## Duluth Campus

## Environment and Sustainability B.A.

## Geography \& Philosophy

## College of Arts, Humanities and Social Sciences

- Students will no longer be accepted into this program after Fall 2018. Program requirements below are for current students only.
- The environment and sustainability degree is now being offered through the environment, sustainability, and geography degree. Students interested are encouraged to pursue this degree option.
- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2019
- Required credits to graduate with this degree: 120
- Required credits within the major: 77 to 80
- This program requires summer terms.
- Degree: Bachelor of Arts

The environment and sustainability program provides a sound interdisciplinary grounding in the natural sciences, social sciences, and the humanities, producing graduates who understand and think creatively about complex global environmental and social problems. The curriculum encourages multidisciplinary thinking and problem-solving skills at the nexus of the natural sciences and social sciences. Coursework develops skills in research, writing, creative thinking, and sound policy making, as students draw upon a range of disciplines to understand and solve specific issues and problems.

Honors Requirements: Candidates must be majors with a 3.00 overall GPA and 3.30 in the major. Students must complete an honors project supervised by a faculty member and approved by the program director. In some cases, the project may develop out of the environment and sustainability internship. Students must notify the director of their intent to participate in the honors program by the end of the first week of the semester of graduation and the completed project must be approved by the faculty adviser and the director at least 30 days before the end of the term. The project is presented orally or by exhibition.

## Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)


## Admission Requirements

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

## Required prerequisites

Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000-Learning in Community ( $1.0-2.0 \mathrm{cr}$ )

## General Requirements

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

## Program Requirements

Environment and Sustainability Core (19 cr)
ES 4097 is only offered during the summer term.
ES 1001 \{Inactive\}(2.0 cr)
ES 2803 - Issues in Global Ecology [LE CAT] (3.0 cr)
ES 3100 - Sustainable Food Systems ( 4.0 cr)
ES 3500 - Ecological Economics ( 3.0 cr )
ES 4010 - Seminar ( 4.0 cr )
ES 4090 - Internship Preparation \& Career Development ( 1.0 cr )
ES 4097 - Internship (3.0 cr)

## Natural Science Core (17 cr)

BIOL 1011 - General Biology I [LE CAT, NAT SCI] (5.0 cr)
BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)
BIOL 2801 - General Ecology ( 3.0 cr)
GEOG 1414 - The Physical Geography [LE CAT, NAT SCI, SUSTAIN] (4.0 cr)
or EES 1110 - Geology and Earth Systems [LE CAT, NAT SCI, SUSTAIN] ( 4.0 cr )
Social Science Core (22-23 cr)
Economics
ECON 1023 - Principles of Economics: Micro [LE CAT, SOC SCI] ( 3.0 cr )
ECON 3721 - Natural Resource and Energy Economics ( 3.0 cr ) or ECON 3777 - Environmental Economics ( 3.0 cr)
Geography
GIS 3563 - Geographic Information Science I: Theory and Analysis (4.0 cr)
GEOG 3335 - Urban Planning ( 3.0 cr )
or GEOG 4451 - The Geography of Soils ( 4.0 cr)
Political Science
POL 1011 - American Government and Politics [LE CAT6, SOC SCI] (3.0 cr)
POL 3080 - Environment and Politics ( 3.0 cr )
or POL 3170 \{Inactive\}( 3.0 cr )
or POL 3570 - Politics of Developing Nations ( 3.0 cr )
Sociology
SOC 3901 - Social Change and Social Policy ( 3.0 cr )
or SOC 4860 - Environmental Sociology [SUSTAIN] ( 3.0 cr)
Supporting Core (7-9 cr)
Math Requirement
Take no more than 1 course(s) from the following:
-MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT, LOGIC \& QR] ( 5.0 cr )
-MATH 1250 - Precalculus Analysis [LE CAT2, LOGIC \& QR] (4.0 cr)
-MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC \& QR] ( 5.0 cr )
-MATH 1296 - Calculus I [LE CAT, LOGIC \& QR] ( 5.0 cr )
-MATH 1297 - Calculus II [LOGIC \& QR] ( 5.0 cr )
-MATH 1596 \{Inactive\}[LE CAT2, LOGIC \& QR] (5.0 cr)
-MATH 1597 \{Inactive\}[LOGIC \& QR] (5.0 cr)
Statistical Requirement
STAT 2411 preferred; if GIS 4585 or SOC 2155 is taken, neither can apply as an elective course.
Take no more than 1 course(s) from the following:
-ECON 2030 - Applied Statistics for Business and Economics [LOGIC \& QR] ( 3.0 cr )
-ECON 3030 - Econometrics I (3.0 cr)
-GIS 4585 - Advanced GIS Analytics ( 4.0 cr )
-POL 2700 - Methodology and Analysis [LOGIC \& QR] ( 4.0 cr )
-PSY 3020 - Statistical Methods ( 4.0 cr)
-SOC 2155 - Introduction to Research Methods and Analysis (4.0 cr)
-STAT 2411 - Statistical Methods [LE CAT, LOGIC \& QR] (3.0 cr)
-STAT 3xxx
-STAT 4xxx

## Environment and Sustainability Electives (8 cr)

Students propose at least three elective courses above the $2 x x x$ level; courses already taken may or may not be accepted. Since the major does not require a second field of study, only two proposed courses can be applicable to a second major or minor. Students must consult with their adviser before selecting their elective courses.

Take 3 or more course(s) from the following:
Proposal form found here: z.umn.edu/umdclaprograms
$\bullet$-(ES proposed course)

## Advanced Writing Requirement (3 cr)

Any WRIT 31xx course will satisfy this requirement. WRIT 31xx-Adv Writing (3 cr)

