

Curricular Pathways for Environmental Studies Majors

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Objectives and Summary:

Environmental Studies (ES) majors are required to complete a “curricular pathway.” A curricular pathway is a course of study that equips an ES major with a depth of knowledge, analytical skills, and experiences related to understanding and addressing a particular topic or subject area. Although certain pathways may emphasize tools from particular disciplinary perspectives, the program recognizes that many of the most pressing contemporary issues in ES are highly interdisciplinary and can be most successfully understood through a curricular plan that focuses course work across disciplines. For students interested in pursuing highly interdisciplinary topics such as climate change, urban agriculture, or water resource management, courses will necessarily be selected from multiple different departments and disciplines. In contrast, students wishing to pursue pathways that necessitate strong background within one traditional discipline, (e.g., in environmental chemistry, environmental policy, environmental economics, etc.) are encouraged to consider an appropriate double major in association with their pathways. We anticipate that students who successfully complete the ES major will report their pathways to graduate schools and potential employers. However, the particular pathways completed will not be reported on a student’s Oberlin transcript. Successful completion of a pathway is marked by the creation and approval of four milestones:

ES Student Pathway Approval Timeline

Milestone	Draft due to Advisor	Deadline for upload of Approved Document	Year
Area of Interest selected		Time of major declaration	
Pathway Proposal¹	March 15	April 1	Second
Capstone Proposal²	March 15	April 1	Third
Pathway Report³	March 15	April 1	Fourth

Once documents are uploaded to Blackboard and their advisor has approved them, the milestones will appear in the student's academic record on Degree Works; students will not graduate with an ES major without the registrar’s record that these milestones have been completed. The four milestones of the pathway are explained in greater detail below. Students should submit their Pathway Proposal, Capstone Proposal, and Pathway Report as MSWord documents based on templates contained at the end of this document.

Pathway Milestones Explained:

1) Pathway Area of Interest Selection: In discussion with their advisors, ES major declarants should identify an area of interest for their pathways from the approved list below.

2) Pathway Proposal: A complete pathway proposal is a single document that includes a “statement of goals and intent” and a proposed “course trajectory.” The statement of goals and intent describes the theme that the student intends to pursue, provides a rationale for the importance of that theme, and describes the specific goals with respect to knowledge, skills, and expertise and the intended outcomes. This statement must use the template at the back of this document. It should include the questions and directly and sequentially address each of the questions on that template. The course trajectory is a semester-by-semester sequence of courses that the student has taken and intends to take to complete the proposed pathway. Note that courses listed in this sequence should fulfill all requirements described in the “ES Majors Checklist,” latest versions of which are on Bb, the department’s web page, and in the ES office. During each advising session after the first, the advisor will review the course trajectory with the advisee and appropriate adjustments will be made based on changes in focus and course availability. It is important to note that very distinct pathways are possible within a given Area of Interest -- for example, depending on the questions and goals identified in a student’s proposal, a pathway in agriculture and food studies might focus more on natural science, social science, humanities, or on the intersection among these.

The pathway proposal is an agreement between a student, their advisor, and the ES program. The responsibility of proposing, revising, and executing a focused pathway is the students. The responsibility of reviewing, requesting revisions, and approving each student’s pathway proposal rests with that student’s advisor. If a student wishes to make substantial changes in the focus of their course of study, the pathway proposal must be revised, reviewed, and re-approved by that student’s advisor, and then resubmitted electronically to the ES Program.

A MSWord version of the approved pathway proposal should be given the file name “Firstname.Lastname.PathwayProposal.doc” and posted to the Environmental Studies Blackboard Site.

3) Capstone Proposal: The capstone experience provides students with a concrete opportunity to apply, integrate, and further develop knowledge and skills from multiple courses in order to achieve the goals that students define in their pathway proposal. The capstone experience can be fulfilled in a variety of ways including study away, summer fellowships, honors projects, private reading, independent research, certain courses (which must be approved by the student’s advisor), and Winter Term experiences. The capstone proposal articulates the way in which a proposed experience contributes to the pathway. The template for the capstone proposal is included at the end of this document.

A MSWord version of the approved capstone proposal should be given the file name “Firstname.Lastname.CapstoneProposal.doc” and posted to the Environmental Studies Blackboard Site.

4) Pathway Report: The pathway report provides each student with the opportunity to reflect on the ways in which the chosen pathway has (and has not) achieved the goals and intent specified in that student’s pathway proposal and to reflect on how the capstone experience contributed to the pathway. The report should address the specific questions and follow the format of the template provided at the end of this document.

A MSWord version of the approved Pathway Report should be given the file name “Firstname.Lastname.PathwayReport.doc” and posted to the Environmental Studies Blackboard Site.

Pathway Areas of Interest:

Areas of Interest supported by the Oberlin curriculum are listed below. A variety of pathways are possible within each of these Areas of Interest. The substantial flexibility allows students to choose what interests them most. It is important to recognize that the list of courses associated with each pathway are simply

recommendations; it is up to the student, in consultation with their advisor, to choose a course trajectory that meets the particular objectives that a student defines in their pathway proposal.

