# Animal, Food, and Nutrition Sciences, Ph.D.

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**Degree Offered**

- Doctor of Philosophy

## Nature of the Program

The Davis College of Agriculture and Natural Resources offers graduate studies leading to the degree of doctor of philosophy in agricultural sciences with a major in Animal and Food Science. The objective of the degree program is to provide doctoral students an opportunity to study and conduct research with faculty in areas of excellence within the college. Students entering this program may select research and classes in areas of emphasis including: agricultural biochemistry, animal nutrition, animal physiology, and production management.

## FACULTY

### PROFESSORS

- Kenneth P. Blemings - Ph.D. (University of Wisconsin)
  Nutritional biochemistry
- Scott A. Bowdridge - Ph.D. (Virginia Tech)
  Food animal production, parasite immunology
- Robert A. Dailey - Ph.D. (University of Wisconsin)
  Reproductive physiology
- Jacek Jaczynski - Ph.D. (Oregon State University)
  Food science and technology
- P. Brett Kenney - Ph.D. (Kansas State University)
  Meat science
- Hillar Klandorf - Ph.D. (British Council for National Academic Awards)
  Physiology
- Kristen E. Matak - Ph.D. (Virginia Tech)
  Food science and human nutrition
- Joseph S. Moritz - Ph.D. (Kansas State University)
  Nutrition and feed manufacture
- Melissa D. Olfert - Dr.P.H., M.S., R.D. (Loma Linda University)
  Human nutrition and foods
- Cangliang Shen - Ph.D. (Colorado State University)
  Safety of meat and fresh produce
- Janet C.L. Tou - Ph.D. (University of Toronto, Canada)
  Nutrition in bone health and chronic diseases
- Matthew E. Wilson - Ph.D. (Iowa State University)
  Reproductive physiology
- Jianbo Yao - Ph.D. (McGill University)
  Functional genomics

### ASSOCIATE PROFESSORS

- Kimberly M. Barnes - Ph.D. (University of Nebraska)
  Lipid metabolism
- Eugene E. Felton - Ph.D. (University of Missouri)
  Animal science and ruminant nutrition
- K. Marie Krause - Ph.D. (University of Wisconsin-Madison)
  Ruminant nutrition
- Melissa D. Ventura-Marra - R.D., Ph.D. (Florida International University)
  Diet related health disparities

### ASSISTANT PROFESSOR

- Ibukun Ogunade - Ph.D. (University of Florida)
  Livestock production

### TEACHING PROFESSORS

- Nettie Freshour - Ph.D, R.D, (West Virginia University)
  Dietetics (L.D.N.)
- Margaret A. Minch - D.V.M. (Ohio State University)
  Veterinary medicine
- Crystal E. Smith - Ed.D. (West Virginia University)
  Equine management

### TEACHING ASSISTANT PROFESSOR

- Kelli George - R.D., Ph.D. (Florida State University)
  Dietetics
- Cassandra Lamb - Ph.D. (Cornell University)
  Biochemistry

### SERVICE ASSISTANT PROFESSOR

- Madonna M. Higgins - D.V.M. (Auburn University)
  Veterinary medicine

### VISITING INSTRUCTOR

- Lindsay Livengood - Director of Operations (West Virginia University)
  Hearts of Gold Service Dogs

## Admissions for 2026-2027

Applicants must hold a bachelor's to be eligible for admission into the program. The following admission and performance standards are usually required in the Ph.D. in Agriculture Sciences program:

- An applicant must possess a grade point average (GPA) of 3.0 or above (on a 4.0 scale).
- The graduate record examination is required for the major in plant and soil sciences but not for the major in animal, food, and nutrition sciences.
- International students must meet WVU's minimum score requirement for English language proficiency. (https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2024-2025/international-graduate-applicant/)
- An applicant must provide three letters of reference.
- A one to two-page letter of intent from the student describing their research and professional aspirations is required.
- Applicants are advised to contact a potential faculty advisor before they initiate the application process.

After a student is admitted into the doctoral program, their major professor will provide and direct an appropriate research opportunity. Doctoral students will conduct research supporting projects approved by the West Virginia Agricultural and Forestry Experiment Station (WVAFES) or externally funded grants. In consultation with the major professor, the student will select a graduate committee within the first semester of study. The committee will consist of five or more members; the majority must be WVU faculty and at least one member representing a discipline outside the college. Each student and their committee will formulate a plan of study, which will be filed in the Office of the Associate Dean for Academic Affairs of the College. WVU regulations concerning committee membership will apply.

Major Code: 1730

A candidate for the Ph.D. degree in Animal, Food, and Nutrition Sciences must meet all University, College, Division, and Program requirements as outlined in the WVU Graduate catalog.

## Program Requirements

All Ph.D. degree candidates are required to follow a planned program of study. The student develops the plan of study during their first year in the program in conjunction with the graduate committee. The plan must be approved by the Director of the Division and the Associate Dean for Academic Affairs of the Davis College.

| Code | Title | Hours |
|---|---|---|
| A minimum cumulative GPA of 3.0 is required in all courses applied toward degree requirements. | | |
| Course Requirements as determined by the Plan of Study | | |
| Research * | | |

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| Candidacy Exam |
| Dissertation |
| Dissertation Defense |

Doctoral students must satisfactorily complete a set of core courses before they will be admitted to candidacy for the Ph.D. degree. Certain course requirements may be waived if the student has received equivalent training in prior coursework. Additional coursework pertaining to the student's area of specialization will be determined by the student's major professor and graduate committee. Although not required, presentation of research results at meetings of a professional society and submission of manuscripts for publication are encouraged.

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Students are expected to be involved in research throughout their graduate career, and enrollment in A&VS 797 Research, should reflect this activity. Most students complete an average of 45 credit hours of research.

# Major Learning Outcomes

## ANIMAL AND NUTRITIONAL SCIENCES

1. Students will demonstrate an appropriate depth and knowledge of their research topic and fundamental knowledge of relevant associated fields.
2. Students will demonstrate the ability to identify, read, and critically interpret relevant valid, peer-reviewed scientific literature.
3. Students will employ laboratory or field technical skills (as dictated by the nature of their research project) to acquire novel, high-quality data.
4. Students will employ analytical skills to interpret their data and draw valid, meaningful conclusions.
5. Students will communicate effectively in writing and orally about scientific concepts and the results of their research studies.
6. Students will ask original research questions relevant to their particular area of animal and nutritional sciences that will address those questions in a scientifically valid way.
7. Graduates of the program will be employed in a relevant postdoctoral or professional position within one year of completing their degrees.