ENVIROMENTAL & SUSTAINABILITY STUDIES (CAS)

Description
Website: esp.unl.edu (http://esp.unl.edu)

The environmental and sustainability studies major is designed for students who want to make a difference and contribute to solving environmental challenges on a local to global scale. Solutions to challenges such as climate change, pollution, and resource conservation require individuals who have a broad-based knowledge in the natural and social sciences, as well as strength in a specific discipline. The environmental studies major will provide the knowledge and skills needed for students to work across disciplines and to be competitive in the job market. The environmental and sustainability studies program uses a holistic approach and a framework of sustainability. This framework recognizes the necessity of meeting current resource needs without compromising the environment or the ability of future generations to meet their needs.

Options in the Major
Students may choose to focus their advanced coursework in ways that meet their specific interests and career goals. All students complete a core set of requirements and can determine in consultation with faculty and their academic advisor which specific option to follow. The option will be documented on the final transcript.

Policy, Advocacy, and Social Justice Option
Within the context of the environment, this option provides disciplinary knowledge and proficiency as well as social research skills related to negotiation, advocacy, and discourse; human behavior change; public policy; and social justice and diversity.

Biosphere and Earth Systems Studies Option
Within the context of the environment, this option provides disciplinary knowledge and proficiency in the collection, synthesis, and interpretation of information/data in one of four science-based subdiscipline areas—Earth Systems, Climate, Ecological Systems, and Geospatial technologies.

Additional minor program opportunities: Students interested in environmental and sustainability studies may choose to minor in it through the College of Arts and Sciences or through the environmental education minor or sustainability solutions minor in the College of Agricultural Sciences and Natural Resources, both of which are available to CAS students.

Learning Outcomes
Graduates with a major in environmental and sustainability studies will:

1. Explain and apply appropriately the systemic principle of sustainability for the development of solutions to environmental and natural resource issues.
2. Organize, plan, and satisfactorily complete a senior project through scholarly creativity and/or in-depth research that uses appropriate technical knowledge, field, laboratory, geospatial, and/or social science research methodologies.
3. Demonstrate the ability to critically assess environmental and sustainability issues from the local to global scale considering a range of perspectives.
4. Identify, explain, and evaluate problems/questions/issues using relevant data, resources, and reasoning to form carefully considered conclusions.
5. Communicate effectively to a range of audiences through the preparation of written documents along with oral and visual presentations that are consistent with professional standards.
6. Describe Earth’s four major spheres: land, water, living things, and air; their variability over space and time; and the extent to which humans influence them.
7. Effectively work in teams and groups from various backgrounds and perspectives to address environmental challenges.
8. Demonstrate improvement in professional and interpersonal skills such as collaboration, critical thinking, problem solving, empathy, and teamwork to effectively operate in society and the professional world.

Graduates with the policy, advocacy and social justice option will also be able to:

1. Assess policies in the context of environmental and sustainability issues.
2. Evaluate the extent to which solutions to environmental problems are equitable and environmentally just.

Graduates with the biosphere and earth systems studies option will also be able to:

1. Apply a systems approach to describe the relationships among Earth’s four major spheres: land, water, living things, and air.
2. Demonstrate knowledge of how the relationships among spheres are shaped by physical, geological, and biological processes, variability across space and time, and the extent to which humans influence them.

Academic and Career Advising
Academic and Career Advising Center
Not sure where to go or who to ask? The Advising Center team in 107 Oldfather Hall can help. The Academic and Career Advising Center is the undergraduate hub for CAS students in all majors. Centrally located and easily accessed, students encounter friendly, knowledgeable people who are eager to help or connect students to partner resources. Students also visit the Advising Center in 107 Oldfather Hall to:

• Choose or change their major, minor, or degree program.
• Check on policies, procedures, and deadlines.
• Get a college approval signature from the Dean’s representatives.

CAS Career Coaches are available by appointment (in-person or Zoom) and located in the CAS Academic and Career Advising Center, 107 Oldfather Hall. They help students explore majors and minors, gain experience, and develop a plan for life after graduation.

Assigned Academic Advisors
Academic advisors are critical resources dedicated to students’ academic, personal, and professional success. Every CAS student is assigned an academic advisor based on their primary major. Since most
ACE Student Learning Outcomes

ACE 1: Write texts, in various forms, with an identified purpose, that respond to specific audience needs, integrate research or existing knowledge, and use applicable documentation and appropriate conventions of format and structure.

ACE 2: Demonstrate competence in communication skills.

ACE 3: Use mathematical, computational, statistical, logical, or other formal reasoning to solve problems, draw inferences, justify conclusions, and determine reasonableness.

ACE 4: Use scientific methods and knowledge to pose questions, frame hypotheses, interpret data, and evaluate whether conclusions about the natural and physical world are reasonable.

ACE 5: Use knowledge, historical perspectives, analysis, interpretation, critical evaluation, and the standards of evidence appropriate to the humanities to address problems and issues.

ACE 6: Use knowledge, theories, and research perspectives such as statistical methods or observational accounts appropriate to the social sciences to understand and evaluate social systems or human behaviors.

ACE 7: Use knowledge, theories, or methods appropriate to the arts to understand their context and significance.

ACE 8: Use knowledge, theories, and analysis to explain ethical principles and their importance in society.

ACE 9: Exhibit global awareness or knowledge of human diversity through analysis of an issue.

ACE 10: Generate a creative or scholarly product that requires broad knowledge, appropriate technical proficiency, information collection, synthesis, interpretation, presentation, and reflection.

