College of Science & Mathematics

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ACADEMIC PROGRAMS

Astronomy ........................................... Minor
Biochemistry ........................................ BS
Biological Sciences ............................... BS, MA, MS
Biology ................................................ Minor
Biotecnology ......................................... Minor
Chemistry ........................................... BS
Environmental Studies ......................... Minor
Geology ............................................... Minor
Kinesiology .......................................... BS, MS
Liberal Studies ..................................... BS
Mathematics ........................................ BS, MS, Minor
Microbiology ....................................... BS, Minor
Physics ............................................... BA, BS, Minor
Polymers and Coatings Science ................ MS
Statistics ........................................... BS, Minor

SCHOOL OF EDUCATION

Academic Programs

Education ........................................... MA
Educational Leadership ......................... EdD

Credential Programs

See pages 277 and 279 for lists

MISSION

The mission of the College of Science and Mathematics is to facilitate learning, understanding, and appreciation of science and mathematics as a basis for creative endeavors, intellectual pursuits, careers, and critical consideration of issues confronting society. The College has two equally important roles: (1) to provide specialized coursework for students enrolled in the College's undergraduate, graduate and minor programs, and (2) to provide support and breadth courses in science and mathematics for all students of the university. Cal Poly is a national leader in preparing college students for careers in science, technology, engineering, and mathematics (STEM) professions, including science and mathematics teaching careers.

The College of Science and Mathematics has a tradition and reputation for excellence in teaching and is dedicated to both undergraduate and graduate instruction. The College provides a student-centered learning environment consistent with the University's "learn by doing" philosophy. In laboratories, students have access to modern instrumentation and computer technology. Classroom instruction is done in relatively small classes so that a personal approach by instructors is possible. Because of the College's large role in offering supports courses to the rest of the university community, the number of faculty in each department is relatively large and favors student-faculty interaction, both inside and outside of the classroom.

School of Education

The School of Education prepares students to be effective, ethical and informed teachers, counselors and administrators, who have a particular expertise in and understanding of science, mathematics, and technology integrated across the curriculum in inquiry-based, hands-on approaches. The School of Education offers a range of programs: multiple subject and single subject teaching credentials; agriculture specialist credential; educational technology certificate; integrated credential and M.A. in Education with specializations in educational leadership and administration and special education; an M.A. in Education with specialization in counseling and guidance; and an Ed.D. in educational leadership, offered jointly with the University of California, Santa Barbara. Single subject credentials programs are offered in Agriculture, English, Biology, Chemistry, Mathematics, Physics and Social Science. Teaching credential candidates have opportunities for additional authorizations in Computer Concepts and Applications, Mathematics, General Science, and other subjects.

To prepare students in these fields, faculty from agriculture, science, mathematics, the liberal arts, and humanities work collaboratively with faculty in the School of Education to provide outstanding programs that maintain a balance of subject matter, education foundations, and pedagogy, together with field experiences for applied practice. In the Liberal Studies Program, students can pursue an integrated pre-professional program that leads to a B.S. degree and a multiple subject credential to teach elementary school. Cal Poly takes pride in producing elementary school teachers and leaders who have special expertise in science and mathematics education through a balanced multiple subject curriculum. More information on the programs offered in the School of Education can be found on pages 276-282.

CESaME

The University Center for Excellence in Science and Mathematics Education (CESaME) was created to focus Cal Poly on preschool through college (P-16) STEM education in order to improve the STEM education and workforce pipeline and to enhance the scientific and technological literacy of our citizens. As an interdisciplinary, university-wide endeavor, CESaME fosters
collaborations among students, staff and faculty from across campus and nurtures partnerships with preschool through high school (P-12) teachers and community college faculty as well as business, industry, government and foundations in support of improving STEM learning and teacher education.

CESaME leads the state in the development and implementation of model programs in teacher education and professional development, such as the Science Teacher and Researcher (STAR) program that provides summer research internships for aspiring and early career science and mathematics teachers from any CSU campus. CESaME is responsible for Cal Poly’s Math and Science Teacher Initiative and fosters other programs such as Cal Poly’s Noyce Scholarship program, the Learn By Doing Laboratory (a local P-16 STEM initiative) and various professional development programs for local science and mathematics teachers.

STUDENT SERVICES
The College Office acts on various student-initiated petitions (change of major, curriculum substitutions, withdrawal from the university). In addition, the office has the dual function of counseling those on academic probation and notifying those undergraduate students who are eligible each quarter for the Dean’s Honor List.

FACULTY ADVISING
Faculty members take an active role in academic and career advising. Students are encouraged to obtain academic advising prior to registration each quarter. The advisor-student relationship becomes important especially when the student needs a letter of reference for a potential employer or needs career advice.

COLLEGE OF SCIENCE AND MATHEMATICS
ADVISING CENTER
Kristi Weddige, Director/Advisor
Anya Bergman, Advisor
Rebecca Westmoreland, Administrative Coordinator
Science North (Bldg. 53), Room 219
(805) 756-2615
http://www.csmadvising.calpoly.edu

The College of Science and Mathematics Advising Center provides academic advising services to students within the college. These services include assistance with scheduling classes and developing long-range academic plans, career advising; information on university policies and procedures, special programming to facilitate student success, and referral of students to other campus offices.

The Advising Center also has a library of materials for student use. This includes information on the health professions, graduate schools, job opportunities, internships, study abroad, and catalogs from junior colleges and other four-year institutions. Most student-related forms – curriculum sheets, concentration forms, graduation evaluation forms – are also available.

Health Professions Peer Advisors
Science North (Bldg. 53), Room 153
(805) 756-6510
http://healthprofessions.calpoly.edu

Health professions advising is available to all students who are interested in pursuing a health professions career. Students should begin their preparation by visiting the Health Professions Peer Advisors. Support includes health careers advising, assistance in selecting courses and course sequencing, and finding appropriate community service and other health related opportunities such as summer internships.

Professional staff advisors offer additional, more detailed advising for students and alumni who are preparing to apply to professional schools, including assistance with the application and interview process.

APPLYING TO GRADUATE SCHOOL
College of Science and Mathematics faculty have earned advanced degrees from a wide variety of universities and are excellent sources for information and advice about graduate programs, prerequisites and application procedures. Applications to graduate programs should be made in the fall for admission to the following fall term. The Graduate Record Exam (GRE) should be taken early in the application cycle. Generally, two or more letters of reference from faculty are required. Most Ph.D. granting institutions offer financial support in the form of teaching assistantships and research fellowships.