



UNIVERSITY OF WASHINGTON

OFFICE OF THE PRESIDENT

April 26, 2006

Mark A. Emmert, President

Acting Dean and Vice Provost Christine Ingebritsen  
Undergraduate Education  
Box 352800

Dean David C. Hodge  
College of Arts and Sciences  
Box 353765

Dear Christine and David:

Based on the recommendation of its Subcommittee on Admissions and Programs, the Faculty Council on Academic Standards has recommended approval of revised minor and major requirements for the Bachelor of Arts degree in Environmental Studies. A copy of the changes is attached.

I am writing to inform you that the Program on the Environment is authorized to specify the amended requirements beginning autumn quarter 2006.

The new requirements should be incorporated in printed statements and in individual department websites as soon as possible. The *General Catalog* website will be updated accordingly by the Registrar's Office.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Mark".

Mark A. Emmert  
President

Enclosure

cc: David Secord (with enclosure)  
Michelle Hall (with enclosure)  
Mr. Robert Corbett (with enclosure)  
Dr. Deborah H. Wiegand (with enclosure)  
Mr. Todd Mildon, J.D. (with enclosure ENVIR-20051227)

ENUCK-20051227  
revised



College: Interdisciplinary Undergraduate Programs  
Department or Unit: Program on the Environment Date: 12/27/2005

**New Programs**

- Leading to a Bachelor of \_\_\_\_\_ in \_\_\_\_\_ degree
- Leading to a Bachelor of \_\_\_\_\_ degree with a major in \_\_\_\_\_
- Leading to a \_\_\_\_\_ Option within the existing major in \_\_\_\_\_
- Leading to a Minor in \_\_\_\_\_

**Changes to existing programs**

- New Admission Requirements for the Major in \_\_\_\_\_ within the Bachelor of \_\_\_\_\_
- Revised Admission Requirements for the Major in \_\_\_\_\_ within the Bachelor of \_\_\_\_\_
- Revised Program Requirements for the Major in Environmental Studies within the Bachelor of Arts
- Revised Requirements for the Option in \_\_\_\_\_ within the major in \_\_\_\_\_
- Revised Requirements for the Minor in Environmental Studies

**Other Changes**

- Change name of program from \_\_\_\_\_ to \_\_\_\_\_
- New or Revised Continuation Policy for \_\_\_\_\_
- Eliminate program in \_\_\_\_\_

Proposed Effective Date: (quarter/year) Autumn / 2006

Contact Person	Phone Number	Email
David Secord or Michelle Hall	221-6140 or 616-1208	dave@u.washington.edu or hallm@u.washington.edu

1. **Explanation of and Rationale for Proposed Change:** (Please use additional pages if necessary. For new programs, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support, and departmental handouts.)

See attached Supporting Documents.

## Creating & Changing Undergraduate Academic Programs

### 2. Catalog Copy

A. Catalog Copy as Currently Written (*Include only sections/paragraphs that would be changed if your request is approved. Please cross out or otherwise highlight any deletions.*)

## Program on the Environment

274 Mary Gates Hall, Box 352802

The Program on the Environment (PoE) fosters and promotes interdisciplinary environmental education at the UW. As an interdisciplinary program merging multiple fields of study, PoE draws faculty from a wide array of disciplines, providing a unique opportunity for students and faculty to explore complex environmental issues from multiple perspectives.

### Undergraduate Program

Adviser

274 Mary Gates Hall, Box 352802

206-616-1208 or 206-616-2461

[poeadv@u.washington.edu](mailto:poeadv@u.washington.edu)

The ~~Program~~ program on the Environment offers the following programs of study:

- The Bachelor of Arts degree with a major in ~~E~~environmental ~~S~~studies
- A minor in ~~E~~environmental ~~S~~studies

### Bachelor of Arts

~~Suggested First and Second-Year College Courses: Major requirements 1-5 as listed below.~~

#### Department Admission Requirements

Students in good academic standing can declare this major at any time.

#### General Education Requirements

All majors must satisfy the College of Arts and Sciences general education requirements.

#### Major Requirements

~~85-90 credits as follows:~~

- ~~1. One course (5 credits) from MATH 112, MATH 124, MATH 145, Q SCI 110, or Q SCI 294.~~
- ~~2. One course (5 credits) from STAT 220, STAT 301, STAT 311, QMETH 201, or Q SCI 384.~~

## Creating & Changing Undergraduate Academic Programs

3. One course (5 credits) from CHEM 120 or CHEM 142.

4. One of the following (5 to 10 credits): BIOL 116, or BIOL 161 and BIOL 162, or BIOL 180 and BIOL 200 (or BIOL 201 and BIOL 203).

