

## **MICROBIAL ECOLOGY (MB 448/548)**

**WINTER 2018**

**Hovland Hall 202, MWF 11:00 – 11:50 am.**

Instructor: Dr. Kimberly Halsey, Nash Hall, Rm. 354, Phone 541-737-1831, email, [halseyk@science.oregonstate.edu](mailto:halseyk@science.oregonstate.edu)

**Jan 8- Mar 16 (Final exam is the following week, see below)**

### **Course Objectives.**

- (1) To obtain an overview of the diversity of metabolic capabilities in the microbial world and place it into an ecological context.
- (2) To provide an overview of the essential roles that microorganisms play in some of the environments on Earth.
- (3) To generate an understanding of the physical and chemical characteristics of natural environments that interact with microbial life and influence its activities.
- (4) To develop an understanding of the interactions that occur among microorganisms that are essential for life to exist on Earth.

### **Course outline.**

- (1) The concepts of microbial ecology.
- (2) Microbial energetics and its links to ecology.
- (3) Microbial ecology of aquatic ecosystems: the water column, marine and fresh water.
- (4) Comparison of aquatic, sediment, and terrestrial ecosystems.
- (5) Carbon, nutrient, and energy exchange between trophic levels.

**Course format.** Three lectures per week, MWF 11:00 am to 11:50 am.

**Undergraduate recitation:** TBA, depending upon class schedules.

**Graduate recitation.** TBA, depending upon class schedules. Room TBA.

**Textbook:** None specified.

**Specific handouts will be provided in class and on Canvas.**

### **Exam schedule:**

**1. MIDTERM: TUESDAY, Feb 6, 2017, Evening. 5:30pm to 8:30pm, NASH HALL Rm. 206**

**2. FINAL EXAM: FRIDAY, March 23, 2017, 7:30 to 10:30 am, Hovland Hall 202.**

For undergraduates, the mid-term will be worth 45%, the final 50%, and recitation participation 5% of the total grade.

For graduate students, midterm and final written exams will be each worth 45% toward the final grade. Other assignments/presentations will account for the remaining 10%.

**Statement on Students with Disabilities:**

Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

**Expectations for Student Conduct:**

The primary purpose of the Student Conduct Code is to establish community standards and procedures necessary to maintain and protect an environment conducive to learning, in keeping with the educational objectives of Oregon State University. This code is based on the assumption that all persons must treat one another with dignity and respect in order for scholarship to thrive. Students are also expected to follow the academic and professional standards of the academic units. Choosing to join the Oregon State University community obligates each member to a code of responsible behavior. Individuals and Student Organizations are expected to observe the policies, rules, and requirements of Oregon State University as well as laws of municipalities and counties, the State of Oregon, the United States of America and, when in another country, that country. Please refer to the link provided below for definitions, offenses, jurisdiction, sanctions and other descriptions of processes used for determination of improper conduct.

[http://arcweb.sos.state.or.us/pages/rules/oars\\_500/oar\\_576/576\\_015.html](http://arcweb.sos.state.or.us/pages/rules/oars_500/oar_576/576_015.html)