



Biology

Degree: Bachelor of Science

Introduction

Biology is the science of living matter. It involves the study of the structure, evolutionary development, and functions of plants, animals, and micro-organisms and the ways in which they relate to our environment. Most biological scientists are further classified by the type of organism they study or by the specific activity they perform. Undergraduates entering this program should have a strong science and mathematics background in high school. Select from four emphases.

The biomedical sciences emphasis is intended for those students having an interest in the medical and paramedical professions. This program meets the minimal requirements of most professional schools of health science.

The cell and molecular biology emphasis emphasizes a thorough understanding of the biological principles underlying all living systems through study of the basic unit of life, the cell. Students should have an interest in working in research or industrial laboratories, including medical, microbiological or biotechnological laboratories.

The organismal biology emphasis places emphasis on organismal biology and on field courses. Students completing the program will acquire a broader background in science support courses than in other bachelor's level biological science programs. Students should have an interest in working with plants and animals in a field setting.

See the Secondary Endorsement Programs Major to Career Guide for more information about the biology secondary teaching emphasis.

Additional information

- Volunteer work, part-time jobs, internships, and cooperative education experiences in Biology provide valuable experience and can lead to full-time employment after graduation.
- Graduate students in Biology are to have an understanding of physics, chemistry, and mathematics.
- Many of the potential occupations require specialized training in the specific occupational area.

What are some desirable personal qualities?

- Concern for living organisms
- Ability to communicate well orally and in writing
- Imagination and curiosity
- Good judgment
- Precision, orderliness, and ability to work well with details
- Ability to work independently and as part of a team
- Patience and alertness
- Ability to use laboratory equipment
- Visual acuity and accurate data interpretation

What are some of the job tasks?

- Analyzing/Dissecting
- Conducting Research
- Designing Projects/Testing Ideas & Hypotheses
- Diagnosing Diseases/Solutions
- Inspecting/Examining Scientific Data
- Operating Scientific Instruments
- Reviewing/Evaluating Data/Problem Solving

What are some potential occupations?

Air Pollution Analyst
Agricultural Biologist
Animal Ecologist
Biochemist
Biological Oceanographer
Biological Photographer
Botanist
Coroner
Drug Inspector
Ecologist
Entomologist
Environmental Scientist
Fisheries Scientist
Food and Drug Inspector
Forensic Pathologist
Forester
Geneticist
Health Educator
Horticulturist
Immunologist
Land Use Planning Coordinator
Life Sciences Teachers and Professors
Marine Biologist
Medical Illustrator
Microbiologist
Molecular Biologist
Mortician
Oceanographer
Osteopath
Parasitologist
Pesticide Specialist
Pharmaceutical Personnel
Physiologist
Plant Molecular Biologist
Plant Pathologist
Public Health Environmentalist
Quality Control Specialist (Food, Dairy, Cosmetics)
Taxonomist
Wetland Scientist

Who hires?

- Aquariums
- Arboretums
- Biotechnology Companies
- Business/Industry
- Chemical Industries
- Cosmetic Companies
- Educational Institutions
- Environmental Agencies
- Government Agencies
- Laboratories (Medical, Testing, Research)
- Mining Companies
- National and State Parks
- Petroleum Manufacturers
- Pharmaceutical Companies
- Plant Nurseries
- Public Health Laboratories
- Research Firms
- Textile/Leather Manufacturers
- Water and Waste Water Treatment Facilities
- Zoos