

# EXPERIENCE

## Purdue Agriculture

# MAJORS



✕ **Agribusiness.** Train for a rewarding career in agribusiness. With concentrations in **Agribusiness Management**, **Agrifinance**, **Agrimarketing**, **Commodity Marketing**, and **Food Marketing**, this major prepares graduates for careers in the meat, dairy, and poultry processing industries; grain handling, feed manufacturing, and seed and fertilizer firms; transportation and storage concerns; financial institutions; and food manufacturing, wholesale, and retail businesses. Although the major emphasizes agricultural-related businesses, its broad-based curriculum also allows preparation for nonagricultural businesses. The program's flexibility allows students to seek careers in international agribusiness.

Web [ag.purdue.edu/agecon](http://ag.purdue.edu/agecon)

E-mail [agec1@purdue.edu](mailto:agec1@purdue.edu)

**Agricultural Communication.** Prepare for a profession that serves business and society by promoting awareness of food, agriculture, and science issues among rural and urban audiences. Purdue agricultural communication majors gain skills and experience in public relations, marketing, journalism, and new media through diverse coursework and competitive internships. Through the program's design, students have the advantage of excelling in communication, science, and agricultural courses—a combination future employers value. Though situated within a large university, the agricultural communication program offers a close-knit community in which students receive personal attention from faculty and staff in the College of Agriculture.

Web [www.asec.purdue.edu/undergrad/agcomm](http://www.asec.purdue.edu/undergrad/agcomm)

E-mail [ASEC@purdue.edu](mailto:ASEC@purdue.edu)

**Agricultural Economics.** Prepare for careers at banks, farm credit institutions, grain companies, farm equipment and fertilizer manufacturers, and food processing firms. Concentrations in **Applied Agricultural Economics**, **Quantitative Analysis**, and **Commodity Marketing** give graduates the foundation to apply economic and business principles in many career fields. Graduate schools, government agencies, and consulting firms seek individuals with a strong background in quantitative methods, advanced courses in applied economics, and a strong background in economic theory. Quantitative agricultural economics graduates are highly trained to analyze management problems. They possess the technical skills in mathematics, statistics, and economic theory to give them a competitive edge in any market.

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**Agricultural Education.** Prepare for a professional career in a people-centered field of agricultural study—agricultural education. Purdue University agricultural education graduates are equally comfortable teaching in our nation's high schools, leading training efforts in major agricultural companies, or assisting youth and adults in informal settings. The curriculum provides a base of scientific knowledge, a strong educational and communication emphasis, and leadership development opportunities through seminar courses and student organization activities. Graduates are qualified for an Indiana Teachers License, which is recognized in over 40 states. Attention to individual student needs and a family atmosphere characterize the agricultural education program.

Web [www.asec.purdue.edu/undergrad/aged](http://www.asec.purdue.edu/undergrad/aged)

E-mail [ASEC@purdue.edu](mailto:ASEC@purdue.edu)

**Agricultural Engineering.** Prepare for a challenging career as a professional engineer designing or using the systems, processes, and machines that generate or use energy, food, and water. This program provides students with a background in mechanical design, hydraulics, instrumentation and control, finite element analysis, and electronics and sensors. Graduates design, develop, analyze, and operate machines and systems related to agricultural and biological products and processes, materials handling, construction and mining, forestry, lawn and ground care, and food and fiber production and processing.

Web [engineering.purdue.edu/ABE](http://engineering.purdue.edu/ABE)

E-mail [joinabe@ecn.purdue.edu](mailto:joinabe@ecn.purdue.edu)

**Agricultural Systems Management.** Prepare to organize and manage environmentally sound, technology-based businesses. The program emphasizes planning and directing an industry or business project with responsibility for results. ASM is based on an understanding of how equipment and buildings are used with plants and animals and their products. These processes require an understanding of the physical and biological sciences to produce and maintain top product quality. The curriculum provides in-depth technical knowledge for selecting and applying advanced technologies in the food system. The major offers concentrations in **Data and Information Systems**, **Leadership and Management**, and **Agrosecurity**. Graduates solve a wide variety of business and technical problems in careers related to grain handling and storage, equipment management, precision technology, and technical sales and support.

