

# Plant Biology – B.S. – Major Requirements

## Required Courses (33-36 hours)

### Required Core Courses (20 hours)

([BIOL 1108](#) - Principles of Biology II (3 hours), [BIOL 1108L](#) - Principles of Biology II Laboratory (1 hour)) or ([BIOL 2108H](#) - Principles of Biology II (Honors) (3 hours), [BIOL 2108L](#) - Principles of Biology II Laboratory (Honors) (1 hour))

[GENE 3000-3000D](#) - Evolutionary Biology (4 hours) or [GENE 3000H](#) - Honors Evolutionary Biology (4 hours)

[GENE 3200-3200D](#) - Genetics (4 hours) or [GENE 3200H](#) - Honors Genetics (4 hours)

[HORT\(CRSS\) 4430/6430](#) - Plant Physiology (3 hours) or [HORT\(CRSS\) 4430E/6430E](#) - Plant Physiology (3 hours)

[P BIO 4950](#) - Capstone Skills in Plant Biology (1 hour)

[STAT 2000](#) - Introductory Statistics (4 hours) or [STAT 2100H](#) - Introduction to Statistics and Computing (Honors) (4 hours) or [BIOS 2010](#) - Elementary Biostatistics (4 hours)

## Select an Area of Emphasis:

### Area of Emphasis: Plant Ecology and Environment (14-16 hours)

[P BIO 3650-3650L](#) - Plant Ecology (4 hours)

[P BIO 4650/6650-4650L/6650L](#) - Plant Taxonomy (4 hours)

Choose one course from the following:

[BIOS 3000](#) - Intermediate Biostatistics for Public Health Sciences (3 hours) or [STAT 3110](#) - Introduction to Statistics for Life Sciences (3 hours)

[GEOG 4370/6370-4370L/6370L](#) - Geographic Information Science (3 hours)

[HORT 4095/6095](#) - GPS/GIS Applications for Landscape Managers (3 hours)

[P BIO 3660L](#) - Plant Biology Intensive Laboratory (4 hours)

Choose one course from the following:

[ANTH\(BIOL\)\(ECOL\)\(EETH\)\(ENTO\)\(FANR\)\(GEOG\)\(GEOL\)\(PATH\)\(P BIO\) 4261](#) - Museum of Natural History Internship (3 hours)

[P BIO 4940](#) - Internship in Plant Biology (3-4 hours)

[P BIO 4960R](#) - Faculty-Mentored Undergraduate Research I (1-6 hours) (4 hours)

### Area of Emphasis: Plant Biotechnology and Bioinformatics (14-15 hours)

[BCMB 3100](#) - Introductory Biochemistry and Molecular Biology (4 hours) or [BCMB 3100E](#) - Introductory Biochemistry and Molecular Biology (4 hours)

[BINF\(P BIO\) 4550/6550](#) - Concepts in Bioinformatics and Omics (3 hours) or [BCMB 3600](#) - Genomics and Bioinformatics (3 hours) or [GENE 4220L](#) - Laboratory in Genetic Modeling (3 hours)

[BTEC\(BCMB\)\(P BIO\) 4000L](#) - Methods in Biotechnology (4 hours) or [P BIO 3660L](#) - Plant Biology Intensive Laboratory (4 hours)

Choose one course from the following:

[PBIO 4940](#) - Internship in Plant Biology (3-4 hours)

[PBIO 4960R](#) - Faculty-Mentored Undergraduate Research I (1-6 hours) (4 hours)

**Area of Emphasis: Plants and Microbes (13-16 hours)**

[PATH 3530-3530L](#) - Introductory Plant Pathology (3 hours)

[PATH 4150](#) - Plant Pathology Undergraduate Seminar (1 hour)

Choose one course from the following:

[PATH\(PBIO\) 4200/6200-4200L/6200L](#) - Mycology (4 hours)

[MIBO 3500](#) - Introductory Microbiology (3 hours) or [MIBO 3500E](#) - Introductory Microbiology (3 hours)

Choose one course from the following:

[CRSS\(MIBO\) 4610/6610-4610L/6610L](#) - Soil Microbiology (3 hours)

[PBIO 3650-3650L](#) - Plant Ecology (4 hours)

[PBIO 3660L](#) - Plant Biology Intensive Laboratory (4 hours)

Choose one course from the following:

[PBIO 4940](#) - Internship in Plant Biology (3-4 hours)

[PBIO 4960R](#) - Faculty-Mentored Undergraduate Research I (1-6 hours) (4 hours)

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**Major Electives (9-12 hours)**

In consultation with the department adviser, choose three of the following courses not used elsewhere in the major:

[ANTH\(BIOL\)\(ECOL\)\(EETH\)\(ENTO\)\(FANR\)\(GEOG\)\(GEOL\)\(PATH\)\(PBIO\) 4261](#) - Museum of Natural History Internship (3 hours)

[ANTH\(PBIO\) 4300/6300-4300L/6300L](#) - Ethnobotany (4 hours)

[BCMB 3100](#) - Introductory Biochemistry and Molecular Biology (4 hours) or [BCMB 3100E](#) - Introductory Biochemistry and Molecular Biology (4 hours)