College Degree Requirements

College Distribution Requirements – BA and BS

The College of Arts and Sciences distribution requirements are common to both the bachelor of arts and bachelor of science degrees and are designed to ensure a range of courses. By engaging in study in several different areas within the College, students develop the ability to learn in a variety of ways and apply their knowledge from a variety of perspectives. All requirements are in addition to University ACE requirements, and no course can be used to fulfill both an ACE outcome and a College Distribution Requirement.

• A student may not use a single course to satisfy more than one College Distribution Requirement, with the exception of CDR Diversity. Courses used to meet CDR Diversity may also meet CDR Writing, CDR Humanities, or CDR Social Science.
• Internship (395 or 495), independent study or readings (396 or 496), research (398 or 498), and thesis (399, 399H, 499, or 499H) will not satisfy distribution requirements.
• Other courses with a 9 in the middle number (ex. PSYC 292) will not satisfy distribution requirements unless approved by an advisor.
• Cross-listed courses from interdisciplinary programs will be applied in the same area as courses from the lead department.

College Distribution Requirements

CDR: Written Communication

Select from courses approved for ACE outcome 1.

CDR: Natural, Physical, and Mathematical Sciences

Select a course from ASTR, BIOS, CHEM, GEOL, LIFE, METR, MATH, PHYS, or ANTH 242, GEOG 155, GEOG 181, POLS 250, or PSYC 273.

CDR: Laboratory

Laboratory courses may be embedded in a 4-5 credit course used in CDR Natural, Physical, and Mathematical Science (example GEOG 155), or stand alone (example LIFE 120L).

CDR: Humanities


Select a course from ARAB, CHIN, CLAS, CZEC, ENGL, FREN, GERM, GREK, HIST, JAPN, LATN, PHIL, RELG, RUSS, or SPAN.

**CDR: Social Science**

Select a course from ANTH, COMM, GEOG, NSST, POLS, PSYC, or SOCI.

**CDR: Human Diversity in U.S. Communities**

Select from the following approved courses also listed in your degree audit: ANTH 130, ANTH 412, ANTH 473, ARAB 313, COMM 331, COMM 364, COMM 465, ENGL 212, ENGL 245N, ENGL 312, ENGL 345D, ENGL 345N, ENGL 346, ENGL 376, ENGL 380, ENGL 445, ETHN 100, ETHN 201, ETHN 202, ETHN 205, FILM 344, GEOG 271, GEOG 403, GLST 350, HIST 115, HIST 246, HIST 251, HIST 323, HIST 340, HIST 351, HIST 356, HIST 357, HIST 402, PHIL 105, PHIL 106, PHIL 218, PHIL 323, PHIL 325, POLS 333, POLS 338, POLS 347, PSYC 310, PSYC 330, PSYC 421, PSYC 425, RELG 134, RELG 226, RELG 227, RELG 313, SOCI 101, SOCI 180, SOCI 200, SOCI 217, SPAN 206, SPAN 486, WMNS 101, WMNS 201, WMNS 202, WMNS 210, WMNS 356

**CDR: Language**

Fulfilled by the completion of the 4th level of a single language (either in H.S. or in college). Language study at UNL is available in: ARAB, CHIN, CZEC, FREN, GERM, GREK, HIST, JAPN, LATN, RUSS, SLPA, or SPAN.

Credit Hours Subtotal: 12.33

1. **Excluded courses**: BIOC 101, BIOS 100, CHEM 101, MBIO 101, PHYS 201, MATH 100A, MATH 101, MATH 102, MATH 103.
3. **ARAB, CHIN, CZEC, FREN, GERM, GREK, HIST, JAPN, LATN, RUSS, and SPAN courses must be numbered 300 or above. ENGL courses must be ENGL 170, ENGL 180, or ENGL 200 level and above. Excluded courses**: CLAS 116, ENGL 254, ENGL 300, ENGL 354, SPAN 300A, SPAN 303, and SPAN 304.
4. **Excluded courses**: ANTH 242/ANTH 242L, GEOG 155, GIST 111, GIST 311, POLS 101, POLS 250, PSYC 100, PSYC 273.
5. **ARAB 202, CHIN 202, CZEC 202, FREN 202 or FREN 210, GERM 202, GREK 301 and GREK 302, JAPN 201 and JAPN 202, LATN 301 and LATN 302, RUSS 202, SLPA 202, or SPAN 202 or SPAN 210.

**Language Requirement - BA and BS**

The University of Nebraska–Lincoln and the College of Arts and Sciences place great value on academic exposure and proficiency in a second language. The University of Nebraska–Lincoln entrance requirement of two years of the same foreign language or the College's language distribution requirement (CDR: Language) will rarely be waived and only with relevant documentation. See the main College of Arts and Sciences page for more details.

**Experiential Learning Requirement - BA and BS**

All undergraduates in the College of Arts and Sciences must complete an Experiential Learning (EL) designated course. This may include 0-credit courses designed to document co-curricular activities recognized as Experiential Learning.

