

## Some advice for chemistry majors who wish to study away

The Chemistry Department values Macalester's emphasis on internationalism and encourages its majors to consider studying away for a semester. The chemistry faculty are happy to talk with you about various programs and options. You should begin planning well in advance so that you can best integrate your academic experience away with your continuing development as a chemist back at Macalester. Here are some suggestions to help guide your thinking.

### Advice for those planning to study away in the fall semester of their junior year

The only course required for the chemistry major that you will miss is *Chemistry 311: Thermodynamics and Kinetics*. Note that Chemistry 311 is not a prerequisite for any other courses at Macalester, such as Chemistry 312 or 411. Two options are possible.

- **Option 1:** Take a suitable chemistry course that covers thermodynamics (and kinetics if possible) at the university where you are studying away. If you would like to explore this option, talk with Prof. Varberg during the time that you begin preparing your study away application to Macalester (or earlier). The Chemistry Department needs to certify *in advance* if you would like a course taken away to meet the requirements for Chemistry 311.
- **Option 2:** Delay taking Chemistry 311 until the fall of your senior year. Be sure to take Chemistry 312 in the spring of your junior year, as this course is a prerequisite for Chemistry 411.

If you are also completing the biochemistry emphasis, we recommend that you take *Biology/Chemistry 351: Biochemistry I* in the spring semester of your junior year. We do not recommend that you take Chemistry 311, 351, and 411 simultaneously in the fall of your senior year.

### Advice for those planning to study away in the spring semester of their junior year

Studying away in the spring is a bit more challenging. Here you will miss *Chemistry 312: Quantum Chemistry and Spectroscopy*, which is required for the chemistry major. Chemistry 312 is also a prerequisite for *Chemistry 411: Advanced Inorganic Chemistry*. Three options are possible.

- **Option 1:** Take a suitable chemistry course that covers quantum chemistry at the university where you are studying away. If you would like to explore this option, you should talk with Prof. Varberg during the time that you begin preparing your study away application to Macalester (or earlier). The Chemistry Department needs to certify *in advance* if you would like a course taken away to meet the requirements for Chemistry 312.
- **Option 2:** Take Chemistry 411 in the fall of your senior year without having met the Chemistry 312 prerequisite. While Prof. Fischer has the discretion to authorize your enrollment in Chemistry 411 without Chemistry 312, you need to recognize that it puts you at a significant disadvantage when taking Chemistry 411, because you will not have had prior exposure to quantum chemistry and group theory. These are both important topics in inorganic chemistry, and you will need to spend extra time and effort to learn this material in Chemistry 411. Chemistry 411, as the last course in the chemistry major sequence, builds on the foundation presented in Chemistry 312. Students are best equipped to maximize their learning in Chemistry 411 by engaging the course content with a strong background that comes from previous study of quantum chemistry.
- **Option 3:** You could also explore the possibility of taking a course during the summer that meets either the Chemistry 312 or 411 requirement.