

Course Syllabus

ENV H 594: Current Topics in Environmental Health

Winter Quarter 2015

Class Meets: Wednesdays at 12:30-1:20 in T-359 Health Sciences Center

Coordinator: Marilyn C. Roberts

Participating Faculty: John Kissel and John Scott Meschke

Open to: MS and MPH, PhD and advanced undergrads

Topic for the Quarter:

Biosafety Practices & Application in Biotechnology

Course Description:

Biotechnology simply harnesses cellular and biomolecular processes for research, industrial and other purposes. In recent years, biotechnology has grown well beyond its roots of harnessing of microbiological process for production of food products, such as bread and cheese, and to preserve dairy products. Biotechnology is now a pervasive component of most modern research labs (basic, clinical, and applied), and is used widely in industrial and manufacturing settings. The Biotech sector is one of the fastest growing sectors in the US economy, with new companies and technologies emerging on a nearly daily basis. Although biosafety issues have traditionally been under-recognized in occupational health and safety, companies employing biotechnology must address biosafety as part of their occupational health and safety programs. This course will focus on identification of health and safety issues related to biotechnologies and application of Biosafety practices within the biotechnology context.

Course Objectives:

1. Identify and categorize biological hazards in the biotechnology setting.
2. Assess potential routes of exposure and recommend appropriate engineered, personal and procedural controls to mitigate exposure.
3. Critique biosafety practices.
4. Outline waste handling and disinfection concerns particular to biotechnological applications.
5. Recognize and discuss emerging issues in biosafety application in biotechnology

Grading: Course will be graded credit/no credit. A student must earn greater than or equal to 80% of the available points for a grade of credit.

Scoring Opportunities:

Case Study Report (20%). Students will draft a one page critique of a training video that demonstrates donning and doffing of PPE for high consequence pathogens.

Group Project (30%). Students will work in groups of 2 (or 3 as necessary) to fill out a Biosafety Use Authorization form.

Class Participation (50%). Students are expected to complete all assigned readings and contribute to in-class discussions of the daily topic.

Topics to be discussed:

Week	Date	Topic
1	1/7/2015	Introduction
2	1/14/2015	Biosafety in Biotechnology Context
3	1/21/2015	Risk Assessment in Biosafety and Biotechnology Environments
4	1/28/2015	Facilities and PPE
5	2/4/2015	PPE Case Study: Ebola Health Care Worker
6	2/11/2015	Administrative Controls & Biosecurity
7	2/18/2015	Waste Handling
8	2/25/2015	Emerging Issues and Animal Biosafety
9	3/4/2015	Disinfection/Decontamination
10	3/11/2015	Group Project: Biological Use Authorization

ACADEMIC ACCOMMODATIONS: Disability Resources for Students (DRS) offers resources and coordinates reasonable accommodations for students with disabilities. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have a temporary or permanent disability that requires accommodations (this can include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu or <http://depts.washington.edu/uwdrs/>

ACADEMIC INTEGRITY: Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the University of Washington [Student Conduct Code](#) (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](#). Any suspected cases of academic misconduct

will be handled according to University of Washington regulations. For more information, see the University of Washington [Community Standards and Student Conduct](#) website.

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