



**PennState**  
College of  
Agricultural Sciences



# Ag Journeys

**“Everyone in our college has a common purpose—solving the world’s most important problems.”**

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—*Gabrielle Henrichs, Plant Science*

See Gabrielle's Ag Journey and more at [agsci.psu.edu/ag-journeys](https://agsci.psu.edu/ag-journeys)

# The mission is real.

Healthy and affordable food. Clean air and water. Stewardship of our natural resources. Vibrant economies and communities. That's why all of us in the College of Agricultural Sciences are so passionate about preparing you for success. When you succeed, we all succeed.

**3,000**

**UNDERGRADUATE  
STUDENTS ARE  
ENROLLED IN**

**AG SCIENCES,  
MAKING OUR  
COLLEGE A  
TIGHT-KNIT  
COMMUNITY**

## **WE START SMALL.**

Penn State is a universe unto itself. The resources and opportunities go on and on. Our college is a small, happy green corner of that universe. Your whole world is right there. Labs, barns, farms, dining, residence halls, gyms, and classrooms— all just steps away. Faces are familiar and the door is open. You'll find some of the best friends you will ever have.

## **IT'S DIFFERENT HERE.**

Staff and faculty treat you—like you. Your professors are world class and they are engaged in cutting-edge, pioneering research. But their first priority is helping you discover your talents and hone your skills. The help doesn't end at graduation. Ag Sciences alumni are energized everywhere to help open doors to your success.

## **LEARNING IS HANDS-ON.**

You're going to roll-up your sleeves and get your hands dirty. Learning quickly moves out to the farms, factories, laboratories, corporate board rooms, halls of government, disaster sites, hospitals, military installations, jungles, deserts, wilds, waterways, small towns, and cities where you will learn today and lead tomorrow.

## Join us, on Ag Hill!



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# No two ag journeys are alike.

You dream it, we'll all put our heads together to work towards making it happen. There's so much there—activities, opportunities, travel, internships, and more. On and off campus, and on every corner of the planet. Your Ag Journey is just that—yours. Chart a path that is customized to your talents, appetites, and dreams.

## UNDERGRADUATE RESEARCH

Where science learning comes alive. In Ag Sciences, you can put ideas to the test from the day you set foot on campus. Work side-by-side with faculty, graduate students, and other undergraduates in a lab or field experience. The research you work on is at the very front line of world-changing discovery.

## STUDY ABROAD

Broaden your worldview, develop new skills, learn about yourself, make new friends, and enhance opportunities for a meaningful future. You'll find a variety of ways to help fit study abroad into your curriculum and budget. Embedded courses include travel components that range from a week, to summer, and full semester-long experiences. You can even embark on a full academic year abroad!

## CLUBS


Interested in being a part of an award-winning judging team? Fighting for a cause? Cleaning the Chesapeake? There's a club for that and dozens more. Explore interest areas, gain leadership experience, and have a blast.

## INTERNSHIPS

Three words: deep, industry, contacts. Ag Sciences staff and faculty are deeply connected to leaders across the world of agriculture—and they want to hire Penn Staters. We help match students with employers for internships to explore career paths—and we are proud of our success. More than one-third of our students previously interned with what became their future employer.

## ENTREPRENEURSHIP AND INNOVATION

Create new ventures and make solutions happen under the mentorship of seasoned entrepreneurs and with the support of organizations bringing the next best thing to market. Even refine your good idea by pitching it at our own Ag Springboard competition. Winners take home grant money and bring their ideas to life—and to the market!



**40+**  
**STUDENT  
CLUBS AND  
TEAMS**



Ag Science is perfect for me. It's a little bit of all the majors and that's what I love about it

—Mitchell Valentin, Agricultural Sciences

STUDY  
ABROAD  
OPPORTUNITIES  
IN **29**  
COUNTRIES

*Ag Journeys*

See Mitchell's Ag Journey and more at  
[agsci.psu.edu/ag-journeys](http://agsci.psu.edu/ag-journeys)

# What do you like to do?

Ag majors are for doers. For contributors. Coursework is designed to meet the demands of rewarding, purposeful careers. No matter your talents, interests, or career aspirations the College of Agricultural Sciences has a major that will challenge and inspire you to have a phenomenal experience and become the best version of yourself.