- | | |
|------------------------------------|--|
| -Agriculture & Food Studies | -Environmental Literature & Media |
| -Art & the Environment | -Environmental Politics & Policy |
| -Climate Change Studies | -Environmental Psychology |
| -Energy & Society | -Global Environmental Issues |
| -Environmental Biology | -Indigenous Environmental Issues |
| -Environmental Chemistry | -Political Ecology |
| -Environmental & Ecological Design | -Public Health |
| -Environmental Economics | -Sustainable Enterprise & Entrepreneurship |
| -Environmental Education | -Systems Ecology |
| -Environmental Geology | -Urban Sustainability (or Sustainable Communities) |
| -Environmental Justice | -Water & Society |

Agriculture & Food Studies: This pathway might emphasize agrarian literature, food access and food justice, sustainable agriculture, farm economics, or ecological and biogeochemical perspectives. We strongly encourage all students pursuing this pathway to take an appropriate balance of coursework in the humanities, social sciences, and natural sciences. Students are also encouraged to use summer, WT, and (especially) study away experiences as means of building and exploring their understanding of agriculture and food. *Foundation courses* might include American Agricultures (ENVS302), Political Ecology (ENVS 342), Literature and the Land: Writing Nature in Russia and America (RUSS329), Soils and Society (GEOL152), Ecosystems Ecology (ENVS316), Practicum in Agroecology (ENVS336 and ENVS337), Systems Modeling (ENVS340) and Ecological Perspectives on Small-Scale Societies (ANTH212). Students who wish to focus in Food Justice should take at least one class that examines power, agency, and inequality, such as CAST100 or AAST101. Students interested in urban agriculture and food justice issues should consider taking Sustainable Cities (ENVS390), American Urbanism (SOC1241) and/or Environmental Sociology (SOC1284). Students should discuss with their advisor to identify an appropriate research method course for their pathway.

Art & the Environment: Students following pathways in this area engage in critical and creative explorations of the intersections between various art forms (including visual art, architecture, creative writing, music, dance, cinema and media) and environmental studies. These pathways might entail investigating the many artists who have interpreted and documented the landscape and environment, engaging in cross-disciplinary and collaborative research/field study involving art and the environment, and pursuing creative projects involving the environment and environmental issues. Students are encouraged to consider a second major in Studio Art, Art History, Dance, Music, or a related department. *Foundational courses* might include: Art and the Environment (ARTS041), What's Natural Isn't Real (ARTS048), Land Arts in an Electronic Age (ARTS093), Creative Resistance (ARTS075), Renegade Nature (ARTS092), Modernism and Environmentalism in Architecture of the 20th century (ARTS371), Space and Environment (ARTS425), Architecture and Climate (ARTS472), Somatic Landscapes (DANC203), Indigenous Environmentalism (ENVS 327), Music and Ecology (ETHN212), Introduction to Electro-acoustic Music (TECH101), Workshop in Music & Media Technology (TECH350). Students interested in integration of art in urban design should consider taking Sustainable Cities (ENVS390). Suggested *research methods* courses include: CAST300, GSFS305, POLT205, PSYC200, SOCI301.

Climate Change Studies: Climate change studies can be integrated into every discipline: natural sciences, social sciences, humanities, and the arts. The ENVS program is particularly strong in the social dimensions of climate change, including impacts on Indigenous peoples, environmental racism, urban planning/design and opportunities for local engagement through the Environmental Dashboard. Beyond ENVS, courses in Biology, Geology, Politics, and many other majors are available. *Foundational courses* may include: Indigenous Peoples and Climate Change (ENVS 225), Indigenous Environmentalism (ENVS 327), Political Ecology (ENVS 342), Earth's Environments (GEOL120), Environmental Geology (GEOL240), Climate Change (ENVS219). A broad range of other courses might be important depending on the focus, for example, Coral Reefs: Biology, Geology and Politics (GEOL115), Environmental Chemistry (CHEM208), Environmental

Issues Beyond Borders (ENVS222), Systems Ecology (ENVS340), Environmental Sociology (SOC1284), Seminar in Coal, Communities, and Culture (SOC1438), and Environmental Ethics (PHIL225). Students interested in climate resilient cities should consider taking Sustainable Cities (ENVS390). Suggested *research methods* include: ENVS316, ENVS340, GEOL235, POLT205, STAT113/114.

