

CHEMISTRY & BIOCHEMISTRY

Chemistry

Chemistry is the central science that involves the study of molecules, their structures, their combinations, their interactions, and the energy changes accompanying chemical processes.

The Department offers the following degrees: B.S., B.A., M.S., M.A., and Ph.D.

Prospective students desiring further information on programs in the Department of Chemistry and Biochemistry should visit the websites of the Department of Chemistry and Biochemistry (<http://hs.umd.edu/chemistry/default.php>) and the Biochemistry Program (<http://hs.umd.edu/biochemistry/>).

High School Preparation: In addition to the general University admission requirements, it is strongly recommended that a student take four years of mathematics, four (or more) years of science (earth and space science, biology, chemistry, and physics), four years of a modern or classical language, and four years of English.

Biochemistry

The Biochemistry Program is a joint program between the Department of Chemistry and Biochemistry and the Division of Biological & Biomedical Sciences. Biochemistry is an interdisciplinary science that integrates chemistry and biology to understand the molecular basis of life. The Biochemistry Program is accredited by the American Society for Biochemistry and Molecular Biology (ASBMB).

Undergraduate majors receive a solid foundation in both chemistry and biology. Biochemistry courses are usually taken in the junior year allowing majors to become involved in research with faculty and to take electives in their senior year. The major also introduces students to computer science, an essential tool in modern biochemistry. The B.S. in Biochemistry prepares students for advanced degrees in biochemistry or biophysics, for medical, dental or veterinary schools and for careers in the pharmaceutical and biotechnology industries. A Health Professions concentration is also offered within the B.S. in Biochemistry for students whose career goals are in fields related to biochemistry, particularly medical school. This option is designed so that students can complete all coursework necessary for the MCAT and other exams required for health-related professional schools by the end of their third year. Students desiring a basic grounding in biochemistry to complement their primary major can choose to pursue a minor in Biochemistry. All students completing a major or minor in Biochemistry are eligible to take the ASBMB certification exam in their junior or senior year.

Prospective students desiring further information on these degrees should contact the Program Director by visiting the Biochemistry Program web site (<http://hs.umd.edu/biochemistry/>).

High School Preparation: In addition to the general University admission requirements, it is strongly recommended that a student take four years of mathematics, four years of science, and a language.

- Biochemistry Minor (<https://catalog.umd.edu/colleges-schools-programs/science/chemistry-biochemistry/minor-biochemistry/>)
- Brewing Science C.A.S. (<https://catalog.umd.edu/colleges-schools-programs/science/chemistry-biochemistry/cas-brewing-science/>)
- Brewing Science C.T.S. (<https://catalog.umd.edu/colleges-schools-programs/science/chemistry-biochemistry/cts-brewing-science/>)
- Chemical Pharmacology Certificate (<https://catalog.umd.edu/colleges-schools-programs/science/chemistry-biochemistry/cert-chem-pharmacology/>)
- Chemistry B.S. (<https://catalog.umd.edu/colleges-schools-programs/science/chemistry-biochemistry/bs-chemistry/>)
- Chemistry B.S. - Forensic Chemistry (<https://catalog.umd.edu/colleges-schools-programs/science/chemistry-biochemistry/bs-forensic-chemistry/>)
- Chemistry Education Minor (<https://catalog.umd.edu/colleges-schools-programs/science/chemistry-biochemistry/minor-chemistry-education/>)
- Chemistry Minor (<https://catalog.umd.edu/colleges-schools-programs/science/chemistry-biochemistry/minor-chemistry/>)

- Biochemistry B.S. (<https://catalog.umd.edu/colleges-schools-programs/science/chemistry-biochemistry/bs-biochemistry/>)
- Biochemistry B.S. - Health Professions (<https://catalog.umd.edu/colleges-schools-programs/science/chemistry-biochemistry/bs-biochemistry-health-professions/>)