## AGRIBUSINESS MANAGEMENT

Take a hands-on approach to business while diving deep into the unique challenges of the multibillion-dollar agricultural industry. While agriculture is the focus, graduates succeed in every imaginable type of business.

### The right major if you're:

- entrepreneurial and committed to growing your business skillset in foundations like marketing management, human resources, and more
- hungry to run the family farm, a fortune 500, and anything in between
- ready to set yourself apart with an education that includes instruction from two industry leaders—Penn State College of Agricultural Sciences and Penn State Smeal College of Business

## AGRICULTURAL SCIENCE

Acquire science and management knowledge and skills across the full range of agriculture, while gaining focused expertise through a required ag minor.

### The right major if you're:

- called to careers in agribusiness, production, government, and education
- interested in customizing your education to match your personal, academic, and professional goals
- eager to explore many different facets of agriculture including animals, food, plants, the environment, business, and more!

## AGRICULTURE AND EXTENSION EDUCATION

Become an educator and grow tomorrow's leaders. Join a growing network of informed, committed professionals who want to make a difference with students, agriculture and our natural resources.

### The right major if you're:

- motivated for a career as a teacher in schools, colleges, and extension agencies
- energized to equip students to face challenges in agriculture and the world's most pressing issues
- inspired to bring insight and a culture of mentorship to business, trade and professional associations, and government agencies.

## ANIMAL SCIENCE

Roll up your sleeves and get the best of the business, practical stewardship, and refined scientific understanding of all things animals.

### The right major if you're:

- searching for hands-on, experiential learning with exposure to multiple domestic species
- Interested in an education that is both practical and grounded in science.
- interested in animal-related research and preparing for grad school, including veterinary school



**16:1**  
**APPROX.**  
**STUDENT/FACULTY**  
**RATIO IN CORE**  
**COURSES**



## **BIOLOGICAL ENGINEERING**

Earn an engineering degree that combines traditional engineering disciplines with biological, agricultural, and environmental sciences.

### **The right major if you're:**

- interested in the role engineering plays in producing food and protecting our natural resources
- up for the challenge, rigor, and prestige of a Penn State Engineering degree, coupled with the hands-on approach of the College of Agricultural Sciences
- seeking a meaningful career in manufacturing, engineering, nonprofits, government agencies, or continuing on to graduate school

## **BIORENEWABLE SYSTEMS**

Combine engineering technology, natural resources, and agriculture with fundamentals of business, entrepreneurship, and management.

### **The right major if you're:**

- interested in science, engineering, and business roles in biorenewable companies
- passionate about developing products made from renewable materials that will sustainably replace plastics and other petroleum-based substances
- looking to work with engineers in the testing, development, and improvement of equipment, processes, or products



# MAJORS

## COMMUNITY, ENVIRONMENT, AND DEVELOPMENT

Acquire in-demand physical and social science skills needed to take a balanced approach to environmental stewardship with facing challenges in healthy communities abroad and at home.

### The right major if you're:

- interested in obtaining competencies sought by governments, advocacy groups, and corporations
- looking for a problem-oriented, customizable major that blends economics, sociology, and other disciplines to give you a wide skill set
- envision yourself influencing policy, business practices, community planning, and even industry culture to make real, impactful change







## ENVIRONMENTAL RESOURCE MANAGEMENT

Gain the science skills needed to jump into a rewarding career analyzing environmental problems and managing environmental resources.

### The right major if you're:

- interested in a career with government agencies, corporations, advocacy groups, and more that demand physical science skills to ensure that our soil, water, and air are protected
- a science-minded, hands-on learner who is happiest outdoors in the field gathering data and monitoring environmental conditions
- Interested in bringing Environmental Science realities to law and policy as an environmental advocate

## FOOD SCIENCE

Learn the science and systems needed to manufacture safe, nutritious, and delicious food.

