



Environmental Studies Program 2022 Assessment Report

MISSION STATEMENT

The Environmental Studies Program provides students with the literacy, skills, and commitment needed to foster a healthy natural environment and to create a more sustainable, equitable, and peaceful world. To these ends, the Environmental Studies Program educates and challenges students to become knowledgeable, motivated and engaged in environmental affairs. Our students acquire the skills and awareness to promote positive social change, and improve the environment and communities of Montana and the world, for current and future generations.

Statement of Principles

- Environmental studies require an interdisciplinary approach that integrates the natural sciences, social sciences, and humanities.
- Creating solutions to environmental problems requires critical thinking, enterprise and action taking, as well as reflection on our actions; therefore, an effective environmental education generates thinkers who can do as well as doers who can think.
- Environmental Studies provides both classroom and experiential learning opportunities in democratic citizenship, including communication, collaboration, and committed civic participation.
- Creating a sustainable world requires addressing social and environmental injustices simultaneously, being actively anti-racist, and supporting tribal sovereignty.
- Students thrive in learning environments where the expression of diverse perspectives are valued and supported.
- Students are co-creators of their educational experience.

DEPARTMENT ALIGNMENT WITH PRIORITIES FOR ACTION

- 1. Gain Knowledge and Competencies in Environmental Science:** Students gain understandings of ecological systems, including understanding of basic natural sciences (i.e., biology, chemistry, and ecology), principles of population and community ecology, energy and matter flow in systems, and dynamics of linked human-natural systems. Students develop understanding of the Western scientific method, its strengths, limitations, and interdisciplinary approaches; use of science in environmental policy making and problem solving; and understandings and applications of Indigenous and local knowledges. Students also gain competency in analyzing the credibility of sources of scientific information; and researching, synthesizing, and presenting scientific information in both oral and written forms; and using science to support social justice, and economic and environmental sustainability. (UM Priorities for Action (PA) #1,2,4).
Innovative/Noteworthy: Agroecology project-based course (ENSC 470); Sustainability Science and Practice (SSP) BS Capstones
- 2. Gain Knowledge and Competencies in Environmental Policy and Politics:** Students gain an understanding of natural resource, environmental, and agricultural policy making processes, related institutions, organizations, policy typologies, and decision-making processes, including civil society

influences. Students also gain competency in: critically analyzing unsustainable production systems, market failures, implementation problems, and inequitable outcomes of policy; researching and analyzing policy issues (policy/stakeholder analysis), including assessing strategies to influence policy decisions; and communicating such analyses orally and in writing. Through course assignments, field trips, guest speakers, and internships, students gain skills and confidence interacting with multiple stakeholders who engage with policy making, implementation, and evaluation. (UM PA #1,2,3,4). **Innovative/Noteworthy: Environmental Leadership Series (ELS); MontPIRG Internship.**

3. **Gain Knowledge and Competencies in Environmental Thought and Literature.** Students engage diverse historical and contemporary perspectives of nature and the earth, including Western, colonial, critical, and BIPOC perspectives. Students study environmental ethics, philosophies, social theories, and works of creative expression, which include traditional nature writing as well as literary journalism, fiction, poetry, film, art, and podcasts. Students also gain competency in applying environmental ideas to inform individual and societal actions, to master oral and written expression in scientific, political and creative works. **Innovative/Noteworthy: Environmental and Nature Writing Certificate; Camas, biannual student-produced environmental literary magazine; Wild Mercy reading series; new Environmental and Indigenous Justice course.**
4. **Gain Knowledge and Competencies in Environmental and Indigenous Justice:** Students develop understandings: of social and environmental inequalities and injustices experienced by disadvantaged and marginalized groups and communities; understandings of systems of oppression, intersectional and structural inequality; environmental justice (EJ), Indigenous, and other environmental movements; basic environmental health science; international human rights and Indigenous rights; EJ analytic tools and assessment methods; and approaches to social transformation and just energy transition, including use of Indigenous Knowledge/Traditional Ecological Knowledge. Students gain competency in: negotiating their own identities in civic and professional settings; cross-cultural practice; researching and analyzing current environmental and natural resources issues and solutions by applying environmental, Indigenous and social justice concepts and theories; communicating critical perspectives orally and in writing; and working constructively and respectfully with and on behalf of disproportionately-impacted and environmentally-vulnerable communities and allied organizations (UM PA #1,2,4,5). **Innovative/Noteworthy: Environmental Justice Certificate; Indigenous Knowledge and Environmental Sustainability Certificate; Healing Grounds/Food Sovereignty Workshop; new Environmental and Indigenous Justice course.**
5. **Career Preparation and Gaining Knowledge and Competencies in Civic and Community Engagement and:** Students gain competency in strategies and techniques for addressing environmental problems and promoting social, economic, and environmental sustainability; develop an appreciation of diversity, equity, and inclusion, and inquiry into ethical and culturally-sensitive civic participation and other forms of community engagement. Students gain career-readiness skills for entry level positions in environmental professions and for further education in environmental studies and related fields. (UM PA #1,2,4, 5). **Innovative/Noteworthy: New Careers in Sustainability course; Sustainable Agriculture and Food Systems Certificate; annual Environmental Leadership Series; required Undergraduate Internships; UM Forum for Living with Appropriate Technology (UM FLAT) and PEAS Farm Supervised Internships; Practicum in Sustainable Ag Education.**