**Scientific Base – BS Only**

The bachelor of science degree requires students to complete 60 hours in mathematical, physical, and natural sciences from disciplines within the College of Arts and Sciences or required in its majors: ACTS, ASTR, BIOL, BIOS, CHEM, CSCE, GEOL, LIFE, METR, MATH, PHYS, STAT or ANTH 242, ANTH 242L, ANTH 341, ANTH 385, ANTH 386, ANTH 389, ANTH 416, ANTH 422, ANTH 430, ANTH 442, ANTH 443, ANTH 444, ANTH 448, ANTH 473, ANTH 484, ANTH 487D, ENVR 201, GEOG 155, GEOG 181, GEOG 217, GEOG 281, GEOG 308, GEOG 317, GEOG 408, GEOG 417, GEOG 418, GEOG 419, GEOG 421, GEOG 422, GEOG 425, GEOG 427, GEOG 432, GEOG 444, GEOG 461, GEOG 467, PHIL 211, POLS 250, PSYC 273, PSYC 368, PSYC 370, PSYC 450, PSYC 451, PSYC 456, PSYC 458, PSYC 460, PSYC 461, PSYC 463, PSYC 464, or PSYC 465.

**Credit Hours**

1. **Excluded courses** include: BIOL 101, BIOS 100, CHEM 101, MATH 100A, MATH 101, MATH 102, MATH 103, MBIO 101, PHYS 201 as well as any course numbered 395, 399, 399H, 499, or 499H.

Up to 12 hours of scientific and technical courses offered by other colleges may be accepted toward this requirement with approval of the College of Arts and Sciences. See your assigned academic advisor to start the approval process.

**Minimum Hours Required for Graduation**

A minimum of 120 semester hours of credit is required for graduation from the College of Arts and Sciences. A cumulative grade point average of at least 2.0 is required.

**Grade Rules**

**Restrictions on C- and D Grades**

The College will accept no more than 15 semester hours of C- and D grades from other domestic institutions except for UNO and UNK. All courses taken at UNO and UNK impact the UNL transcript. No transfer of C- and D grades can be applied toward requirements in a major or a minor. No University of Nebraska–Lincoln C- and D grades can be applied toward requirements in a major or a minor. International coursework (including education abroad) with a final grade equivalent to a C- or lower will not be validated by the College of Arts and Sciences department to be degree applicable.

**Pass/No Pass Privilege**

University policy for the Pass/No Pass (P/N) privilege:

- Neither the P nor the N grade factor into your GPA.
- 'P' is interpreted to mean a grade of C or above. A grade of C- or lower results in a 'N'.
- A change to or from a Pass/No Pass may be made until mid-term (1/2 of the course - see the academic calendar for specific dates per term).
- The Pass/No Pass or grade registration cannot conflict with the policy of the professor, department, college, or University policy governing the grading options.
- Changing to or from the Pass/No Pass grading option requires using MyRED, or processing a Schedule Adjustment Form.
- For undergraduates, the University maximum of 24 'Pass' credit hours and/or college and department limits will apply. These limits do not include courses offered on a 'Pass/No Pass' basis only. Consult your advisor or the Undergraduate Catalog (https://catalog.unl.edu/undergraduate/) for restrictions on the number of 'Pass' hours you can apply toward your degree.
- The 'Pass/No Pass' grading option cannot be used for the removal of 'C-', 'D+', 'D', 'D-', or 'F' grade factors.

**Environmental & Sustainability Studies (CAS)**
NOTE: See Course Repeats (https://registrar.unl.edu/academic-standards/course-repeats/)

College of Arts and Sciences policy on the Pass/No Pass (P/N) privilege:

- Pass hours can count toward fulfillment of University ACE requirements and college distribution requirements up to the 24-hour maximum.
- Most arts and sciences majors and minors do not permit any courses graded Pass/No Pass to apply, or limit them to no more than 6 hours. Students should refer to the major section of the catalog for clarification.
- Departments may specify that certain courses of theirs can be taken on a P/N-only or on a graded-only basis.

Grading Appeals
A student who feels that he/she has been unfairly graded must ordinarily take the following sequential steps in a timely manner, usually by initiating the appeal in the semester following the awarding of the grade:

1. Talk with the instructor concerned. Most problems are resolved at this point.
2. Talk to the instructor’s department chairperson.
3. Take the case to the Grading Appeal Committee of the department concerned. The Committee should be contacted through the department chairperson.
4. Take the case to the College Grading Appeals Committee by contacting the Dean’s Office, 1223 Oldfather Hall.

Course Level Requirements
Courses Numbered at the 300 or 400 Level
Thirty (30) of the 120 semester hours of credit must be in courses numbered at the 300 or 400 level. Of those 30 hours, 15 hours (1/2) must be completed in residence at the University of Nebraska–Lincoln.

Residency Requirement
The term “Residency” refers to courses taken at UNL. Students must complete at least 30 of the 120 total hours for their degree at the University of Nebraska–Lincoln. Students must complete at least 18 hours of their major coursework, and 15 of the 30 hours required at the 300 or 400 level, at UNL.

Catalog to Use
Students must fulfill the requirements stated in the catalog for the academic year in which they are first admitted to and enrolled as a degree-seeking student at the University of Nebraska–Lincoln. In consultation with advisors, a student may choose to follow a subsequent catalog for any academic year in which they are admitted to and enrolled as a degree-seeking student at the University of Nebraska–Lincoln in the College of Arts and Sciences. Students must complete all degree requirements from a single catalog year. Beginning in 1990-1991, the catalog which a student follows for degree requirements may not be more than 10 years old at the time of graduation.

Transfer Students: Students who have transferred from a community college may be eligible to fulfill the requirements as stated in the catalog for an academic year in which they were enrolled at the community college prior to attending the University of Nebraska-Lincoln. This decision should be made in consultation with academic advisors, provided the student a) was enrolled in a community college during the catalog year they are utilizing, b) maintained continuous enrollment at the previous institution for 1 academic year or more, and c) continued enrollment at the University of Nebraska-Lincoln within 1 calendar year from their last term at the previous institution. Students must complete all degree requirements from a single catalog year and within the time frame allowable for that catalog year.