Web [engineering.purdue.edu/ABE](http://engineering.purdue.edu/ABE)

E-mail [joinabe@ecn.purdue.edu](mailto:joinabe@ecn.purdue.edu)

*We prepare students for careers that help solve the world's greatest challenges in food, agricultural, life, and natural resources sciences. Use the contact information at the end of each description to ask for more information.*



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**Agronomy.** Concentrations include: **Agronomic Business and Marketing**, **Crop and Soil Management**, and **International Agronomy**. Prepare to fill the high demand for professionals in field agronomy, international food security, agricultural development, cropping systems management, seed sales, soil fertility and/or conservation, and many related fields. Selective courses in communications, science, and/or business support a strong foundation in agronomy and crop protection. As a professional agronomist, you'll interact directly with producers to provide strong crop management support for their farming operations. This major is an excellent first step in preparing for graduate study for those who choose to do so.

Web [ag.purdue.edu/agry](http://ag.purdue.edu/agry)

E-mail [agronomy@purdue.edu](mailto:agronomy@purdue.edu)

✕ **Animal Sciences.** Prepare for careers with animals by learning about animal growth and development, nutrition, reproduction, breeding, and genetics. Concentrations in **Animal Agribusiness**, **Production, Products, Biosciences**, **Behavior and Well-Being**, or **Pre-veterinary Medicine** provide graduates with the broad foundation to work in many career fields, including farm operations, technical sales, animal behavior, and research laboratories. Advanced degree graduates (MS, PhD, and DVM) may work in Cooperative Extension, veterinary medicine, or research and development in academic, industry, or government settings as research specialists in nutrition, genetics, reproduction, growth biology, or animal behavior and well-being.

Web [ag.purdue.edu/ansc](http://ag.purdue.edu/ansc)

E-mail [ansc4you@purdue.edu](mailto:ansc4you@purdue.edu)

**Applied Meteorology and Climatology.** Prepare for a career in meteorology and climatology as you study basic math, physics, instrumentation, data collection and interpretation, and predictive modeling, which describes and forecasts weather and climate. Excellent opportunities for graduates exist with governmental agencies such as the National Weather Service, the National Environmental Satellite Data and Information Service, and the Department of Defense. Graduates also work for private industry, such as meteorological and environmental consulting firms, and for insurance and commodities industries.

Web [ag.purdue.edu/agry](http://ag.purdue.edu/agry)

E-mail [agronomy@purdue.edu](mailto:agronomy@purdue.edu)

**Aquatic Sciences.** Prepare for a career in fisheries research and management, lake and stream management, aquaculture, and interdisciplinary studies of environmental problems. Studies emphasize understanding ecosystems function, natural and human disturbance, and ecosystem resilience. You can choose a concentration in **Marine and Freshwater Biology** or **Fisheries**. You prepare for work in public organizations (state or federal fish and wildlife), not-for-profit organizations (e.g., The Nature Conservancy), private consulting firms, or for graduate studies (MS, PhD, DVM). This degree meets the educational requirements for the American Fisheries Society Professional Certification.

Web [ag.purdue.edu/fnr](http://ag.purdue.edu/fnr)

E-mail [JoinFNR@purdue.edu](mailto:JoinFNR@purdue.edu)

**Biochemistry.** Gain a strong understanding of science and research by studying the molecular basis of living organisms. This prepares you for an exciting and productive career in biotechnology and the life sciences. It is also excellent preparation for medical, dental, veterinary or law school, or for graduate studies in life sciences at any of the finest institutions in the country. In addition to our research focus, we offer concentrations in **Pre-medicine** and **Pre-veterinary medicine**.

Web [ag.purdue.edu/biochem](http://ag.purdue.edu/biochem)

E-mail [BioChem-Boilers@purdue.edu](mailto:BioChem-Boilers@purdue.edu)

**Biological Engineering.** Prepare to design, develop, and operate large-scale manufacturing facilities for food and biological materials. Train to conduct research using chemical, physical, and biotechnology tools. Gain background in process engineering, chemistry, and microbiology to prepare for work in the food, biological, and pharmaceutical industries. Concentrations in this major include **Food and Biological Process Engineering**, **Cellular and Biomolecular Engineering**, **Bioenvironmental Engineering**, and **Pharmaceutical Process Engineering**. Careers include: product development; process design; research; packaging; transportation; storage; food and bioprocess engineering; and consulting engineering for equipment manufacturers, pharmaceutical companies, the biotechnology industry, and research organizations.