### The right major if you're:

- passionate about chemistry, microbiology, nutrition, and engineering and how those subjects relate to food production
- interested in developing new products, supervising manufacturing operations, or ensuring food quality and safety
- looking for a hands-on major where students work in labs and small-scale processing facilities to put their learning into practice



## FOREST ECOSYSTEM MANAGEMENT

Gain the science and management knowledge to sustainably utilize and manage forest resources

### The right major if you're:

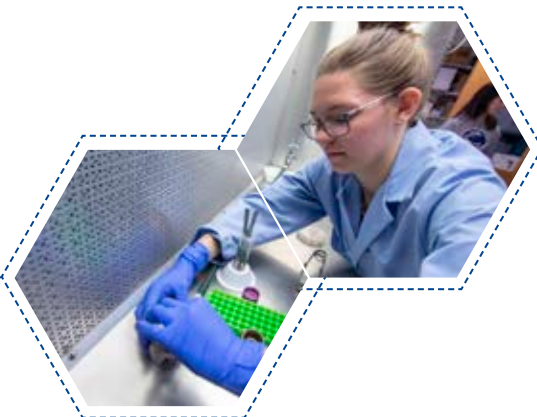
- a hands-on learner who loves the outdoors and has an appreciation of nature and concern for natural resources
- anxious to use cutting-edge technologies like LIDAR (Light Detection and Ranging), satellite imagery, and UAVs to understand and conserve our forests
- passionate about managing complex ecological systems and resolving environmental, economic, and social challenges

## IMMUNOLOGY AND INFECTIOUS DISEASE

Fight health threats and embark on scientific exploration of the human immune system to acquire the tools to prevent and cure deadly diseases.

### The right major if you're:

- interested in studying mechanisms of human disease progression at the molecular, cellular, and whole organism levels, and how these diseases are impacted by components of the immune system
- interested in a career in the biomedical industry, government or continuing to medical, veterinary, or pharmacy school
- passionate about fighting cancer, diabetes, allergies, and other threats to people and animals





## LANDSCAPE CONTRACTING

Develop skills in construction, site design, plant material usage, plant establishment, and landscape maintenance to join a career field with unmatched opportunities.

### The right major if you're:

- interested in a highly specialized profession that involves the design, construction, and management of outdoor environments
- seeking to work in the studio creating 2-D and 3-D landscape plans or aspiring to become a leader in a design-and-build company
- a hands-on learner in search of a career with potential for high reward

## PHARMACOLOGY AND TOXICOLOGY

Study the effects different chemicals have on living cells to better understand human health, and be a part of pioneering, life-saving research.

### The right major if you're:

- headed to medical school, the pharmaceutical industry, the chemical industry, or taking leadership in government
- passionate about applying that knowledge to make a difference in fighting deadly diseases
- looking to study how new drugs are discovered and evaluated
- concerned about the environment impact of toxic chemicals released into the ecosystem and want to understand how to define and manage safety



## PLANT SCIENCES

Master the science of plants for food, fiber, medicine, and fuel. Experience highly accessible faculty and world class facilities just steps away.

### The right major if you're:

- interested in careers in business and government related to sustainable and conventional food, fuel, and fiber production systems
- curious about growing and developing plants for better human nutrition, greater insect and disease resistance, and medical or aesthetic qualities
- seeking hands-on learning in greenhouse spaces, labs, research and teaching farms, a student farm, and hydroponics and aquaponics systems

## TURFGRASS SCIENCE

Join the ranks of the national leader in the science and business of golf courses, sports fields, and related industries. Our graduates run the show at premier facilities around the world.

### The right major if you're:

- ready to combine business acumen, people skills, and plant science interest
- excited about having a real-world, hands-on internship as a core part of your collegiate experience
- searching for a career with incredible opportunities and explosive growth





**\$2.9**  
MILLION IN  
SCHOLARSHIPS  
ANNUALLY

## VETERINARY AND BIOMEDICAL SCIENCES

Don't just get in to vet school, thrive there with this science-heavy preparation for your dream bio-medical career.

### The right major if you're:

- an aspiring veterinarian, doctor, or other biomedical professional
- passionate about animals and interested in genetics, nutrition, physiology and biochemistry curriculum
- interested in issues like emerging diseases, food safety, and control and prevention of animal diseases

## WILDLIFE AND FISHERIES SCIENCE

Develop the knowledge, skills, and professional ethics needed to conserve and manage fish, wildlife, and their environments.