Major Requirements
Environmental and sustainability studies core requirements plus completion of one of the options: Policy, Advocacy, and Social Justice or Biosphere and Earth Systems Studies.

Core Requirements
Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ENVR 101</td>
<td>Environmental &amp; Sustainability Studies</td>
<td>1</td>
</tr>
<tr>
<td>ENVR 201</td>
<td>Science, Systems, Environment and Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>ENVR 249 / NRES 249</td>
<td>Individual and Cultural Perspectives on the Environment</td>
<td>3</td>
</tr>
<tr>
<td>ENVR 319</td>
<td>Environmental Engagement and the Community</td>
<td>2</td>
</tr>
<tr>
<td>ENVR 334 / PSYC 334</td>
<td>Psychology of Environmental Sustainability</td>
<td>3</td>
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</table>

Credit Hours Subtotal: 12

Internship
ENVR 495 | Internship in Environmental & Sustainability Studies | 1

Credit Hours Subtotal: 1

Thesis (ACE 10)

<table>
<thead>
<tr>
<th>Select one sequence:</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ENVR 489 &amp; ENVR 499</td>
<td>3</td>
</tr>
</tbody>
</table>

Environmental Studies Senior Thesis I and Environmental Studies Senior Thesis II

or ENVR 489 Honors: Environmental Studies Senior Thesis I and Honors: Environmental Studies Senior Thesis II & ENVR 499H

Credit Hours Subtotal: 3

Total Credit Hours: 16

1 ENVR 489 and ENVR 499 are the capstone courses for environmental and sustainability studies majors. ENVR 489H and ENVR 499H are the capstone courses for Honors students.

Policy, Advocacy, and Social Justice Option

Natural Science Foundations

| Select one course or sequence from four of the following areas: | 12-16 |

Life Science

| BIOS 101 & BIOS 101L or LIFE 120 & 120L | General Biology and General Biology Laboratory or Fundamentals of Biology I and Fundamentals of Biology I laboratory |

Chemistry

| CHEM 105A & CHEM 105L | Chemistry in Context I and Chemistry in Context I Laboratory |
or CHEM 109: General Chemistry I and General Chemistry I Laboratory

or CHEM 113: Fundamental Chemistry I and Fundamental Chemistry I Laboratory

**Ecology**

- BIOS 207: Ecology and Evolution
- or NRES 220: Principles of Ecology

**Earth Systems**

- ENSC 110: Energy in Perspective
- or GEOL 101: Dynamic Earth
- or GEOL 106: Environmental Geology
- or GEOG 155: Elements of Physical Geography
- or GEOG 181: Global Environmental Issues
- or NRES 108E: Earth’s Natural Resource Systems Laboratory

**Climate**

- METR 100: Weather and Climate
- or METR 181: Climate Change, Energy, and the Environment
- or NRES 104: Climate in Crisis
- or NRES 208: Climate Literacy in Natural Resources

**Water**

- GEOG 281 / NRES 281: Introduction to Water Science
- or ENVR 109 / SCIL 109 / AECN 109 / NRES 109 / GEOG 109: Water in Society

**Soil**

- SOIL 153 / PLAS 153: Soil Resources

**Option Courses** 21

Select 7 courses, at least one course from each area. At least 9 hours must be at the 300 or 400 level.

**Negotiation, Advocacy, and Discourse**

- COMM 209: Public Speaking
- COMM 212: Debate
- COMM 220: Public Advocacy and Civic Engagement
- COMM 250: Rhetoric, Media, and Civic Life
- COMM 312: Argumentation
- COMM 355: Community and Identity in the Digital Age
- COMM 375: Theories of Persuasion

**Human Behavior and Change**

- ANTH 473: Ecological Anthropology
- COMM 271: Organizing Social Change
- GEOG 450 / METR 450 / NRES 452 / PLAS 450: Climate and Society
- NRES 315: Human Dimensions of Fish and Wildlife Management
- POLS 250: Genetics, Brains, and Politics
- PSYC 288: The Psychology of Social Behavior

**Social Justice and Diversity**

- ANTH 476 / GLST 476: Human Rights, Environment, and Development
- COMM 311 / ETHN 311: Intercultural and Intergroup Communication
- COMM 371: Communication in Negotiation and Conflict Resolution
- COMM 465: Communication and Social Identity
- COMM 482: Voices of Dissent and Activism
- CRPL 400: Introduction to Planning
- GEOG 406: Spatial and Environmental Influences in Social Systems
- POLS 362: Globalization, Human Rights and Diversity
- PSYC 330: Psychology of Diversity
- SOCI 180: Social Problems
- SOCI 217 / ETHN 217: Sociology of Race and Ethnicity
- SOCI 261 / POLS 261: Conflict and Conflict Resolution

**Data Analysis and Research Methods**

- COMM 201: Social Scientific Research Methods in Communication Studies
- COMM 202: Rhetorical Methods in Communication Studies
- CRPL 471: Environmental Impact Assessment
- ECON 215: Statistics
- EDPS 459: Statistical Methods
- POLS 286: Political Analysis
- PSYC 350: Research Methods and Data Analysis
- SOCI 205: Introduction to Social Research Methods
- SOCI 206: Introduction to Social Statistics
- STAT 218: Introduction to Statistics

