

# Botany (BS)

**Program Prerequisites:** Not Required

**Minor:** A minor is required

**Grade Requirement:** An overall GPA of 2.00 in all courses required in the major in addition to an overall GPA of 2.00 or higher.

**Credit Hour Requirements:** A total of 120 credit hours is required for graduation; a minimum of 66 of these is required within the major. A total of 40 upper division credit hours is required (courses numbered 3000 and above) with a minimum of 21 required within the major.

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## **Botany Core Courses Required (19 credit hours)**

BTNY 2104 - Plant Form and Function (4)  
BTNY 2114 - Evolutionary Survey of Plants (4)  
BTNY 2121 - Career Planning for Botanists (1)  
BTNY 2600 - Laboratory Safety (1)  
BTNY 2750 - Topics in Science and Society (3)  
BTNY 3624 - Taxonomy of Vascular Plants (4)  
BTNY 4990 - Botany Capstone Seminar (2)

## **Additional Botany Courses Required (Minimum of 21 credit hours)**

A minimum of 21 additional credits is required within the major. Of these, a minimum of 3 credit hours in each of the three categories (A, B, and C) is required. A maximum of 6 lower division credits can count towards the major course requirements.

### **Category A: Genetics, Cell, and Molecular** **(3 credit minimum)**

BTNY 3153 - Biology of the Plant Cell (3) 📖, 🌸  
BTNY 3303 - Plant Genetics (4) 📖, 🌸  
BTNY 4252 - Cell Culture (2) 🌸

### **Category B: Physiology and Organismal** **(3 credit minimum)**

BTNY 3105 - Plant Anatomy (4) 🌸  
BTNY 3204 - Plant Physiology (4) 🌸  
BTNY 3504 - Mycology (4)  
BTNY 3583 - Medicinal Plants (4) 🌸

### **Category C: Evolution, Ecology, and** **Environmental (3 credit minimum)**

BTNY 2413 - Introduction to Natural Resource Management (3) 🌿  
BTNY 3214 - Soils (4) 🌿  
BTNY 3454 - Plant Ecology (4) 🌿  
BTNY 3473 - Plant Geography (3) 🌿  
BTNY 3643 - Intermountain Flora (3) 🌿  
BTNY 4113 - Plant Evolution (3) 🌿  
BTNY 4950 - Advanced Field Botany (3) 🌿

### **Additional Botany Electives**

*Topics in Botany (BTNY 4750), Cooperative Work Experience (BTNY 4890), and a Thesis Readings & Research (BTNY 4840 & 4850) may count towards one of the three categories with approval from your advisor.*

BTNY 2203 - Home and Garden Plants (3)  
BTNY 2303 - Ethnobotany (3)  
BTNY 2890 - Cooperative Work Experience (1-3)  
BTNY 4750 - Topics in Botany (1-5)  
BTNY 4800 - Independent Research (2)  
BTNY 4840 - Thesis Readings (2) 📖  
BTNY 4850 - Thesis Research (2) 📖  
BTNY 4890 - Cooperative Work Experience (1-3) 🌸  
BTNY 4920 - Short Courses  
BTNY 4970 - Thesis (2) 📖  
MATH 3450 - Advanced Statistical Methods (4) 📖, 🌸

### **Required Support Courses (26-36 credit hours)**

For each of the following categories in the College of Science you must choose one of the course groupings to satisfy your required support courses.

#### **Chemistry (10-15 credit hours)**

CHEM 1110 PS– Elementary Chemistry (5) & CHEM 1120 PS– Elementary Organic Bio-Chemistry (5) 🌸

Or

CHEM 1210 PS– Principles of Chemistry I (5), CHEM 1220 Principles of Chemistry II (4), CHEM 2310 – Organic Chemistry I (4), & CHEM 2315 Organic Chemistry I Lab (1) 📖, 🌸

#### **Mathematics (3-5 credit hours)**

MATH QL 1040 - Introduction to Statistics (3) 🌿 or MATH QL 1050 - College Algebra or MATH 1080 QL Pre-Calculus (5) 🌸 or MATH 1210 – Calculus I (4) 📖

#### **Physical Sciences (7-10 credit hours)**

PHYS 2010 PS– College Physics I (5) and PHYS 2020 – College Physics II (5) 📖, 🌸

or

PHYS 2210 PS– Physics for Scientists and Engineers I (5) and PHYS 2220 – Physics for Scientists and Engineers II (5) 📖, 🌸

or

PHYS 1010 PS - Elementary Physics (3) and GEO 1110 PS - Dynamic Earth: Physical Geology (3) and GEO 1115 – Physical Geology Lab (1) 🌿

#### **Other Life Sciences (a minimum of 6 credits hours from below)**

MICR 1113 LS, MICR 2054 LS, MICR 3012, MICR 3053 , MICR 3203, MICR 3254, MICR 3305, MICR 3403, MICR 3484, MICR 3753, MICR 3853, MICR 4054, MICR 4154, MICR 4554, ZOO 1010 LS, ZOO 1110 LS, ZOO 2100, ZOO 2200, ZOO 3450, ZOO 3470, ZOO 3500, ZOO 3720, ZOO 3730, ZOO 4050, ZOO 4100, ZOO 4120, ZOO 4210, ZOO 4220, ZOO 4250, ZOO 4300, ZOO 4470, ZOO 4480, ZOO 4490, ZOO 4500, ZOO 4600, ZOO 4640, ZOO 4650, ZOO 4660, ZOO 4670, ZOO 4680.

\* Denotes courses that do not count towards the major

Botany majors pursuing the following emphases should consult appropriate advisors and include the specified courses designated with the below symbol while fulfilling the requirements for the Botany major.

🌿 - Ecology and Field Botany Emphasis

📖 - Pre-Professional School Emphasis (Graduate School, Natural Medicines, Medical)

🌸 - Industry Emphasis