5. *Core Courses (15 credits):* ENVIR 201, ENVIR 202, ENVIR 203.

6. *Matrix Courses (40 credits):* Choose all courses from one of five options: ecology and conservation, population and health, resources, international perspectives, or an approved individualized curriculum. (The international perspectives option requires a one-quarter, 12-credit minimum, pre-approved study abroad component, which can count towards the matrix and/or the capstone requirements.) A list of approved courses is available on the program web site or from the advising office. In addition to the courses on the approved list, a maximum of 10 credits (of the 40 credits required) may be taken at the 100 and 200 level if pre-approved by the adviser.

7. *Capstone Experience (10 credits, to include at least 5 credits of ENVIR 491):* ENVIR 490, ENVIR 491, ENVIR 492.

Completion of requirements 1-5 above during freshman or sophomore years (or pre-transfer) is highly recommended.

### Minor

*Minor Requirements:* 30 credits, including 15 credits from ENVIR 201, 202, 203; an additional 15 credits drawn from a list of program "matrix" courses and/or the capstone experience. 10 credits of the additional 15 credits may overlap with the student's major. A minimum of 5 credits must be taken from the program "matrix" outside the general discipline of the student's major. See adviser for list of matrix courses.

### Student Outcomes and Opportunities

↳ *Learning Objectives and Expected Outcomes:* The Environmental Studies major offers an interdisciplinary approach to environmental problems and develops the following broad skill sets: taking an integrated approach to environmental issues; recognizing that dealing with the scientific aspect of environmental issues requires grappling with the cumulative nature of scientific disciplines; appreciating that some of the most profound differences in perspective are related to cultural and economic setting; understanding the difference between stating a viewpoint and marshalling evidence to make a compelling argument; being able to find relevant data and evaluate its quality; being able to distinguish between data and interpretation and being able to handle data in a quantitatively appropriate way; being able to present one's viewpoint and/or findings both in writing and orally in a public setting.

Because the degree culminates with a senior capstone experience that requires 210 hours of fieldwork or independent research, all PoE undergraduates develop professional skills specific to their capstone project, and many prepare for the experience by taking suites of courses to develop specific areas of expertise.

Graduates have pursued careers or graduate studies in policy, law, environmental planning, community organizing, environmental health, nonprofit administration, and environmental

## Creating & Changing Undergraduate Academic Programs

education:

- *Instructional and Research Facilities:* The Program on the Environment Multipurpose Room, centrally located in 258 Mary Gates Hall, houses a small library of environmental resources, contains computer workstations for students, and serves as a meeting and study space. Because PoE is an interdisciplinary program, its students access resources, laboratories, and field stations across a range of UW departments, colleges, and schools.
- *Honors Options Available:* Departmental Honors. See adviser for details.
- *Research, Internships, and Service Learning:* All environmental studies majors complete a senior capstone experience, which includes an internship with a community-based organization or government agency, an undergraduate research project, and/or international fieldwork or study abroad. Program on the Environment students receive a weekly email listing of internship and career opportunities. For information on identifying internship, research, and career opportunities, see the "Undergraduate Resources" section of the department's Web page.
- *Department Scholarships:* ~~None offered.~~
- *Student Organizations/Associations:* The UW Earth Club organizes the annual UW Earth Week events and year-round activities such as public-service projects, panel discussions, and social gatherings.

~~Of Special Note: Many students majoring in environmental studies also pursue a complementary Bachelor of Arts degree in humanities or social science or a complementary Bachelor of Science degree in physical or natural sciences, engineering, forestry, or fisheries. Students electing to pursue either a double major or a double degree are limited to 15 credits of overlap between the two major/degree programs.~~

B. Proposed Catalog Copy, Reflecting Requested Changes (*Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications.*)

# Program on the Environment

274 Mary Gates Hall, Box 352802

The Program on the Environment (PoE) fosters and promotes interdisciplinary environmental education at the UW. As an interdisciplinary program merging multiple fields of study, PoE draws faculty from a wide array of disciplines, providing a unique opportunity for students and faculty to explore complex environmental issues from multiple perspectives.