Energy and Society: Energy issues are central to the challenge of sustainability in the 21st century – particularly due to our heavy reliance on greenhouse gas (GHG) intensive non-renewable fossil fuels and their impact on the environment and society. Students pursuing an Energy and Society pathway may focus on energy supply, demand, consumption, conservation and alternatives with particular attention to the role of individuals and communities. While a basic understanding of science, technology and human decision making will be important to any pathway in Energy and Society, a given pathway will emphasize different aspects of challenges and opportunities. In some cases double majors may be appropriate, for example in economics, psychology, sociology, geology, physics or biology. *Foundation courses* might include Energy Technologies (PHYS068) and Energy and Society (ENVS322). Other relevant courses are: Environmental Economics (ENVS231), Energy Economics (ENVS332), Environmental Policy (ENVS208), Systems Ecology (ENVS316), Systems Modeling (ENVS340), Sustainable Cities (ENVS390), Practicum in Environmental Communications (ENVS354), Environmental Sociology (SOC1284), and Seminar in Coal, Communities, and Culture (SOC1438). Suggested *research methods* include: ENVS316, ENVS340, GEOL235, POLT205, STAT113/114.

Environmental Biology: Students pursuing pathways in environmental biology will relate appropriate fundamentals of biology to problems of conservation, invasive species, bioremediation, ecological restoration, disease ecology, etc. There may also be a particular focus on levels of biodiversity (e.g., genes, species, or landscape), techniques (field methods, molecular tools, models), and areas of investigation (e.g., habitat loss, hybridization, inbreeding, etc.). Students are encouraged to consider a double major in Biology. Beyond the core requirements for the biology major, those pursuing this pathway should consider taking two upper-level electives in related subdisciplines. *Foundational courses* might include Plant Ecology (BIOL202), Community Ecology (BIOL205), Disease Ecology (BIOL206), Genetics of Populations (BIOL322), Plant Systematics (323/324), Systems Ecology (ENVS316), Systems Modeling (ENVS340), Evolution (BIOL218), or Behavioral Ecology (BIOL315), with Conservation Biology (BIOL411) potentially serving as a capstone. Other electives should be chosen in consultation with the advisor. Students should consider taking Statistical Methods for the Biological Sciences (MATH114) to meet their *research methods* requirement.

Environmental Chemistry: Students pursuing pathways focused on environmental chemistry will gain understanding of the methods of chemical analysis and their application to the study of chemicals in the natural and polluted environment. Students who intend postgraduate study or employment in environmental science fields in which strong chemical analysis skills are needed are strongly encouraged to double major in Chemistry. Students primarily interested in policy and advocacy with a more in-depth knowledge of the scientific methods and findings that are relevant to major environmental problems may consider pursuing this pathway with a chemistry minor. Foundational courses include the Introductory Chemistry sequence (CHEM101 and 102 (or 103)), Environmental Chemistry (CHEM208), Organic Chemistry (CHEM205), Analytical Chemistry (CHEM211), Trace Analysis (CHEM341), Environmental Policy (ENVS208), Energy and Society (ENVS322), Systems Ecology (ENVS316), and Systemic Modeling (ENVS340). For those pursuing a double major or minor, Analytical Chemistry (CHEM211) serves as the required research methods course. For others, one of the statistics courses may be appropriate.

Environmental and Ecological Design: *Ecological Design* draws on natural science, social science, arts and the humanities to broadly consider how humans remake our presence in the world in a fashion that is both socially just and environmentally sustainable. *Environmental Design* focuses more specifically on understanding and critiquing plans, programs and approaches associated with creating sustainability in physical environments. Pathways may, for example, focus on sustainability in the built environment, on the practice of sustainable agriculture, on biomimicry and on ecological engineering. Appropriate *foundational courses* and *research methods* will depend strongly on the particular environments considered but emphasize a variety of natural sciences and the social sciences that inform application. For example, a student wishing to pursue a

pathway focused on the design of sustainable wastewater systems requires a strong grounding in biology, chemistry and geology. Students interested in ecological design of the built environment should consider taking Energy and Society (ENVS322) and Sustainable Cities (ENVS390). Certain students may be interested in combining this pathway with Oberlin's 3-2 engineering program.

Environmental Economics: Pathways in environmental economics are meant to provide students with a background in environmental, natural resource, and ecological economics. As early as possible, interested students should take Principles of Economics (ECON101), which is a prerequisite for all upper level courses in the Economics Department. *Foundational courses* within the Economics Department include Environmental Economics (ECON231), Energy Economics (ECON332), Intermediate Microeconomics (ECON253), and an upper level seminar in environmental and energy economics (ECON432). Students are also encouraged to take Environmental Policy (ENVS/POLT208), Seminar on Global Environmental Politics (ENVS323), and Environmental Psychology (PSYC440). Suggested *research methods* include: CAST300, ECON255, ENVS220, ENVS340, GEOL235, POLT205, SOCI301/302, STAT113/114.

Environmental Education: Students pursuing environmental education pathway should build a strong foundation in natural sciences, social sciences or humanities and supplement their core strengths with courses and experiences specifically focused on education. Students may choose to focus on critically analyzing the role of education as a mechanism for effecting environmental change or may choose to focus on obtaining a background relevant to traditional or non-traditional education. The variety of relevant *foundational courses* that students are encouraged to consider include: Practicum in Environmental Communication (ENVS354) Social Psychology (PSYC218), Practicum in Tutoring (AAST 281), Principles of Education (EDUC300), and Practicum in Social Justice Education (AAST320). Students pursuing this pathway are strongly encouraged to consider augmenting their ES major with a concentration in education. Suggested *research methods* courses include: CAST300, ENVS220, ENVS340, GSFS305, PSYC200, SOCI301/302.

