

## **Thinking about Graduate School?**

The decision to apply to graduate school is ultimately a personal one, requiring a thorough evaluation of your career goals and interests. Since graduate work requires a serious commitment of ~5 years of study, the reasons for entering an advanced degree program should be considered carefully. We encourage undergraduate chemistry students to learn about graduate work and life through formal and informal discussions with chemistry faculty, staff, and graduate students.

## **What is graduate school like?**

The core of the graduate experience in chemistry is being trained to employ the scientific method to solve real problems at the frontier of our understanding of matter. Most of your time as a PhD student will involve carrying out research within the research group of a faculty member, who will serve as your mentor and research supervisor. Of course, research entails more than just carrying out experiments, and your time will be also be spent studying the chemical literature, interpreting results and planning experiments, and communicating chemistry with colleagues informally as well as formally through departmental seminars and professional conferences.

During the first year of graduate school you will be required to take classes to build your knowledge base in the field. Once you have been accepted into a research group (usually in the middle of your first year), you will begin to conduct research on an original problem, and by the summer at the end of your first year you will be responsible for working on your research project full-time.

You should keep in mind that doctoral programs in chemistry usually fully support their students, either through fellowships, research assistantships, or teaching assistantships. This includes covering the cost of tuition and living expenses.

## **What do graduate admissions committees look for in an application?**

It is important to keep in mind that the evaluation of applications to graduate programs in chemistry is carried out by faculty in the department you are applying to rather than in a central admissions office of the university. Although the criteria that faculty use in making their admission decisions varies, one generalization can be made: faculty evaluate your application from the perspective of whether you are someone they would want to include in their research group. Undergraduate research experience is therefore of particular importance. It is not essential for this research to be in exactly the same area as that you are interested in for your graduate work; what is important is that you have a track record of excelling at research and that you have demonstrated that you appreciate what graduate thesis research will entail. For this reason it is important to maintain a good relationship with your undergraduate research supervisor, as he or she will be providing the most important reference to the admissions committee. In many cases your supervisor will personally know the faculty who will be reading your application at a particular school. Outstanding undergraduate research performance

sometimes means much more than grades and GRE performance in determining admissions decisions.

### **Timetable for applying to graduate school**

Outlined below is a timetable for preparing for graduate school immediately after graduation. (It is also acceptable to work in industry for a few years before applying to graduate school.)

#### **Sophomore Year**

- Begin to evaluate the areas of chemistry you are interested in for potential research projects and summer research internships.
- Begin talking to faculty, other chemistry majors, and graduate students about graduate school, careers in chemistry, and chemical problems that are of current interest.

#### **Junior Year**

- Begin/Continue a research project as time allows. Do not be afraid to switch projects if you decide that there are topics that are of more interest in other research groups.
- Begin to read about graduate programs with a focus in the chemical area you are interested in. Visit websites of chemistry departments you have interest in.
- Speak with faculty advisors and other faculty about specific departments and programs.

#### **Senior Year**

- Summer
  - Write a draft of your personal statement.
  - Continue researching chemistry departments and potential advisors and request application materials from programs you are interested in.
- September/October/November
  - Meet with your faculty and/or research advisor to discuss your personal statement and programs you are considering.
  - Request letters of recommendation.
  - Sign up for any required standardized tests.
  - Begin to collect information about national and school-based fellowship programs, and their required application materials.
  - Develop your personal timeline for applying, based on the requirements of specific programs. **KNOW THE DEADLINES.**
  - Take standardized tests.
  - Complete your personal statement and customize it as needed for the requirements of each program.

- Order transcripts and other required documents.
- Provide any required information or documents to those writing your recommendations. (including when the letters need to be sent to each school.)
- December/January
  - Mail applications even if deadlines are later. Get applications in as early as possible.
- February
  - Arrange to visit each department you have been admitted to. Most major departments invite admitted students to visit their school in March and early April (sometimes for specific dates or weekends), and most provide considerable travel support.
- April-May
  - Inform those programs you have been accepted to whether you will attend or not.