## Undergraduate Program

Adviser

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206-616-1208 or 206-616-2461

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The Program on the Environment offers the following programs of study:

- The Bachelor of Arts degree with a major in Environmental Studies
- A minor in Environmental Studies

## Bachelor of Arts

**Suggested First- and Second-Year Courses:** ENVIR 100, ENVIR 200, and all Foundational Courses listed below.

**Department Admission Requirements:** Students in good academic standing can declare this major at any time.

**General Education Requirements:** Majors must satisfy the College of Arts & Sciences general education requirements.

**Minimum GPA Requirements:** Students must achieve a minimum grade of 2.0 in each course presented for the major, except for the courses presented for the Biology, Chemistry and Statistics components of the Foundational Courses requirement. The average grade across the Biology, Chemistry, and Statistics courses must be a minimum of 2.0.

**Major Requirements:** 88 - 90 credits, distributed as follows:

### CORE COURSES (15 credits):

- Environmental Studies: Interdisciplinary Foundations (5 credits): ENVIR 100
- Environmental Studies: Research and Communication (5 credits): ENVIR 200
- Environmental Studies: Synthesis and Application (5 credits): ENVIR 300

# Creating & Changing Undergraduate Academic Programs

## FOUNDATIONAL COURSES (33 - 35 credits):

- Biology (10 credits): BIOL 161 and BIOL 162
- Chemistry (5 credits): CHEM 120
- Earth Systems Literacy (3 - 5 credits): One course from among ATM S 211, ESS 201, ESS / OCEAN 230, GEOG 205, OCEAN 200
- Statistics (5 credits): One course from among Q SCI 381, STAT 220, and STAT 311
- Values and Cultures (10 credits): Two courses from among ANTH 210, HSTAA 221, and PHIL 112

## ENVIRONMENTAL PERSPECTIVES AND EXPERIENCES (30 credits):

Complete a minimum of 30 credits from the list of approved courses available on the program website or from the advising office. Courses must be chosen to satisfy the Perspectives and Experiences requirements described below and at least 20 of these credits must come from 300- and 400-level classes.

*See Section 6 of this proposal for course list.*

### Perspectives

A minimum of three credits must be completed in each of the following Environmental Perspectives areas:

- Natural Sciences (3 credits): Consult list of approved courses
- Human and Social Dimensions (3 credits): Consult list of approved courses
- Policy and Decision-Making (3 credits): Consult list of approved courses
- Tools and Technologies (3 credits): Consult list of approved courses

### Experiences

A minimum of three credits must be completed of each of the following Environmental Experiences:

- Bioregional Studies and Experiences (3 credits): Designated with a **\*B\*** on course lists
- Global Studies and Experiences (3 credits): Designated with an **\*G\*** on course lists
- Fieldwork (3 credits): Designated with an **\*F\*** on course lists

**A course may count as both a Perspective and an Experience. However, a single course cannot count as two types of Environmental Experience, nor can it fulfill more than one Environmental Perspectives requirement. Environmentally related independent-study courses, study-abroad programs, as well as other courses not on the approved list may be used to fulfill Environmental Perspectives and Experiences requirements, but the PoE advising office must pre-approve such courses and programs.**

## CAPSTONE EXPERIENCE (10 credits):

- Pre-Capstone Seminar (2 credits): ENVIR 490
- Capstone Experience (5 credits): ENVIR 491
- Post-Capstone Seminar (3 credits): ENVIR 492

## Minor

## Creating & Changing Undergraduate Academic Programs

**Minor Requirements:** 30 credits, including ENVIR 100 (5 credits) and ENVIR 200 (5 credits); an additional 20 credits drawn from the Environmental Perspectives course list (see program website or advising office for list); at least one course (minimum of 3 credits) in each Environmental Perspectives course category: Natural Sciences, Human and Social Dimensions; Policy and Decision-Making; and Tools and Technologies. Of these additional 20 credits, at least 10 credits must be at the 300 or 400 level. Students must achieve a minimum 2.0 in each course presented for the minor.

### Student Outcomes and Opportunities

#### *Learning Objectives and Expected Outcomes:*

#### **Environmental Studies Student Learning Objectives**

The Environmental Studies major at the University of Washington offers a rigorous, interdisciplinary, experiential curriculum designed to prepare future environmental leaders to respond to bioregional and global environmental opportunities and challenges. It seeks to take full advantage of the extraordinary environmental research at the University of Washington, and make that social, scientific, humanistic, and professional expertise accessible to students in innovative ways.