Web [engineering.purdue.edu/ABE](http://engineering.purdue.edu/ABE)

E-mail [joinabe@ecn.purdue.edu](mailto:joinabe@ecn.purdue.edu)

**Crop Science.** Courses in plant biology, physiology, and ecology work together with courses in genetics, cropping system management, soils, soil fertility, and crop protection courses in entomology, plant pathology, and weed science to prepare you for diverse opportunities. After graduation, you may work as a professional in field agronomy, technical sales, crop research support, or a wide array of other field-crop related opportunities in private industry or with governmental agencies. This is excellent science-based preparation for graduate study in these professional fields.

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E-mail [agronomy@purdue.edu](mailto:agronomy@purdue.edu)

**Environmental and Natural Resources Engineering.** Prepare for careers that address energy, food, water, environment, and other vital concerns. Gain background in chemistry, biology, geographic information systems, hydrology, modeling, and bioremediation. Employment opportunities for graduates include product engineering; design and test engineering for machinery and manufacturing industries; engineering for consulting firms and government agencies responsible for environmental quality; facilities design; safety engineering; engineering management; private consulting; teaching in universities; and research in industry and government.

Web [engineering.purdue.edu/ABE](http://engineering.purdue.edu/ABE)

E-mail [joinabe@ecn.purdue.edu](mailto:joinabe@ecn.purdue.edu)

**Environmental Studies (Pre).** Start here if you are interested in environmental studies, but are undecided about enrolling in a specific program of study. Take courses and explore different environmental majors during your first year before choosing a specific major.

Web [ag.purdue.edu/NRES](http://ag.purdue.edu/NRES)

E-mail [nres@purdue.edu](mailto:nres@purdue.edu)

**Farm Management.** Prepare to manage the home or professional farm and to understand the challenges of farm management. Emphasis is on production, finance, marketing, and management strategies.

Web [ag.purdue.edu/agecon](http://ag.purdue.edu/agecon)

E-mail [agec1@purdue.edu](mailto:agec1@purdue.edu)



**Food Science.** Prepare to apply scientific knowledge of food processing, microbiology, chemistry, and economics to a career in food production, storage, distribution, product development, quality control, inspection, and sales—or pursue graduate studies in food processing, microbiology, or chemistry. As an undergraduate, chemistry, organic chemistry, biochemistry, biology, microbiology, calculus, and physics in the first two years lay the foundation for food microbiology, food chemistry, and food processing in the upper level courses.

Web [ag.purdue.edu/foodsci](http://ag.purdue.edu/foodsci)  
E-mail [foodsci@purdue.edu](mailto:foodsci@purdue.edu)

**Forestry.** Learn to apply biological, ecological, economic, and social knowledge as you develop and implement sustainable forest management plans. Studies emphasize understanding ecosystems function, natural and human disturbance, and ecosystem resilience. This prepares you for careers with public agencies such as state divisions of forestry, U.S. Forest Service, or private industries and consulting firms. This program is accredited by the Society of American Foresters.

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E-mail [JoinFNR@purdue.edu](mailto:JoinFNR@purdue.edu)

**Horticulture.** Choose among several concentrations in this broad major. **Horticultural Production & Marketing** provides training in business operations and in fruit, vegetable, flower, landscape ornamental, or specialty horticultural commodity production and commercial distribution. Both **Landscape Design** and **Landscape Contracting & Management**, prepare you to direct and conduct landscape construction and plant installation, and to supervise management of established landscapes. **Landscape Enterprise Management** graduates become account managers in client relations, business managers, and supervisors for landscape management and installation. **Public Horticulture** leads to communication or education careers, often with public gardens, mass media, or public service groups. **Plant Science** encompasses applied research and basic plant biology, emphasizing horticultural plants. You gain and apply knowledge from biology, chemistry, ecology, engineering, communication, business, and education. You solve real-world problems, such as feeding a hungry world or improving quality of life.

Web [ag.purdue.edu/hla/Hort](http://ag.purdue.edu/hla/Hort)  
E-mail [hlacareers@purdue.edu](mailto:hlacareers@purdue.edu)

**Insect Biology.** Prepare for a biological career where it helps to be an insect expert—become an entomologist. Entomologists use biotechnology and cutting-edge science to solve important health, food security, environmental, and economic issues. They work in private corporations, governmental agencies, universities, museums, and zoos or pursue small business ownership or private consulting. Graduates find work in the United States or abroad in research and development, technical support, sales, employee training, education, forensics, or regulatory affairs. Or, they prepare for advanced degrees (MS, PhD, DVM, MD).

