

MIRCOBIAL FOOD SAFETY
16 400 605
3 credits

Prerequisites: Knowledge of Microbiology - upper level course in microbiology

Course description: An in-depth presentation of Microbial Food Safety from the farm to the table. Discussion will encompass a range of topics from safety of genetically modified microorganisms for use in food production to impact of preventative measures and risk analysis in the food industry. Emphasis is placed on applied technology rather than microbial theory.

This course will:

- a. Encourage independent critical thinking.
- b. Provide an opportunity for writing, critiquing, and presenting technical material.
- c. Introduce active learning exercises and decrease reliance on lectures as the primary medium of information transfer.

Student Performance Objectives:

- Students will obtain foundational factual knowledge related to application of microbial theory, biotechnology, and preventative systems related to microbial safety of food.
- Through use of case studies, group discussions, written assignments, and professional presentations students will begin to integrate facts and develop sufficient critical thinking skills to allow for intelligent debate of controversial microbiology issues in the food industry.
- Students will expand their understanding of national and international government and industry regulations and concerns related to safe food production.

Student Evaluation:

- In-class discussion/debate: Students are expected to be prepared to actively engage in discussion of material presented during class. Topic areas and background material will be provided to students prior to class such that students can independently review the material and be prepared to address specific questions. Students will be evaluated based on ability to engage in discussion and knowledge of material provided to the student prior to lecture
- Group lectures: Scientists frequently engage in collaborative research efforts or group exercises related to product/system development or protocol formation. Groups will be provided a relevant topic for which they will prepare a professional presentation. Grading will be based on student knowledge of the subject, flow of the story, quality of slides, ability to answer questions.
- Exams: The exams will cover material presented since previous exam. Questions will consist of true/false, multiple choice, matching, and short answer. The questions will be

designed to evaluate student understanding of material and ability to integrate knowledge to solve problems.

ACADEMIC INTEGRITY

All exams, quizzes, and short written assignments should represent your exclusive effort. Books and reference material may be consulted for written assignments, but students may not work together on written assignments or copy from other students. Do not copy material from books or internet directly to answer a question.

The written papers should be original works of scholarship based on your reading, digestion, and synthesis of primary literature. Failure to indicate direct quotes, inadequately citing others work, and presentation of another's work as one's own are all varying degrees of plagiarism, the theft of intellectual property. Plagiarism and other ethical breeches are not tolerated at Rutgers University. Students should consult and be familiar with the full policy on academic integrity published in the Undergraduate catalog. If you do not understand the distinctions therein, *please* see me for explanations and clarification. Academic dishonesty will be severely penalized, with punishment up to and including dismissal from Rutgers University.

NOTE: STUDENT MUST BE PREPARED TO DISCUSS SUBJECT MATERIAL IN CLASS

Grading:

Exams	60%
Group lecture	30%
Participation (question and answer, discussion)	10%

Instructor:

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