

## Microbiology (MICR)

### MICR 2060 BB

#### Microbiology for Health Professions

**3:3:0** **Fall, Spring, Summer**

\* Prerequisite(s): BIOL 1010 or BIOL 1610, ENGL 1010 with a C- or higher in each. CHEM 1110 or higher is highly recommended  
\* Corequisite(s): MICR 2065

Studies the history of microbiology. Explores bacterial, fungal, parasitic, and viral diseases and their causes. Discusses the classification, physiology, genetics, and physical and chemical control of microbes. Emphasis is on clinical applications. Designed for those planning a career in the health professions such as nursing, dental hygiene, medicine, pharmacy, and dentistry. Includes weekly laboratory.

### MICR 2065 BB

#### Microbiology for Health Professions Laboratory

**1:0:2** **Fall, Spring, Summer**

\* Prerequisite(s): BIOL 1010 or BIOL 1610, ENGL 1010. CHEM 1110 highly recommended  
\* Corequisite(s): MICR 2060

Studies the history of microbiology. Explores bacterial, fungal, parasitic, and viral diseases and their causes. Discusses the classification, physiology, genetics, and physical and chemical control of microbes. Emphasis is on clinical applications. Designed for those planning a career in the health professions such as nursing, dental hygiene, medicine, pharmacy, and dentistry. Includes weekly laboratory. Course Lab fee of \$44 for materials, lab applies.

### MICR 3200

#### Emerging and Re Emerging Diseases and Zoonoses

**3:3:0** **On Sufficient Demand**

\* Prerequisite(s): BIOL 1620 and (MICR 2060 or MICR 3450) with a C- or higher in each and University Advanced Standing

Utilizes the most current infectious disease entities as examples for new (emerging) or old (re-emerging) diseases currently affecting mankind. Also discusses zoonotic diseases (those transmissible from animals to humans and vice-versa) in detail. Emphasizes the underlying mechanisms of disease, and includes fundamental aspects of virology, bacteriology, and parasitology. Also covers fundamental concepts in epidemiology, how the public health system deals with these diseases once they have been identified and instances where the public health system has failed in controlling these diseases and the reasons for these failures. Investigates historical aspects of infectious diseases. Requires a written paper and a presentation on the disease entity of the student's choosing.

### MICR 3450

#### General Microbiology

**3:3:0** **Fall**

\* Prerequisite(s): BIOL 3400 with a C- or higher and University Advanced Standing; BIOL 3600 recommended  
\* Corequisite(s): MICR 3455

Covers taxonomy, physiology and genetics of prokaryotes (bacteria, Archaea), viruses and eukaryotic pathogens. Introduces industrial microbiology, biotechnology, and immunology and the biochemical basis of infectious diseases. Designed for biology majors who desire an in-depth coverage of microbiology.

### MICR 3455

#### General Microbiology Laboratory

**1:0:2** **Fall**

\* Prerequisite(s): BIOL 3400 and University Advanced Standing; BIOL 3600 recommended  
\* Corequisite(s): MICR 3450

Hands-on laboratory procedures that studies the methods of taxonomy and distinguishes physiology and genetics of prokaryotes (bacteria, Archaea), viruses and eukaryotic pathogens. Introduces methods used in industrial microbiology, biotechnology, and immunology and the biochemical basis of infectious diseases. Designed for biology majors who desire an in-depth coverage of microbiology. Course Lab fee of \$60 for materials, lab applies.

### MICR 4300

#### Pathogenic Microbiology

**4:3:2** **Spring**

\* Prerequisite(s): [MICR 3450 or (MICR 2060 with instructor consent)] and University Advanced Standing

Discusses fundamentals of immune mechanisms, pathogenesis, replication, and infection. Explores bacterial, viral, fungal, protozoan, and helminth pathogens. Discusses identification, control, and treatments. Includes weekly laboratory. Course Lab fee of \$25 applies.

### MICR 4500

#### Virology

**3:3:0** **Fall**

\* Prerequisite(s): BIOL 3400 and [MICR 3450 or (MICR 2060 with instructor consent)] and University Advanced Standing; BIOL 3600 recommended

Examines the fundamentals of virology. Covers viral structure, biochemistry, genomics, viral multiplication cycles in prokaryotic and eukaryotic cells, and techniques used in viral studies. Also discusses viral diseases, transmission, therapy, evolution, and epidemiology.