

**VERSION 8/12/08**

**CATALOG DESCRIPTION—BACHELORS OF SCIENCE IN ENVIRONMENTAL STUDIES**

**Environmental Studies, B.S.**

The B.S. in Environmental Studies will provide students with an understanding of the natural science of environmental issues as well as the social, political, and economic factors that contribute to policy and planning decisions. Through this program, students will gain the necessary professional and technical skills for entry into successful environmental careers or for graduate studies in environmental fields.

**Requirements for B.S. in Environmental Studies**

The requirements for the B.S. in Environmental Studies have three parts: 1) Foundational courses in supporting disciplines. Some of these courses also serve as prerequisites for courses within the specializations. These foundational courses must be completed before students take ENST 304. 2) A core requirement consists of six interdisciplinary ENST courses, two upper level electives, and a capstone experience outside of the classroom (research, internship, service learning, or study abroad). 3) A specialization consisting of 6-8 courses that focus on one area of study.

**Foundational courses**

BIOL 101/101 Lab or BIOL 181/181 Lab or BIOL 200 .....	5
CHEM 101/101 Lab or CHEM 111/111 Lab or CHEM 181/181 Lab.....	5
GEOG 101 or GEOG 107 or GEOL 101 or GEOL 102 or GEOL 108.....	5
ANTH 130 or GEOG 108.....	5
ECON 101 or ECON 201.....	5

**Subtotal Foundational Credits: 25**

**Core courses**

ENST 201 Earth as an Ecosystem or ENST 202 Ecosystems, Resources, Populations, and Culture.....	5
ENST 210 The Global Environment from a Local Perspective.....	5
ENST 303 Environmental Management.....	5
ENST 304 Environmental Methods and Analysis.....	5
ENST 455 Environmental Literature.....	3
ENST 444 Environmental Policy Formulation.....	4
ENST 495 or other 495 Senior Research..... or ENST 490 Cooperative Education or UNIV 309 Service Learning or Study Abroad	3-5

Upper level electives.....7-10

Select two of the following, these courses can not be used to fulfill specialization requirements:

ANTH/GEOG 440 Ecology and Culture

ANTH 398 Anthropological Perspectives on the Environment  
ANTH/GEOG 498 Native American Resource Issues  
BIOL 302 Human Ecology  
BIOL 362 Biomes of the Pacific Northwest  
ECON 462 Economics of Energy, Resources, and Environment  
GEOG 303 Introductory GIS  
ENST 310 Energy and Society  
GEOG/IET 442 Alternative Energy Resources and Technology  
GEOG 350 Resources, Population, and Conservation  
GEOG 448 Resource and Environmental Analysis  
GEOL 302 Oceans and Atmosphere  
GEOL 380 Environmental Geology and Natural Hazards  
CMGT 452 LEED in Sustainable Construction  
HIST 454 American Environmental History  
PHIL 306 Environmental Ethics

**Subtotal Core Credits: 37-42**

**Select one of the following specializations:**

**Environmental Biology specialization 33-34 credits**

BIOL 181/181 Lab and CHEM 181/181 Lab are required as foundational courses for this specialization.

BIOL 182/182 Lab Biology 2 (5)

BIOL 183 Biology 3 (5)

CHEM 182 and CHEM 183 and LABS General Chemistry (10)

BIOL 213 Quantitative Methods in Biology (4)

BIOL 360 General Ecology (5)

Choose 1 field course from: (4-5)

BIOL 362 Biomes of the Pacific Northwest  
or BIOL 377 and LAB Regional Natural History  
or BIOL 462 Wildlife and Fisheries Ecology  
or BIOL 463 Limnology  
or BIOL 464 Terrestrial Plant Ecology  
or BIOL 466 Conservation Biology  
or BIOL 467 Biological Field Methods

**Environmental Chemistry specialization 30 credits**

CHEM 181/181 Lab is required as a foundational course for this specialization.

