

# Plant Biology

## Curriculum

The Plant Biology program provides students with a deep understanding in botany and a broad knowledge in biology in general. It provides background in chemistry and mathematics to meet the requirements for graduate and professional schools (medical, dental, pharmacy, law schools). Plant Biology graduates are in high demand for jobs in government agencies, non-governmental organizations, industry, and education.

## Plant Biology majors develop the following skills:

- Develop an understanding of the principles of cellular and molecular biology, genetics, ecology, and evolution
- Acquire a foundation in chemistry, physics and quantitative skills
- Develop critical thinking and communication skills
- Develop an appreciation for the diversity, complexity, and unity of life
- Understand current issues in biology
- Critically evaluate scientific evidence
- Engage in scientific inquiry
- Access electronic and print databases and resources
- Apply theoretical knowledge to practical situations
- Use analytical thinking to learn to analyze and interpret research findings and other data related to your experiments and lab work

## Get Involved

OSU Botanical Society (OSUBS)  
ECO - OSU  
Environmental Science Club  
Beta Beta Beta Honor Society

A complete list of student clubs and organizations can be found online at:  
<https://campuslink.okstate.edu>

## College of Arts & Sciences Career Services

213 Life Science East  
Tel: 405 744 5658

For appointments and resources:  
<http://cascareers.okstate.edu>

## Job and Internship Websites

- American Society of Plant Biologists  
[http://my.aspb.org/?page=Career\\_Center](http://my.aspb.org/?page=Career_Center)
- American Institute of Biological Sciences  
<http://www.aibs.org/classifieds/>
- Botanical Society of America  
<http://botany.org/careers/postingads.php>
- Chicago Botanic Garden  
<http://www.chicagobotanic.org/internship>
- Environmental Career Opportunities  
<http://www.ecojobs.com>
- Ecological Society of America  
<http://esa.org>
- Natural Resources Conservation Services  
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/careers/student/>
- Missouri Botanical Garden  
<http://www.missouribotanicalgarden.org>
- Monsanto  
<http://www.monsanto.com/careers/>
- NASA  
<http://nasajobs.nasa.gov>
- National Institute of Environmental Health Sciences  
<http://www.niehs.nih.gov/careers/jobs/index.cfm>
- National Science Foundation  
<http://www.nsf.gov/careers/openings/>
- Office of Science  
<http://science.energy.gov/about/jobs>
- Research Gate  
<http://researchgate.net/jobs/>
- Science Careers  
<http://www.sciencecareers.org>
- The American Society of Plant Taxonomists  
[www.aspt.net/careers](http://www.aspt.net/careers)
- The Student Conservation Association  
<http://thesca.org>
- The New York Botanical Garden  
<http://www.nybg.org/science/intern/>
- The Field Museum  
<http://www.fieldmuseum.org/about/careers>
- United States Department of Agriculture  
<http://www.ars.usda.gov/Careers/Careers.htm>

# Plant Biology Career Paths...

Plant biologists who like to be outdoors include ecologists and taxonomists. They often work for federal and state agencies and conservation organizations. For example, they may evaluate the effects of pollution (such as acid rain) on plants and work toward environmental protection. Or they may identify plant species and document their geographic distributions. They may evaluate all plant species that occur in a particular habitat, such as the tall grass prairie or the eastern deciduous forest.

Plant biologists who enjoy working in the laboratory may utilize their skills in the field of biotechnology to develop new or improved plants, such as introducing genes that provide drought tolerance. They may be employed by federal and state agencies, or in industries that deal with plants and plant products, such as agricultural and pharmaceutical companies.

Plant Biology also has a place in the classroom and careers include teaching at the college and K-12 grade level.

## Job Titles

Community Agency Worker  
Agronomist  
Cooperative Extension Agent  
Field Contractor  
Nature Photographer  
Journalist  
Landscape Architect  
Horticulturist  
Naturalist Patent Specialist  
Plant Geneticist  
Public Health Administrator  
Botanist  
Plant Quarantine Specialist  
Wine Maker  
Scientific Librarian  
Physician  
Consumer Advocate  
Taxonomist  
Conservation Expert  
Food Buyer  
Food Technologist  
Forester  
Irrigation Engineer  
Lab Technician  
Natural Resource Manager  
Research Assistant  
Ecologist  
Quality Control Specialist  
Technical Writer  
Environmental Health Educator  
National Park Service Employee  
Food & Drug Inspector  
Crop Physiologist  
Forest Engineer  
Teacher/Professor

## Types of Employers

Biological Supply Houses  
Biotechnology Companies  
Botanic Gardens & Museums  
Consumer Affairs  
Chemical Manufacturers & Suppliers  
Conservation Organizations  
Crop and Soil Management Firms  
Department of Interior  
Ecological Consulting Companies  
Environmental Regulatory Agencies  
Environmental Consulting Firms  
Floral Organizations  
Fermentation Organizations  
Food Manufacturers  
Forest Management Agencies  
Lumber and Paper Companies  
Municipal Governments  
Nurseries and Greenhouses  
Pharmaceutical Firms  
Peace Corps  
Petrochemical companies  
Public and Private Schools  
Public Health Service  
Research Laboratories  
Scientific Equipment Manufacturers & Suppliers  
Shade Tree Commission  
State Department  
NASA  
USDA  
US Food and Drug Administration  
US Forest Service  
Weed Control Industry