

MICROBIOLOGY (MBIO)

MBIO 101 Introduction to the Microbiology Major

Notes: Letter grade only.

Description: Introduction to the Microbiology major by providing an overview of Microbiology as a field of science, possible career paths, and opportunities available to Microbiology majors.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Format: LEC

Offered: FALL

MBIO 420 Molecular Genetics

Crosslisted with: BIOS 420, BIOS 820, VBMS 820

Prerequisites: BIOS 206 and Senior standing

Description: Molecular basis of genetics. Gene structure and regulation, transposable elements, chromosome structure, DNA replication, and repair mechanisms and recombination.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Format: LEC

Prerequisite for: AGRO 963, HORT 963, PLPT 963; BIOS 945; BIOS 964, VBMS 964; FDST 908B

ACE: ACE 10 Integrated Product

MBIO 421 Microbial Diversity

Crosslisted with: BIOS 421, BIOS 821

Prerequisites: BIOS 206 and BIOS 312 and Senior Standing.

Description: Diversity of microbial cell composition, structure, and function enabling movement, metabolism, symbiosis, and adaptation using bacterial, fungal, algal, and viral examples. A physiological, biochemical and molecular approach used throughout.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Format: LEC

ACE: ACE 10 Integrated Product

MBIO 440 Microbial Physiology

Crosslisted with: BIOS 440, BIOS 840, VBMS 840

Prerequisites: BIOS 312; BIOS 313 or BIOS 314.

Description: Molecular approaches to the study of prokaryotic cell structure and physiology, including growth, cell division, metabolism, and alternative microbial life styles.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Format: LEC

MBIO 443 Immunology

Crosslisted with: BIOS 443, BIOS 843, VBMS 843

Prerequisites: BIOS 206; CHEM 251 or CHEM 255 or CHEM 261.

Description: Fundamental consideration of cellular and humoral mechanisms of immunity, the structure and function of immunoglobulins, antigen-antibody interactions; hypersensitivity; transplantation and tumor immunity; immune and autoimmune disorders.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Format: LEC

Prerequisite for: BIOS 966, VBMS 966; VBMS 852; VBMS 908; VBMS 910; VBMS 948; VBMS 949

MBIO 498 Independent Research

Prerequisites: LIFE 120 and 121 and permission

Notes: Letter grade only. Before registering, arrangements must be made with a microbiology faculty member to reach an agreement on the scope and to determine the amount of credit for the project.

Description: Independent study and laboratory or field investigation of a specific problem.

Credit Hours: 1-8

Min credits per semester: 1

Max credits per semester: 8

Max credits per degree: 8

Format: IND