

Botany and Plant Ecology (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.

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 elective 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) 📖, 🍷

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

BTNY 3105 - Plant Anatomy (4) 🍷 BTNY
3204 - Plant Physiology (4) 🍷, #
BTNY 3224 - Plant Morphology (4) 🍷
BTNY 3504 - Mycology (4) 🍷
BTNY 3583 - Medicinal Plants-Chemistry
and Use (4) 🍷, #

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

BTNY 2413 - Introduction to Natural Resources
Management (3) 🌿
BTNY 3214 - Soils (4) 🌿, #
BTNY 3420 - Wildland Fire Ecology (3) 🌿
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 Thesis Readings & Research (BTNY 4840 & 4850) may count towards one of the three categories with approval from your advisor and the department chair.

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) 📖, 🍷

Course has a chemistry prerequisite

Required Support Courses (26-31 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 credit hours)

CHEM 1210 PS– Principles of Chemistry I (4) & CHEM 1215 - Principles of Chemistry I Lab (1), CHEM 1220 Principles of Chemistry II (4) & CHEM 1225 - Principles of Chemistry II Lab (1) 📖, 🍇

Mathematics (3-5 credit hours)

MATH 1160 QL (formerly MATH 1040 QL) - Introduction to Statistics (3) 🌿 or MATH 1050 QL - College Algebra (4) 🍇 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 (4) & PHYS 2015 - College Physics I Lab (1) or PHYS 2019 - College Physics I Lab (1), and PHYS 2020 – College Physics II (4) & PHYS 2025 - College Physics II Lab (1) or PHYS 2029 - College Physics II Lab (1), 📖, 🍇

or

PHYS 2210 PS– Physics for Scientists and Engineers I (4) & PHYS 2215 - Physics for Scientists and Engineers I Lab (1) or PHYS 2219 - Physics for Scientists and Engineers I Lab (1), and PHYS 2220 – Physics for Scientists and Engineers II (4) & PHYS 2225 - Physics for Scientists and Engineers II Lab (1) or PHYS 2229 - Physics for Scientists and Engineers II Lab (1), 📖, 🍇

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, ZOOL 1010 LS, ZOOL 1110 LS, ZOOL 2100, ZOOL 2200, ZOOL 3450, ZOOL 3470, ZOOL 3500, ZOOL 3720, ZOOL 3730, ZOOL 4050, ZOOL 4100, ZOOL 4120, ZOOL 4210, ZOOL 4220, ZOOL 4250, ZOOL 4300, ZOOL 4470, ZOOL 4480, ZOOL 4490, ZOOL 4500, ZOOL 4640, ZOOL 4660, ZOOL 4670, ZOOL 4680.

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 Medicine, Medical Professions)



- Industry Emphasis