#### **Students completing the B.A. in Environmental Studies will be able to:**

- 1. Earth Systems Knowledge:** Understand the structure, function, and integration of the Earth and its inhabitants and its four major spheres: land, water, living things, and air.
- 2. Interdisciplinary Approach:** Use an interdisciplinary approach to the study of the environment, knowledgeably integrating multiple kinds of information, tools, methods, and scholarship from a variety of disciplines to analyze and construct arguments about complex environmental issues.
- 3. Experiential Learning:** Understand the connections between classroom and experiential learning and successfully practice multiple forms of hands-on, real-world applications.
- 4. Communication:** Demonstrate proficiency in multiple modes of communication (writing for different audiences and purposes and using a range of disciplinary norms, oral presentations and public speaking, online publishing, and the visual display of environmental information).
- 5. Public Policy & Decision-Making:** Understand how uncertainty, risk, law, politics, ethics, economics and culture interact with environmental public policy and decision-making.
- 6. Teamwork:** Collaborate as members of teams, effectively working with multiple stakeholders from various backgrounds to address environmental issues.
- 7. History of Environmental Inquiry:** Understand and reflect critically on the intellectual and cultural history of environmental studies including the history of environmental preservation and conservation.
- 8. Temporal Scales:** Understand various temporal scales inherent in environmental studies and situate themselves on the continuum of geologic time, evolutionary history, human environmental history, and decision-making for future generations.
- 9. Spatial Scales:** Understand various spatial scales inherent in environmental studies, spanning the continuum from the local/bioregional to the international/global.
- 10. Diversity:** Understand how environmental perspectives, policies, and decisions are related to issues of diversity, privilege, and power.
- 11. Technical Knowledge:** Be familiar with some of the technological tools commonly used to address environmental challenges.
- 12. Professional Development:** Understand how their education will serve them as environmental professionals.

- *Instructional and Research Facilities:* The Program on the Environment Multipurpose Room, centrally located in 258 Mary Gates Hall, houses a small library of environmental resources and serves as a meeting and study space. Because PoE is an interdisciplinary



## Creating & Changing Undergraduate Academic Programs

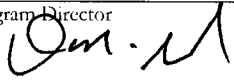

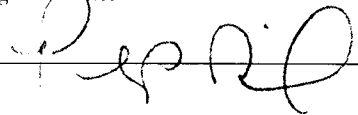
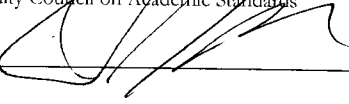
program, its students access resources, laboratories, and field stations across a range of UW departments, colleges, and schools.

- *Honors Options Available:* Departmental Honors. See adviser for details.
- *Research, Internships, and Service Learning:* All environmental studies majors complete a senior capstone experience, which includes an internship with a community-based organization or government agency, an undergraduate research project, and/or international fieldwork or study abroad. Program on the Environment students receive a weekly email listing of internship and career opportunities. For information on identifying internship, research, and career opportunities, see the "Undergraduate Resources" section of the department's Web page.
- *Department Scholarships:* Periodic funding available for fieldwork, training, and travel.
- *Student Organizations/Associations:* The UW Earth Club organizes the annual UW Earth Week events and year-round activities such as public-service projects, panel discussions, and social gatherings.

*Of Special Note:*

Students who are pursuing a double major / degree may apply no more than 15 credits of coursework presented for their second major / degree toward the Environmental Perspectives and Experiences requirement.

### 3. Signatures (required)

Chair/Program Director 	Date 4/14/06	Dean 	Date 4/14/06
College Committee 	Date APR 19 2006	Faculty Council on Academic Standards 	Date 4-21-06

**University of Washington  
Program on the Environment**

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**Supporting Documents:  
Proposed Revised Requirements for  
Bachelor of Arts Major and Minor in Environmental Studies**

<b>1) Rationale for Changes</b>	.	.	.	.	<b>2</b>
<b>2) New Learning Goals</b>	.	.	.	.	<b>4</b>
<b>3) Description of New Requirements</b>	.	.	.	.	<b>5</b>
<b>4) Course Selection Criteria</b>	.	.	.	.	<b>7</b>
<b>5) Course List for Perspectives and Experiences Requirements</b>	.	.	.	.	<b>8</b>

