



BIOLOGY

College of Arts and Sciences
www.aus.edu/cas



Biology is concerned with the scientific investigation of all aspects of life, from molecular foundations to the health of people and the environment. Presently, the world is experiencing a revolution in molecular biology and genetic manipulation that is equal to the scope and importance of the industrial revolution and the power of the computer age. More importantly, astounding applications are underway in the fields of medicine, microbiology, neuroscience, immunology and agriculture. Biologists work in a variety of fields, including medical sciences, pharmaceuticals, bioinformatics, species conservation, ecosystems management and environmental protection.



Possible Career Options

- Medicine and Medicine-Related Professions
- Medical Laboratory Technology
- Public Health
- Science Education and Teaching
- Laboratory and Field Research
- Pharmaceutical Industry
- Governmental Agencies
- Biotechnology
- Genetics and Genomics
- Environmental Consulting
- Sustainable Agriculture
- Marine Aquaculture/Fisheries and Aquaponics
- Wildlife Management
- Biomedical Engineering
- Immunology
- Human Genetics Counseling
- Scientific Journalism
- Forensics



Possible Employers

- Drug and Biotechnology Companies
- Food Testing Agencies and Firms
- Bioinformatics Database Companies
- Pharmaceutical Sales and Production
- University Biology Departments
- University and Hospital Research Centers
- Natural History Museums
- Teaching at all Levels
- Government Wildlife Management
- Public Health and Governmental Agencies
- Epidemiology, Virology and Immunology
- Biosystems Management
- Law Enforcement Agencies



Skills Required

- Interest in topics related to biology
- Desire to study physiology, genetics, biochemistry and microbiology
- Reasonable level of competency in mathematics and statistics
- Ability to organize, analyze and understand laboratory procedures and protocols
- Use the scientific method approach to enhance knowledge in biology and related fields
- Communicate well orally and in writing



Personal Attributes

- Natural curiosity about life processes, protection and nurturing of living organisms
- Desire to learn about new discoveries of biological research
- Interest in laboratory work, molecular biology, genetic engineering and applications
- Creativity in integrating biological knowledge to solving problems in novel ways
- Ability to accurately and critically analyze scientific concepts and principles
- Ability to use principles of logic and reasoning to support explanations
- Ability to work alone as well as within a team
- Ability to apply knowledge to solve practical and theoretical problems



Ways to Get Experience

- Researching topics and writing reports about them
- Preparing oral presentations related to biology for class
- Working on laboratory experiments and projects
- Taking part in field trips and experimental exercises
- Conducting a senior research project with the help of instructors
- Joining a university club related to biology
- Attending and participating in science seminars, exhibitions and fairs
- Interning with a wildlife agency, genetics company or agricultural concern
- Working part-time for a governmental agency, hospital, research lab or conservation group