

## **Huxley College of the Environment 2009/2010 Minors**

### **Notes on Huxley College minors**

- Any student may complete a minor at Huxley. (The Environmental Science minor is designed to complement a major in a related science. Planning and Environmental Policy and Environmental Studies/Economics majors may not minor in Environmental Policy)
- Students do not need to complete an application to Huxley to complete a minor.
- Non-Huxley majors wishing to register for classes to fulfill a minor should sign up on the appropriate waiting list available in the department offices: Environmental Studies Department AH 217, 650-3277, [diane.knutson@wwu.edu](mailto:diane.knutson@wwu.edu); Environmental Sciences Department ES 522, [diane.peterson@wwu.edu](mailto:diane.peterson@wwu.edu). Registration is restricted to Huxley majors for many upper-division courses.
- Students on waiting lists who are minors and pre-majors have first priority placement into Huxley courses after Huxley students have registered. Non-Huxley majors may face difficulty gaining access to Huxley policy and law classes as well as environmental science field classes.
- Students are expected to have any prerequisites required for courses in the minor. (This especially applies to the Environmental Science minor, for which several courses require a year of biology, a year of chemistry and calculus.)
- To declare a minor, complete a minor declaration card available in the Huxley Dean's Office ES 539 and return to Mary Moores or Kathryn Patrick, Huxley College Advising in the Environmental Studies Building Room 539.
- See Mary Moores for minor evaluation for graduation application and for questions regarding electives if faculty advisor(s) not listed.

### **Minor – Environmental Education (Advisors: Gene Myers) 26 credits**

- ESTU 371 Environmental Education (4 credits)
- ESTU 372 The Environmental Education Curriculum (4 credits)
- ESCI 330 Natural History of the Pacific Northwest (4 credits) (Limited access may require a substitution for ESCI 330. See Huxley College Registrar for details.)
- One of the following (4 credits)
  - ESTU 305 Environmental History and Ethics (4)
  - ESTU 488 The History of Conservation in America (4)
- Electives under advisement (10 credits)
  - EDUC 309
  - ESCI 325, 326, 340
  - ESTU 300- and 400-level
  - FAIR 331N, 335N, 339N (maximum 1 course allowed)

### **Minor – Environmental Studies 24 credits**

Huxley's environmental studies minor is open to all students at Western who have completed prerequisites for the courses required for the minor.

- ESCI 101 Environmental Studies: The Scientific Approach (3 credits)
- ESTU 202 Environmental Studies: The Social Science Approach (3 credits)
- Two of the following (8 credits minimum)
  - ESCI 310 Environmental Systems (4 credits)
  - ESTU 303 Human Ecology (4 credits)
  - ESTU 304 Environment and Resource Policy (4 credits)
  - ESTU 305 Environmental History and Ethics (4 credits)
- Environmental Studies electives under advisement (10 credits)
  - EGEO 331, 350, 362, 363, 434, 461
  - ESCI 300- and 400-level
  - ESTU 300- and 400-level
  - FAIR 331N, 335N, 339N (maximum 1 course allowed)

### Minor – Environmental Science 24-29 credits

Huxley's environmental science minor is open to students whose majors in the science disciplines would be complemented by an environmental science minor and who have completed prerequisites for the courses comprising the minor.

- ESCI 101 Environmental Studies: A Scientific Approach (3 credits)
- ESCI 302 Environmental Disturbances (4 credits)
- ESCI 325 Fundamentals of Ecology (3 credits)
  
- One course from the large-scale systems area and one lab/lecture course (8 credits minimum)

#### *Large-scale Systems courses*

ESCI 321	Oceanography (4 credits)
ESCI 435	Landscape Ecology (4 credits)
ESCI 492	Effects of Global Climate Change (3 credits)
EGEO 330	Geography of Landforms (4 credits)
EGEO 331	Climatology (4 credits)
EGEO 433	Climate and Biophysical Processes (4 credits)

#### *Lab/Lecture courses*

ESCI 321/322	Oceanography/Oceanography Lab (6 credits)
ESCI 361/362	Water Quality/Water Quality Lab (5 credits)
ESCI 407	Forest Ecology (5 credits)
ESCI 408	Field Methods in Wildlife Ecology (5 credits)
ESCI 410/411	Forest Fish Interactions (3); Forest and Fish Assessment (2 credits)
ESCI 421/425	Aquatic Ecology/Fisheries Management Lab (5 credits)
ESCI 423	Past Environments of the Pacific Northwest (4 credits)
ESCI 426	Marine Invertebrates and Their Environment (5 credits)
ESCI 429	Stream Ecology (5 credits)
ESCI 430	Limnology/Limnology Lab (5 credits)
ESCI 440	Wetlands Ecology (5 credits)
ESCI 442	Introduction to Remote Sensing (5 credits)
ESCI 455/457	Environmental Toxicology I/ Environmental Toxicology I Lab (8 credits)
ESCI 456/458	Environmental Toxicology II/ Environmental Toxicology II Lab (8 credits)

- Upper-division environmental science electives under advisement (6 credits)
  - BIOL 326, 340
  - EGEO 331, 332, 350, 430, 434 (maximum 1 course allowed)
  - ESCI 300- and 400-level

### Minor – Environmental Policy (advisers: Jean Melious, Grace Wang) 20-25 credits

Huxley's environmental policy minor is open to students whose majors would be complemented by a minor in environmental policy and who have completed prerequisites for the courses comprising the minor. (Students majoring in Planning and Environmental Policy or Environmental Studies/Economics are not eligible to take this minor.)

