

BENEFICIAL MICROBES IN FOOD AND HEALTH

16:400:535

Fall Semester

4 credits

Prerequisites: General Microbiology

Objective:

This course is designed to give students an understanding of the role of microorganisms in health promotion.

Students completing this course should be able to:

1. understand the factors and predict microorganisms, which can positively influence human and animal health;
2. understand the molecular mechanism underlying health promotion actions by probiotic bacteria;
3. evaluate possible risks and determine essential measures required to control safety of health promoting microorganisms;
4. understand the role of microorganisms in animal and human health.

Student Evaluation:

Quizzes will be given to provide students feedback on their course performance and to prepare them for the exams. Quizzes will be arranged in a form of multiple-choice test and will cover material presented in previous lectures and reading, assigned for the day of the quiz.

Two exams will test students' knowledge and their ability to independently make decisions and solve problems using the knowledge obtained during the course of study.

Students may request re-evaluation of exam or quiz scores within 2 weeks of receiving a grade. No grades will be changed after two weeks. Students are required to follow the **ACADEMIC INTEGRITY RULES:**

ACADEMIC INTEGRITY

All exams, quizzes, and short written assignments should represent student's exclusive effort. Books and reference material may be consulted for the exam, but students may not discuss exam questions, work together on the exam, or receive any other assistance. Do not copy material from books or Internet directly to answer a question.

Any work of the student should be original effort of a scholar, based on 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 breaches are not tolerated at Rutgers University. Students should consult and be familiar with the full policy on academic integrity published in the Graduate School Handbook. Should the student have any doubts about understanding of the distinctions therein, *it is strongly advised* to see the course coordinator for explanations and clarification. Academic dishonesty will be severely penalized, with punishment up to and including dismissal from Rutgers University.

Expectations:

Students are expected to attend all lectures and to prepare for lectures ahead of time by consulting recommended textbooks and the lectures materials. They are also expected to actively participate in class discussions and to ask questions in class, to complete and turn in assignments on time and to notify in advance about their possible absence.

The lectures and activities in this course are designed to help students learn the basic principles of food microbiology, to solve problems, and to report clearly and concisely their knowledge in both an oral and written format.

Final course grade will be based on:		Approximate grading cut-offs:	
		90-100	A = outstanding, does it all
Mid-term Exam	35%	85-89	B+ = excellent in most areas
End of Term Exam	35%	80-84	B = good/solid
Quizzes and assignments	30%	75-79	C+ = decent
		70-74	C = satisfactory factual knowledge
		< 70	F = unsatisfactory

Textbook and references:

Students are expected to learn a significant amount of information on their own by reading. There is no required text for this course. Any textbooks on food microbiology may be used as references. The suggested textbooks are:

1. Therapeutic microbiology. Probiotics and related strategies. J. Velasovic and M. Wilson, eds. ASM Press.
2. Probiotics and prebiotics: scientific aspects. G.W. Tannock, ed. Caister Academic Press.
3. Probiotics in pediatric medicine. S. Michail and P.M. Sherman, eds. Humana Press.
4. Prebiotics and probiotics. S. Jardine. ed. Wiley, John & Sons.
5. Probiotics and Prebiotics. K. Venema and A.P. do Carmo, eds. Caister Academic Press.

Communication:

Students are encouraged to feel free to ask questions and to express any concerns that they may have. Should they like to talk with the course co-ordinator or a teaching professor outside of class, an appointment can be set up. Students can talk to the professor before or after class, send an email, or stop by the professors' offices. If the student stops by without an appointment, s/he should understand that the professor may have other commitments and may not be able to talk at that time.

Dr. Michael L. Chikindas*

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*Course coordinator; please address administrative issues to him.

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