**Power, Politics, and Policy**

- AECN 357 / NREE 357: Natural Resource and Environmental Law
- AECN 456 / NREE 456: Environmental Law
- ALEC 410 / NRES 413: Environmental Leadership
- CRPL 470: Environmental Planning and Policy
- ECON 200: Economic Essentials and Issues
- NRES 323: Natural Resources Policy
- PHIL 225: Environmental Ethics
- POLS 100: Power and Politics in America
- POLS 108: Political Ideas
- POLS 221: Politics in State and Local Governments
- POLS 332: Climate Change: Policy and Politics
- POLS 334 / COMM 334: Polls, Politics and Public Opinion
- POLS 430 / COMM 430: Political Communication

**Environmental Ethics**

- PHIL 225: Environmental Ethics

**Natural Resources Policy**

- NRES 323: Natural Resources Policy

**Climate Change, Energy, and the Environment**

- METR 181: Climate Change, Energy, and the Environment
- NRES 104: Climate in Crisis
- NRES 208: Climate Literacy in Natural Resources

**Data Analysis and Research Methods**

- COMM 201: Social Scientific Research Methods in Communication Studies
- CRPL 471: Environmental Impact Assessment
- ECON 215: Statistics
- EDPS 459: Statistical Methods
- POLS 286: Political Analysis
- PSYC 350: Research Methods and Data Analysis
- SOCI 205: Introduction to Social Research Methods
- SOCI 206: Introduction to Social Statistics
- STAT 218: Introduction to Statistics

**Climate and Society**

- METR 181: Climate Change, Energy, and the Environment
- NRES 104: Climate in Crisis
- NRES 208: Climate Literacy in Natural Resources
<table>
<thead>
<tr>
<th>STAT 380 Statistics and Applications</th>
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</table>

**Total Credit Hours** 33-37

**Biosphere and Earth Systems Studies Option**

**Human Dimensions Foundations**

Select one course from each area.

**Negotiation, Advocacy, and Discourse** 3

- COMM 209 Public Speaking
- or COMM 21 Debate
- or COMM 22 Public Advocacy and Civic Engagement
- or COMM 25 Rhetoric, Media, and Civic Life
- or COMM 31 Argumentation
- or COMM 35 Community and Identity in the Digital Age
- or COMM 37 Theories of Persuasion

**Power, Politics, and Policy** 3

- AECN 265 / NREE 265 Resource and Environmental Economics I
  - or AECN 357 Natural Resource and Environmental Law
  - or AECN 456 Environmental Law
  - or ALEC 410 Environmental Leadership
  - or CRPL 470 Environmental Planning and Policy
  - or ECON 200 Economic Essentials and Issues
  - or ENSC 230 Energy and the Environment: Economics and Policy
  - or PHIL 225 Environmental Ethics
  - or POLS 100 Power and Politics in America
  - or POLS 108 Political Ideas
  - or POLS 221 Politics in State and Local Governments
  - or POLS 332 Climate Change: Policy and Politics
  - or POLS 334 Polls, Politics and Public Opinion
  - or POLS 430 Political Communication

**Data Analysis and Research Methods** 3

- STAT 218 Introduction to Statistics
  - or STAT 380 Statistics and Applications

Credit Hours Subtotal: 9

**Required Option Courses**

**Life Science** 8

- LIFE 120 Fundamentals of Biology I
  - & LIFE 120L and Fundamentals of Biology I Laboratory
- LIFE 121 Fundamentals of Biology II
  - & LIFE 121L and Fundamentals of Biology II Laboratory

**Chemistry: Select one course.** 4

- CHEM 109A General Chemistry I
  - & CHEM 109L and General Chemistry I Laboratory
  - or CHEM 113A Fundamental Chemistry I
  - and Fundamental Chemistry I Laboratory
  - & CHEM 113L

**Ecology: Select one course.** 3-4

- BIOS 207 Ecology and Evolution
  - or NRES 220 Principles of Ecology

**Earth Systems: Select one course.** 3-4

- ENSC 110 Energy in Perspective
  - or GEOL 101 Dynamic Earth
  - or GEOL 106 Environmental Geology

or GEOG 155 Elements of Physical Geography
or GEOG 181 Global Environmental Issues
or NRES 108 Earth's Natural Resource Systems Laboratory

**Climate: Select one course.** 3-4

- METR 100 Weather and Climate
- or METR 180 Climate Change, Energy, and the Environment
- or NRES 104 Climate in Crisis
- or NRES 208 Climate Literacy in Natural Resources

**Water: Select one course.**

- GEOG 281 / NRES 281 Introduction to Water Science
- or ENVR 109 Water in Society
- SCIL 109 / AECN 109 / NRES 109 / GEOG 109

**Soil** 4

- SOIL 153 / PLAS 153

**Geospatial Science** 3

- NRES 218 Introduction to Geospatial Technologies

**Advanced Option Sub-Area** 9

Select at least 9 hours from one of the following sub-areas, with at least 6 hours at the 300 or 400 level.

