



## Biological Sciences, B.S.

Planning for 2005

Students majoring in Biological Sciences will select from either **Cell Biology and Development** or **Microbiology/ Immunology** emphasis available during UC Merced's first year.

**Cell Biology and Development** focuses on the molecular interactions that govern cell function, life cycle, and specialization, as well as the cellular interactions that mediate the development and function of multicellular organisms.

**Microbiology/Immunology** focuses on understanding the gene regulation and protein functions that mediate the biology of yeast, viruses and bacteria, as well as the mechanisms of microbial pathogenesis and host immune response.

### Approach

Strong linkages will be made to the real-world value of cell biology, microbiology, and immunology such as understanding human disease and prevention, including cancer, developmental disorders, and the emerging threats from new infectious diseases and bioterrorism.

### Message from Maria Pallavicini Dean of Natural Sciences

Biological Sciences represent one of the most exciting fields of study in the University, tackling such challenging problems as understanding the building blocks of life and processes which life changes over single lifespans and the millennia. Students in the Biological Sciences major will develop skills to access and interpret biological information from diverse sources and to utilize this information to solve biological problems. Because fundamental advances in the past decade have changed the way we view biological sciences, UC Merced integrates quantitative and physical sciences with biological sciences to better see the relationships between genetics, organismal biology, evolution, biochemistry, and biological systems.

### High School Preparation

Recommended as part of or in addition to the A-G subject requirements: [www.ucop.edu/doorways](http://www.ucop.edu/doorways)

- Pre-Calculus and/or Calculus (1 year)
- Biology (1 year)
- Chemistry (1 year)
- Physics (1 year)

### Transfer Preparation

Recommended as part of or in addition to UC minimum admission requirements: [www.ucop.edu/pathways](http://www.ucop.edu/pathways)

- Biology (2 semesters)
- Chemistry (2 semesters)
- Organic Chemistry (1 semester)
- Calculus (2 semesters)
- Physics (2 semesters)
- Probability and Statistics (1 semester)
- No grade below a "C" in the above preparatory courses
- IGETC is Not Recommended

Transfer students take two (2) transitional courses in Computational Modeling and Genomics after transferring to UC Merced.

### Please contact:

UC Merced Admissions/Relations with  
Schools and Colleges  
550 E. Shaw Avenue, Suite 105  
Fresno, CA 93710  
(559) 241-7474  
(559) 241-7480 fax  
(866) 270-7301 toll free in California  
[www.ucmerced.edu](http://www.ucmerced.edu)

### Service Learning Experience, Research Opportunities, & Internships

Students who chose to participate in UC Merced's Service Learning Initiative can obtain practical experience that complements their formal coursework. Students will gain experience in Biological Sciences by working with student teams that serve non-profit organizations under the direction of a faculty team mentor.

## Careers in Biological Sciences

The Biological Sciences major will provide excellent preparation for students who want to prepare for careers in the health sciences, including medicine, nursing, pharmacy, and dentistry, as well as other allied health fields. Graduates of this program will be competitive for positions in pharmaceutical industry, health care delivery, as well as in other careers such as law, policy and administration, which increasingly interface with the biological sciences. The program's strong linkage with physical and information sciences will also appeal to computationally oriented students with interests in biological applications. In addition, the breadth and hands-on emphasis of this program will be an excellent preparation for graduates to become K-12 science teachers.

## About Your Professors

Faculty at UC Merced are nationally and internationally recognized researchers in their own fields, and they have also been selected for their excellence as teachers and as mentors.

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## UC Merced's Academic Schools

Campus majors and programs are organized into three academic schools; the **School of Engineering**, the **School of Natural Sciences**, and the **School of Social Sciences, Humanities, and Arts**. UC Merced is planning educational experiences designed to prepare well-educated people of the 21<sup>st</sup> Century for the workplace, for advanced education, and for leadership roles in their own communities. Graduates from UC Merced will find themselves better able to navigate and succeed in a complex world.

## College One

College One will be the home of UC Merced's general education program and will introduce students to the major domains of intellectual inquiry and help them build their college-level skills. What does the educated citizen of the 21<sup>st</sup> Century need to know? How will what students learn in UC Merced's classrooms connect with the world outside the University? What does it mean to be part of a research university? Students will be able to answer these questions, and many more, through their participation in College One.

### Special Note for Transfer Students

We encourage you contact us for more information:

Learn how to:

- Meet UC transfer admission requirements
- Prepare for your major
- Complete your IGETC or General Education
- Apply to UC Merced for 2005-06
- Get a Transfer Admission Guarantee to UC Merced

Consult your counselor, transfer center, or a UC Merced representative, for assistance in creating an academic plan for transfer to UC Merced.

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