### The right major if you're:

- angling for a career that combines indoor and outdoor activities with the opportunity to work in settings such as state or federal natural resource agencies, nonprofits, zoos and aquariums, or consulting firms
- happiest outdoors, learning hands-on, but also appreciate the importance of a scientific approach
- concerned about society's impact on the environment



A photograph of two men standing in a farm or laboratory setting. They are both wearing blue jackets. The man on the left is smiling, while the man on the right has a serious expression. In the background, there are metal cages containing animals, likely sheep or goats, and bright overhead lights.

# Ag Journeys

**"They know me. They push me.  
They treat me like family."**

—Luke Trimble, *Veterinary and Biomedical Sciences*

See Luke's Ag Journey and more at [agsci.psu.edu/ag-journeys](https://agsci.psu.edu/ag-journeys)

# You're not in this alone.

Ask around. It's different here. The relationship between students and their dedicated support team of professors, full-time advisers, staff, peer students, and alumni is uniquely strong.

## ACADEMIC SUCCESS

You go to college to broaden your horizons, engage academically, and gain an education on a subject matter that you are passionate about. Take advantage of our academic advisers and professors who are here to help you succeed! They guide you through the process, help you with your academic progress, and support you in finding a career. Writing tutors, student mentors, and technology help are always available, too.

## CAREER SERVICES AND EXPERENTIAL LEARNING

There has never been a better time than right now to embark on a career in agriculture, food, and the natural sciences. Penn State will help you develop the skills, credentials, industry insight, and a life-long network to build a rewarding, difference-making career. We host career fairs and other events where you can meet hundreds of potential employers as well as graduate and professional schools. You'll also find helpful resources on resumes, cover letters, personal statements, and interviewing at our college's Office of Experiential Learning and Career Services.

## MULTICULTURAL AFFAIRS

There's a home for you here. Faculty, staff, students, and groups like Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) work to maintain a climate of diversity, equity, and inclusion.

## ALUMNI

We're everywhere. On every continent. At every echelon of business and government. With over 35,000 alumni, no matter your career dream, Ag Science alumni are eager to open your eyes to opportunities and help you succeed. The Penn State network is incredible. It's professional, social, and full of joy. It starts the day you set foot on campus and will last for the rest of your life. You will be part of a family that is there to open doors to opportunities, lend a hand in time of need, and celebrate life at full speed. We are!



**80%**

**COMPLETE AT  
LEAST ONE  
INTERNSHIP**

**AG INTERNSHIPS  
OFTEN LEAD  
TO FULL-TIME  
JOBS**

# Start your Ag Journey

Visit [agsci.psu.edu](http://agsci.psu.edu) to learn even more about our undergraduate degree programs, unique academic and extracurricular opportunities, and support services. You can also explore our admissions process and ways to pay for your education, including our College's many scholarships—we award more than \$2.9 million to students annually! You can also request a call from our team, register for an upcoming event, or schedule a visit!

## Take the next step and contact us today!

**[agsci.psu.edu](http://agsci.psu.edu)**

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**WE  
WANT  
YOU  
HERE**



**PennState**  
College of  
Agricultural Sciences



**PennState**  
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Agricultural Sciences

**“My only regret  
about Ag? I didn’t  
discover it earlier.”**

—*Nelson DiBiase, BioRenewable Resources*

**This publication is available in alternative media on request.**

The University is committed to equal access to programs, facilities, admission, and employment for all persons. It is the policy of the University to maintain an environment free of harassment and free of discrimination against any person because of age, race, color, ancestry, national origin, religion, creed, service in the uniformed services (as defined in state and federal law), veteran status, sex, sexual orientation, marital or family status, pregnancy, pregnancy-related conditions, physical or mental disability, gender, perceived gender, gender identity, genetic information, or political ideas. Discriminatory conduct and harassment, as well as sexual misconduct and relationship violence, violates the dignity of individuals, impedes the realization of the University's educational mission, and will not be tolerated. Direct all inquiries regarding the nondiscrimination policy to the Affirmative Action Office, The Pennsylvania State University, 328 Boucke Building, University Park, PA 16802-5901, Email: [aaop@psu.edu](mailto:aaop@psu.edu), Tel 814-863-0471.