Environmental Geology: Geology provides a spatial and temporal view of environmental topics that is larger in scale than in most other disciplines. Environmental change is a natural phenomenon that has taken place throughout Earth history and Geology provides the perspective to put modern rapid changes in proper context. Environmental Geology also prepares one for careers in companies, NGOs, and government that tackle issues of environmental remediation and planning for a future shaped by human influences. A pathway in environmental geology depends heavily on knowledge across the spectrum of natural science. It is recommended that all students interested in this pathway start early on with Earth's Environments (GEOL120). Depending on your particular interests, the Geology Department offers a variety of environmentally relevant foundational courses that could contribute to your pathway. You are also encouraged to look for relevant courses in the social sciences and humanities. Other courses that will likely be relevant to most Environmental Geology pathways include Earth Surface Processes (GEOL212), Glaciers & Climate Change (GEOL111), Oceanography (GEOL161), Evolution of the Earth (GEOL204), Environmental Ethics (PHIL225) and Introductory Chemistry (CHEM101). If you anticipate a career in environmental geology, then a double major in Geology is advisable. Pathway Area of Interests in Climate Change and Water and Society may also strongly emphasize topics closely related to environmental geology. Suggested research methods include GEOL235, ENVS316, ENVS340, CHEM211, STATS113/114.

Environmental Justice: Environmental Justice (EJ) is an interdisciplinary field that critiques the institutionalized oppression that places disproportionate burdens on communities of color and other vulnerable populations through exposure to toxic living and work environments. Environmental justice models a productive relationship between academic and activist communities and is one option for students who want to engage in community-based learning and research. Students in the EJ pathway will have the option of focusing on the history and current work of the EJ movement in the United States or internationally. An interdisciplinary range of coursework is essential for students who hope to work with EJ issues after graduation, whether through community organizing or fields such as law or science. Students should take at least one class that examines power, agency, and inequality, such as CAST100 or AAST101. *Foundational courses* might include: Climate

Change (ENVS219); Local vs. Global: Environmental Issues Beyond Borders (ENVS222); Indigenous Peoples and Climate Change (ENVS 225), Environmental Justice Literature (ENVS304); Indigenous Environmentalism (ENVS327), Global Indigenous Health (ENVSXXX), Political Ecology (ENVS342), Seminar in Coal, Community, Culture (SOC1438); Environmental Sociology (SOCI 284); American Urbanism (SOCI241), and Sustainable Cities (ENVS390). A variety of natural sciences such as Disease Ecology (BIOL308), Immunology (BIOL327) Systems Ecology (ENVS316), Environmental Chemistry (CHEM208), Analytical Chemistry (CHEM211) and Trace Analysis (CHEM341) may be important for students wishing to understand environmental burdens. Students might also consider a double major in a relevant discipline, such as Comparative American Studies, Africana Studies, Sociology, Biology or Politics. Suggested *research methods* include: CAST 300, CAST400, CHEM211, ENVS220, ENVS340, GEOL234, GSFS305, PHIL201, POLT205, PSYC200, SOCI 301/302, STAT113/114.

Environmental Literature and Media: Environmental Literature and Media (ELM) considers a variety of texts as well as methods of interpretation. As the area of ecocritical inquiry has developed in the last few decades, the interdisciplinary study of literature and environment has expanded to include film, media, and other forms of green cultural criticism. Students in ELM pathways will learn methods of interpretation informed by ecocritical theories as well as attention to historical and cultural contexts. ELM pathways can often be strengthened by double majoring in a related discipline (e.g., English, Cinema Studies, Comparative Literature, languages other than English). *Foundational courses* for ELM include: Rivers in American Literature (ENGL141), Meaning and Being: Nature in 19th-century American Narrative (ENGL223), The Concept of Nature in Early American Literature (ENGL255), Introduction to the Advanced Study of Literature (ENGL299), Nature and Transcendentalism (ENGL366), Climate Change: Ethics, Equity, Narratives (ENVS214), Environmental Justice Literature (ENVS304), American Agricultures (ENVS302), Indigenous Peoples and Climate Change (ENVS 225), Wild Russia (RUSS240), Literature and the Land (RUSS329), Land Arts in an Electronic Age (ARTS093), Creative Resistance (ARTS075), Digital Art and Public Space (TECH110), Renegade Nature (ARTS092), Introduction to Comparative Literature (CMPL200). Suggested *research methods* courses include: ENGL255, ENGL299, ENVS301, GSFS305.

