

MICROBIOLOGY (MICB)

MICB 7620 - Advanced Genome Analysis (2 Credits)

Introduction to genomics emphasizing gaining familiarity with: analysis, utilization of genomic data. Topics: sequencing, mapping genomes, transcriptomics, human genome, evolution, genomic disorders, bioinformatics, statistics, population variation, epigenomics, proteomics, metagenomics, microbiome analysis, functional genomics, ethics.

Crosslisted Course: CPBS 7620, STBB 7620, and HMGP 7620

Grading Basis: Letter Grade

A-GRAD Restricted to graduate students only.

Typically Offered: Spring.

MICB 7621 - Genome Analysis Workshop (3 Credits)

The Genome Analysis Workshop is a hands-on tutorial of skills needed to process large genomics data sets and visualize their results. The class is taught from the standpoint of biologist with practical goals (e.g. to interpret the results of a sequencing-based experiment and gain biologically meaningful insight).

Grading Basis: Letter Grade

A-GRAD Restricted to graduate students only.

Typically Offered: Spring.

MICB 7628 - Viral Pathogenesis (2 Credits)

Grading Basis: Letter Grade

A-GRAD Restricted to graduate students only.

MICB 7650 - Research in Microbiology (1-10 Credits)

Research work in microbiology. Prereq: Consent of instructor.

Grading Basis: Letter Grade with IP

Repeatable. Max Credits: 99.

A-GRAD Restricted to graduate students only.

Typically Offered: Fall, Spring, Summer.

MICB 7701 - Molecular Virology and Pathogenesis (3 Credits)

Topics in this course include viral structure and genome organization, replication and expression of viral genomes, mechanism of action of tumor viruses, molecular aspects of virus-host cell interactions, animal models of infectious diseases and pathogenesis of human viruses.

Prereq: MICB 7706, MICB 7705 are desirable but not required. Restriction: Permission of Instructor.

Grading Basis: Letter Grade

A-GRAD Restricted to graduate students only.

Typically Offered: Spring.

MICB 7703 - Molecular Mechanisms of Bacterial Disease (3 Credits)

The course focuses on molecular processes that bacteria utilize to cause disease in humans. The course content will use specific examples from pathogenic bacteria to illustrate common virulence mechanisms utilized to initiate, maintain and survive interactions with host cells. Prereq:

Recommended Fundamentals of Microbiology Restrictions: Permission of the instructor.

Grading Basis: Letter Grade

A-GRAD Restricted to graduate students only.

Typically Offered: Spring.

MICB 7704 - Host Response to Infectious Disease (1 Credit)

This interactive graduate course, which provides an overview and specific examples of the host response to infectious disease. Current research and future directions in the field are discussed. Students are assessed via presentations, participation and an exam. Prerequisite: Biomedical Core Courses

Grading Basis: Letter Grade

A-GRAD Restricted to graduate students only.

Typically Offered: Spring.

MICB 7705 - Medical Microbiology (4 Credits)

The course will focus on Microbiology, Infectious Diseases. Course content will focus on: pathogenic bacteria, viruses, fungi, parasites; emphasis on microbial virulence determinants, host-pathogen interactions emphasizing host immune responses, signs, symptoms of disease presentation, epidemiology, and diagnosis of infectious diseases.

Prereq: Recommended Fundamentals of Microbiology. Restriction:

Permission of Instructor. Cross listed: IDPT 6004.

Grading Basis: Letter Grade

A-GRAD Restricted to graduate students only.

Typically Offered: Spring.

MICB 8990 - Doctoral Thesis (1-10 Credits)

Doctoral thesis work in microbiology. Prereq: Consent of the instructor.

Grading Basis: Letter Grade with IP

Repeatable. Max Credits: 99.

A-GRAD Restricted to graduate students only.

Additional Information: Report as Full Time.

Typically Offered: Fall, Spring, Summer.