

# BIOLOGICAL SCIENCE MAJOR: BOTANY CONCENTRATION

## GRADUATION REQUIREMENTS

1. Complete all AUCC, Botany Core, Physical Sciences/Math, and Major Elective Requirements.
2. **Minimum of 120 total credits.**
3. Minimum of **42 upper division credits** (300 level or above).  
\*30 upper division credits must be in-residence at CSU
4. Minimum of **2.0 CUMULATIVE GPA.**

## ALL UNIVERSITY CORE CURRICULUM (AUCC)

**Must earn at least a 2.0 cumulative GPA in the AUCC courses.**

### Category 1

1A Written Communication: CO 150 (3 credits) \_\_\_\_\_

1C Diversity, Equity, and Inclusion (3 credits) \_\_\_\_\_

### Category 2

2 Additional Communication (3 credits)  
Advanced Writing \_\_\_\_\_

### Category 3

3B Arts/Humanities (6) \_\_\_\_\_

3C Social/Behavioral (3) \_\_\_\_\_

3D Historical Perspectives (3) \_\_\_\_\_

### Category 4: Depth and Integration

BZ 350 and BZ 450 (see CORE Requirements below)

## GRADE REQUIREMENTS

**Must earn at least a C- in all the Botany Core, Major Electives, and Physical Sciences/Math courses. This also applies to courses taken as substitutions for these requirements.**

## BOTANY CORE REQUIREMENTS

LIFE 102 Attributes of Living Systems (4) \_\_\_\_\_

LIFE 103 Biology of Organisms (4) \_\_\_\_\_

BZ 220 Introduction to Evolution (3) \_\_\_\_\_

BZ 310 Cell Biology (4) \_\_\_\_\_

BZ 350 Molecular & General Genetics (4) \_\_\_\_\_

BZ 325 Plant Systematics (4) \_\_\_\_\_

BZ 331 Plant Anatomy (4) \_\_\_\_\_

BZ 440 Plant Physiology (3) \_\_\_\_\_

BZ 441 Plant Physiology Lab (2) \_\_\_\_\_

BZ 450 Plant Ecology (4) \_\_\_\_\_

**\*With approval of the Curriculum Committee, up to 3 credits of the following can be applied toward a student's major electives:**

\*BZ 384 Supervised College Teaching

\*BZ 487 Internship

\*BZ 495 Independent Study

\*BZ 498 Laboratory or Field Research

Criteria

- Cumulative GPA: 2.5 GPA in major: 3.0

- Junior standing or higher.

## MAJOR ELECTIVES

**Must complete a minimum of 12 credits from the following:**

ATS 350 (2) Introduction to Weather & Climate  
BSPM 308 (3) Ecology & Management of Weeds  
BSPM 361 (3) Elements of Plant Pathology  
BSPM 365 (4) Integrated Tree Health Management  
BSPM 450 (3) Molecular Plant-Microbe Interaction  
BZ 223 (3) Plant Identification (online)  
BZ 333 (4) Introductory Mycology (summer only)  
BZ 342 (3) Exploring Range Shifts in a Changing World  
BZ 360 (3) Bioinformatics & Genomics  
BZ 415 (4) Marine Biology  
BZ 460 (4) Genome Evolution  
BZ 476 (3) Genetics of Model Organisms  
BZ 477 (2) Genome Editing  
BZ 492 A-G Seminar (topic dependent on instructor)  
BZ 540 (2) Translocation in Plants  
BZ 561 (3) Landscape Ecology  
BZ 570 (3) Molecular Aspects of Plant Development  
BZ 572 (3) Phytoremediation  
F 310 (3) Forest & Rangeland Ecology  
F 311 (3) Forest Ecology  
F 312 (2) Dendrology  
F 324 (3) Fire Effects & Adaptations  
F 510 (3) Ecophysiology of Trees  
GR 348 (3) Biogeography  
HORT 401 (3) Medicinal & Value-Added Uses of Plants  
HORT 476 (3) Environmental Plant Stress Physiology  
RS 331 (3) Wildland Plants & Plant Communities  
RS 351 (3) Wildland Ecosystems in a Changing World  
RS 378 (2) Disturbance Ecology  
RS 420 (3) Grass Taxonomy  
SOCR 440 (4) Pedology

## PHYSICAL SCIENCES/MATH

### CHEMISTRY

CHEM 111 (4) \_\_\_\_\_ CHEM 112 (1) \_\_\_\_\_

**AND**

CHEM 113 (3) \_\_\_\_\_ CHEM 114 (1) \_\_\_\_\_

### ORGANIC CHEMISTRY

CHEM 245 (4) \_\_\_\_\_ CHEM 246 (1) \_\_\_\_\_

**OR**

CHEM 341 (3) \_\_\_\_\_ CHEM 343 (3) \_\_\_\_\_ CHEM 344 (2) \_\_\_\_\_

### BIOCHEMISTRY

BC 351 (4) \_\_\_\_\_

**OR**

BC 401 (3) \_\_\_\_\_ BC 403 (3) \_\_\_\_\_

### PHYSICS

PH 121 (5) \_\_\_\_\_ PH 122 (5) \_\_\_\_\_

**OR**

PH 141 (5) \_\_\_\_\_ PH 142 (5) \_\_\_\_\_

### CALCULUS

MATH 155 (4) \_\_\_\_\_ **OR** MATH 160 (4) \_\_\_\_\_

### STATISTICS

STAT 301 (3) \_\_\_\_\_ **OR** STAT 307 (3) \_\_\_\_\_

**TRACK 1 HONORS PROGRAM STUDENTS ARE REQUIRED TO TAKE THE FOLLOWING COURSES TO FULFILL THE AUCC CURRICULUM**

**Category 1: Basic Competencies**

HONR 192 First Year Seminar (4) \_\_\_\_\_

HONR 193 Seminar (3) \_\_\_\_\_

**Category 2: Additional Communication**

Advanced Writing (3) \_\_\_\_\_

**Category 3B: Arts/Humanities**

HONR 292 Seminar (3) \_\_\_\_\_ (For students entering Fall 2015 and later)

**OR**

Additional Arts/Humanities (3) \_\_\_\_\_ (For students entering before Fall 2015)

HONR 392 Seminar (3) \_\_\_\_\_

**Category 3C: Social/Behavioral**

HONR 492 Senior Seminar (3) \_\_\_\_\_

**Category 3D: Historical Perspectives and 1C: Diversity, Equity, and Inclusion**

HONR 399 Pre-Thesis (1) \_\_\_\_\_

HONR 499 Thesis (3) \_\_\_\_\_