Environmental Politics and Policy: Multiple goals of pathways in this Area of Interest include: 1) learning how to analyze approaches to policy making in environmental and natural resource domains; 2) understanding how interests and values contend for power and influence and how that competition affects environmental policy, and how political and legal institutions in the United States, in other countries, and in the international arena shape environmental outcomes; 3) gaining an appreciation for the role of parties, social movements, and interest groups in environmental politics, and how political ideas, cultures, and economic circumstances have shaped politics and policies; 4) seeking to understand the reasons for why environmental policies have and haven't been effective. *Foundational courses* for this Area of Interest include: Environmental Policy (ENVS/POLT208), Political Ecology (ENVS 342), Public Policy in America (POLT209), Environmental Economics (ENVS231). Other courses of particular relevance include: Mass Politics in a Media Age (POLT200), Energy Economics (ENVS332), Seminar on Global Environmental Politics (ENVS323), Seminar on Natural Resources and Conflict (ENVS324), International Law (POLT226), American Urbanism (SOCI241), Environmental Sociology (SOCI284), Environmental Ethics (PHIL225), and American Constitutional Law (POLT202). Suggested *research methods* include: GEOL234, POLT205, SOCI301/302, ECON255, STAT113.

Environmental Psychology: Through coursework and supplementary experiences, students in this Area of Interest will gain an understanding of humans' psychological reaction to the natural and built environment, and how psychological principles can be used to foster environmentally sustainable choices and behaviors. A major in Psychology is strongly encouraged. Social Psychology (PSYC218) should be taken as soon as possible. Particularly relevant psychology courses include Environmental Psychology (PSYC440), Research Practicum in Social and Environmental Psychology (PSYC520); Personality/Social Laboratory (PSYC301); Advanced Methods in Community Based Social Marketing (PSYC308), Practicum in Environmental Communication (ENVS354). Research Methods I (PSYC200) should be taken to fulfill the methods requirement. Depending on the particular focus of students pursuing environmental psychology, relevant courses may also include:

Environmental Ethics (PHIL225), Environmental Economics (ECON231), Indigenous Peoples and Climate Change (ENVS225), Indigenous Environmentalism (ENVS327), and Global Indigenous Health (ENVSXXX).

Global Environmental Issues: Most of today's pressing environmental problems transcend national boundaries and require international initiatives in order to pursue effective solutions. However, environmental impacts, institutional capabilities, patterns of resource use, and human attitudes towards the environment vary across and within political borders. That, coupled with an often unyielding sovereign state system makes management and protection of the environment at the global level uniquely challenging. Students pursuing this pathway Area of Interest will learn about the bilateral, regional, and international geopolitical dynamics of environmental governance. They may focus on broader theoretical or applied topics on a global scale or choose to concentrate on a particular region of the world. *Foundational courses* might include: Introduction to International Politics (POLT120), Environmental Policy (ENVS/POLT208), Environmental Issues Beyond Borders (ENVS222), Seminar on Global Environmental Politics (ENVS323), Seminar on Natural Resources and Conflict (ENVS324), Political Ecology (ENVS 342), International Law (POLT226), and Seminar on Globalization (POLT329). Other *relevant courses* include: Political Economy of Development in Asia (POLT212), Ecological Perspectives on Small-Scale Societies (ANTH212), Climate Change: Ethics, Equity and Narratives (ENVS219), Environmental Economics (ECON231), Society and Environment in Latin America and the Caribbean (ENVS244), Energy and Society (ENVS322), Global Indigenous Health (ENVSXXX), and Energy Economics (ENVS332).

Indigenous Environmental Issues: Indigenous and marginalized peoples often stand on the frontline of global climate and ecological changes and social challenges. Therefore, it is important for us to cultivate in-depth knowledge and appreciation of Indigenous peoples' complex and diverse cultures and histories, as well as their impacts on the global society. The Indigenous Studies pathway allows students to examine the long history and current status of how these peoples have interpreted and interacted with the landscape and environment. Students are encouraged to pursue a second major or minor in Anthropology, Art History, Comparative American Studies, Ethnomusicology, History, or a related field. *Foundation courses include:* Nature, Culture, Interpretation (ENVS 201), Indigenous Peoples and Climate Change (ENVS225), Society and Environment in Latin America and the Caribbean (ENVS244), Indigenous Environmentalism (ENVS327), Global Indigenous Health (ENVSXXX), Political Ecology (ENVS342), Climate Change (ENVS219), American Agricultures (ENVS 320), Environmental Justice Literature (ENVS 309), Environmental Justice and Local Knowledge (ENVS 320). *Other relevant courses are:* An Introduction to Native American and Indigenous Studies (CAST223), Art and the Environment (ARTS041), Indigenous Peoples of Latin America (ANTH210), Ecological Perspectives on Small-Scale Societies (ANTH212), The Native Languages of the Americas (ANTH402), Seminar on Culture, Contact and Colonialism (ANTH456), From Comanches to Aztecs (ANTH413), American Indians: Pre-Columbus to the Present (HIST 285), Indians and Empires in Early America (HIST351), Latin American History (HIST109/110), Japan Earliest Times to 1868 (HIST159/EAST131), West African Dance Forms (AAST 190/191), Introduction to Musics of the World (ETHN100), Introduction to the Anthropology of Music (Musical Studies 103), Music and Ecology (ETHN212), Music of Indonesia (ETHN203). *Suggested research methods courses include:* ENVS 230, GSFS 305, PHIL 201, POLT 205, PSYC 200, SOCI 301.

