focus on PLANT BIOLOGY-ECOLOGY AND MANAGEMENT

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 is a partnership program 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.

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

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, a minor, or electives to help meet these requirements.

Degrees offered: B.A. or B.S.

Department: Life Sciences

School: Natural and Social Sciences

Internship: Required for credit toward your degree

Suggested minors: Chemistry, Environmental Studies

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

focus on results

outside the classroom
Visit 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

2018-19 Academic Year
Revised 8/8/18
### 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

### SUMMER SESSION
- BIO 397 Biology Internship .................................................. 1

### 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 200 Zoology ........................... (can be taken anytime during the 3 years at WSC)
- **BIO 345 Conservation Biology ........................................ 3
- **BIO 370 Introduction to Research .................................... 2
- MAT 180 Applied Probability and Statistics ......................... 3

### SUMMER SESSION AT UNL
- AGRO 153 Soil Resources ..................................................... 4

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*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.