STUDENT LEARNING OUTCOMES and MEASUREMENT TOOLS

Student Learning Outcomes	Measurement Tool	Measurement Tool	Measurement Tool	Measurement Tool	Measurement Tool
1. Preparation for careers in the field and for post-bac study	Review of supervisor internships evaluations (3cr required)	Faculty interviews with employers of graduates	Survey of recent alums about career placements (mostly grad)	Faculty review integration of career readiness in curriculum	
2. Develop knowledge and competencies in environmental science	Biannual faculty review of env science curricula	Faculty monitor competence of EVST majors doing SSP thesis/capstone, DHC honors theses, and UMCUR presentations	Annual interview with advisors and annual review by faculty mentors of EVST student performance in env sci courses & SSP major student progress	Review of concept integrated in applied project in ENSC 470 Agroecology	
3. Develop knowledge and competencies in environmental policy and politics	Biennial faculty review of policy curricula and student progress	Measure % change in grades for policy analysis assignment from draft to final in ENST 367	Review of policy-related internship reflection essays		
4. Develop knowledge and competencies in environmental thought, writing, literature, and information literacy	Comparisons of writing assignments in 1 st and last weeks of ENST 373	Weekly evaluation of research and writing and info literacy skills in ENST 201	Faculty assess students' peer reviews.	Asking students for feedback in class on env humanities course content	
5. Develop knowledge and competencies in environmental and indigenous justice (New Objective)	Biennial faculty review of EJ/IJ curricula	Inventory relevant field trips, guest speakers, student projects, dept.-sponsored co-curricular learning opportunities	Faculty assessment of competencies gained in project-based courses, including feedback from community partners		
6. Develop knowledge and competencies in civic and community engagement	Faculty interviews with employers (often grad alumni)	Faculty review of PEAS supervised internship outcomes	Faculty review competencies from SSP majors' capstone project reports & presentations, also soliciting community partner feedback	Qualitative analysis of student internship reflection essays	Faculty review of student competencies achieved in project-based courses and ENST 225

