

Public Health Microbiology - Course Syllabus

Course Number: EnSE 314

Course Title: Public Health Microbiology

Academic Semester: Spring

Academic Year:

2015/ 2016

Semester Start Date: Jan, 24, 2016

Semester End

May, 19, 2016

Date:

Class Schedule: 2 days and 1.5 hours per session

Classroom Number:

Instructor(s) Name(s):

Peiying Hong

Email:

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Teaching Assistant name:

Email:

Office Location: Building 4 Room 4275

Office Hours:

COURSE DESCRIPTION FROM PROGRAM GUIDE

An introduction to the diversity of microbial agents that can impact the public health and environmental systems. The course is structured to detail the microbial hazards found in waters, soils and air. Molecular biology techniques and the current regulatory methods for investigating pathogens and the surrogate indicators will be discussed. Treatment and engineering strategies are discussed. The latter part of the course serves to provide an introduction to Quantitative Microbial Risk Assessment (QMRA). The concepts related to exposure assessment and risk characterization will be included. Practical lab classes will be incorporated as soon as student laboratories are available.

COMPREHENSIVE COURSE DESCRIPTION

The course is structured to detail the microbial hazards found in different types of water matrices. The different types of treatment technologies to reduce the abundance of microbial hazards are discussed. Molecular biology techniques and the current regulatory methods for investigating pathogens and the surrogate indicators will be discussed. The latter part of the course serves to provide an introduction to Quantitative Microbial Risk Assessment (QMRA). The concepts related to exposure assessment and risk characterization will be included.

GOALS AND OBJECTIVES

This course serves to provide an introduction to the diversity of microbial agents that can impact the public health and to elaborate on treatment technologies that are available to mitigate these risks.

REQUIRED KNOWLEDGE

Basic applied microbiology and basic mathematical skills

REFERENCE TEXTS

No textbook listed for this course

METHOD OF EVALUATION

Percentages %	Graded content
5%	Attendance
5%	Participation
20%	Mid-term
40%	Lab participation and report
30%	Final examination (Subjected to changes)

COURSE REQUIREMENTS

Assignments

Lab participation and report

Course Policies

Students are required to attend all lectures unless a valid explanation is provided to account for their absence. Students are graded for their attendance.

Additional Information

NOTE

The instructor reserves the right to make changes to this syllabus as necessary.