

Plant biology is becoming an increasingly important field as advances in plant genomics and biotechnology reveal new ways to protect the environment and improve crops. Plant biologists study the genetics, development, and evolution of plants. They make important contributions to preserving biodiversity worldwide. And they enhance the nutritional value of crops as well as resistance to disease, pests, and drought while working to reduce the need for pesticides, fertilizer, and irrigation.

## Your future in the biological sciences

There couldn't be a better time to major in the biological sciences. Advances in genomics and related applications in biotechnology are dramatically increasing demand for biological scientists in the work force. According to the 2002 edition of *Jobs Rated Almanac*, biological scientists top a list of 250 occupations ranked by earnings potential and job prospects. The report is based on statistics from the U.S. Department of Labor, the census, professional organizations, and surveys.

Many students who earn bachelors degrees in the biological sciences go on to graduate school to pursue research and academic careers, or to a health science professional school. An increasing number, however, are employed by the biotechnology industry.

The CBS Career Center provides students with information about career planning.

## Curriculum

Plant biology majors take organismal courses that focus on plant functions, diversity, and adaptation. To meet upper division requirements, students complete three courses from integrative and organismal biology, and cellular and sub-cellular biology. Examples of courses include Flowering Plant Systematics, Taxonomy of Minnesota Flora, Plant Genomics, and Plant Physiology. Students must also complete two lab or field courses from an approved list.

All CBS students are required to take a year each of calculus, general chemistry, and physics along with coursework in general biology and organic chemistry. Students also take courses in organismal biology, cell biology, ecology, and evolution. There are lots of choices that satisfy these requirements, so students may select courses that relate to their interests.

The curriculum is designed to integrate a strong basic research program with traditional and innovative classroom teaching and mentoring.



## Meet Jaime Thompson, plant biology major

Jaime Thompson came to the University of Minnesota from Mesa, Arizona to take advantage of Minnesota's post-secondary education program.

She planned to major in chemistry, but took a plant biology class and was immediately captivated.

"It was the first time I felt excited about reading a textbook," she says. "And I've felt that way ever since."

She likes CBS because of the broad range of subjects offered, "from molecules to ecosystems."

"There are lots of choices here," she says. "You can find what matches your interests, and you can combine different approaches to science."

Jaime did directed research on fungi that colonize roots of prairie plants and help the plants absorb nutrients. The fungi play an important role in preserving and restoring these plants. She also took part in an exchange program at the University of Melbourne in Australia, where she studied invasive species in coastal regions.

Jaime is interested in applied research in economic botany, which involves plants that have a beneficial or harmful economic impact.

## Research opportunities

As part of a large public research university, the College of Biological Sciences offers a wealth of opportunities for hands-on research experience. This gives the college a distinct advantage over small private colleges. There are more than 1,200 life sciences faculty on the Minneapolis and St. Paul campuses, and as many kinds of research to



experience. Most CBS students complete a directed research project guided by a faculty member. Projects are done for credits that apply toward the major. Students may also volunteer to assist with faculty research projects or gain experience by working as paid lab technicians.

## Administration

The plant biology major is administered by the Department of Plant Biology. For more information about the department, refer to <http://biosci.cbs.umn.edu/plantbio/pbio/>.

## The CBS advantage

Here are some of the advantages offered by the College of Biological Sciences:

- The University of Minnesota is ranked among the top three public research universities in the U.S.
- Molecular and Cellular Biology is one of the University's five designated priorities.
- Many classrooms and instructional labs for undergraduates are located in the new \$80 million Molecular and Cellular Biology Building.
- CBS is a gateway to the Academic Health Center, which trains health professionals in medicine, pharmacy, dentistry, veterinary medicine, public health, and nursing.
- CBS operates two outstanding sites for field biology: Cedar Creek Natural History Area and Lake Itasca Forestry and Biological Station.
- Although CBS offers the advantages of access to a large public university, with 1,300 students it retains a small-college atmosphere.
- CBS offers a number of special programs to help students make a successful transition to college life and to meet other students.

## For more information

If you are interested in visiting CBS, call the University of Minnesota Visit Office at 612-625-0000 or 1-800-752-1000

For more information about admissions, including an application, contact the Office of Admissions at <http://admissions.tc.umn.edu> or 612-625-2008; toll-free 800-752-1000; TTY 612-625-9051.

Twin Cities campus information is available on the Web at [www.umn.edu/tc](http://www.umn.edu/tc). The Undergraduate Catalog is available at [www.umn.edu/commpub](http://www.umn.edu/commpub). To request a copy of the Undergraduate Catalog, call University Bookstores, 800-442-8636.

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