



# UC Riverside

## Biochemistry

### Biochemistry, B.A. and B.S.

## Major Description

Biochemistry holds a central position in the life sciences. At the interface between biology and chemistry, it deals with the molecular structures and reactions essential to all life processes. There are three emphasis areas within the Biochemistry major: chemistry, biology and medical sciences. The choice of emphasis depends on the career plans of the student, and determines from which course groupings upper-division electives are selected to complete the major requirements. The biology emphasis is geared toward students interested in basic biological sciences or an allied health profession, while the chemistry emphasis is generally chosen by students interested in pharmacy, forensics or biophysical sciences. The objectives of the medical science emphasis are to provide students with the opportunity to achieve a sound major in Biochemistry and to provide them with the opportunity to be very well prepared for the various professional school admissions tests.

## Starting Your Degree

### Lower-Division Major Requirements in Biochemistry

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 **Biochemistry, B.A. and 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 Biochemistry.

- General Biology (full sequence for Biological Science majors)
- General Chemistry (full sequence)
- Organic Chemistry (full sequence)
- Calculus (full sequence)
- 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](http://www.assist.org)

## Becoming Competitive for Admission to Biochemistry

### 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 the following courses prior to transfer: General Chemistry (full sequence); General Calculus (full sequence); and a full sequence chosen from Calculus-based Physics, Organic Chemistry or General Biology for Biology majors.
- You **must** earn minimum grades of B or higher in Organic Chemistry and C or higher in all other lower-division major-preparation courses.
- You **must** earn a GPA of at least 2.7 in all UC-transferable courses.
- To be well prepared to begin upper-division coursework, you are advised to complete all of the lower-division major-preparation courses prior to transfer.

## Satisfying General Education in Biochemistry

### 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 Biochemistry major is listed below.

- Completion of lower-division major-preparation requirements **must** take precedence over completion of GE/breadth requirements. You are not required to complete GE/breadth requirements prior to transfer.
- If time permits after completing your major preparation, you should choose courses from UCR’s GE/breadth pattern for the College of Natural and Agricultural Sciences.
- IGETC is not an acceptable way to complete GE/breadth requirements for this major.

## Related Majors

Preparation for the following majors may be similar to the Biochemistry major described above (consult the campus catalog and [www.assist.org](http://www.assist.org)).

- Chemistry, B.S.
- Chemical Engineering, B.S.