



The University of Washington

## SCHOOL OF PUBLIC HEALTH

Department of Environmental and Occupational Health Sciences

### ENV H Interest Area Electives - Health & Environmental Sciences

The Health & Environmental Sciences interest area is intended for students who want to learn about chemical and physical hazards in both the workplace and ambient environment that impact human health. This would include chemical contamination in the air, water, and soil and physical hazards such as ionizing radiation, non-ionizing radiation, noise, repetitive motion and thermal stresses. Students completing this emphasis work for state and federal regulatory agencies, environmental and occupational hygiene consulting firms, large and small private businesses, and sometimes continue with graduate school in closely-related areas of study. The interest area advisers are Chris Simpson [simpson1@uw.edu](mailto:simpson1@uw.edu) and Janice Camp [jecamp@uw.edu](mailto:jecamp@uw.edu).

*You may receive elective credits for any of the below courses if the course does not already count as an Environmental Health core course. There are other courses in the UW catalog that may count toward your interest area electives. Please discuss any additional courses with your interest area advisor before registering.*

#### **Water Pollution Emphasis**

- ATM S 321 The Science of Climate (3) [SP]
- ATM S 340 Introduction to Thermodynamics and Cloud Processes (3) [W]
- CEE 350 Environmental Engineering -- Water and Air Quality (4) [SP]
- CEE 482 Wastewater Treatment and Reuse (3)
- CEE 483 Drinking Water Treatment (3)
- ENV H 440 Water, Wastewater and Health (3) [A]
- ENV H 451 Ecology of Environmentally Transmitted Microbiological Hazards (3) [A]
- ENV H 452 Detection and Control of Environmentally Transmitted Microbiological Hazards (3) [W]
- ESRM 250 Introduction to Geographic Information Systems in Forest Resources (5) [A,W,SP]
- ESRM 311 Soils and Land Use (3) [W]
- FISH 453 Geospatial Pattern Analysis and Geostatistics (3) [W]
- GEOG 360 Principles of GIS Mapping (5) [A,SP]
- GEOG 465 GIS Database and Programming (5) [W]
- GEOG 469 Geographic Information Systems Workshop (5) [SP]
- IND E 315 Probability and Statistics for Engineers (3) [A,W,SP,S]
- MATH 125 Calculus with Analytic Geometry II (5) [A,W,SP,S]
- MATH 126 Calculus with Analytic Geometry III (5) [A,W,SP,S]

#### **General Environmental Sciences**

- CEE 320 Transportation Engineering I (3)
- CEE 360 Sustainability in Civil Engineering (3) [SP]
- CEE 495 Sustainability and Design for Environment (3) [S]
- CHEM E 341 Energy and Environment (3) [A]

- ENGR 380 Design for Sustainability in the Developing World (2, max. 8) [A,W]
- ENV H 440 Water, Wastewater and Health (3) [A]
- ENV H 445 Solid Waste Management (3) [SP]
- ENV H 446 Hazardous Waste Management (3) [W]
- ENV H 448 Community Air Pollution (3) [SP]
- ENV H 451 Ecology of Environmentally Transmitted Microbiological Hazards (3) [A]
- ENVIR 415 Sustainability and Design for Environment (3) [S]
- ENVIR 418 Communications and the Environment (5)
- ENVIR 476 Introduction to Environmental Law and Process (3) [A]
- ENVIR 503 Role of Scientific Information in Environmental Decisions (3)
- ESRM 250 Introduction to Geographic Information Systems in Forest Resources (5) [A,W,SP]
- ESRM 311 Soils and Land Use (3) [W]
- ESRM 400 Natural Resource Conflict Management (3) [W]
- ESRM 470 Natural Resource Policy and Planning (5) [A]
- ESS 303 Geologic Hazards (5)
- ESS 345 The Environment of Fuel and Mineral Deposits (3)
- GEOG 360 Principles of GIS Mapping (5) [A,SP]
- GEOG 440 Regional Analysis (5) [SP]
- GEOG 465 GIS Database and Programming (5) [W]
- GEOG 469 Geographic Information Systems Workshop (5) [SP]
- Q SCI 454 Ecological Modeling (5)

