



UC Santa Barbara

Cell Biology

Cell and Developmental Biology, B.S.

Major Description

Modern cell and developmental biology brings together a diverse group of disciplines and technologies linked by the common goals of understanding the nature and behavior of cells and how these cells work together to assemble an organism. Some cell and developmental biologists concentrate on the role that one particular molecule plays within cells. Others study the way in which molecules assemble into structures such as chromosomes or nuclei. Still others examine how groups of cells interact to form systems of greater complexity, such as occurs with the progression of a fertilized egg through developmental stages to become an adult organism. The range of instruments and methods employed by cell and developmental biologists is equally diverse and includes recombinant DNA technology, biochemistry, cell culture, genetics, and light and electron microscopy.

Starting Your Cell Biology Degree

Lower-Division Major Requirements in Cell Biology

From UC's perspective, community college is where you begin working on the first two years of your bachelor's degree. This includes taking lower-division coursework specifically related to your field of study that may be applied toward graduation in your major.

Listed below are the lower-division requirements for **Cell and Developmental Biology, B.S.** that may be satisfied with approved community college courses unless otherwise noted. To find out which of these requirements are shared by other UC campuses, see the UC Statewide Transfer Preparation Path in Cell Biology.

- General Biology (full sequence for Biological Science majors)
- General Chemistry (full sequence)
- Organic Chemistry (full sequence)
- Calculus (full sequence)
- Statistics (a third course in Calculus is accepted in place of Statistics)
- Calculus-based Physics (full sequence)

!!! IMPORTANT !!!

All of these requirements do not necessarily have to be completed **before** you transfer. See the next section of this path for what you must do to be competitive for admission.

FIND YOUR COURSES

Every course at your community college that can be used to meet any of the lower-division major requirements is listed at www.assist.org

Becoming Competitive for Admission to Cell Biology

Selection Requirements

Important information on selection requirements for admission to the major, including what this campus advises applicants to complete—and by when and with what GPA—is outlined below. It is important to note that meeting these requirements does not necessarily guarantee admission to the campus or major. The stronger your major preparation, the more competitive you will be.

- You **must** complete General Chemistry with laboratory (full sequence) and General Biology with laboratory (two- to three-term sequence for Biological Science majors) with no individual grade less than a C.
- You **must** attain a cumulative GPA of 2.7 or better in the required General Biology and General Chemistry major courses.
- To graduate within two years of transferring, you are **strongly** advised to complete all remaining pre-major courses (Organic Chemistry is especially important).

Satisfying General Education in Cell Biology

General Education Requirements

While all UC campuses urge you to focus on your lower-division major requirements while in community college, it is important to remember that general education (GE), or “breadth,” requirements for your bachelor’s degree may also be met with approved community college courses. In fact, some majors require completion of lower-division GE coursework as part of your preparation prior to transfer. The good news is you may be able to double-count some of your lower-division major coursework for related GE requirements.

The Intersegmental General Education Transfer Curriculum (IGETC) is a series of courses at California community colleges that students may complete to satisfy GE requirements. Certain students, however, may not be well served by following this GE option. Specific information about satisfying GE requirements as a Cell Biology major is listed below.

- If time permits while or after taking your lower-division major-preparation coursework, you should take courses to fulfill either IGETC or UCSB’s GE requirements. If you think you will not complete IGETC prior to transfer, fulfill courses for the UCSB GE requirements for the College of Letters and Science. You are not required to complete UCSB’s GE requirements prior to transfer.

Related Majors

Preparation for the following majors may be similar to the Cell and Developmental Biology major described above (consult the campus catalog and www.assist.org).

Related majors offered in the **Ecology, Evolution and Marine Biology Department**:

- Aquatic Biology, B.S.
- Biological Science, B.S. and B.A.
- Ecology and Evolution, B.S.
- Physiology, B.S.
- Zoology, B.S.

Related majors offered in the **Molecular, Cellular and Developmental Biology Department**:

- Biochemistry—Molecular Biology, B.S.
- Biological Science, B.S. and B.A.
- Microbiology, B.S.
- Pharmacology, B.S.

Related majors offered in the **College of Creative Studies**:

- Biology, B.A.