

Biological Chemistry

B.S. Program Adviser: Ka Yee Lee, SCL 007, 702-7068,
kayeelee@uchicago.edu

Web: chemistry.uchicago.edu

Program of Study

The Department of Chemistry, in conjunction with the Department of Biochemistry and Molecular Biology (BCMB) in the Division of Biological Sciences, offers a B.S. degree in Biological Chemistry. The program is designed to prepare students to enter a variety of interdisciplinary fields in biochemical and biophysical sciences. Undergraduate research is strongly encouraged. By combining the resources of both departments, the students in this program are given the opportunity to study chemistry and physics of macromolecules, mechanisms of actions of enzymes and hormones, molecular and cellular biology, biotechnology, and other related fields.

Summary of Requirements

General Education CHEM 11101-11201/11102-11202 or 12100-12200†
MATH 15100-15200 or 16100-16200† or a grade of A-
or higher in MATH 13100-13200
BIOS 20191-20192

Concentration 1 CHEM 11301/11302 or 12300†
1 MATH 15300 or 16300† or a grade of A- or
 higher in MATH 13300
2 MATH 20000-20100
3 PHYS 12100-12200-12300 or higher†
1 CHEM 20100
3 CHEM 22000-22100-22200
3 CHEM 26100-26200, 26700
1 course from CHEM 20200, 22300, or 26300
1 appropriate 20000-level course in biology
2 BIOS 20200 and 21316
1 approved 30000-level biochemistry
 or chemistry course

19

† Credit may be granted by examination.

Grading. Students concentrating in Biological Chemistry must receive letter grades in all courses required in the degree program. To qualify for the B.S. degree, students must achieve a GPA of 2.0 or higher, and no grade lower than C- in the 20000-level or higher Chemistry, Biology, and Department of Biochemistry and Molecular Biology courses in the preceding list.

Honors Program and Undergraduate Research. All Biological Chemistry concentrators are strongly encouraged to participate in research with a faculty member by their junior year. For information on pursuing such research opportunities, see chemistry.uchicago.edu/programs.shtml.

Excellent students who pursue a substantive research project with a faculty member in the Department of Chemistry or the Department of Biochemistry and Molecular Biology should plan to submit an honors thesis. Students usually begin this research program during their junior year and continue it through the following summer and their senior year. Students in the honors program are expected to receive approval from the program adviser before the end of their third year. The B.S. with honors in Biological Chemistry will be awarded to students with an overall GPA of 3.0 or higher who have submitted a creditable honors paper describing their research. The honors paper should be submitted about one month before graduation. This paper must be approved by the program advisers in the Department of Chemistry and the Department of Biochemistry and Molecular Biology.

Joint Degree Program. A four-year joint degree program leading to a B.S. in Biological Chemistry and a concurrently awarded M.S. in Chemistry is available for a select group of students who have achieved advanced standing through their performance on placement or on accreditation examinations. Special programs are developed for such students. For more information, consult Ka Yee Lee, *kayeelee@uchicago.edu*.

For a list of faculty, see the Chemistry section of this catalog.

Courses

29900. Advanced Research in Biological Chemistry. *PQ: Consent of a faculty sponsor and the program adviser. Students are required to submit the College Reading and Research Course Form. Normally taken for a letter grade.* This course provides advanced, individually guided research for College students, both those who are concentrating in Biological Chemistry and those who are not. Students may submit a written report covering their research activities to be considered for departmental honors. *Summer, Autumn, Winter, Spring.*