#### **Environmental Chemistry Emphasis**

- ATM S 340 Introduction to Thermodynamics and Cloud Processes (3) [W]
- ATM S 358 Fundamentals of Atmospheric Chemistry (3) [SP]

- CEE 480 Air-Quality Modeling (3)
- CEE 483 Drinking Water Treatment (3)
- CEE 485 Environmental Engineering Chemistry (3)
- CEE 486 Environmental Analysis Chemistry (3)
- CHEM 321 Quantitative Analysis (5)[A,WS]
- CHEM 410 Radiochemistry Laboratory (2) [alternate years]
- CHEM 426 Instrumental Analysis (3) [W]
- CHEM 429 Chemical Separation Techniques (3) [SP]
- CHEM 455 Physical Chemistry (3) [A,SP]
- CHEM 456 Physical Chemistry (3) [W,S]
- CHEM 457 Physical Chemistry (3) [SP]
- CHEM E 220 Introduction to Molecular and Nanoscale Principles (4)
- CHEM E 260 Thermodynamics (4) [A,W,SP,S]
- CHEM E 341 Energy and Environment (3) [A]
- IND E 315 Probability and Statistics for Engineers (3) [A,W,SP,S]
- MATH 125 Calculus with Analytic Geometry II (5) [A,W,SP,S]
- MATH 126 Calculus with Analytic Geometry III (5) [A,W,SP,S]

**Air Pollution Emphasis**

- ATM S 301 Introduction to Atmospheric Sciences (5) [A]
- ATM S 321 The Science of Climate (3) [SP]
- ATM S 340 Introduction to Thermodynamics and Cloud Processes (3) [W]
- ATM S 358 Fundamentals of Atmospheric Chemistry (3) [SP]
- CEE 350 Environmental Engineering -- Water and Air Quality (4)
- CEE 480 Air-Quality Modeling (3)
- CEE 490 Air-Pollution Control (4)
- CEE 493 Air-Pollution Source Testing and Equipment Evaluation (3)

- CEE 494 Air-Pollution Control Equipment Design (3)
- ENV H 448 Community Air Pollution (3) [SP]
- ESRM 250 Introduction to Geographic Information Systems in Forest Resources (5) [A,W,SP]
- FISH 453 Geospatial Pattern Analysis and Geostatistics (3) [W]
- GEOG 360 Principles of GIS Mapping (5) [A,SP]
- GEOG 465 GIS Database and Programming (5) [odd years; W]
- GEOG 469 Geographic Information Systems Workshop (5) [SP]
- IND E 315 Probability and Statistics for Engineers (3) [A,W,SP,S]
- MATH 125 Calculus with Analytic Geometry II (5) [A,W,SP,S]
- MATH 126 Calculus with Analytic Geometry III (5) [A,W,SP,S]

**Health and Safety Emphasis**

- CEE 482 Wastewater Treatment and Reuse (3)
- CEE 483 Drinking Water Treatment (3)
- ENV H 417 Non-Ionizing Radiation and Electrical Safety (2)
- ENV H 441 Food Protection (3) [W]
- ENV H 445 Solid Waste Management (3) [SP]
- ENV H 446 Hazardous Waste Management (3) [W]
- ENV H 451 Ecology of Environmentally Transmitted Microbiological Hazards (3) [A]
- ENV H 452 Detection and Control of Environmentally Transmitted Microbiological Hazards (3) [W]
- ENV H 453 Industrial Hygiene (3) [A]
- ENV H 457 Industrial and Environmental Noise (3) [SP]
- ENV H 460 Organization and Administering Industrial Safety and Health Programs (3) [SP]
- ENV H 473 Community Responses to Environmental Health Hazards (5) [W]