Web [ag.purdue.edu/entm](http://ag.purdue.edu/entm)  
E-mail [bugs@purdue.edu](mailto:bugs@purdue.edu)

**Landscape Architecture.** Prepare to become a design professional who combines art, science, and technology to propose meaningful and sustainable enhancements to our human-made environment. Learn to design outdoor environments, including parks, urban open spaces, retail environments, corporate campuses, and even new communities. Landscape architects skillfully apply the art of creative invention, the science of sustainable practices, the science of social behavior, and cutting edge technologies to ensure a healthy future for our planet and its occupants.

Web [ag.purdue.edu/hla/LA](http://ag.purdue.edu/hla/LA)  
E-mail [hlacareers@purdue.edu](mailto:hlacareers@purdue.edu)

**Landscape Architecture (Pre).** (See Landscape Architecture.)

**Natural Resources and Environmental Science.** Prepare to work as an environmental consultant, wetland scientist, hydrologist, industrial compliance specialist, urban project coordinator, wildlife biologist, resource economist, environmental planner, or soil conservationist. This interdisciplinary, science-based program includes concentrations in **Air Quality**, **Emerging Environmental Challenges**, **Environmental Policy and Analysis**, **Land Resources**, and **Water Quality**. NRES graduates work for businesses, industries, non-profits, and governmental agencies. Others continue their education in environmental law, teaching, or working in research.

Web [ag.purdue.edu/NRES](http://ag.purdue.edu/NRES)  
E-mail [nres@purdue.edu](mailto:nres@purdue.edu)

**Plant Genetics, Breeding, and Biotechnology.** Prepare for research and technical positions in private industry, government, or a university. Specialize in plant genetics, which emphasizes biochemistry, anatomy and function, pathology, entomology, molecular biology, and transgenic technologies, as well as classical plant breeding techniques for crop improvement. A professional internship is required. Most students have the opportunity to complete two or more internships to build their professional credentials prior to graduation. This major is an excellent science-based precursor to graduate school.

Web [ag.purdue.edu/agry](http://ag.purdue.edu/agry)  
E-mail [agronomy@purdue.edu](mailto:agronomy@purdue.edu)

**Plant Science.** Study the biology of plants: how they grow and develop; how they interact with other organisms and the environment; and how to manage plants that are grown for food, fiber, and fuel. Classes in Cell and Molecular Biology, Plant Ecology and Environment, and Plant Health Management allow students to develop expertise in these areas, prepare for a career with plants and the environment, and progress to advanced graduate study.

Web [ag.purdue.edu/btny](http://ag.purdue.edu/btny)  
E-mail [plants@purdue.edu](mailto:plants@purdue.edu)

**Plant Studies – Exploratory (Pre).** Interested in a career that involves studying plants, but not sure which of our majors best suits your personal interests? Start here and you'll have up to four semesters to initiate your required coursework, take introductory courses and explore the differences between plant-related majors. Potential career paths in plant studies range from growing plants for food, fiber and fuel to specialty areas where plants are used for fundamental science research. Careers also include the design and construction of landscapes or sports turf areas and the business and marketing of plant products.

E-mail [studyplants@purdue.edu](mailto:studyplants@purdue.edu)



✕ **Pre-veterinary Medicine.** Join this nondegree, undergraduate program if veterinary medicine is your career goal, but you're undecided on a major. As a prevet, you complete preparatory coursework for schools of veterinary medicine while also exploring various majors. The biology, chemistry, animal nutrition, and other science courses you take apply toward majors in agriculture or other university disciplines. Prevet advisors thoroughly understand both the majors available at Purdue and admissions requirements for Purdue's College of Veterinary Medicine. Majors most commonly pursued by prevets in our college are animal sciences, biochemistry, and wildlife.  
E-mail [PrevetinAG@purdue.edu](mailto:PrevetinAG@purdue.edu)

**Sales and Marketing.** Develop an area of specialization to prepare for an agriculture-related industry of your choice. A wide spectrum of farm-supply industries, service firms, agricultural marketing organizations, and food manufacturing companies are marketing-oriented and depend extensively on agricultural graduates who are well-trained in marketing tools and concepts. This program provides the basis for entry into agri-marketing, leading to a professional career in agri-sales or marketing management.  
Web [ag.purdue.edu/agecon](http://ag.purdue.edu/agecon)  
E-mail [agec1@purdue.edu](mailto:agec1@purdue.edu)