**Appendix A: Syllabi for New Core Courses**

**Appendix B: Complete Course Lists with Catalogue Descriptions**

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*Submitted December, 2005*

## **Rationale for Changes**

### **Program on the Environment: BA in Environmental Studies Rationale for Proposed Degree Changes, December 2005**

**Background:** The Program on the Environment began offering a B.A. and Minor in Environmental Studies in Autumn of 1998. Since that time, we have frequently reviewed and adjusted the curriculum within the context of working groups, retreats, and faculty committees, with an eye toward continuous improvement and excellence. Now in its seventh year, the degree program has grown to 106 current majors and 22 minors and has produced 212 alumni (168 majors; 44 minors) who are working in the public, private and nonprofit sectors (e.g. Seattle City Light, Parametrix, and The Nature Conservancy, among many others). Our alumni have also pursued graduate studies in a range of fields including public affairs, law, environmental science, forest resources, and public health at universities such as Cambridge University, Duke University, Fordham University, Emory University, Seattle University, and the University of Washington, among many others.

**Moving Environmental Studies to the Next Level:** Having grown to a mature and stable program, we are now poised to create a vision for our next 5-7 years of growth and evolution and revise our program to meet those goals. We are now proposing the most significant changes in our curriculum since its inception. These improvements result from an 18-month process described below, and are designed to make this program among the best Environmental Studies programs in the nation. The changes are designed to bring renewed focus and rigor to the program in light of new Learning Goals, reflect the unique environmental research strengths of the UW, and showcase emerging best practices in undergraduate environmental education specifically, and interdisciplinary programs generally.

**Summary of Process:** The proposed degree changes have emerged from an 18-month process of self-study, input, and consensus building. In September and November, 2004, PoE hosted two university-wide retreats to get input on how it can best serve the entire University, and specifically on what should be the key elements of a BA education in Environmental Studies. Following on those events, we did extensive work with Cathy Beyer, Research Scientist with the UW Office of Educational Assessment, to develop new Learning Goals for the BA degree. We wanted to ensure that students emerged from the transformed program with a clear sense of what they know, what they can do, and how their education is distinct from other UW degrees and other environmental programs nationwide. To this end, we joined the Council of Environmental Deans and Directors (CEDD), a national leadership body for more than 100 of our peer programs, and consulted with Dr. Will Focht of CEDD, who led a national study of the structure and function of academic programs in Environmental Studies and Environmental Science. We developed multiple drafts of our Learning Goals, vetted by Ms. Beyer, Dr. Focht, the Program on the Environment Governing Board (with its representation by faculty across the UW campuses), PoE co-directors (a biologist and a chemist) and instructors (both longtime and new in multiple disciplines), alumni and current students, and selected topical groups of faculty. Based on the Learning Goals and continued consultation with the above groups, we modified our old curriculum to explicitly deliver each learning goal, preferably in multiple places, with increasing sophistication and measurable outcomes in mind.

**Overview of Improvements to the Degree:** Like all interdisciplinary majors, our old and new degrees are somewhat more complex in their goals, structure and function than a typical disciplinary degree. We have, however, created a simplified, streamlined, and more focused and

rigorous degree in Environmental Studies that gives students unique access to the extraordinary environmental expertise at the UW. Key improvements are:

- *Simplified degree options / tracks.* We have eliminated the degree options, creating a simplified structure that maps directly to our learning goals and is easier for students to understand and navigate. Flexibility is retained so that once students have received core content, skills, and experiences, they can still pursue more topical interests within the structure of the major.
- *Improved foundational content.* We have added new foundational requirements in Earth Systems Literacy and Values and Culture, dropped Biology 116 as an option for foundations in biological science since its content is too narrow to meet our Learning Goals, and changed our quantitative requirement as follows. Instead of requiring both statistics and calculus (very unusual for BA degrees), we retain the statistics requirement but add a new upper-level “Tools and Technologies” requirement. The latter meets some of the original intent of the current basic quantitative requirement, but ties these skills to environmental content and gives students more marketable exposure to advanced statistics, GIS, modeling, etc.
- *New core.* Unlike the old ENVIR 200-series of three overlapping sophomore courses, the new courses are progressive and build on each other, culminating in better preparation for the Senior Capstone Experience, which we retain. These new classes allow us to have more ownership over content and skills, build a community or cohort among students (critical in an interdisciplinary program that lacks its own dedicated faculty), and ensure that learning goals such as research and writing across disciplines, sophisticated analysis of complex problems, numeracy, temporal and spatial scales, and bioregional and global perspectives are met. These courses are new, distinct and meet specific learning goals.
- *Simplified “matrix”:* We have greatly simplified and shortened the list of approved courses for the matrix portion of our old degree, reframing the former “Domains of Knowledge” into a streamlined “Perspectives and Experiences” set of requirements. Consistent with UW strengths and national trends, we have also added new emphases on bioregional, international, and field-based content.

