

MIC - Microbiology

Microbiology: MIC

Lower-Division Courses

Upper-Division Courses

Graduate Courses

MIC 383K. Topics in Advanced Microbiology.

Examine microbiology topics in-depth. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate Standing.

MIC 394M. Bacterial Behavior and Signaling Mechanisms.

Examine molecular, cellular, organismal, ecological, and evolutionary biology of bacteria. Focus on a large number of bacteria, both Gram-positive and Gram-negative from four major phyla, that live and survive both as free-living microbes, in groups, and in both beneficial and pathogenic associations with eukaryotic hosts. Explore evolution of organelles and behaviors, including receiving and transducing signals that produce a variety of outcomes such as chemotaxis and motility, morphogenesis and development, secretion and virulence, quorum sensing and biofilms, bacterial warfare, and antibiotic production and tolerance. Three lecture hours a week for one semester. Biology 394M (Topic: Bactrl Behav/ Signaling Mech) and Microbiology 394M may not both be counted. Prerequisite: Graduate Standing.

MIC 395G. Structure and Function of Proteins and Membranes.

Explore advanced biochemistry concepts and the scientific process. Examine a detailed consideration of the structure and function of proteins, carbohydrates, lipids and nucleic acids, as well as discussion of enzyme mechanisms and kinetics. Three lecture hours a week for one semester. Only one of the following may be counted: Biochemistry 395F, 395G, Biology 395I, 395G, Molecular Biology 395I, 395G, Microbiology 395G. Prerequisite: Graduate standing; a one-year undergraduate sequence in biochemistry is strongly recommended.

MIC 395H. Cell Biology.

Examine mechanisms of growth control, cell cycle regulation, mitosis, cell signaling, protein targeting, and the integration of these processes. Three lecture hours a week for one semester. Only one of the following may be counted: Biology 395H, Chemistry 395H, Molecular Biology 395H, Microbiology 395H. Prerequisite: Graduate standing.

MIC 395J. Genes, Genomes, and Gene Expression.

Examine prokaryotic and eukaryotic mechanisms of DNA replication and transcription; posttranscriptional processing of transcription products; and mechanism and regulation of the translation of messenger RNAs. Three lecture hours a week for one semester. Only one of the following may be counted: Biochemistry 395J, Biology 395J, Molecular Biology 395J, Microbiology 395J. Prerequisite: Graduate standing.

MIC 395M. Advanced Microbiology.

Explore technical and conceptual aspects of microbiology. Focus on experimental methods and design. Discuss career opportunities and development with industry professionals. Three lecture hours a week for one semester. Biology 395M and Microbiology 395M may not both be counted. Prerequisite: Graduate standing.

MIC 698. Thesis.

The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate

standing in microbiology and consent of the graduate advisor; for 698B, Microbiology 698A.

MIC 398R. Master's Report.

Prepare a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in microbiology and consent of the graduate advisor.

MIC 399W, 699W, 999W. Dissertation.

Offered on the credit/no credit basis only. Offered on the credit/no credit basis only.

Professional Courses