**Soil and Water Sciences.** Prepare to work as a professional in areas such as soil conservation, soil chemistry, environmental management and protection, soil physics, soil fertility, soil productive potential, cropping systems management, agricultural water use and management, food security, soil and water quality, and many related fields. Excellent professional opportunities are available in private industry and with county, state, and federal government agencies for well-qualified individuals. The strong emphasis on science in this option allows graduates maximum flexibility with regard to advancement in industry and further graduate training.  
Web [ag.purdue.edu/agry](http://ag.purdue.edu/agry)  
E-mail [agronomy@purdue.edu](mailto:agronomy@purdue.edu)

**Sustainable Biomaterials—Process and Product Design.** Students learn the basics of sustainability of biomaterials, product design, processing, and conservation. Studies focus on sustainable materials resource evaluation, product strength design, lean manufacturing, end-of-life options, cradle to grave, cradle to cradle, zero-impact theories, and use of life cycle assessment techniques. You will gain experience with complex natural resources utilization issues on a local and global scale. You are prepared for management positions in manufacturing industries, particularly the wood products manufacturing and the hardwood cabinet and furniture industries.  
Web [ag.purdue.edu/fnr](http://ag.purdue.edu/fnr)  
Email [JoinFNR@purdue.edu](mailto:JoinFNR@purdue.edu)

**Sustainable Food and Farming Systems.** Learn to design and manage a small farm enterprise. Study the principles of sustainable agriculture including nonchemical pest and soil management. Investigate organic, local, and urban agriculture systems and study the resilience of the American food system. Gain hands-on experience at the new Purdue University student farm ([facebook.com/FullCircleAgricultureAtPurdue](https://facebook.com/FullCircleAgricultureAtPurdue)). This comprehensive, science-based degree program prepares you to manage low-input farming enterprises and for a career in many other agricultural and environmental professional fields.  
Web [ag.purdue.edu/hla/hort](http://ag.purdue.edu/hla/hort)  
Email [hla-careers@purdue.edu](mailto:hla-careers@purdue.edu)

**Turf Management and Science.** Prepare to become a professional sports turfgrass manager on golf courses, soccer fields, football fields, baseball diamonds, and other athletic facilities. Professional opportunities are also available in the management of residential, corporate, or other large landscaped areas such as parks and school grounds. You may work as a turf-supply dealer or a landscape contractor, or in one of many other areas of business.  
Web [ag.purdue.edu/hla](http://ag.purdue.edu/hla)  
E-mail [hla-careers@purdue.edu](mailto:hla-careers@purdue.edu)

**Wildlife.** Learn about wildlife research, management, and education, as well as application of biological, ecological, economic, and social knowledge to wildlife management issues. Studies emphasize understanding ecosystems function, natural and human disturbance, and ecosystem resilience. You are preparing for work in public organizations (state/federal fish and wildlife), not-for-profit organizations (e.g., The Nature Conservancy, Ducks Unlimited), or private consulting firms—or for graduate studies (MS, PhD, DVM). This degree meets the educational standards of The Wildlife Society to become a Certified Wildlife Biologist.  
Web [ag.purdue.edu/fnr](http://ag.purdue.edu/fnr)  
E-mail [JoinFNR@purdue.edu](mailto:JoinFNR@purdue.edu)

## MINORS

The College of Agriculture offers 29 minors, all of which can complement any major at Purdue University.

- Agricultural Systems Management
- Animal Sciences
- Biochemistry
- Crop Science
- Farm Management
- Fermentation Science
- Fisheries and Aquatic Sciences
- Food and Agribusiness Management
- Food Science
- Forensic Sciences
- Forest Ecosystems
- Furniture Design
- Global Food and Agricultural Systems
- Horticulture
- Insect Biology
- International Studies in Agriculture\*
- Landscape and Turf Management
- Landscape Management
- Natural Resources and Environmental Science
- Pet Food Processing
- Plant Biology
- Plant Pathology
- Soil Science
- Sustainable Environments
- Turf Management
- Urban Forestry
- Weed Science
- Wildlife Science
- Wood Products Manufacturing Technology

\*The International Studies minor requires a cooperative work, internship, study abroad, or cultural exchange experience of at least eight weeks in a geographic region selected by the student.

### For more information about the College of Agriculture contact:

Office of Academic Programs  
College of Agriculture  
Purdue University  
Agricultural Administration Building, Rm. 121  
615 West State Street  
West Lafayette, IN 47907-2053

Phone: 765.494.8470  
E-mail: [EXP@purdue.edu](mailto:EXP@purdue.edu)

FAX: 765.494.8477  
Web: [purdue.edu/experience](http://purdue.edu/experience)