Political Ecology: Political ecology (PE) is an eclectic and vibrant field grounded in the discipline of Geography. PE assumes that our environmental issues are social issues with deep historical roots. That is environmental concerns are mutually entangled with questions of injustice, knowledge, and asymmetrical power relations. By taking a critical approach to environmental studies, PE questions both the framing of environmental narratives that define environmental problems and the power relations embedded in the knowledge systems that underpin those narratives. Significantly informed by social theory, PE relies on rich and nuanced empirical research that is often grounded in a case study. *Foundational courses* for a pathway in Political Ecology might include: Africana Philosophy (AAST232), Ecological Perspectives on Small Scale Societies (ANTH212), Cultural Theory (ANTH353), Imagining Borders (CAST279), Environmental Economics (ECON/ENVS231), Feminist Theory (GSFS301), Environmental Justice and Local Knowledge (ENVS230), Society and Environment in Latin America and the Caribbean (ENVS 244), Global Environmental Politics

(ENVS323), Natural Resources and Conflict (ENVS324), Indigenous Environmentalism (ENVS327), Political Ecology (ENVS342), Repairing the Past: Readings in Historical Justice (HIST493), Explaining Social Power: Classical and Contemporary Theories (POLT 132), Global Political Economy (POLT223), Marxian Theory (POLT239), Environmental Sociology (SOC1284), How Places Make Us: Sociology of Place and Space (SOC1432), Coal, Communities and Culture (SOC1438). To fulfill the Research Methods requirement, students would be strongly encouraged to take GEOL234, but other options might better fulfill individual needs.

Public Health: Pathways in this area can focus on understanding the ways in which human health is related to and dependent on the environment and our relations to it. The humanities, social sciences, and natural sciences all contribute in important ways to these understandings. In consultation with the advisor, a student would define a pathway that emphasizes an aspect of public health. For example, a pathway might consider ways in which the health of certain demographic groups is especially vulnerable to the consequences of environmental conditions or injustices. Double majors in areas most related to students' interests are encouraged. Relevant courses may include: Medical Anthropology (ANTH227), Anthropology of Good Intentions (ANTH482), Biology of Infectious Diseases and their Global Impact (BIOL047), Disease Ecology (BIOL308), Emerging Infectious Diseases (BIOL315), Immunology (BIOL327), Introduction to Comparative American Studies (CAST 100), Introduction to Feminist Science Studies (CAST217), Environmental Chemistry (CHEM208), Environmental Economics (ECON/ENVS231), Health Economics (ECON245), Economics of Poverty and the Income Distribution, Poverty and Affluence (ECON430), Environmental Policy (ENVS208), EJ and Local Knowledge (ENVS230), Global Indigenous Health (ENVSXXX), Political Ecology (ENVS342), Environmental Chemicals in Human Health (NSCI108), Environmental Ethics (PHI 225), Biomedical Ethics (PHIL235), Food Ethics (PHIL241), Environmental Psychology (PSYC221 or 240), Issues in Medical Ethics (RELG249), Environmental Sociology (SOC1284), Cities, Culture, Society (SOC1322), Seminar in Coal, Communities, and Culture (SOC1438).

Sustainable Enterprise and Entrepreneurship: The promotion, diffusion, and marketing of sustainability related ideas and products is burgeoning in both public and private sectors. Most large organizations in the public and private sector now include sustainability-focused professionals on staff. Pathways in this area will help students explore the economic and social dimensions of promoting sustainability in the public and private sectors. Examples of areas and approaches that students might choose to focus on include the campus ecology movement, environmental entrepreneurship, and community-based social marketing. Suggested *foundational courses* will depend on the particular focus but may include: Intro to Entrepreneurship (ENTR100), Social Psychology (PSYC218), Environmental Economics (ECON231), Energy Economics (ECON332), Systems Modeling (ENVS340), American Urbanism (SOC1241), Physiology (BIOL312), Practicum in Environmental Communication (ENVS354), and Sustainable Cities (ENVS390). Students in this Area of Interest are strongly encouraged to engage with Oberlin's Center for Innovation and Impact. Their programming focuses on entrepreneurship and includes valuable co-curricular opportunities like the LaunchU Bootcamp for startups and an integrated program with the Bonner Center. Appropriate *research methods* courses will depend on the particular emphasis within this Area of Interest, but may include: ECON255, ENVS340, GEOL235, POLT205, PSYC200, SOC1301/302, STAT113/114.