**Earth Systems**

- BIOS 454 / NRES 454 Ecological Interactions
- BIOS 458 / NRES 468 / BSEN 468 Wetlands
- GEOL 200 Mineralogy
- GEOL 201 Igneous and Metamorphic Petrology
- GEOL 308 / GEOG 308 / NRES 308 Biogeography
- GEOL 372 Water & Earth Connections
- GEOL 410 Geochemistry
- GEOL 423 / BIOS 423 / NRES 452 / PLAS 450 Quaternary Paleoclimatology and Paleoeconomy
- GEOL 424 / BIOS 424 Biogeochemical Cycles
- GEOL 488 / NRES 488 Groundwater Geology

**Climate**

- METR 270 Global warming: Science, Impacts, Solutions
- METR 370 / NRES 370 Applied Climatology
- METR 450 / GEOG 450 / NRES 452 / PLAS 450 Climate and Society
- METR 470 The Climate System: Analysis and Prediction
- METR 478 / NRES 478 Regional Climatology
# Ecology

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIOS 300 /</td>
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<td>ENTO 300 /</td>
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<tr>
<td>NRES 300</td>
<td>Toxins in the Environment</td>
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<td>BIOS 337</td>
<td>Applications of Bioinformatics</td>
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<td>BIOS 406 /</td>
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<td>ENTO 406</td>
<td>Insect Ecology</td>
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<td>BIOS 416</td>
<td>Biodiversity Conservation</td>
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<td>BIOS 444 /</td>
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<tr>
<td>GEOL 444</td>
<td>Earth and Environmental Microbiology</td>
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<td>BIOS 454 /</td>
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<td>NRES 454</td>
<td>Ecological Interactions</td>
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<td>BIOS 457 /</td>
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<tr>
<td>GEOL 457</td>
<td>Ecosystem Ecology</td>
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<td>BIOS 458 /</td>
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<td>BSEN 468</td>
<td>Wetlands</td>
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<td>NRES 481K</td>
<td>Stream and River Ecology</td>
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<td>LARC 200 /</td>
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<tr>
<td>PLAS 200</td>
<td>Landscape and Environmental Appreciation</td>
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# Geospatial Science

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<td>CRPL 430</td>
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<tr>
<td>CRPL 432</td>
<td>Advanced Spatial Analysis with GIS</td>
</tr>
<tr>
<td>CRPL 433</td>
<td>GIS in Environmental Design and Planning</td>
</tr>
<tr>
<td>GEOG 418 /</td>
<td></td>
</tr>
<tr>
<td>NRES 418</td>
<td>Introduction to Remote Sensing</td>
</tr>
<tr>
<td>GEOG 419 /</td>
<td></td>
</tr>
<tr>
<td>GEOL 419 /</td>
<td></td>
</tr>
<tr>
<td>NRES 420 /</td>
<td></td>
</tr>
<tr>
<td>PLAS 419</td>
<td>Applications of Remote Sensing in Agriculture and Natural Resources</td>
</tr>
<tr>
<td>GEOG 421 /</td>
<td></td>
</tr>
<tr>
<td>NRES 421</td>
<td>Field Techniques in Remote Sensing</td>
</tr>
<tr>
<td>GEOG 422</td>
<td>Advanced Techniques in Geographic Information Systems</td>
</tr>
<tr>
<td>GEOG 427 /</td>
<td></td>
</tr>
<tr>
<td>NRES 427</td>
<td>Introduction to the Global Positioning System (GPS)</td>
</tr>
<tr>
<td>NRES 218</td>
<td>Introduction to Geospatial Technologies</td>
</tr>
</tbody>
</table>

**Credit Hours Subtotal:** 40-43

**Total Credit Hours:** 49-52

# Requirements for Minor Offered by Department

## Environmental Studies Minor

At least eighteen (18) hours, with six (6) hours at the 300 level or above.

### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVR 101</td>
<td>Environmental &amp; Sustainability Studies</td>
</tr>
<tr>
<td>ENVR 201</td>
<td>Orientation</td>
</tr>
<tr>
<td>ENVR 249 /</td>
<td></td>
</tr>
<tr>
<td>NRES 249</td>
<td>Individual and Cultural Perspectives on the</td>
</tr>
<tr>
<td>ENVR 319</td>
<td>Environmental Engagement and the Community</td>
</tr>
</tbody>
</table>

**Credit Hours Subtotal:** 9

### Earth and Environmental Systems

Select one course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOS 207</td>
<td>Ecology and Evolution</td>
</tr>
<tr>
<td>ENSV 110</td>
<td>Energy in Perspective</td>
</tr>
<tr>
<td>ENVR 109 /</td>
<td></td>
</tr>
<tr>
<td>SCIO 109 /</td>
<td></td>
</tr>
<tr>
<td>AECN 109 /</td>
<td></td>
</tr>
<tr>
<td>NRES 109 /</td>
<td></td>
</tr>
<tr>
<td>GEOG 109</td>
<td>Water in Society</td>
</tr>
<tr>
<td>GEOG 155</td>
<td>Elements of Physical Geography</td>
</tr>
<tr>
<td>GEOG 181</td>
<td>Global Environmental Issues</td>
</tr>
<tr>
<td>GEOG 281</td>
<td>Introduction to Water Science</td>
</tr>
<tr>
<td>GEOL 101</td>
<td>Dynamic Earth</td>
</tr>
<tr>
<td>GEOL 106</td>
<td>Environmental Geology</td>
</tr>
<tr>
<td>METR 100</td>
<td>Weather and Climate</td>
</tr>
<tr>
<td>METR 180</td>
<td>Climate Change, Energy, and the Environment</td>
</tr>
<tr>
<td>NRES 104</td>
<td>Climate in Crisis</td>
</tr>
<tr>
<td>NRES 108</td>
<td>Earth's Natural Resource Systems Laboratory</td>
</tr>
<tr>
<td>NRES 208</td>
<td>Climate Literacy in Natural Resources</td>
</tr>
<tr>
<td>NRES 220</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>SOIL 153 /</td>
<td></td>
</tr>
<tr>
<td>PLAS 153</td>
<td>Soil Resources</td>
</tr>
</tbody>
</table>

