MCRO 291. Undergraduate Learning Assistant. 2 Credits.
Permission required. Experience includes preparations, demonstrations, assistance, and attendance in weekly meetings.
**Requisites:** Prerequisite, MCRO 251; a grade of B or better in MCRO 251 is required.
**Repeat rules:** May be repeated for credit. 4 total credits. 2 total completions.
**Grading status:** Pass/Fail.

**Advanced Undergraduate and Graduate-level Courses**

**MCRO 449. Introduction to Immunology. 3 Credits.**
This course provides a general overview of the evolution, organization, and function of the immune system. Instruction will be inquiry-based with extensive use of informational and instructional technology tools.
**Requisites:** Prerequisite, BIOL 205; permission of the instructor for students lacking the prerequisite.
**Grading status:** Letter grade

**Same as:** BIOL 449.

**MCRO 614. Immunobiology. 3 Credits.**
A strong background in molecular biology, eukaryotic genetics, and biochemistry is required. Advanced survey course with topics that include molecular recognition, genetic mechanisms of host resistance, development of cells and cell interactions; hypersensitivity, autoimmunity, and resistance to infection. Course material from textbook and primary literature.
**Grading status:** Letter grade.

**Same as:** BIOL 614.

**MCRO 630. Virology. 3 Credits.**
Required preparation, coursework in molecular biology and cell biology. Current concepts of the chemistry, structure, replication, genetics, and the natural history of animal viruses and their host cells.
**Grading status:** Letter grade.

**Same as:** BIOL 630, BIOC 630, GNET 630, GNET 631, BIOC 631, BIOL 631.

**MCRO 631. Advanced Molecular Biology I. 3 Credits.**
Required preparation for undergraduates, at least one undergraduate course in both biochemistry and genetics. DNA structure, function, and interactions in prokaryotic and eukaryotic systems, including chromosome structure, replication, recombination, repair, and genome fluidity. Three lecture hours a week.
**Grading status:** Letter grade
**Same as:** GNET 631, BIOC 631, BIOL 631.

**MCRO 632. Advanced Molecular Biology II. 3 Credits.**
Required preparation for undergraduates, at least one undergraduate course in both biochemistry and genetics. The purpose of this course is to provide historical, basic, and current information about the flow and regulation of genetic information from DNA to RNA in a variety of biological systems. Three lecture hours a week.
**Grading status:** Letter grade
**Same as:** GNET 632, BIOC 632, BIOL 632.

**MCRO 635. Microbial Pathogenesis I. 3 Credits.**
Permission of the instructor. Required preparation, coursework in molecular biology and genetics. Topics will include aspects of basic bacteriology as well as bacterial and fungal pathogens and mechanisms of disease.
**Grading status:** Letter grade.

**MCRO 640. Microbial Pathogenesis II. 3 Credits.**
Permission of the instructor or a fundamental understanding of molecular virology and immunology. Molecular pathogenesis, with a primary focus on viral pathogens. Additional topics include vaccines and genetics of host-pathogen interactions.
**Grading status:** Letter grade.
MCRO 690. Special Topics in Microbiology or Immunology. 1-15 Credits.
Permission of the department except for department majors. Designed to introduce the student to research methods. Minor investigative problems are conducted with advice and guidance of the staff. Hours and credit to be arranged, any term. May be repeated for credit two or more semesters.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics; 15 total credits. 5 total completions.
Grading status: Letter grade.