- One of the following:
  - ESTU 202 Environmental Studies: A Social Science Approach (3)
  - ESTU 320 Explorations in Environmental Studies (5 credits)
- ESTU 304 Environment and Resource Policy
- One course from each of the four key areas of environmental policy:

Planning	ESTU 369	Introduction to Planning (3 credits)
	EGEO 314	Urbanization: Process and Patterns (4 credits)
Policy	ESTU 463	Environmental Policy Analysis (4 credits)
	ESTU 464	U. S. Environmental Policy (4 credits)
	ESTU 467	Natural Resource Policy (3 credits)
Skills	ESTU 444	Environmental Dispute Resolution (4 credits)
	ESTU 466	US and Washington State Environmental Regulations (4 credits)
	EGEO 362	Land Resource Analysis (3 credits)
Law	ESTU 443	Land Use Law (4 credits)

ESTU 468 Environmental Law (4 credits)

**Minor – Geography (advisor: Thomas Terich) 25 credits**

- EGEO 201 Human Geography (4 credits)
- EGEO 203 Physical Geography (4 credits)
- EGEO 320 The United States (3 credits)
- EGEO 351 Map Reading and Analysis (3 credits)
  
- Electives under advisement (11 credits)
  - EGEO 300- and 400-level

**Minor – Geography Information Systems (advisor: Michael Medler) 31-33 credits**

- EGEO 350 Introduction to GIS (4 credits)  
or ESTU 401 Applications in GIS (3 credits)
- EGEO 351 Map Reading and Analysis (3 credits)
- EGEO 352 Computer Cartography (2 credits)
- EGEO 450 Intermediate Geographic Information Systems (4 credits)
- EGEO 451 GIS Databases (4 credits)
- EGEO 452 Advanced GIS (4 credits)
- CSCI 140 or 141 Programming Fundamentals (4 credits) or approved programming course
  
- One of the following (4 credits minimum)
  - EGEO 305 Analysis of Spatial Data (4 credits)
  - ESCI 340 Biostatistical Analysis (5 credits)
  - DSCI 305 Applied Business Statistics (4 credits) or approved statistics course
  
- Electives under faculty advisement (3 credits)
  - EGEO 453
  - ESCI 441, 442
  - GEOL 442, 448

**Minor – Sustainable Design 30-32 credits**

Huxley College of the Environment and the Department of Engineering Technology jointly offer a minor in Sustainable Design. The goal of the program is to enable students with strengths in design or in environmental studies to gain complementary skills in the other area so as to pursue sustainable design careers more effectively. The program is also open to students from any area that would benefit by the set of concepts and skills offered. Students are accepted into the sustainable design minor by application based on their demonstrated affinity to integrate environmental systems knowledge and sustainable design principles, and on enrollment limits. Students submit an application and a portfolio of work. Applications are accepted semi-annually on the third Friday of fall and spring quarters. See the *Huxley College of the Environment* website: <http://faculty.wvu.edu/zaferan/index%20-%20sustainable%20design%20minor.htm>.

**ENVIRONMENTAL STUDIES (14-16 credits)**

- ESTU 369 Introduction to Planning (3 credits)
- ESTU 415 Planning for Sustainable Communities (4 credits)
- One of the following
  - ESCI 310 Environmental Systems (4 credits)
  - ESCI 325 Fundamentals of Ecology (3 credits)
- One of the following
  - ESTU 303 Human Ecology (4 credits)
  - ESTU 304 Environment and Resource Policy (4 credits)
  - ESTU 305 Environmental History and Ethics (4 credits)
  - FAIR 335N Visioning Sustainable Futures (4-5 credits)

**INDUSTRIAL DESIGN (8 credits)**

- ETEC 311 Perspective and Rendering 1 (4 credits) (Prereq required)
- ETEC 312 Industrial Design CAD Skills (4 credits) (co-req: ETEC 311)

**ELECTIVES UNDER FACULTY ADVISEMENT (8 credits)**

- ACCT 484
- ECON 383, 384
- ESCI 302, 431, 490
- ESTU 464, 466, 467, 470, 471
- ETEC 214, 215, 216, 231, 315