Microbiology and Immunology Undergraduate Course Descriptions

MIC 301. Introduction to Microbiology and Immunology. 4cr
Basic principles of microbiology and immunology, including laboratory exercises. Required for Microbiology/Immunology majors; recommended for Biology and Chemistry majors and premedical students. Prerequisite: CHM 111/113 and BIL 150/151.

MIC 302. Intro to Microbiology/Immunology Honors Seminar. 1cr
Special topics in Microbiology/Immunology requiring a term paper and/or an oral presentation. Corequisite: MIC 301 honors section.

MIC 321. Immunobiology. 3cr
Mechanisms underlying the cooperation between T-cells, B-cells and antigens leading to humoral and cell mediated responses. The significance of immune cells and their products pertaining to autoimmunity, transplantation and the surveillance of neoplastic cells. Prerequisite: MIC 301.

MIC 322. Medical Parasitology. 3cr
The biochemistry, physiology, pathogenicity, immunology and mechanism of drug action and resistance of medically important parasitic protozoa, trematodes, nematodes, and cestodes. Prerequisite: MIC 301, MIC 321.

MIC 323. Principles of Microbial Pathogenesis. 3cr
Course analyzes host-microbe relationships at the molecular and cellular levels with an emphasis on microbial virulence determinants and host-cell defense responses. Prerequisite: MIC 301.

MIC 434. Microbial Genetics and Molecular Immunology. 3cr
DNA replication, mutation, repair, recombination, jumping genes (transposons), infective hereditary mechanisms, gene regulation, protein synthesis, recombinant DNA technology, modern methods and application of genetic engineering. Origin of antibody diversity, organization and expression of antibody genes. Prerequisite: MIC 301, BIL 250

MIC 436. Fundamental and Medical Virology. 3cr
The viruses as biological entities and etiological agents of disease. Virus-cell and virus-host interactions. Prerequisite: MIC 301.

MIC 441. Microbiology and Immunology Colloquium. 1cr
Faculty presentations of recent advances in research. Prerequisite: MIC 301

MIC 451. Special Projects in Immunology. 2-4cr
Laboratory research problems in major areas of immunology; including literature search, experiment design, data gathering and evaluation of results. Prerequisite: Major in Microbiology and Immunology and permission of department director. 17 cr. in MIC required to qualify as well as a 3.0 gpa within the major and overall.

MIC 452. Special Projects in Parasitology. 2-4cr
Laboratory research problems in major areas of Parasitology; including literature search, experiment design, data gathering and evaluation of results. Prerequisite: Major in Microbiology and Immunology and permission of department director. 17 cr. in MIC required to qualify as well as a 3.0 gpa within the major and overall.

MIC 453. Special Projects in Pathogenic Bacteriology. 2-4cr
Laboratory research problems in major areas of pathogenic bacteriology; including literature search, experiment design, data gathering and evaluation of results. Prerequisite: Major in Microbiology and Immunology and permission of department director. 17 cr. in MIC required to qualify as well as a 3.0 gpa within the major and overall.
MIC 454. Special Projects in Microbial Genetics. 2-4cr
Laboratory research problems in major areas of microbial genetics; including literature search, experiment design, data gathering and evaluation of results. Prerequisite: Major in Microbiology and Immunology and permission of department director. 17 cr. in MIC required to qualify as well as a 3.0 gpa within the major and overall.

MIC 455. Special Projects in Immunogenetics. 2-4cr
Laboratory research problems in major areas of immunogenetics; including literature search, experiment design, data gathering and evaluation of results. Prerequisite: Major in Microbiology and Immunology and permission of department director. 17 cr. in MIC required to qualify as well as a 3.0 gpa within the major and overall.

MIC 456. Special Projects in Virology. 2-4cr
Laboratory research problems in major areas of virology; including literature search, experiment design, data gathering and evaluation of results. Prerequisite: Major in Microbiology and Immunology and permission of department director. 17 cr. in MIC required to qualify as well as a 3.0 gpa within the major and overall.