CHEM 182/182 Lab and CHEM 183/183 Lab General Chemistry (10)

CHEM 332 Quantitative Analysis (5)

CHEM 345 Environmental Chemistry (5)

MATH 154 Precalculus II (5)

Select one from: (5)

GEOL 425 Environmental Geochemistry  
or BIOL 220 Introductory Cellular Biology  
or CHEM 452 Instrumental Analysis

**Environmental Geology specialization    32-34 credits**

GEOL 101 or GEOL 102 or GEOL 108 is required as a foundational course for this specialization.

GEOL 101 Lab Intro to Physical Geology Lab (1)

GEOL 200 Earth Evolution and Global Change (5)

GEOL 302 Oceans and Atmosphere (4)

GEOL 380 Environmental Geology and Natural Hazards (4)

GEOL 386 Geomorphology (5)

GEOL 445 Hydrogeology (5)

MATH 154 Precalculus II (5)

Choose 1 field course from: (3-5)

    GEOL 210 Introduction to Geological Field Methods

    or GEOL 377 and LAB Regional Natural History

    or GEOL 410 Snow Sciences: The Physics of Avalanches

**Physical Geography Specialization        29 credits**

GEOG 107 is required as a foundational course for this specialization.

GEOG 303/403 Introduction to GIS (5)

GEOG 361 Soils (5)

GEOG 382 Hydrology (5)

GEOG 386 Geomorphology (5)

GEOG 409 Quantitative Methods in Geography (5)

GEOG 450 Geography of Arid Lands,

    or GEOG 451 Mountain Environments,

    or GEOG 452 Coastal Environments,

    or GEOG 479 Geography of the West (4)

**Water and Air Quality Specialization    35 credits**

BIOL 181/181 Lab and CHEM 181/181 Lab are required as foundational courses for this specialization.

MATH 154 Precalculus II (5)

CHEM 182/182 Lab and CHEM 183/183 Lab General Chemistry (10)

CHEM 345 Environmental Chemistry (5)

BIOL 220 Introductory Cellular Biology (5)

BIOL 322 Introductory Microbiology (5)

GEOL 425 Environmental Geochemistry (5)

**Total credits: 91-102 credits**

## **Environmental Studies Courses**

**ENST 298.** Special Topics (1-6).

**ENST 201.** Earth as an Ecosystem (5). Introduction to the concept of our planet as a finite environment with certain properties essential for life. The dynamic nature of the earth physical, chemical, geological and biological processes and their interrelated systems aspects furnishes the thrust of this treatment.

**ENST 202.** Ecosystems, Resources, Population, and Culture (5). The physical and cultural dimensions of environmental problems with particular emphasis given to the interaction between ecosystems, basic resources, population dynamics, and culture.

**ENST 210.** Global Environment from a Local Perspective (4). Students will collect, analyze, and synthesize original field data in natural and behavioral science on environmental issues relevant to global and local communities. Prerequisite, ENST 201 or ENST 202 or permission of instructor.

**ENST 303.** Environmental Management (5). Development of attitudes and perceptions of our environment. Examination of the economic, political and legal mechanisms and philosophical perspectives useful in managing the environment. Prerequisite, ENST 201 or ENST 202 or permission of instructor.

**ENST 304.** Environmental Methods and Analysis (5). Introduction to qualitative and quantitative methods in the social and natural sciences with emphasis on practical application to a variety of examples in the environment. Prerequisite, ENST 201 or ENST 202 or permission of instructor.

**ENST 310.** Energy and Society (5). Through classroom and field experience, students will examine society's use of, and dependence upon, energy. Students will become more discerning citizens, able to take part in local, national and global energy discussions.

**ENST 398.** Special Topics (1-6).

**ENST 444.** Environmental Policy Formulation (4). Students will work together in interdisciplinary teams to formulate and justify policy measures they think appropriate to meet some environmental problem investigated. Prerequisite, ENST 201 or 202 and ENST 303 or permission of instructor.

**ENST 455.** Environmental Literature (3). Survey of literary works that thematically explore human relationships with place and environment. Sampling of various themes and genres, with a focus on Pacific Northwest.

**ENST 490.** Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

**ENST 491.** Workshop (1-6).

**ENST 496.** Individual Study (1-6). Prerequisite, permission of instructor.

**ENST 498.** Special Topics (1-6).

**ENST 499.** Seminar (1-5).