River College.

### Pre-medical

Although a student may be admitted to a medical school upon completion of 90 units, a baccalaureate degree is recommended. The usual stated minimum GPA is 2.5. In reality, a student with a GPA below 3.0 is almost never accepted, and it is rare to be admitted with a GPA below 3.4. The Medical College Admission Test (MCAT) is a requirement.

In addition to the basic core courses, the required MATH 350 and 351 and a full year of organic chemistry [CHEM 420 and 421] may be completed at Cosumnes River College.

### Pre-optometry

Although a student may be admitted to an optometry school upon completion of 90 units, a baccalaureate degree is recommended. The usual stated minimum GPA is 2.0; however, a more realistic minimum is a 3.0 GPA. The Optometry College Admission Test (OCAT) is a requirement.

In addition to the basic core courses, other courses such as BIOL 440, 430, 431; MATH 350, 351; PSYC 300; STAT 300; humanities courses and social science classes may be required. Please check with your counselor. These courses can be completed at Cosumnes River College.

### Pre-veterinary

It is extremely difficult to gain admission to a veterinary school without being a resident of the state in which the school is located. A California resident, therefore, is virtually restricted to attending the University of California School of Veterinary Medicine at Davis.

Although a student may be admitted to the School of Veterinary Medicine upon completion of 90 units, a baccalaureate degree is recommended. A student with a 2.5 GPA may be considered for admission; however, rarely is a student admitted with a GPA below 3.0. Experience with animals is given heavy consideration. The Graduate Record Examination General Aptitude Section and Advanced Test in Biology are requirements.

In addition to the basic core courses, the required STAT 300 may be completed at Cosumnes River College.

### Pre-physical therapy

Students may take general education and a basic core of prerequisite courses at Cosumnes River College and transfer to California State University, Fresno, Long Beach or Northridge. Admission into a physical therapy program is very competitive with great weight given to relevant work experience and grade point average earned in the prerequisite courses. Because admission requirements vary among the programs, students are advised to work closely with a counselor to plan for the completion of work experience, general education and a core of basic program courses. Many Physical Therapy programs will be offered at the Master's Degree level only. Check with the counseling department.

The core courses may include:

BIOL 400, 420, 430, 431  
CHEM 400, 401 **or**  
CHEM 305/307, 306/308  
PHYS 350, 360  
PSYC 300

**Pre-Nursing Option**, see Biology section, page 91