Biochemistry, B.S.

Program Description

The Bachelor of Science with a major in Biochemistry is designed to prepare students for graduate school in biochemistry or for a variety of professional schools including medical, veterinary, and dental. This degree also provides training for BS level biochemist positions in industrial, academic, and government laboratories.

The Department of Chemistry and Biochemistry provides American Chemical Society (ACS) approved programs. Students completing a baccalaureate degree that meets the ACS Guidelines will receive an ACS-certified degree. See an academic advisor for more information on the requirements for ACS certification.

 This program is a part of the College of Science and Mathematics.

Accreditation

This is an American Chemical Society (ACS) approved program.

Admission, Enrollment, and Graduation Policies

Admission Requirements

This program does not have specific admission requirements and only admission to Kennesaw State University is required. For more information, please visit the Admissions section of the Catalog.

Graduation Requirements

Each student is expected to meet the requirements outlined in Academic Policies 5.0 PROGRAM REQUIREMENTS & GRADUATION.

Program Course Requirements

Core IMPACTS Curriculum (42 Credit Hours)

General Education Core IMPACTS Curriculum

Core IMPACTS Curriculum Requirements Specific to This Major

Science Majors: Must take MATH 1113 or higher in Mathematics & Quantitative Skills and MATH 1179 or higher in Applied Math.

Science and Engineering Majors: Must take two four-hour laboratory sciences in Natural Sciences. Students must choose from CHEM 1211/1211L , CHEM 1212/1212L , PHYS 1111/1111L *, PHYS 1112/1112L , PHYS 2211/2211L *, PHYS 2212/2212L , BIOL 1107/1107L , or BIOL 1108/1108L.

*Students cannot take both PHYS 1111/L and PHYS 2211/L nor PHYS 1112/L and PHYS 2212/L.

Core Field of Study (18 Credit Hours)
Students must earn a grade of "C" or better in these courses.

- CHEM 1211: Principles of Chemistry I
- CHEM 1211L: Principles of Chemistry Laboratory I
- CHEM 1212: Principles of Chemistry II
- CHEM 1212L: Principles of Chemistry Laboratory II
- CHEM 2800: Quantitative Analytical Chemistry
- CHEM 2800L: Quantitative Analytical Chemistry Laboratory
- MATH 2202: Calculus II
  One (1) credit hour carried over from Applied Math.
  One (1) credit hour carried over from Natural Sciences

Major Requirements (27 Credit Hours)
Students must earn a grade of "C" or better in these courses.

- CHEM 3105: Inorganic Chemistry
- CHEM 3105L: Inorganic Synthesis
- CHEM 3361: Modern Organic Chemistry I
- CHEM 3361L: Modern Organic Chemistry Lab I
- CHEM 3362: Modern Organic Chemistry II
- CHEM 3362L: Modern Organic Chemistry Lab II
- CHEM 3501: Biochemistry I: Structure and Function of Biological Macromolecules
- CHEM 3501L: Biochemistry I Laboratory
- CHEM 3502: Biochemistry II: Metabolism
- CHEM 3512L: Biochemistry II laboratory
- CHEM 3601: Quantum Chemistry and Spectroscopy
- CHEM 4500K: Methods in Nucleic Acid and Protein Biochemistry

Supporting Discipline Courses (23 Credit Hours)

Students must earn a grade of "C" or better in these courses.

- SCM 2000: Culture and Success in Science and Mathematics
- BIOL 1107: Principles of Biology I
- BIOL 1107L: Principles of Biology I Laboratory
- BIOL 1108: Principles of Biology II
- BIOL 1108L: Principles of Biology II Laboratory
- BIOL 3300: Genetics
- BIOL 3300L: Genetics Laboratory
- PHYS 2211: Principles of Physics I
- PHYS 2211L: Principles of Physics Laboratory I
- PHYS 2212: Principles of Physics II
- PHYS 2212L: Principles of Physics Laboratory II
  If taken in Natural Sciences, please consult an advisor on how to fulfill this requirement.

University Electives (10 Credit Hours)
In accordance with KSU Graduation Policy, students must earn a grade of "D" or better in these courses while maintaining a minimum 2.00 cumulative GPA.

Upper-Division Electives (9 Credit Hours)
Select 9 credit hours of 3000-4000 level coursework from the University Catalog. Courses may be taken from any department, but it is recommended for students to integrate their chemical interests and career goals. This area could be used for credit toward a KSU Minor.

Free Electives (1 Credit Hour)
Select 1 credit hour of 1000-4000 level coursework from the University Catalog.

Program Total (120 Credit Hours)