

# PLANT BIOLOGY

## (ECOLOGY AND MANAGEMENT CONCENTRATION)

### 3+1 Degree Program with UNL

Plant life exists everywhere, from the driest deserts to the wettest tropics. Vegetation covers the earth, from the finest grasses to the heartiest trees. Plants are grown for food, beautification, or other uses. They can be used to keep soil from eroding. With a plant biology and ecology degree, you'll get to study the cellular makeup of plants, discovering uses for them and perhaps even improving their lifespan. The plant biology-ecology management degree program is a partnership between Wayne State College and the University of Nebraska-Lincoln. You'll get a solid foundation in the biological sciences in your first three years at WSC (90 hours), then cap your education with exposure to experts in agronomy at UNL. This program will prepare you for future studies at the master's or doctoral level in the areas of plant molecular, cellular, and physiological biology, as well as careers in ecology, botany, rangeland management, and field biology.

## Fast facts

### Hours:

55-56 hours for major at WSC  
30 hours in general education at WSC  
30 hours in major at UNL

*At least 120 hours are required for graduation from Wayne State College. You may add a second major, minor, or electives to help meet these requirements.*

**Degree offered:** B.S. in plant biology from UNL (ecology and management option)

**Department:** Life Sciences

**School:** Science, Health, and Criminal Justice

**Internship:** Required for credit toward your degree

**Popular minors:** Chemistry, Environmental Studies

## focus on results

### Skills Learned

- Zoology
- Evolutionary processes
- Biological systems and structures
- Plant science
- Molecular genetics
- General chemistry and physics
- Experimental design and data collection
- Modern lab techniques
- Statistical analysis
- Critical thinking and problem-solving
- Technical communication

### Possible Careers

- Botanist
- Field biologist
- Environmental scientist
- Ecosystem manager
- Rangeland manager
- Plant ecologist
- Plant pathologist
- Horticulturist
- Agronomist
- Genetic engineer
- Plant biochemist

### Types of Employers

- National parks and forests
- Natural resource facilities
- Wildlife preserves
- Government organizations
- Conservation societies
- Plant breeding / seed companies
- Schools, colleges, and universities
- Research facilities
- Food science companies
- Landscaping companies
- Energy or water companies

## outside the classroom



Visit [www.wsc.edu/clubs](http://www.wsc.edu/clubs) to learn more about clubs and organizations on campus.

### Activities / Opportunities

- Conduct research projects
- Conferences and presentations
- Peer mentoring and tutoring
- Service-Learning
- Study Abroad

### Clubs / Organizations

- Biology Club
- The Wildlife Society

# Sample program of study

2020-21 Academic Year

Every effort is made to ensure this information is current, but please be aware that some content may have changed. There is no substitute for developing a careful course registration plan in consultation with your advisor. The class sequence listed is suggested only. The final decision rests with the student and academic advisor.

## Freshman - 1st semester

BIO 110 Biology Concepts.....	4
CHE 106 General Chemistry I .....	4
ENG 102 Composition Skills .....	3
Elective.....	3

## Freshman - 2nd semester

BIO 210 Experimental Plant Science.....	4
CHE 107 General Chemistry II .....	4
GEO 120 World Regional Geography .....	3
PHI 101 Introduction to Philosophy .....	3

## Sophomore - 1st semester

BIO 320 Molecular Genetics.....	4
CHE 314 Organic Chemistry I.....	4
GEO 430 Geographic Information Systems.....	3
MAT 140 Calculus I .....	5

## Sophomore - 2nd semester

*BIO 200 Zoology.....	4
**BIO 345 Conservation Biology.....	3
BIO 370 Introduction to Research.....	2
MAT 180 Applied Probability and Statistics.....	3

\*BIO 200 and BIO 434 Advanced Cellular Biology will substitute for LIFE 121/L at UNL.

\*\*BIO 345 will substitute for NRES 211 at UNL.

\*\*\*BIO 325 will substitute for BIOS 207/BIOS 220 at UNL

\*\*\*\*AGRO 153 is a prerequisite and must be taken before going to UNL; offered online.

Students are required to submit a contract for approval to the Plant Biology Steering Committee at UNL before the experience or independent study occurs.

## Summer Session

BIO 397 Biology Internship.....	1
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## Junior - 1st semester

***BIO 325 Ecology.....	4
BIO 469 Senior Seminar in Biology.....	1
CHE 326 Biochemistry I .....	4
PHY 201/321 General Physics I w/Lab .....	4

## Junior - 2nd semester

BIO 470 Research Project.....	1
CNA 101 Introduction to Theatre or ART 110 Drawing I .....	3
EAS 110 Introduction to Meteorology .....	4
ECO 202 Principles of Macroeconomics.....	3
PHI 105 Ethics and Values.....	3

## Summer Session at UNL

(can be taken anytime during the 3 years at WSC)

****AGRO 153 Soil Resources.....	4
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plant biology  
faculty



Visit [www.wsc.edu/life-sciences](http://www.wsc.edu/life-sciences)  
to learn more about the  
Department of Life Sciences.

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