Biological Sciences

Animal Science [http://catalog.montana.edu/undergraduate/agriculture/animal-science/] - Animal and Range Sciences Department; College of Agriculture

Equine Science: emphasizes science and technology combined with practical aspects of management, horsemanship and training. Livestock Management and Industry: stresses the application of science to livestock production, incorporating courses in agriculture economics and business. This program focuses on sustainable livestock systems, business, and management skills as they relate to livestock enterprises and production service industries. Science Option: emphasizes greater depth in the basic sciences and is designed for highly motivated students who have a strong interest in graduate training or professional school.

Biological Sciences - Ecology Department; College of Letters and Science

Conservation Biology and Ecology: gives students a clear understanding of the ways that natural and human-related processes affect species, communities and ecosystems, and relate this knowledge to its broad societal context. Fish and Wildlife Ecology and Management: provides a professional degree program for those students who have an interest in employment in these fields. Study leading toward a bachelor’s degree emphasizes basic principles of animal ecology, with considerable work in related fields. Organismal Biology: provides a rigorous program of study in plant or animal biology at the whole-organism, species, population, and community levels, while allowing students flexibility in selecting those biology courses that best meet their interests and objectives. Biology Teaching: certifies graduates to be qualified to teach secondary school biology and provides a solid education in biology and basic sciences with professional preparation courses required for state teacher certification.

Biotechnology - Microbiology Dept; Plant Sciences and Plant Pathology Department

Modern research in cellular and molecular biology, in areas focused on Animal Systems, Plant Systems, and Microbial Systems, and its resultant technology offers unparalleled opportunities to provide solutions to our society’s most urgent problems in human and animal health, agriculture, and environmental quality.

Cell Biology and Neuroscience - Cell Biology and Neuroscience Department; College of Letters and Science

Biomedical Sciences: The biomedical science options curriculum provides a strong background for students who are (1) interested in biomedical sciences career in research or teaching, or (2) plan on a career in medicine or other health professions. Cell Biology and Neuroscience: The curriculum in the cell biology and neuroscience option provides a strong background for students who are interested in a career in research or teaching in cell biology, molecular biology, developmental biology, or neuroscience.

Chemistry; Biochemistry option - Chemistry and Biochemistry Department; College of Letters and Science

This course of study includes a core of Chemistry, Biochemistry, and biology courses for the student interested in the molecular nature of biological materials and life processes.

Environmental Horticulture - Plant Sciences and Plant Pathology Department; College of Agriculture

Environmental Horticulture Science: the science and art of growing and maintaining plants for food and the enjoyment and improvement of the human environment. Its application through research has led to improved varieties of plants to benefit our daily lives. Landscape design: prepares students to solve aesthetic and functional landscape problems.

Environmental Sciences - Land Resources and Environmental Sciences Department; College of Agriculture

Environmental Sciences Major: This major is for students who wish to obtain a more general Environmental Sciences degree and design more of their course of study than possible in one of the below options. The required courses in this major are also required in each of the options, allowing for a relatively seamless transfer to one of them if accomplished by the end of the student’s second year. Environmental Biology Option: intended to train students who are interested in understanding the ecology of organisms in natural environments, and/or in understanding how organisms may be used to clean up environments that have been disturbed by human activities. Geospatial and Environmental Analysis Option: This program is for students interested in land resources and their management at landscape scales. Land Rehabilitation Option: This course of study provides training in site re-vegetation, soil remediation, riparian zone restoration, stream channel restoration, investigation of impacted geologic resources, restoration ecology, and remediation of sites contaminated by industrial activities. Soil and Water Sciences Option: provides students with fundamental training in biological, chemical, and physical sciences and advanced training in soil and water sciences.

Microbiology - Microbiology Department; College of Letters and Science

Environmental Health: provides a program for attaining a broad understanding of the physical, chemical, and biological factors in our environment, and their interactions that relate to health. Medical Laboratory Science: designed to prepare students for careers in Clinical Laboratory Science. Microbiology: In this option, students obtain a thorough education in the fields of medical, ecological, physiological and environmental microbiology, immunology, virology, and molecular biology.

Natural Resources and Rangeland Ecology - Animal and Range Sciences Department; College of Agriculture

Rangeland Ecology and Management: provides training in soils, vegetation, water, riparian areas, and livestock production on rangelands. Wildlife Habitat Ecology and Management: the science and art of managing wildland habitats for wildlife.

Plant Sciences - Plant Sciences and Plant Pathology Department; College of Agriculture

Crop Science: The challenge for crop scientists is to implement crop and soil management schemes that maintain and/or increase production, but at the same time conserve our soil and water resources and preserve the delicate balance in the agroecosystem. Plant Biology: Plant biology provides a broad education in the plant sciences.