**Impact on students:** We believe that students will have a greatly enhanced educational experience with these changes. There should be few if any adverse impacts on access or time to degree. Specifically, transfer students can easily complete all the foundational courses except the Values and Culture requirement at the community college level. Current UW students should see that all of the new Foundational Courses are offered regularly and open to non-majors. The new list of approved courses for the Perspectives and Experiences requirements consists largely of courses that are offered regularly, are open to non-majors, and have few if any prerequisites other than the Foundational Courses. The Capstone Experience requirement will not change, but students will be much better prepared to succeed in the Capstone with the improvements in the rest of the curriculum.

**We believe our curricular improvements and the 18-month process that led to them reflect new UW emphases on clear learning goals, interdisciplinary approaches, experiential learning and community engagement, rigor and balance, faculty and student research on environmental topics, and best practices in undergraduate environmental education.**

## **Environmental Studies Student Learning Objectives**

The Environmental Studies major at the University of Washington offers a rigorous, interdisciplinary, experiential curriculum designed to prepare future environmental leaders to respond to bioregional and global environmental opportunities and challenges. It seeks to take full advantage of the extraordinary environmental research at the University of Washington, and make that social, scientific, humanistic, and professional expertise accessible to students in innovative ways.

Students completing the B.A. in Environmental Studies will be able to:

**1. Earth Systems Knowledge:** Understand the structure, function, and integration of the Earth and its inhabitants and its four major spheres: land, water, living things, and air.

**2. Interdisciplinary Approach:** Use an interdisciplinary approach to the study of the environment, knowledgeably integrating multiple kinds of information, tools, methods, and scholarship from a variety of disciplines to analyze and construct arguments about complex environmental issues.

**3. Experiential Learning:** Understand the connections between classroom and experiential learning and successfully practice multiple forms of hands-on, real-world applications.

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**6. Teamwork:** Collaborate as members of teams, effectively working with multiple stakeholders from various backgrounds to address environmental issues.

**7. History of Environmental Inquiry:** Understand and reflect critically on the intellectual and cultural history of environmental studies including the history of environmental preservation and conservation.

**8. Temporal Scales:** Understand various temporal scales inherent in environmental studies and situate themselves on the continuum of geologic time, evolutionary history, human environmental history, and decision-making for future generations.

**9. Spatial Scales:** Understand various spatial scales inherent in environmental studies, spanning the continuum from the local/bioregional to the international/global.

**10. Diversity:** Understand how environmental perspectives, policies, and decisions are related to issues of diversity, privilege, and power.

**11. Technical Knowledge:** Be familiar with some of the technological tools commonly used to address environmental challenges.

**12. Professional Development:** Understand how their education will serve them as environmental professionals.

## **Description of New Requirements**

### ***Proposed New Degree and Minor Requirements Beginning Autumn 2006***

#### **Bachelor of Arts with a Major in Environmental Studies**

**Suggested First- and Second-Year Courses:** ENVIR 100, ENVIR 200, and all Foundational Courses listed below.

**Department Admission Requirements:** Students in good academic standing can declare this major at any time.

**General Education Requirements:** Majors must satisfy the College of Arts & Sciences general education requirements.

**Minimum GPA Requirements:** Students must achieve a minimum 2.0 in each course presented for the major, except the courses presented for the Biology, Chemistry and Statistics Foundational requirement. The average grade across the Biology, Chemistry, and Statistics courses must be a minimum of 2.0.

**Major Requirements:** 88 - 90 credits, distributed as follows:

#### **CORE COURSES (15 credits):**

- Environmental Studies: Interdisciplinary Foundations (5 credits): ENVIR 100
- Environmental Studies: Research and Communication (5 credits): ENVIR 200
- Environmental Studies: Synthesis and Application (5 credits): ENVIR 300

#### **FOUNDATIONAL COURSES (33 - 35 credits):**

- Biology (10 credits): BIOL 161 and BIOL 162
- Chemistry (5 credits): CHEM 120
- Earth Systems Literacy (3 - 5 credits): One course from among ATM S 211, ESS 201, ESS / OCEAN 230, GEOG 205, OCEAN 200
- Statistics (5 credits): One course from among Q SCI 381, STAT 220, and STAT 311
- Values and Cultures (10 credits): Two courses from among ANTH 210, HSTAA 221, and PHIL 112