Systems Ecology: The field of systems ecology seeks to understand flows of energy, cycles of matter and control mechanisms operating in ecological systems, including those directly managed by humans. Pathways in this Area of Interest will equip students to pursue further academic study and career opportunities in systems ecology and in other systems-related disciplines. A double major with biology, geology, chemistry or physics may prove useful. Suggested *Foundational courses* include Systems Ecology (ENVS316) and Environmental Systems Modeling (ENVS340) and Energy and Society (ENVS322), which should be taken as early as possible during a student's time at Oberlin. Course of particular relevance include Genetics of Populations (BIOL322) or Community Ecology (BIOL205), Environmental Chemistry (CHEM 208), Analytical Chemistry (CHEM211), Elementary Physics I (PHYS103) or Mechanics and Relativity (PHYS110), Marine Science (GEOL161), Groundwater Hydrology (GEOL242), Coral Reefs (GEOL115), GEOL111 (Glaciology, Ice Ages and Climate Change), Evolution of the Earth (GEOL204), Environmental Economics (ENVS231), Applied GIS (GEOL235),

and (GEOL380) Great Lakes Limnology. Although GEOL235, ENVS316, ENVS340 and CHEM211 all count towards the *research methods* requirement, students are encouraged to consider taking a statistics course.

Urban Sustainability or Sustainable Communities: Students pursuing pathways in Urban Sustainability (or Sustainable Communities) will study the economic, social and environmental implications of urbanization, and explore creative, contemporary solutions. This Area of Interest provides students with an understanding of the opportunities and challenges of urban sustainability, equips them with concepts and techniques of urban and regional analysis, and introduces them to both historical and contemporary approaches to the design and management of sustainable communities and the built environment. Pathways may place greater or lesser emphasis on technical and socially oriented aspects of urban systems. Depending on the focus, *foundational courses* might include: Approaches to Western Architectural History (ARTS205), American Urbanism (SOC1241), Urban Economics (ECON207), Environmental Sociology (SOC1284), Urban Politics in Developing Cities (POLT264), Seminar in Coal, Communities and Culture (SOC1438), and Sustainable Cities (ENVS390). Other relevant courses are: Environmental Policy (ENVS208), Energy and Society (ENVS322), Applied Geographic Information Systems (GEOL235), Systems Modeling (ENVS340), Systems Ecology (ENVS316), Environmental Justice: Theory and Practice (ENVS217), Land Arts in an Electronic Age (ARTS093), Digital Art and Public Space: Performance and Transmission (TECH160). Suggested *research methods* include: POLT205, ENVS340, SOC1301/302, CAST300, CAST400, STAT113/114.

Water and Society: Water, the most fundamental resource necessary for life, has been responsible for biodiversity, extinctions, wealth, and war. The study of water and society can be approached from natural science, social science, humanities and the arts. Students pursuing this Area of Interest should develop a cross-disciplinary focus that builds links between technical realities, social needs, ethical considerations and the philosophical ties of humans to water. Depending on the pathway focus, double majors in a variety of disciplines, ranging from geology to creative writing to economics or policy may be appropriate. *Foundational courses* will vary depending on this focus, but might include: Rivers in American Literature (ENGL141), Indigenous Peoples and Climate Change (ENVS225), Systems Ecology (ENVS316), Systems Modeling (ENVS340), Structure and Reactivity in Chemistry (CHEM101), Earth Surface Processes (GEOL212), Groundwater Hydrogeology (GEOL242), Environmental Chemistry (CHEM208), Environmental Ethics (PHIL225), and Trace Analysis (CHEM341). Suggested *research methods* include: ENVS316, ENVS340, GEOL234, GEOL235, POLT205, STAT113/114.

Pathway Proposal Template

Your Statement of Goals and Intent and your Course Trajectory are both components of your Pathway Proposal. Once completed, share and discuss your proposal with your advisor. The final version of your proposal should then be submitted to the ES site on Blackboard as a single MSWord document using the filename “Firstname.Lastname.PathwayProposal.docx”.

A. Statement of Goals and Intent

Instructions Use the questions below as a template for your pathway proposal. *Include the headings and questions below* and replace the prompting text within the brackets with text describing your pathway.

Area of Interest: [Insert name of one of the established areas of interest from the list in the curricular pathways document]

Pathway Title: [Insert a short title that summarizes the more specific topic or approach that you plan to pursue]

Approval to share: [“Yes” indicates that the ES program has your permission to share your document with other majors. “No” indicates that you prefer not to have your proposal shared.]

Questions: Answer each question separately. Include the text of these questions above your answers. *Read all the questions first. Be as brief as possible and avoid repeating yourself.*

- 1) Describe the coherent theme embodied in your proposed pathway.
- 2) List and comment as necessary on the main questions that your proposed pathway is designed to answer.
- 3) What knowledge, skills, and expertise will your pathway help you develop?
- 4) Describe how the pathway relates to your educational goals at Oberlin and your plans beyond Oberlin.
- 5) What course work will be particularly important to achieving your pathway goals? What is your rationale for your proposed sequence of courses?
- 6) What opportunities outside of traditional course work might contribute to your pathway (i.e. winter term, summer, study away, extracurricular experiences, etc.)?
- 7) What ideas do you have for your capstone experience and how might the capstone experience fulfill the goals of your proposed pathway?

