Microbiology And Immunology

Department of Microbiology and Immunology

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Overview

**Not a baccalaureate degree program*

The Department of Microbiology and Immunology does not offer an undergraduate major; however, courses in microbiology and immunology are offered to undergraduate students.

MIC 301: Biomedical Microbiology

Credits: 3
Semester(s): Spring
Type: LEC

A separate 3 credit hour lecture only section of this course with section title PHM is offered for students in the UB Pharmacy program. The PHM section does not include a lab portion.

This course focuses heavily on the biomedical aspects of microbiology. The emphasis is on human health, covering areas such as microbial physiology, sterilization, antimicrobial agents, as well as the three areas of disease causing microorganisms: bacteria, viruses, and parasites/mycology.

MIC 319: Introduction to Scientific Literature

Credits: 1
Semester(s): Fall
Type: SEM

Provides advanced discussions on topics in bacteriology, mycology, virology, parasitology, and immunology. Students present papers on current scientific material and participate in discussions.

MIC 320: Introduction to Scientific Literature

Credits: 1
Semester(s): Spring
Type: SEM

Provides advanced discussions on topics in bacteriology, mycology, virology, parasitology, and immunology. Students present papers on current scientific material and participate in discussions.

MIC 401: General Microbiology

Credits: 6
Semester(s): Fall
Pre-requisites: BIO 205 Or BIO 319 Or MIC 301
Type: LEC

Discusses in-depth the biology, physiology, genetics, and pathogenicity of selected bacteria, viruses, and parasites. Presents lectures and current literature on molecular mechanisms.

MIC 412: Fundamentals of Immunology

Credits: 4
Semester(s): Spring
Pre-requisites: BCH 403 Or BIO 201 Or BIO 205
Type: LEC

The first part of the course covers anatomy and function of the immune system, cell interactions, antibody structure and function, antigen-antibody reactions, cell-mediated immunity, and biological effects of immunological reactions. In the later half of this course we will discuss immune defense and immunopathology as it relates to allergy/hypersensitivity, inflammation, innate immunity, mucosal immunity, vaccines and tumor immunity. This is an introductory course and presented entirely as lectures. Students will be expected to read assigned chapters in textbooks and/or some recent publications in scientific journals prior to each lecture. Assignments, announcements and slides for lectures are provided on line. An understanding of the principles of biochemistry, molecular and cell biology is necessary; students lacking this background may have difficulty with this course.

MIC 499: Independent Study

Credits: 1-8
Semester(s): Fall, Spring
Type: TUT

The content of this course is variable and therefore it is repeatable for credit. The University Grade Repeat Policy *does not apply.*

Available by arrangement with one or more faculty members. Involves participation in a research project that provides limited laboratory experience in some aspect of microbiology or immunology.