RESULTS and MODIFICATIONS

Student Learning Outcomes results	Modifications made to enhance learning
<p>1. <u>Prepare for Careers</u>: 100% of graduates complete an internship. Review of supervisor evaluations very positive (scaled and open-ended responses), indicate career-ready skill development. Employer interviews indicate students are well-prepared, obtain jobs requiring skills developed in program. Obtained positive feedback from community partners of service learning and project-based courses students' positive contributions and professionalism that make graduates competitive.</p>	<p>Continued to refine new Introduction to EVST orientation course for 1st fall freshman majors, gained permanent course number (ENST 188). Offered new one-credit course, ENST 391/590 Careers in Sustainability. Included career-readiness content in some required courses. Juniors and seniors assigned faculty mentors to discuss career goals/prep and internship placement.</p>
<p>2. <u>Env'l Science Knowledge and Competencies</u>: Review of ENSC 470 applied projects indicated high level of knowledge and competence integration of agroecological principles; students continue to make good progress in env science courses and in SSP major; review of SPP capstone & DHC theses demonstrated competencies developed in multiple learning outcome areas, indicating knowledge of interdisciplinary and problem-solving approaches.</p>	<p>Improvements made to assignments in ENSC 470 for students to better scaffold their applied projects on concepts and principles of agroecology. ENST 188 learn about and participate in citizen science with the Watershed Education Network.</p>
<p>3. <u>Env'l Policy Knowledge and Competencies</u> Faculty curricular review indicated gap of coverage of environmental regulation and land use policy (ENST 382 not taught); also lack of Indigenous perspectives. ENST 367 students made 4% improvement (1/2 ltr grade) from 1st to 2nd policy analysis assignment (2-yr aggregate). Review of course evaluations showed self-reported gains in knowledge of policy making processes. Student reports for policy-related internships and supervisor evals showed positive growth in policy knowledge and skills.</p>	<p>Land use policy section added to ENST 225S and assignment to attend and report on a public meeting. New special topics course planned titled "Colonialism and Environmental Policy".</p>
<p>4. <u>Knowledge and Competencies in Env'l Thought, Writing, Literature, and Information Literacy</u>: Demonstrated improvements found in qualitative assessment of writing in ENST 335 and 373, and in assessment of research and information literacy skills in ENST 201. Curricular content review verified student feedback of repetition of "classic" writings across the curricula and limited coverage of diverse perspectives in the humanities.</p>	<p>Changes made to ENST 230, and 335, 373 to ensure better sequencing and non-duplication of environmental classics across the curricula. ENST 335L (formerly Nature Works) renamed (Literature of the Earth) and updated to include more diverse perspectives. ENST 230 updated to include more BIPOC perspectives.</p>
<p>5. <u>Knowledge and Competencies in Environmental and Indigenous Justice</u>: Curriculum reviewed in light of departure of Prof. Rosalyn Lapier identified lack of coverage of TEK and ethnobotany. Inventory of new course elements and co-curricular learning showed good exposure to emerging areas, individual and organizational leaders in the field. Assessment of course projects indicated competency in providing valued community services; students demonstrated professional demeanors and behaviors.</p>	<p>Renamed ENST 373A (formerly Nature Works) to Writing the Earth: Workshop on Nature, Environment & Justice; also updated to include BIPOC authors. Offered field trips to Flathead Indian Reservation, Missoula Food Bank & Indigenous farmers. Brought guest speakers to Native Plant Stewardship and Ethnobotany Supervised Internship. ENST 489 projects in partnership with the Fort Belknap Indian Community, Healthy Gulf, and Frenchtown (Superfund) Community Advisory Group. Offered Healing Grounds: A Celebration of Indigenous Farming and Foodways series of events (over 200 attended, mostly students).</p>

Student Learning Outcomes results	Modifications made to enhance learning
<p>6. <u>Knowledge and Competencies in Civic and Community Engagement</u>: Employers reported graduates possess high level of competency in community engagement. Tracking PEAS Farm interns revealed post-internship engagement with sustainable food non-profit organizations and service agencies. 225 students demonstrated competencies in analyzing local sustainability initiatives. SSP students developed competencies in carrying capstone projects, through partnership development and direct service provision. Graduate survey showed successful placement in community-based organizations. Obtained positive community partner feedback for project-based courses (via phone & email).</p>	<p>Initiated project reflection essay in ENST 489. Increased number and variety of field trips in ENST 396 PEAS Farm Supervised Internship to provide more contact with small businesses and NGOs. Added assignment to attend and report on a public meeting in ENST 225. ENST 335 & 373 students attend a literary event. In collaboration with Indigenous leaders and All Nations Health Center, students participated in establishment of a Mandan, Hidatsa, and Arikara Four Sisters Garden at PEAS Farm.</p>

FUTURE PLANS FOR CONTINUED ASSESSMENT

Continue to implement, given reduced dept human resources, a larger number of interviews with post-grad employers and collate and compile results in more effective, usable report for curriculum review and for improvements needed in specific courses.

Continue to devise an efficient, workable testing system, given reduced dept human resources, to assess achievement of dept. learning objectives.