B. Course Trajectory

Instructions: In the area below, list by name and number the courses that you have taken and intend to take that are related to your ES major during each semester. Be certain that the complete set of courses fulfills all requirements on the ES Majors Checklist necessary for you to graduate. Distinguish between those courses that are related to your chosen pathway (**mark with a P**) and those that fulfill major requirements (**mark with an R**). If a course accomplishes both, mark it with both an **R** and a **P**. If you have a double major, you may find it helpful to also indicate key courses for your second major.

First Year, First Semester (Year):

First Year, Second Semester (Year):

Second Year, First Semester (Year):

Second Year, Second Semester (Year):

Third Year, First Semester (Year):

Third Year, Second Semester (Year):

Fourth Year, First semester (Year):

Fourth Year, Second Semester (Year):

Capstone Experience Proposal Template:

Instructions:

Use this template to describe how you anticipate that your capstone experience will contribute to the goals you defined in your pathway proposal.

Capstone Title: [Insert a short title that concisely describes your proposed capstone experience]

Approval to share: [“Yes” indicates that the ES program has your permission to share your document with other majors. “No” indicates that you prefer not to have your proposal shared.]

Questions:

Answer each question separately; include the text of these questions above your answers.

- 1) Describe the work that you intend to serve as your capstone experience. If there are products (final projects, reports, etc.) associated with your capstone, describe these.
- 2) Describe new skills and knowledge that you hope to develop as part of your capstone experience. How do you anticipate that these will apply, integrate, and further develop what you have learned in the course trajectory you are completing as part of your ES major at Oberlin?
- 3) Describe how you anticipate that the capstone experience you propose will contribute to the goals you defined in your curricular pathway.

Pathway Report Template

Instructions:

This is your opportunity to reflect on the ways in which your chosen pathway has (and has not) achieved the goals and intent you specified in your pathway proposal. You should review your initial pathway proposal and capstone proposal before completing this report. This is required for completion of the ES major. Once approved by your advisor, the report should be posted to the appropriate section of the ES Blackboard site using the filename "Firstname.Lastname.PathwayReport.doc"

Area of Interest: [Insert name of one of the established Area of Interests from the Curricular Pathways list]

Pathway Title: [Insert a short title that summarizes the more specific topic or approach that you plan to pursue]

Approval to share: ["Yes" indicates that the ES program has your permission to share your document with other majors. "No" indicates that you prefer not to have your proposal shared.]

Questions:

Answer each question separately and include the text of these questions above your answers.

- 1) In reflecting on your experience at Oberlin, to what extent did your pathway provide a coherent theme?
- 2) What questions did you address and how do these relate to those you initially proposed?
- 3) Describe the extent to which you developed the knowledge, skills and expertise articulated in your pathway proposal. Were there other skills you developed?
- 4) Describe the ways in which completion of a pathway contributed to your educational goals at Oberlin and your plans beyond Oberlin.
- 5) What course work proved to be most important to achieving the goals defined in your pathway?
- 6) What opportunities outside of traditional course work contributed to your pathway (i.e. winter term, summer, study away, extracurricular experiences, etc.)?
- 7) What challenges did you face while pursuing your pathway? Do you have suggestions for how the ES Program could improve the pathway experience?
- 8) Briefly describe your capstone experience. If there were products (final projects, reports, etc.) associated with your capstone, describe these (include links if relevant).
- 9) Describe any skills and knowledge you developed as a result of your capstone experience. How do these relate to (other) course work undertaken at Oberlin?

10) Describe how your capstone experience contributed to the goals you defined in your curricular pathway.

11) What challenges did you face while pursuing your capstone experience? Do you have suggestions for how the ES Program could improve the capstone experience?

Instructions for ES advisors and Majors for Posting Pathways Documents to Blackboard:

Documents associated with the Curricular Pathway requirement as well as an indication of each student's status in completing a pathway are managed by advisors and ES majors using Blackboard. This part of the ES Blackboard site is managed in a fashion similar to Blackboard sites for individual courses; all ES faculty advisors essentially function as course instructors and ES majors as students in a course. Periodically the ES Administrative Assistant will transfer information regarding the status of each student from Blackboard into Banner so that the Office of the Registrar can track and report completion of pathway requirements in degree audits. The procedures for students and faculty are as follows:

- 1) Students submit all pathway documents by navigating to the ES Program Blackboard site and clicking on the button, "Everything PATHWAY". This link opens a page with links that allow students to find the various templates and to submit their Pathway Proposal, Capstone Proposal, and Pathway Report. To submit a document, students click on the appropriate document link, browse to the file that they have created, attach the file and then submit this file. Further student revisions to the documents can be uploaded using the same procedure. The Blackboard site thereby maintains an archive of all versions uploaded. A student can verify the status of movement through the pathway process on Degree Works.
- 2) Since only approved documents are uploaded, faculty will then replace the exclamation mark in the Bb Gradebook with the MM/DD/YEAR to signify to the Administrative Assistant that the submitted work has been approved.