#### **ENVIRONMENTAL PERSPECTIVES AND EXPERIENCES (30 credits):**

*See Section 6 of this proposal for course list.*

#### **Perspectives**

Complete a minimum of 30 credits from the list of approved courses available on the program website or from the advising office. At least 20 of these credits must come from 300- and 400-level classes. A minimum of three credits must be completed in each of the following Environmental Perspectives areas:

- Natural Sciences (3 credits): Consult list of approved courses

- Human and Social Dimensions (3 credits): Consult list of approved courses
- Policy and Decision-Making (3 credits): Consult list of approved courses
- Tools and Technologies (3 credits): Consult list of approved courses

## **Experiences**

Within this 30-credit requirement, students must complete at least three credits in each of the following types of Environmental Experiences:

- Bioregional Studies and Experiences (3 credits): Designated with a *\*B\** on course lists
- Global Studies and Experiences (3 credits): Designated with an *\*G\** on course lists
- Fieldwork (3 credits): Designated with an *\*F\** on course lists

A course may count as both a Perspective and an Experience. However, a single course cannot count as two types of Environmental Experience, nor can it fulfill more than one Environmental Perspectives requirement. Environmentally related independent-study courses, study-abroad programs, as well as other courses not on the approved list may be used to fulfill Environmental Perspectives and Experiences requirements, but the PoE advising office must pre-approve such courses and programs.

Students who are pursuing a double major / degree may apply no more than 15 credits of coursework presented for their second major / degree toward the Environmental Perspectives and Experiences requirement.

## **CAPSTONE EXPERIENCE (10 credits):**

- Pre-Capstone Seminar (2 credits): ENVIR 490
- Capstone Experience (5 credits): ENVIR 491
- Post-Capstone Seminar (3 credits): ENVIR 492

## **Minor in Environmental Studies**

**Minor Requirements:** 30 credits, including ENVIR 100 (5 credits) and ENVIR 200 (5 credits); an additional 20 credits drawn from the Environmental Perspectives course list (see program website or advising office for list); at least one course (minimum of 3 credits) in each Environmental Perspectives course category: Natural Sciences, Human and Social Dimensions; Policy and Decision-Making; and Tools and Technologies. Of these additional 20 credits, at least 10 credits must be at the 300 or 400 level. Students must achieve a minimum 2.0 in each course presented for the minor.

## Selection Criteria and Rationale for Course Lists

### Core Courses

<u>ENVIR 100</u>	Meets Learning Goals # 1, 2, 5, 6, 7, 8, 9, 10.
<u>ENVIR 200</u>	Meets Learning Goals # 2, 4, 5, 6, 7, 9, 10.
<u>ENVIR 300</u>	Meets Learning Goals # 1, 2, 5, 8, 9, 11.

### Foundational Courses

<u>Biology</u>	Meets Learning Goal #1. Course Selection: Courses on this list cover living systems from the subcellular to the ecosystem level. Topics include structure, function, and diversity of plants and animals; general ecology and evolution.
<u>Chemistry</u>	Meets Learning Goal #1. Course Selection: Courses on this list cover matter and energy, chemical nomenclature, chemical reactions, stoichiometry, modern atomic theory, and chemical bonding and structure.
<u>Earth Systems Literacy</u>	Meets Learning Goals #1, 8, 9. Course Selection: Courses on this list examine interactions among the physical and biogeochemical processes of the atmosphere, hydrosphere, and lithosphere.
<u>Statistics</u>	Meets Learning Goals # 11. Course Selection: Courses on this list cover numerical and graphical description of data, correlation and regression, sampling, and inference, significance tests.
<u>Values and Cultures</u>	Meets Learning Goals # 7, 10. Course Selection: Courses in this list focus on the relationship between human cultures and the natural environment; includes historical, ethical, and anthropological inquiries.

### Environmental Perspectives

<u>Human &amp; Social Dimensions</u>	Meets Learning Goals # 5, 7, 9, 10. Course Selection: These courses examine human societies' interactions with the natural world, as well as the forces that shape such interactions, including demographics; racial, ethnic, class and gender divisions; interest groups and popular movements; spatial features and relationships; religious and secular values; and the expression of such values in education, literature, and the arts.
<u>Natural Sciences</u>	Meets Learning Goal # 1. Course Selection: These courses advance students' knowledge of interactions among the physical, chemical, and biological components of the environment, including their reciprocal effects on humans and other organisms.
<u>Policy &amp; Decision-making</u>	Meets Learning Goal # 5. Course Selection: These courses examine issues of governance, such as natural resource economics, conflict resolution, politics, and the creation and implementation of policy.
<u>Tools &amp; Technologies</u>	Meets Learning Goals # 8, 9, 11. Course Selection: These courses provide students practical experience with and knowledge of technologies and tools used in environmental assessment, including Geographic Information Systems (GIS), environmental modeling, aerial and remote sensing, quantitative analysis, experimental design, mapping, and monitoring methods.

