

FARM MICROBIOLOGY 2008

COURSE SYLLABUS

COURSE WEBSITE IS NOW AT LEARN@UW

This one-credit course covers the biology of microorganisms and their involvement in agriculture, food science, infectious disease and technology. Included are an introduction to cellular biology and discussions of bacteria, molds and viruses. Laboratories introduce basic techniques of microbiology for observation, growth and identification of microorganisms.

Instructor for the course is John Lindquist

Office: 2521 Microbial Sciences

Open Office Hours: to be announced

Phone: 262-3381 (has answering machine)

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Grading System:

100 points for attendance; 5 points deducted for each session missed.

Additional 100 points divided between mid-term and final exams.

Lectures and Laboratories will meet primarily in 2425 Microbial Sciences

from 3:30 to (no later than) **5:30 on Mondays and Wednesdays.** We may utilize nearby rooms on occasion.

LECTURE TOPICS WILL COVER THE FOLLOWING:

Introduction to microbiology.

Basic structure, genetics, physiology and nutrition of bacteria.

Food microbiology – including spoilage, preservation, food-borne diseases, and some examples of food fermentations (including silage).

Soil microbiology, cycling of elements and biodegradation.

Microbial diseases of humans, animals and plants.

Microbiology of water and wastewater.

LAB TOPICS WILL INCLUDE:

Food-related fermentations such as the sausage fermentation.

Basic microbiological techniques: plating, staining, etc. – including a quantitative analysis of hamburger.

Production of antibiotics by microorganisms with an examination of how antibiotic-resistant mutants can arise.

The effectiveness of various heat-treatments.

Testing water or food for coliforms.

Various demonstrations of interest.