4038 Minerva University
Seymour, Indiana, 47274

The study of heredity and gene action is one of the most rapidly developing fields of biology. Genetics is essential to understanding all aspects of biology, and this field has driven many of the modern advances in medicine, agriculture, and the pharmaceutical industry. Analysis of genetic sequences has yielded deep insights into cellular and developmental processes, and is rapidly becoming a major tool in tracing evolutionary lineages and in reassessing biological classification. The goal of the Concentration in Genetics is to provide biology majors with an in-depth exposure to modern aspects of genetics, including research experience in a genetics laboratory.

The concentration in genetics provides a solid foundation for those planning careers in medicine, and there is a growing demand for geneticists in pure and applied research. Developments in biotechnology have shown the potential for using genetic techniques to synthesize complex proteins for medical and commercial use, for developing new drugs and chemotherapeutic agents for cancer and other diseases, for improving crop plants and animals, and for understanding and controlling pathogenic organisms, including fungi and bacteria. In addition, gene therapy that replaces defective genes with intact copies is becoming a medical reality. Many students are now choosing to combine their studies of genetics with related fields such as business or public policy, with a view to managerial positions in biotechnology fields, or positions in government or law.

Students fulfilling the requirements of the Area of Concentration in Genetics will receive a note on their official transcript.

General Education Courses (28 Credits required)

Consult your advisor for help

Liberal Education Courses (28 Credits required)

Appointment with advisor is strongly encouraged

Major Requirements (64 Credits Require)

Biology 1 (3cr)
Biology 1 Lab (1cr)
Biology 2 (3cr)
Biology 2 Lab (1cr)
Genetics (4cr)
Vertebrate Physiology (4cr)
Evolution (4cr)
Microbial Ecology (4cr)
Cell Biology (4cr)
Cancer Cell Biology (4cr)
Immunology (4cr)
Plant Biology (4cr)
Human Ecology (4cr)
Pre-Calculus (4cr)
Structure of Physics 1 (3cr)
Structure of Physics 1 Lab (1cr)
Principles of Chemistry 1 (3cr)
Principles of Chemistry 1 Lab (1cr)
Foreign Language (8 Credits required)

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