DEPARTMENT OF CHEMISTRY

Undergraduate Study

Bachelor of Science in Chemistry (Course 5)

Standard Chemistry Option

The Department of Chemistry offers an undergraduate program (*https://catalog.mit.edu/degree-charts/chemistry-course-5*) sufficiently broad as to provide excellent preparation for careers in many different areas of chemistry. Course 5 is designed to provide an education based on science, both for those who intend to go on to graduate study and those who intend to pursue a professional career immediately in either chemistry or an allied field, such as medicine, in which a sound knowledge of chemistry is important. Students receive thorough instruction in the principles of chemistry, supplemented by a strong foundation in mathematics, physics, biology, and the humanities. The Department of Chemistry also teaches courses jointly with the departments of Biology, Chemical Engineering, Biological Engineering, and Materials Science and Engineering. Students at all levels are encouraged to undertake original research under the supervision of a member of the chemistry faculty.

Flexible Chemistry Option

The Flexible Chemistry Option (*https://catalog.mit.edu/degree-charts/chemistry-course-5/#flexibleoptiontext*), "ChemFlex," is designed to provide an education both for those who intend to pursue chemistry as a career and for those who plan to go into an allied field, such as biotechnology or scientific consulting, in which a sound knowledge of chemistry is important. Students receive thorough instruction in the principles of chemistry, supplemented by a strong foundation in mathematics, physics, biology, and the humanities. This training can be tailored to the student's interests by the judicious choice of elective focus subjects that contribute to the major. The Department of Chemistry also teaches courses jointly with the departments of Biology, Chemical Engineering, Biological Engineering, and Materials Science and Engineering. The student's faculty advisor can offer suggestions for elective subjects that are of value in preparation for specialization in the various broad areas of chemistry. The proper choice of electives is particularly important for students planning to continue their education in a graduate program. Students at all levels are encouraged to undertake original research.

Bachelor of Science in Chemistry and Biology (Course 5-7)

The Departments of Biology and Chemistry jointly offer a Bachelor of Science in Chemistry and Biology (*https://catalog.mit.edu/degree-charts/chemistry-biology-course-5-7*). A detailed description of the requirements for this degree program (*https://catalog.mit.edu/interdisciplinary/undergraduate-programs/degrees/chemistry-biology*) can be found in the section on Interdisciplinary Programs.

Minor in Chemistry

The requirements for a Minor in Chemistry are as follows:

Requirements		
5.03	Principles of Inorganic Chemistry I	12
5.12	Organic Chemistry I	12
5.310	Laboratory Chemistry [1]	12
5.601	Thermodynamics I	6
5.602	Thermodynamics II and Kinetics	6
Select 24 units of the following:		24
5.04	Principles of Inorganic Chemistry II	
5.07[J]	Introduction to Biological Chemistry	
5.08[J]	Fundamentals of Chemical Biology	
5.13	Organic Chemistry II	
5.361	Recombinant DNA Technology	
5.362	Cancer Drug Efficacy	
5.363	Organic Structure Determination	
5.371	Continuous Flow Chemistry: Sustainable Conversion of Reclaimed Vegetable Oil into Biodiesel	
5.372	Chemistry of Renewable Energy	
5.373	Synthesis of Boron Heterocycles	
5.43	Advanced Organic Chemistry	
5.611	Introduction to Spectroscopy	
5.612	Electronic Structure of Molecules	
5.62	Physical Chemistry	
Total Units		**72**

[1] *The combination of 5.351 Fundamentals of Spectroscopy, 5.352 Synthesis of Coordination Compounds and Kinetics, and 5.353 Macromolecular Prodrugs is an acceptable alternative.*

Inquiries

Additional information may be obtained from the Chemistry Education Office, Room 6-205, 617-253-7271.