

# Botany and Plant Sciences

## Major Requirements

The major requirements for the B.S. and B.A. degrees in Plant Biology are as follows:

1. Life Sciences core requirements (68-72 units)  
Students must complete all required courses with a grade of "C-" or better and with a cumulative GPA in the core courses of at least 2.0. Grades of "D" or "F" in two core courses, either separate courses or repetitions of the same course, are grounds for discontinuation from the major.

a) BIOL 005A, BIOL 05LA, BIOL 005B, BIOL 005C

b) CHEM 001A, CHEM 001B, CHEM 001C, CHEM 01LA, CHEM 01LB, CHEM 01LC, CHEM 112A, CHEM112B, CHEM 112C

c) MATH 008B or MATH 009A, MATH 009B (MATH 009C recommended)

d) PHYS 002A, PHYS 002B, PHYS 002C, PHYS 02LA, PHYS 02LB, PHYS 02LC

e) STAT 100A

f) BCH 100 or BCH 110A (BCH 110A is strongly recommended)

**Note** for the B.S. degree, courses in Statistics and Biochemistry taken as part of the core may count toward the 24 units from an area of specialization. For the B.A. degree, courses in Statistics and Biochemistry taken as part of the core may not count toward the 16 units required from an area of specialization.

2. Upper-division requirements (40-52 units) A GPA of at least 2.0 in upper-division courses taken in the field of the major is a graduation requirement. A student is subject to discontinuation from the major whenever the GPA in upper-division course work is below 2.0. Students finding themselves in this circumstance must meet with an advisor.

a) BIOL 102

b) BPSC 104/BIOL 104 (may be waived with consent of the faculty advisor)

c) BIOL 132/BPSC 132, BIOL 143/BPSC143, BPSC 133

d) At least 8 units from the following: BIOL 100/ENTM 100, BIOL 120/MCBL120/PLPA 120, BIOL 120L/MCBL 120L/PLPA 120L, BIOL 121/MCBL 121, BIOL 121L/MCBL 121L, BIOL 123/MCBL123/PLPA 123, BIOL 124/MCBL 124, BIOL 134/PLPA 134, BIOL 134L/PLPA 134L, BIOL 159/NEM 159, BPSC 134/ENSC 134/SWSC 134, ENSC 120/NEM 120/SWSC 120, ENTM 124

e) Two (2) units of BPSC 195H, BPSC 197, BPSC 198-I, or BPSC 199

f) **For the B.S.** 20 additional units from one of the four areas of specialization (consult with a faculty advisor) and additional upper-division courses in biological sciences and related areas from any of the areas of specialization lists, and students may apply a maximum of 6 units of BPSC 190 and/or BPSC 195H and/or BPSC 197 and/or BPSC 198-I and/or BPSC 199. Requirements a) through f) must be at least 52 units in total.

**For the B.A.** 12 additional units from one of the four areas of specialization (consult with a faculty advisor).

**Note** Students planning a B.A. degree should schedule the required language courses in place of a series of electives.

## Areas of Specialization

Individual student career goals may be achieved by selecting an area of specialization within the diverse disciplines of botany and plant sciences. Adjustments within these programs can be made to accommodate students' interests. Students must consult with a faculty advisor to clarify educational goals and to plan a program of study.

1. Plant Cellular, Molecular, and Developmental Biology

a) BPSC 135

b) Additional units from the following to meet either the B.S. or B.A. requirement:

BCH 102, BCH 110B, BCH 110C or BIOL 107A, BCH 153/BIOL 153/BPSC 153, BCH 162, BCH 183, BIOL 107B, BIOL 113, BIOL 114, BIOL 121/MCBL 121, BIOL 121L/MCBL 121L, BIOL 123/MCBL123/PLPA 123,

BIOL 155/BPSC 155, BIOL 168, CBNS 101, CBNS 108

2. Plant Genetics, Breeding, and Biotechnology

a) BPSC 150

b) Additional units from the following to meet either the B.S. or B.A. requirement:

BCH 153/BIOL 153/BPSC 153, BIOL 105, BIOL 107A, BIOL 107B, BIOL 108, BIOL 109, BIOL 119, BIOL 148/BPSC 148, BIOL 155/BPSC 155, BPSC 135, BPSC 158, CBNS 108

3. Ecology, Evolution, and Systematics

a) BPSC 146

b) Additional units from the following to meet either the B.S. or B.A. requirement: ANTH 170/BPSC 170, BIOL 105, BIOL108, BIOL 112/BPSC 112/ENTM 112, BIOL 116, BIOL 116L, BIOL 117, BIOL 138/BPSC 138, BIOL 165/BPSC 165, BPSC 134/ENSC 134/SWSC 134, BPSC 158, BPSC 166, ENSC 100/SWSC 100, GEO 151

4. Plant Pathology, Nematology, and Pest Management

a) BIOL 120/MCBL 120/PLPA 120

b) Additional units from the following to meet either the B.S. or B.A. requirement:

BCH 183, BIOL 121/MCBL 121, BIOL 121L/MCBL 121L, BIOL 124/MCBL 124, BPSC 133, BPSC 146, BPSC 150, BPSC 158, BPSC 166, ENTM 100/BIOL 100, ENTM 109, ENTM 124, ENTM 127/BIOL 127, ENTM 129, ENTM 129L, ENSC 100/SWSC 100, ENSC 120/NEM 120/SWSC 120, NEM 159/BIOL 159, PLPA 120/BIOL 120/MCBL 120, PLPA 120L/BIOL 120L/MCBL 120L, PLPA 123/BIOL 123/MCBL 123, PLPA 134/BIOL 134, PLPA 134L/BIOL 134L, SWSC 104/ENSC 104

## Minor

The minor in Plant Biology allows students majoring in other departments to obtain in-depth training in Plant Biology.

Requirements for the minor in Plant Biology are as follows:

1. BIOL 104/BPSC 104 (4 units)

2. One course (4-5 units) from the following:

BIOL 132/BPSC 132,

BIOL 138/BPSC 138,

BIOL 143/BPSC 143, BPSC 133

3. Twelve (12) to 20 units from the following:

ANTH 170/BPSC 170,  
BCH 153/BIOL 153/BPSC 153,  
BIOL 132/BPSC 132,  
BIOL 138/BPSC 138,  
BIOL 143/BPSC 143,  
BIOL 148/BPSC 148,  
BIOL 155/BPSC 155,  
BIOL 165/BPSC 165, BPSC 133,  
BPSC 134/ENSC 134/SWSC  
134, BPSC 135, BPSC 146,  
BPSC 150, BPSC 158,  
BPSC 166, BPSC 190,  
BPSC 195H, BPSC 197,  
BPSC 198-I, BPSC 199

**Note** No more than 4 units of BPSC 190–199 may be used to fulfill this requirement. The course used to fulfill the requirement in 2. cannot also be used to fulfill the requirement in 3.

See Minors under the College of Natural and Agricultural Sciences in the Colleges and Programs section of this catalog for additional information on minors.