FAQs: Introductory Chemistry at Tufts University
Department of Chemistry

Do I have to be present on campus in person in the fall of 2020 to take a chemistry class?

No, introductory chemistry classes (including Chem 1 and Chem 11) may be taken fully online. Some in-person activities may be offered to the students who are on campus, like attending labs in person on a rotating basis, but this depends on the epidemiological situation, which is hard to predict in advance. In any case, fully online versions of chemistry classes will be available to students in the fall of 2020.

What Chemistry majors are there, and where can I learn more about them?

We have four majors: Chemistry, Biochemistry, ACS-Certified Chemistry, and Chemical Physics. To see required classes for each major and possible 4-year course schedules, Google "Tufts Chemistry" or go to chem.tufts.edu, click on the ***Undergraduate*** tab and then click on the ***Majors and Programs*** link.

I want to be a Chemistry / Biochemistry major. What should I take my first semester?

We recommend you take Chem 1 or Chem 11. Chem 1 is the introductory chemistry class required by all chemistry majors, including biochemistry and chemical physics. Chem 11 is a more intensive version of the same course. We also encourage you to enroll in Math 32 (Calculus I), since it is also required by all chemistry majors listed above.

What is the difference between Chem 1 and Chem 11?

Chem 1 is a large class with two sections of 150-200 students each. Chem 1 has no prerequisites. Chem 11 is a smaller class of about 50-90 students, and it has a prerequisite of a Chem AP Exam of 4 or better (or comparable preparation). Chem 1 and Chem 11 cover the same material, but Chem 11 moves more quickly through introductory material and covers some topics in greater depth. Chem 11 focuses on recent scientific publications and makes it a priority to students to make sense of the current chemical literature with what is covered in class. Exams in Chem 11 will require intense analysis of the chemistry topics taught in class by including questions based newly published research and current discoveries in chemistry. Chem 1 is a more traditional, textbook-oriented class that prepares students well to the rigor of pre-health professional exams like MCAT and DAT. The labs are identical for Chem 1 and Chem 11, but the lecture portion for Chem 11 has one additional weekly seminar where Chemistry faculty present their research and discuss their ongoing research and research opportunities in their labs.

Do Chem 1 and Chem 11 prepare me equally well for upper-level coursework?

While Chem 11 is more intensive and research-oriented, both Chem 1 and Chem 11 fully prepare students for upper-level courses and for a wide range of science careers. Chem 1 and Chem 11 ultimately cover the same material and the difficulty of their final exams is similar.

I am interested in the Biochemistry major. Should I start with Chem 1, Chem 11, or Bio 13, or should I take both Chem and Bio in my first semester?

When selecting courses for their first semester, students should objectively evaluate their preparedness for college-level science courses. For the Biochemistry major, we recommend students with excellent preparation (for instance, students who scored highly on Chemistry and/or Biology AP exams) to take both Chem 11 and Bio 13 their first semester. Students with good preparation (success in upper-level chemistry and biology classes in high school) are recommended to take one lab science (either Chem 1 or Bio 13) as well as Math 32 their first semester.

I have pre-matriculation credit that exempts me from Chem 1 and Chem 2. Should I skip these courses and take Chem 51 (Organic Chemistry I)?

This is permitted for students who earned a score of 5 on the Chemistry AP exam. However, even the most rigorous high school class may not be a perfect predictor of performance in college-level chemistry. We have found that many students benefit from foregoing this exemption to take Chem 11 and Chem 12, which are specially geared for first-year students with strong science backgrounds.

I am interested in research. How do I get started doing research at Tufts?

The best way to get involved in research in any department at Tufts is to 1) visit departmental seminars and journal clubs that sound interesting, and get to know the graduate students and professors there; and 2) read the research labs' websites, find research that interests you, read some of their recent articles, and then contact the professor and ask to learn more. Be patient, as it may take some weeks or months of polite inquiry to secure a research position. In Fall 2020, undergraduate research in labs have been restricted due to epidemiological concerns; therefore, it may take more time before a research lab responds to your inquiries. Generally, we recommend that you complete at least one lab course at Tufts before engaging in research, and individual research groups may have preferred courses that they request prior to starting research.

Where can I meet other students at Tufts interested in chemistry and science?

Tufts has student-run chapters of the American Chemical Society and the American Society for Biochemistry and Molecular Biology, and there are many other specialized interest groups such as the Tufts NeuroNetwork. In Fall 2020, these student organization will hold some additional online activities.