**Credit Hours Subtotal:** 3

### Human Dimensions

Select one course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 473</td>
<td>Ecological Anthropology</td>
</tr>
<tr>
<td>COMM 209</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>COMM 212</td>
<td>Debate</td>
</tr>
<tr>
<td>COMM 220</td>
<td>Public Advocacy and Civic Engagement</td>
</tr>
<tr>
<td>COMM 250</td>
<td>Rhetoric, Media, and Civic Life</td>
</tr>
<tr>
<td>COMM 271</td>
<td>Organizing Social Change</td>
</tr>
<tr>
<td>COMM 312</td>
<td>Argumentation</td>
</tr>
<tr>
<td>COMM 355</td>
<td>Community and Identity in the Digital Age</td>
</tr>
<tr>
<td>COMM 375</td>
<td>Theories of Persuasion</td>
</tr>
</tbody>
</table>

**Credit Hours Subtotal:** 3

---

**Additional Major Requirements**

### Grade Rules

**C- and D Grades**

A grade of C or higher is required in all major courses.

**Pass/No Pass**

No courses taken Pass/No Pass will count toward the major or minor.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRES 315</td>
<td>Human Dimensions of Fish and Wildlife Management</td>
</tr>
<tr>
<td>POLS 250</td>
<td>Genetics, Brains, and Politics</td>
</tr>
<tr>
<td>PSYC 334</td>
<td>Psychology of Environmental Sustainability</td>
</tr>
<tr>
<td>ENVR 334</td>
<td></td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 3

**Economics and Policy**

Select one course from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AECN 357</td>
<td>Natural Resource and Environmental Law</td>
</tr>
<tr>
<td>NREE 357</td>
<td></td>
</tr>
<tr>
<td>AECN 456</td>
<td>Environmental Law</td>
</tr>
<tr>
<td>NREE 456</td>
<td></td>
</tr>
<tr>
<td>ALEC 410</td>
<td>Environmental Leadership</td>
</tr>
<tr>
<td>NRES 413</td>
<td></td>
</tr>
<tr>
<td>CRPL 470</td>
<td>Environmental Planning and Policy</td>
</tr>
<tr>
<td>ECON 200</td>
<td>Economic Essentials and Issues</td>
</tr>
<tr>
<td>ENSC 230</td>
<td>Energy and the Environment: Economics and Policy</td>
</tr>
<tr>
<td>NRES 323</td>
<td>Natural Resources Policy</td>
</tr>
<tr>
<td>PHIL 225</td>
<td>Environmental Ethics</td>
</tr>
<tr>
<td>POLS 100</td>
<td>Power and Politics in America</td>
</tr>
<tr>
<td>POLS 108</td>
<td>Political Ideas</td>
</tr>
<tr>
<td>POLS 221</td>
<td>Politics in State and Local Governments</td>
</tr>
<tr>
<td>POLS 332</td>
<td>Climate Change: Policy and Politics</td>
</tr>
<tr>
<td>POLS 334</td>
<td>Polls, Politics and Public Opinion</td>
</tr>
<tr>
<td>COMM 334</td>
<td></td>
</tr>
<tr>
<td>POLS 430</td>
<td>Political Communication</td>
</tr>
<tr>
<td>COMM 430</td>
<td></td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 3

Total Credit Hours 18

**Grade Rules**

C- and D Grades
A grade of C or higher is required in all minor courses.

Pass/No Pass
No courses taken Pass/No Pass will count toward the major or minor.

**ENVR 101 Environmental & Sustainability Studies Orientation**

Description: Introduction to the Environmental Studies program and community. Weekly group discussions focus on majoring in and pursuing a career in Environmental Studies. Topics address the philosophy and structure of the program, exploring local environmental issues, and connecting academic work to career pursuits.

Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded with Option

**ENVR 109 Water in Society**

Crosslisted with: SCIL 109, AECN 109, NRES 109, GEOG 109

Description: Introduction to the scientific, social, and economic dimensions of historical and contemporary water systems. Students will develop an understanding of hydrologic systems and analyze and engage in decision-making about complex challenges associated with water resource use.

Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded with Option

Prerequisite for: SCIL 300

ACE: ACE 8 Civic/Ethics/Stewardship ACE 4 Science

**ENVR 189H University Honors Seminar**

Prerequisites: Good standing in the University Honors Program or by invitation.

Notes: A University Honors Seminar 189H course is required of all students in the University Honors Program. Letter Grade Only.

Description: Topics vary.

Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ACE: ACE 8 Civic/Ethics/Stewardship

**ENVR 201 Science, Systems, Environment and Sustainability**

Description: Application of basic Earth system and ecosystem science concepts for understanding: natural systems; the relationships and interactions between the living and the non-living environment; current and future environmental challenges; the importance of considering scientific evidence and uncertainty; and the implementation of the sustainability concepts.

Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded with Option

ACE: ACE 8 Civic/Ethics/Stewardship

**ENVR 249 Individual and Cultural Perspectives on the Environment**

Crosslisted with: NRES 249

Description: The influence of culture on individual perspectives related to the concepts of sustainability and the relationship that humans have with the environment. The role of ethics, religion, and historical setting on the individual and cultural perspectives related to environmental challenges at the local to global scales.

Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded with Option

ACE: ACE 9 Global/Diversity
ENVR 319 Environmental Engagement and the Community
Description: The processes of environmental agencies and organizations use to develop and implement projects and programs. The development of their project proposal, work plans, budgets, and final report. Requires developing and implementing projects and programs in collaboration with clients who are from agencies and organizations working with environmental issues.
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded with Option
Experiential Learning: Case/Project-Based Learning

ENVR 334 Psychology of Environmental Sustainability
Crosslisted with: PSYC 334
Description: Applications of psychological principles to understand human transactions with their environments and find behavior-based solutions to environmental problems.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded with Option
ACE: ACE 8 Civic/Ethics/Stewardship

ENVR 434 Environmental Education and Interpretation
Crosslisted with: NRES 434, NRES 834
Notes: Requires 20 hours of service.
Description: Examination of formal and informal environmental education and interpretation. Knowledge, application and practice relevant to science teachers and park, extension, museums, and zoo educators.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded with Option
Course and Laboratory Fee: $40
Experiential Learning: Community Engagement

ENVR 489 Environmental Studies Senior Thesis I
Prerequisites: ENVR major or minor, junior or senior standing
Notes: First course of a two-semester sequence of courses consisting of ENVR 489 and 499. Letter Grade only.
Description: Preparation for writing the required senior thesis.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded
Prerequisite for: ENVR 499
ACE: ACE 10 Integrated Product

ENVR 489H Honors: Environmental Studies Senior Thesis I
Prerequisites: University Honors Program; ENVR major or minor, junior or senior standing;
Notes: First course of a two-semester sequence of courses consisting of ENVR 489H and 499H. Letter Grade only.
Description: Preparation for writing the required senior thesis.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded
Prerequisite for: ENVR 499H
ACE: ACE 10 Integrated Product
Experiential Learning: Research

ENVR 499 Environmental Studies Senior Thesis II
Prerequisites: ENVR 489
Notes: Second course of a two-semester sequence of courses consisting of ENVR 489 and 499.
Description: Required thesis written under the supervision of the emphasis advisor or a faculty member designated by the advisor.
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded with Option
ACE: ACE 10 Integrated Product

ENVR 499H Honors: Environmental Studies Senior Thesis II
Prerequisites: ENVR 489H
Notes: Second course of a two-semester sequence of courses consisting of ENVR 489H and 499H.
Description: Required thesis written under the supervision of the emphasis advisor or a faculty member designated by the advisor.
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded with Option
ACE: ACE 10 Integrated Product

Career Information
The following represents a sample of the internships, jobs and graduate school programs that current students and recent graduates have reported.

Transferable Skills
- Confidently navigate complex, ambiguous projects and environments
- Conduct and present research to large and small groups
- Integrate information and perspectives from multiple disciplines to solve problems
- Collaborate with a team to develop solutions
- Communicate clearly using different forms of writing to and for a variety of different audiences
- Understand and use proper laboratory and technical skills and instruments
• Offer empathetic, sensitive, and patient interactions with others
• Understand and utilize a variety of research methodologies

Jobs of Recent Graduates
• Environmental Education Intern, Pottawatomie Conservation – Honey Creek, IA
• Assistant Scientist, Olsson – Lincoln, NE
• Scientist, State of Nebraska Department of Agriculture – Lincoln, NE
• Manager, Glacial Till Winery – Lincoln, NE
• Integrated Water Management Planner Assistant, Nebraska Dept of Natural Resources – Lincoln, NE
• Biological Technician, United States Dept of Agriculture-AMRU – Lincoln, NE
• Crime Analyst, Lincoln Police Department – Lincoln, NE
• Integrated Management Technical Assistant, Nebraska Dept of Natural Resources – Lincoln, NE

Internships
• Integrated Water Management Planner Assistant, Nebraska Dept of Natural Resources - Lincoln NE
• Biological Technician, USDA-AMRU - Lincoln NE
• Natural Resource Intern, JEO Consulting - Lincoln NE
• Pathways Intern, USDA Natural Resources Conservation Service - Lincoln NE
• Integrated Management Technical Assistant, NE Dept of Natural Resources - Lincoln NE
• Environmental Health Waste Section Intern, Lincoln-Lancaster County Health Dept - Lincoln NE
• Intern, Olsson Associates - La Vista NE
• Crime Analysis, Lincoln Police Department - Lincoln NE
• Project Manager Assistant Intern, LI-COR Biosciences - Lincoln NE
• Waste Section Intern, Lancaster County Health Department - Lincoln NE
• Integrated Water Management Planner Assistant, Nebraska Department of Natural Resources - Lincoln NE
• Biological Technician, USDA-AMRU - Lincoln NE
• Natural Resource Intern, JEO Consulting - Lincoln NE
• Pathways Intern, USDA - Natural Resource Conservation Services - Lincoln NE
• Permaculture Intern, Big Island Farms - Honokaa HI

Graduate & Professional Schools
• Master’s Degree, Natural Resources, University of Nebraska-Lincoln – Lincoln, NE
• Master’s Degree, Agronomy-Plant Pathology, University of Nebraska-Lincoln – Lincoln, NE
• Master’s Degree, Environmental Science and Policy, Indiana University – Bloomington, IN
• Master’s Degree, Energy, Technology, & Policy, Humboldt State University – Arcata, CA
• Master’s Degree, Environmental Policy, University of Michigan – Ann Arbor, MI
• Master’s Degree, Geography, University of Nebraska-Lincoln – Lincoln, NE
• Master’s Degree, Public Health, University of Nebraska Medical Center – Omaha, NE
• Master’s Degree, Water Biogeochemistry, University of Nebraska-Lincoln – Lincoln, NE
• Juris Doctorate, University of Nebraska College of Law – Lincoln, NE