[BCMB 3600](#) - Genomics and Bioinformatics (3 hours)

[BINF\(PBIO\) 4550/6550](#) - Concepts in Bioinformatics and Omics (3 hours)

[BIOS 3000](#) - Intermediate Biostatistics for Public Health Sciences (3 hours)

[BTEC\(BCMB\)\(PBIO\) 4000L](#) - Methods in Biotechnology (4 hours)

[CBIO 3400](#) - Cell Biology (4 hours)

[CBIO\(PBIO\) 4600/6600](#) - Biology of Protists (3 hours) and [CBIO\(PBIO\) 4600L/6600L](#) - Biology of Protists Laboratory (1 hour)

[CRSS\(FANR\) 3060](#) - Soils and Hydrology (3 hours) and [CRSS\(FANR\) 3060L](#) - Soils and Hydrology Laboratory (1 hour)

[CRSS 4450/6450](#) - Crop Physiology (3 hours)

[CRSS\(HORT\)\(ECOL\) 4590/6590](#) - Soil Fertility and Plant Nutrition (3 hours) and [CRSS\(HORT\) 4590L/6590L](#) - Soil Fertility and Plant Nutrition Laboratory (1 hour)

[CRSS 4600/6600](#) - Soil Physics (3 hours) and [CRSS 4600L/6600L](#) - Soil Physics Laboratory (1 hour)

[CRSS\(MIBO\) 4610/6610-4610L/6610L](#) - Soil Microbiology (3 hours)

[ECOL 3500](#) - Ecology (3 hours), [ECOL 3500L](#) - Ecology Laboratory (1 hour)) or ([ECOL 3505H](#) - Ecology (Honors) (3 hours), [ECOL 3505L](#) - Ecology Honors Laboratory (1 hour))

[ECOL 4000/6000](#) - Population and Community Ecology (3 hours)

[ECOL 4500/6500](#) - Evolutionary Ecology (4 hours)

[FANR 4350/6350](#) - Conservation Genetics (3 hours)

[GENE 4220L](#) - Laboratory in Genetic Modeling (3 hours)  
[GEOG\(PBIO\) 4220/6220](#) - Ecological Biogeography (3 hours)  
[GEOG\(PBIO\) 4240/6240](#) - Plant Geography (3 hours)  
[GEOG 4370/6370-4370L/6370L](#) - Geographic Information Science (3 hours)  
[HORT\(ANTH\)\(PBIO\) 3440](#) - Herbs, Spices, and Medicinal Plants (3 hours)  
[HORT 4095/6095](#) - GPS/GIS Applications for Landscape Managers (3 hours)  
[HORT\(CRSS\) 4440/6440-4440L/6440L](#) - Environmental Physiology (4 hours)  
[MIBO 3500](#) - Introductory Microbiology (3 hours) or [MIBO 3500E](#) - Introductory Microbiology (3 hours)  
[PATH\(ANTH\)\(PBIO\) 3010](#) - Fungi: Friends and Foes (3 hours)  
[PATH 3530-3530L](#) - Introductory Plant Pathology (3 hours)  
[PATH 4150](#) - Plant Pathology Undergraduate Seminar (1 hour)  
[PATH\(PBIO\) 4200/6200-4200L/6200L](#) - Mycology (4 hours)  
[PBGG\(CRSS\)\(HORT\) 4140/6140](#) - Plant Breeding (3 hours)  
[PBIO 3270](#) - Flowers (3 hours)  
[PBIO 3400](#) - Plants and Society (3 hours)  
[PBIO 3600](#) - Plant Cell and Developmental Biology (4 hours)  
[PBIO 3650-3650L](#) - Plant Ecology (4 hours)  
[PBIO 3660L](#) - Plant Biology Intensive Laboratory (4 hours)  
[PBIO\(CRSS\) 4500/6500](#) - Introduction to Gene Technology (3 hours)  
[PBIO\(GENE\)\(PATH\)\(BINF\) 4510/6510](#) - Genome Evolution Across the Tree of Life (3 hours)  
[PBIO\(ECOL\) 4520/6520](#) - Plant-Animal Interactions (3 hours)  
[PBIO 4650/6650-4650L/6650L](#) - Plant Taxonomy (4 hours)  
[PBIO\(BINF\)\(FANR\) 4700/6700](#) - Computational Plant Science (3 hours)  
[PBIO\(ECOL\) 4750/6750](#) - Tropical Ecology and Conservation (3 hours)  
[PBIO 4940](#) - Internship in Plant Biology (3-4 hours)  
[PBIO 4960](#) - Independent Research in Plant Biology (4 hours)  
[PBIO 4960R](#) - Faculty-Mentored Undergraduate Research I (1-6 hours)  
[PBIO 4970R](#) - Faculty-Mentored Undergraduate Research II (1-6 hours)  
[STAT 3110](#)  
[WASR\(FORS\) 4110/6110-4110L/6110L](#) - Forest Hydrology (4 hours)  
[WASR 4400-4400L](#) - Introduction to Wetlands (3 hours)