Continue working with H&S Advising Center advisors to plan curricula toward desired careers and pursue EVST Certificates; improve faculty mentoring of upper division students.

Improve tracking of recent alums to increase responses to career placement survey.

Develop standardize internship reflection essay guidelines, and compile and analyze essays to gauge development of competencies in environmental science (e.g., science communication and field skills), environmental policy, environmental/Indigenous justice, civic/community engagement, and career preparation.

Add question to departmental course evaluation form (with scaled and short written responses) to help assess achievement of course learning objectives.

Require project reports in ENST 494 UM FLAT Supervised Internship, including community engagement reflection component.

Tabulate GLI capstone participation rates as part of assessing community/civic engagement LOs.

Tabulate enrollment in and completion of EVST Certificates that are applicable to our learning objectives.

Explore curricular partnerships with other departments and programs to address areas and courses we can no longer offer regularly due to faculty retirements and reduced faculty resources.

APPENDICIES

Curriculum Map Updated Spring 2023, reflects new courses and intended levels of achievement

EVST Undergrad Program Assessment: Outcomes & Courses, Calendar Year 2021 & 2022

Learning Outcomes Course	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
A. Prepared students for careers	x	x	x	x					x	x		x	x	x	x	x	x					x	
B. Develop knowledge & competencies in environmental science	x								x				x					x			x		
C. Develop knowledge & competencies in envl policy & politics	x			x						x							x		x	x	x		
D. Develop knowledge & competencies in environmental thought, writing, literature, and information literacy			x	x	x		x	x		x	x		x	x	x			x			x		x
E. Develop knowledge and competencies in envl and indigenous justice				x	x	x	x	x		x	x		x						x	x	x		
F. Develop knowledge and competencies in civic and community engagement	x	x		x						x			x	x	x	x	x					x	x
G. Ability to conduct research & evidence-based analysis	x		x			x			x	x									x	x			x
H. Understand use of science and ethical principles in envl decision making	x	x		x			x		x	x								x	x	x			
I. Understand diverse perspective on env issues		x		x	x	x	x	x		x	x		X	x			x	x	x	x	x		
J. Ability to communicate effectively orally & in writing	x		x	x	x	x	x	x	x	x	x							x	x	x	x		x
K. Develop critical thinking and analytic reasoning skills	x		x	x	x	x	x	x	x	x	x							x	x	x			
L. Ability to locate, organize, and evaluate information from multiple sources	x		x	x	x	x	x		x	x								x	x	x	x		x
M. Ability to apply knowledge & skills to real world settings													x	x	x	x	x				x		x
N. Develop teamwork skills & and ability to collaborate in diverse groups										x	x			x	x			x			x		x
O. Ability to think innovatively and creatively							x	x		x	x	x	x	x	x						x		x
Learning Outcomes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23

Intended Levels of Achievement:

I = Introduction/Foundation; D = Development/Growth; M = Mastery/Integration

Course Key:

1. ENSC 105 Env Science (I)
2. ENST 188 Getting to Know EVST (I)
3. ENST 201 Env Info Systems (I,D)
4. ENST 225 Sustainable Communities (I,D)
5. ENST 230 Nature & Society (I,D)
6. ENST 310 Env Montana: A-Z (D)
7. ENST 330 Earth Ethics (D,M)
8. ENST 335 Literature of the Earth (I,D)
9. ENSC 360 Applied Ecology (D,M)
10. ENST 367 Env Politics & Policy (D,M)
11. ENST 373 Writing the Earth (D,M)
12. ENST 391 Careers in Sustainability (D)
13. ENSC 396 PEAS Farm Supervised Internship (I,D)
14. ENST 396 Native Plant/Ethnobotany Supervised Internship (I,D)
15. ENST 396 UM FLAT Supervised Internship (I,D)
16. ENST 398 Internship (D)
17. ENST 398 MontPIRG Internship (D)
18. ENST 410 Traditional Ecological Knowledge (D)
19. ENST 480 Food, Justice & Sustainability (D,M)
20. ENST 489 Env Justice Issues & Solutions (D,M)
21. ENST 491 Env & Indigenous Justice (D,M)
22. ENST 494 UM FLAT Sustainability Seminar (D,M)
23. ENST 499 Senior Capstone / Thesis (M)