

## College of Creative Studies

# Biology

### Overview

Biology in the College of Creative Studies provides an intensive study for students preparing for a career in research in the life sciences and associated fields.

Applicants to the CCS Biology Major usually have completed a research project or worked on a research team, taken Advanced Placement Biology, achieved high grades in high school biology, or provided other evidence of a focused interest in research in a particular biological subject.

From the first year, students may pursue independent research under the guidance of an individual faculty advisor in areas including marine biology, ecology, molecular and cellular biology, neuroscience, paleontology, biological anthropology, and microbiology. Summer research fellowships are **often** available to support these research projects. Although space for undergraduates in biology laboratories is always limited, CCS biology faculty have had considerable success in arranging placements in these research groups because of the caliber and focused coursework of CCS students. By doing research as an integral part of their college education, CCS biology students are considered junior colleagues of the faculty. Knowledge gained through the research experience is sophisticated, and provides a powerful preparation for graduate research studies.

CCS biology classes are independent laboratory or discussion courses directed by a biology faculty member or small seminars in which research papers on topics of current interest are discussed. These CCS courses augment, rather than replace, the basic and advanced courses offered by the departments of Ecology, Evolution and Marine Biology, Molecular, Cellular and Developmental Biology, Earth Science, Geography, and other departments in the College of Letters & Science. Although each student's curriculum is flexible, CCS biology students normally take many of the same courses as biology majors in the College of Letters and Science; the distinction is that they take more upper division science courses, and take them earlier in their career, than majors in Letters and Science Biology.

Students of Life Science who envision working in academia or research for their profession should consider the opportunity offered by a Biology Major in CCS. **Please contact John Latto ([latto@lifesci.ucsb.edu](mailto:latto@lifesci.ucsb.edu)) or Bruce Tiffney ([bruce.tiffney@ccs.ucsb.edu](mailto:bruce.tiffney@ccs.ucsb.edu)) for further information.**

# CCS Biology Major Requirements

CCS biology students are not bound by the requirements listed in the UCSB General Catalog for Biological Sciences majors in the College of Letters and Science; instead, programs of study are negotiated between CCS student and advisor. Since modern biology spans a breadth of subjects, it is strongly recommended that each student establish a close association with their faculty advisor. This will enable them to design a program appropriate to the specific interests of the student. Bear in mind that:

- All biologists should consider some background courses in other sciences and mathematics. Two quarters of physics lectures would benefit nearly all students.
- Students with an interest in biochemistry or molecular biology should consider a year each of chemistry, organic chemistry, and perhaps physical chemistry.
- In contrast students with interests such as ecology, evolution, aquatic biology or behavior should consider two quarters of calculus, and additional courses in statistics and computer sciences. Courses in Geology and Geography are also beneficial for scientific breadth.
- Students with interests in Archeobotany, Biomaterials, Biophysics, Human Evolution, Evolutionary Psychology, Paleontology, etc. are strongly encouraged to consider CCS Biology, as our program facilitates undergraduate interdisciplinary study and research.
- Premedical students should pay close attention to medical school requirements generally involving a year each of math, physics, inorganic and organic chemistry.
- All CCS students must complete the CCS General Education requirements.
- The requirements for the CCS biology major can be fulfilled by completing a wide spectrum of biology courses, depending upon each student's area of emphasis. Students interested in their potential future course load should examine entries in the UCSB General Catalog for Ecology, Evolution and Marine Biology, Molecular, Cellular and Developmental Biology, Earth Science, Geography, etc.