# BOTANY
What can I do with this degree?

## AREAS

### PLANT BIOLOGY
- Anatomy
- Biochemistry
- Biophysics
- Cytology
- Ecology
- Genetics
- Molecular Biology
- Morphology
- Paleobotany
- Physiology
- Systematics
- Systems Ecology
- Taxonomy

### APPLIED PLANT SCIENCE
- Agronomy
- Biotechnology
- Breeding
- Economic Botany
- Food Science and Technology
- Forestry
- Horticulture
- Natural Resource Management
- Plant Pathology

## EMPLOYERS

- Research organizations
- Colleges and universities
- Museums
- Botanical gardens and arboretums
- U.S. Department of Agriculture branches including Medical Plant Resources Laboratory, Germplasm Resources Laboratory, Animal and Plant Health Inspection Service, National Arboretum, U.S. Forest Service
- Federal agencies including Departments of Interior and State, U.S. Public Health Service, National Aeronautics and Space Administration, the Smithsonian Institution, and Environmental Protection Agency
- State agencies
- Environmental and biotechnical regulatory agencies
- Ecological consulting companies
- Industries including petrochemical, chemical, and lumber and paper
- Companies including pharmaceutical, food, seed and nursery, fruit growers, biological supply houses, and biotechnology firms

## STRATEGIES

- Obtain a Ph.D. for teaching and advanced research positions.
- Conduct undergraduate research with professors to gain experience.
- Apply for undergraduate research fellowships or other student research programs.
- Maintain a high grade point average and develop good references in preparation for graduate school.
- Develop excellent computer skills.
- Join related professional associations.
- Read scientific journals or articles to stay abreast of current research.
- Learn federal and state government job application process.
- Take courses or double major in your area of interest.
- Gain relevant experience through volunteer positions, part-time work, or internships.
- Obtain a Ph.D. for teaching, advanced research positions, and administration.
- Learn a foreign language for international work such as plant studies in the tropics.
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**ORGANISMIC SPECIALTIES**

- Bryology
- Lichenology
- Microbiology
- Pteridology
- Mycology
- Phycology/Marine Botanists

- Colleges and universities
- Research organizations
- Federal and state government laboratories including Agriculture, Health, etc.
- Pharmaceutical companies
- Food and beverage industries including brewing and fermentation
- Hospitals
- Related industries

- Gain experience working with technology.
- Become familiar with laboratory procedures and equipment.
- Assist a professor with research or find a part-time job in a laboratory.
- Obtain a graduate degree in area of interest.

**EDUCATION**

- Teaching
- Research
- Administration

- Public and private high schools
- Colleges and universities
- Museums, botanical gardens and herbaria

- Gain certification or licensure for high school science teaching.
- Obtain a Ph.D. for positions in college teaching and research.
- Gain experience through tutoring.
- Learn to work well with different types of people.

**COMMUNICATION**

- Writing
- Editing
- Botanical Illustration

- Publishing companies including newspapers, magazines, books, and textbooks
- Professional associations
- Scientific and educational software companies
- Non-profit organizations

- Take courses in technical writing, journalism, or illustration.
- Develop word processing and desktop publishing skills or computer-aided design.
- Find an internship with a magazine, newspaper, or publisher.
- Obtain a master's degree in scientific journalism.
## AREAS

### LAW
- Agricultural
- Environmental
- Biotechnological

### EMPLOYERS
- Law firms with environmental focus
- Government agencies and regulatory agencies
- Biotechnical regulatory firms or agencies

### STRATEGIES
- Gain relevant experience by working at a law firm.

### BUSINESS
- Sales/Marketing
- Administration/Management

### EMPLOYERS
- Pharmaceutical companies
- Seed companies
- Biotechnology firms
- Scientific publishers
- Biological supply houses

### STRATEGIES
- Gain related work experience through internships or part-time and summer jobs.

### COMPUTER PROGRAMMING
- Scientific and educational software companies

### STRATEGIES
- Double major or minor in computer programming.

### GENERAL INFORMATION
- Bachelor's degree qualifies one for work as a laboratory technician or technical assistant in education, industry, government, museums, parks, and gardens.
- Master's degree opens some opportunities in research and administration.
- Ph.D. is required for advanced research and administrative positions or college teaching. Most plant scientists work in higher education.
- Build good relationships with science professors and secure strong recommendations. Maintain a high g.p.a. for graduate school admission.
- Obtain part-time, summer, co-op, volunteer, or internship experience with government agencies, college/university labs, agricultural experiment stations, freshwater and marine biological stations, or private companies.
- Complete an undergraduate research project to decide on a specific area of interest in botany.
- Enjoy outdoor activities if planning to conduct research in an outdoor environment.
- Join organizations concerned with the world food supply and other related areas. Read scientific journals related to botany.
- Develop an excellent background in mathematics and strong verbal and written communication skills.
- Select a broad range of courses in English, social sciences, arts, and humanities.
- Become proficient with computers.