

Microbiology (MIC)

MIC 383K Topics in Advanced Microbiology 3 Hours

Examine microbiology topics in-depth.

MIC 386 Topics in Problems and Methods in the Life Sciences 3 Hours

Examine the questions addressed in modern life sciences research and the experimental methods used. Focus on experimental reasoning and on the application of different techniques to solve problems.

MIC 190C, 290C Topics in Microbiology 1-2 Hours

Discuss current topics in microbiology

MIC 392, 692, 992 Research Problems 3,6,9 Hours

MIC 394M Bacterial Behavior and Signaling Mechanisms 3 Hours

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.

MIC 395G Structure and Function of Proteins and Membranes 3 Hours

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.

MIC 395H Cell Biology 3 Hours

Examine mechanisms of growth control, cell cycle regulation, mitosis, cell signaling, protein targeting, and the integration of these processes.

MIC 395J Genes, Genomes, and Gene Expression 3 Hours

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.

MIC 395M Advanced Microbiology 3 Hours

Explore technical and conceptual aspects of microbiology. Focus on experimental methods and design. Discuss career opportunities and development with industry professionals.

MIC 698 Thesis 6 Hours

MIC 398R Master's Report 3 Hours

Prepare a report to fulfill the requirement for the master's degree under the report option.

MIC 399W, 699W, 999W Dissertation 3,6,9 Hours