



### **Twin Cities Campus**

## **Plant Biology Minor**

*Plant and Microbial Biology*

### **College of Biological Sciences**

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2017
- Required credits in this minor: 14 to 16

Plant biologists seek to understand plants and associated organisms, including fungi and algae, at all levels of biological organization, from molecules to ecosystems. Biochemical, physiological, developmental, genetic, evolutionary, and ecological studies of plants are fundamental to improve human welfare and global conditions in the areas of health, food, energy, and environment. Some current examples of research in plant biology include developmental genetics for bioenergy and food production, ecological studies of carbon cycling, evolutionary responses to climate change, cellular responses to pathogens and abiotic stress, natural product discovery, symbiosis, molecular evolution, informatics, and the pursuit of other fundamental questions.

## **Program Delivery**

This program is available:

- via classroom (the majority of instruction is face-to-face)

## **Admission Requirements**

Most courses for the minor require a semester of general biology. Please check individual course options for any other prerequisite coursework.

For information about University of Minnesota admission requirements, visit the [Office of Admissions website](#).

### **Required prerequisites**

#### **General Biology**

- BIOL 1009 - General Biology [BIOL] (4.0 cr)
- or BIOL 2002 *{Inactive}*[BIOL] (6.0 cr)
- or BIOL 2002H *{Inactive}*[BIOL] (6.0 cr)

## **Minor Requirements**

The plant biology minor is available to students in the College of Biological Sciences pursuing another major in the college as well as to non-CBS students. Minor courses must be completed A-F and a grade of C- or better is required. Students must take at least one 4xxx or 5xxx course.

Students who wish to declare a minor in plant biology can do so online at the College of Biological Sciences website.

### **Minor Courses**

Up to 4 credits of plant biology directed research (PBIO 4994/4794W) and/or directed studies (PBIO 4993/4793W) may be used.

Take 10 or more credit(s) from the following:

- PMB 2022 - General Botany (3.0 cr)
- PMB 3002 - Plant Biology: Function (2.0 cr)
- PMB 3005W - Plant Function Laboratory [WI] (2.0 cr)
- PMB 3007W - Plant, Algal, and Fungal Diversity and Adaptation [WI] (4.0 cr)
- EEB 4068 - Plant Physiological Ecology (3.0 cr)
- FNRM 3104 - Forest Ecology (4.0 cr)
- PMB 4321 - Minnesota Flora (3.0 cr)
- PMB 4511 - Flowering Plant Diversity (3.0 cr)
- PMB 4516W - Plant Cell Biology: Writing Intensive [WI] (3.0 cr)
- PMB 4601 - Topics in Plant Biochemistry (3.0 cr)
- PMB 4993 - Directed Studies (1.0 - 7.0 cr)
- PMB 4994 - Directed Research (1.0 - 7.0 cr)
- PMB 4793W - Directed Studies: Writing Intensive [WI] (1.0 - 7.0 cr)
- PMB 4794W - Directed Research: Writing Intensive [WI] (3.0 - 5.0 cr)
- PMB 5301 *{Inactive}*(3.0 cr)
- BIOL 5309 - Molecular Ecology And Ecological Genomics (3.0 cr)
- PMB 5514 *{Inactive}*(3.0 cr)
- PMB 5516 *{Inactive}*(3.0 cr)



- PMB 5960 ~~(Inactive)~~(1.0 - 3.0 cr)
- [PLPA 5203](#) - Introduction to Fungal Biology (3.0 cr)
- [PMB 4412](#) - Plant Physiology and Development (3.0 cr)  
or [PMB 5412](#) - Plant Physiology and Development (3.0 cr)