

syllabus **ENV H 431**

[schedule
of topics
and readings](#)

[online resources](#)

Environmental and Occupational Sampling and Analysis

Autumn 2009
DEOHS
M-W 1:30-2:50

Monday class in T-530, Health Sciences; Wednesday class in T-739,
Health Sciences Building

Instructor: Richard Fenske, Professor (rfenske@u.washington.edu)
Health Sciences Bldg, F-226A (543-0916)

Teaching Assistant: Jen Krenz (jkrenz@u.washington.edu)

Course web site: <http://courses.washington.edu/envh431/>

NOTE: Field trips to local sites will extend beyond normal class hours on three Wednesdays: October 21, November 4, and November 18. Students are expected to attend at least two of the field trips.

Course Description: This course introduces students to the basic principles of environmental sampling and analysis to prevent or reduce public health hazards. This is the first course in a three-course series. We will examine sampling and analytical methods used to measure contaminants in the workplace and in community environments. Topics include regulatory mandates, sampling design, sampling strategies, exposure pathways and routes, quality assurance procedures applied to air, water and soil samples. The course will be of use to environmental scientists and engineers, public health professionals, and others interested in the field of environmental health sciences.

Learning Objectives: At the end of this course, students will be able to:

- define the basic principles of environmental sampling and analysis
- explain the primary laws and regulations that mandate environmental sampling and analysis
- outline a sampling program appropriate for a particular environmental health concern
- evaluate the quality assurance and quality control aspects of a sampling program
- conduct basic calculations needed for planning a sampling program
- demonstrate specific knowledge related to air, water and soil sampling principles and techniques
- apply critical thinking to current issues in environmental sampling

Course Format: Classes will be a combination of lecture, field visits, and discussion.

Readings: Readings for each course session will be posted on the course website as pdf documents, and are listed at the end of the syllabus. The following textbook is recommended as a reference to provide more detail on many of the topics covered in the course, and relevant chapters are noted for course sessions: L.H. Keith: *Principles of Environmental Sampling and Analysis* (2nd Ed.). On reserve in Health Sciences Library; selected chapters available in F-226.

Assignments and Examinations

- 40% homework problem sets and written assignments
- 25% mid-term examination
- 35% final examination

Students with Disabilities

To request academic accommodations due to a disability, please contact Disabled Student Services, 448 Schmitz, 206-543-8924

(voice/TTY). If you have a letter from Disabled Student Services indicating that you have a disability that requires academic accommodations, please present the letter to me so we can discuss the accommodations you might need in this class.