### Environmental Experiences

<u>Fieldwork</u>	Meets Learning Goal # 3. Course Selection: These courses require a minimum of one-third of classroom contact hours spent in direct engagement with content, sites, problems, and/or people beyond the classroom or laboratory.
<u>Bioregional</u>	Meets Learning Goals # 1, 9. Course Selection: These courses devote at least one half of their content to place-based analysis of integrated social and / or natural systems in all or part of the Pacific Northwest bioregion.
<u>Global</u>	Meets Learning Goal # 9. Course Selection: These courses may compare how various nations, regions, or cultures respond to environmental concerns. These courses must devote at least one-half of their content to environmental matters outside the United States. If students consult with the advising office in advance, environmentally related study-abroad experiences can fulfill this requirement.

### Capstone

<u>ENVIR 490</u>	Meets Learning Goals # 2, 4, 12.
<u>ENVIR 491</u>	Meets Learning Goals # 3, 4, 6, 12.
<u>ENVIR 492</u>	Meets Learning Goals # 2, 3, 4, 6, 12.



## Environmental Perspectives and Experiences Course List

Human & Social Dimensions (19)	Natural Sciences (34)	Natural Sciences	Policy & Decision-making (21)	Tools & Technologies (21)
ANTH / ENVIR 371	ATM S 212	ESS 303 (B, F)	ECON / ENVIR 235	BIOL / FISH 438
ANTH / ENVIR 451 (G)	BIOL 222 (B)	ESS 315/ ENVIR 313	ENV H 472	ENVIR 215
ANTH 457	BIOL 223	FISH 312	ESRM 315 (B)	ESRM 250
ANTH / ENVIR 459	BIOL 226	FISH / ESRM 328	ESRM 400	ESRM 304
ANTH / AES 487	BIOL/FISH/OCEAN 250	FISH / SMA 350	ESRM 425	ESRM 430
C LIT 396 / ENVIR 450	BIOL 330 (F)	FISH 447	ESRM 458	ESS 421
ESRM 371 / SOC 379 / ENVIR 379	BIOL 333 (F)	FISH 457	ESRM / ENVIR 460	FISH 210
GEOG 270	BIOL 356	FISH 473	ESRM 465	FISH / OCEAN 453
GEOG 280	BIOL 476	FISH / BIOL / ENVIR 478	ESRM 470	FISH 457
GEOG / SIS 335 (G)	ENV H 311	OCEAN / ENVIR 260 (B)	FISH 323	GEOG 258
GEOG 371 (G)	ENV H 451	OCEAN 310 (B, F)	FISH / ENVIR 439	GEOG 360
GEOG / SISA 372 (G)	ENV H 472	PHYS 204	GEOG 370	GEOG 471
GEOG 380	ENV H 490		POL S 383 (G)	L ARCH 300
GEOG 472	ESRM 210		POL S / ENVIR 384 (G)	L ARCH 303
GEOG 480	ESRM 310 (B, F)		SIS / SCAND 350 / ENVIR 360 (G)	ME / CHEM E / ENVIR 341
L ARCH 361	ESRM 311 (B)		SISEA / ANTH 406 (G)	ME / ENVIR 415 / CEE 495
SIS / SMA / ENVIR 433 (G)	ESRM 350		SISEA / SOC 434 (G)	ME / CHEM E / ENVIR 442
SIS 430 (G)	ESRM / ENVIR 362 (F)		SMA / ENVIR 476	OCEAN / FISH 452 (F)
URDBP 461	ESRM 401 (B, F)		SMA / FISH / ENVIR 480	Q SCI 110
	ESRM 415		URDBP 300	Q SCI 291
	ESRM 452 (F)		URDBP 450	URBDP 467
	ESS 301 (B)			

**Note:** “B” indicates courses that meet the Bioregional Studies & Experiences requirement.  
“G” indicates courses that meet the Global Studies & Experiences requirement.  
“F” indicates courses that meet the Fieldwork requirement.