



### **Twin Cities Campus**

## **Cell Biology Minor**

*Genetics, Cell Biology, and Development TCBS*

### **College of Biological Sciences**

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2020
- Required credits in this minor: 20

This minor focuses on understanding cells, the basic unit of life from bacteria and archaea to eukaryotes. Training in cell biology involves understanding how cells function: understanding structures, biochemical pathways and metabolism, signaling and development. Organismal responses to the environment, to pharmaceutical agents, to diseases, etc. all are cellular responses that manifest at the organismal level. Training provided by the cell biology minor will benefit students in a wide variety of majors including health sciences, engineering, and agriculture.

## **Program Delivery**

This program is available:

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

## **Admission Requirements**

This minor is only for non-CBS students. Students pursuing the Genetics minor are not eligible for the Cell Biology minor.

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

## **Minor Requirements**

### **Chemistry**

- [CHEM 1081](#) - Chemistry for the Life Sciences I [PHYS] (3.0 cr)
- [CHEM 1065](#) - Chemical Principles I Laboratory [PHYS] (1.0 cr)
- or [CHEM 1061](#) - Chemical Principles I [PHYS] (3.0 cr)
- [CHEM 1065](#) - Chemical Principles I Laboratory [PHYS] (1.0 cr)
- or [CHEM 1071H](#) - Honors Chemistry I [PHYS] (3.0 cr)
- [CHEM 1075H](#) - Honors Chemistry I Laboratory [PHYS] (1.0 cr)

### **Biology**

- [BIOL 1009](#) - General Biology [BIOL] (4.0 cr)
- or [BIOL 1951](#) - Foundations of Biology Lecture I for Biological Sciences Majors [BIOL] (4.0 cr)
- or [BIOL 1951H](#) - Foundations of Biology Lecture I for Biological Sciences Majors [BIOL] (4.0 cr)

### **Cell Biology**

- [GCD 3033](#) - Principles of Cell Biology (3.0 cr)
- or [BIOL 4004](#) - Cell Biology (3.0 cr)

### **Electives**

Take 9 or more credit(s) from the following:

- [GCD 2171](#) - Stem Cells in Biomedicine and Society [TS] (3.0 cr)
- [GCD 4111](#) - Histology: Cell and Tissue Organization (4.0 cr)
- [GCD 4151](#) - Molecular Biology of Cancer (3.0 cr)
- [GCD 4171](#) - Stem Cells in Biology and Medicine (3.0 cr)
- [GCD 5036](#) - Molecular Cell Biology (3.0 cr)
- [MICB 4131](#) - Immunology (3.0 cr)
- [NSCI 3101](#) - Neurobiology I: Molecules, Cells, and Systems (3.0 cr)
- [PMB 4516W](#) - Plant Cell Biology: Writing Intensive [WI] (3.0 cr)