



Animal & Food Sciences

Graduate Programs Manual

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DIVISION OF
**AGRICULTURAL SCIENCES
AND NATURAL RESOURCES**



About Us

The Department of Animal & Food Sciences conducts research related to the improvement of animal performance and efficiency, health, animal products, and limiting food waste. This research will ensure the economic sustainability of a safe and affordable supply of animal products for consumers.

Research projects focus on important livestock species including beef and dairy cattle, equine, poultry, sheep, and swine, and disciplines including animal well-being, behavioral genetics, food science, genetics and molecular genetics, immunology, meat science, food safety, nutrition, physiology, and reproduction.

Basic research is conducted to enhance our fundamental knowledge of molecular and biological functions of animals, improve food quality and limit loss, and applied research to evaluate fundamental knowledge in real-world production settings.

One of the unique aspects of our research program is the wide breadth of facilities available near campus, ranging from core molecular facilities and labs to facilities for large herds of beef cows and stocker cattle, swine, equine, poultry and our newest dairy facility. These facilities allow better application of basic and applied research results to solve producer problems.

In addition, faculty within the Department of Animal & Food Sciences conduct collaborative research with faculty from other departments and industry to solve the complex problems facing agriculture.

Degrees Offered

Master of Science (M.S. Degree)

- **Animal Science**
- **Food & Meat Science**

The master's degree may be earned by one of three plans:

Plan I—with thesis, 30 credit hours, consisting of 24 hours of course work and six hours of research with a grade of "SR"

Plan II—with report, 32 credit hours, consisting of 30 hours of course work and two hours of research with a grade of "SR"

Plan III—with no thesis or report, 32 credit hours of course work, including the creative component. The creative component may be a special report, an annotated bibliography, a project in research or design, or other creative activity, as designated by the advisory committee.

Courses numbered 5000 or 6000 may not be used on a plan of study involving a creative component.

Doctor of Philosophy (Ph.D. Degree)

- **Animal Science**
- **Food & Meat Science**

The Doctor of Philosophy degree requires a minimum of 90 credit hours beyond the bachelor's degree, or a minimum of 60 credit hours beyond the master's degree in a related discipline.

Graduate Faculty

Paul Beck, Ph.D.
Scott Carter, Ph.D.

Steven Cooper, Ph.D.
Crosswhite, Mellissa, Ph.D.

Udaya DeSilva, Ph.D.
Gerald Q. Fitch, Ph.D.

Andrew Foote, Ph.D.
Darren Hagen, Ph.D.

Ravi Jadeja, Ph.D.
Hiney, Kris, Ph.D.

Jadeja, Ravi Ph.D.
Divya Jaroni, Ph.D.

David L. Lalman, Ph.D.
Gretchen Mafi, Ph.D.

Joao Moares, Ph.D.
Peter Muriana, Ph.D.

Morgan Pfeiffer, Ph.D.
Adel Pezeshki, Ph.D.

Ranjith Ramanathan, Ph.D.
Ryan Reuter, Ph.D.

Janeen Salak-Johnson, Ph.D.
Leon J. Spicer, Ph.D.

Dan Stein, Ph.D.
Blake Wilson, Ph.D.

Guolong (Glenn) Zhang, Ph.D.

*Beef Cattle Nutrition, Research & Extension
Swine Nutrition, Waste Management, Teaching, Graduate
Coordinator*

*Equine, Research & Teaching, Scholarship Coordinator
Clinical Instructor*

*Molecular Genetics, Research & Teaching
Sheep, Teaching & Extension, Teaching Coordinator*

*Ruminant Nutrition, Research & Teaching
Animal Genomics, Research & Teaching*

Food Safety

Equine, Research & Extension

Food Safety, Research & Teaching

Food Safety, Research & Teaching

Beef Cattle Nutrition, Research & Extension

Meats, Research & Teaching

Reproductive Physiology and Health

Food Microbiology, Research & Teaching

Monogastric Nutrition, Research & Teaching

Meat Science, Research & Teaching

Range Beef Cattle Nutrition, Research & Teaching

Animal Behavior & Well-Being, Research & Teaching

Reproductive Physiology (Dairy Cattle), Research & Teaching

Livestock Production, Research & Teaching

Beef Cattle Nutrition, Research & Teaching

Animal Molecular Biology, Research & Teaching



You're On Campus, Now What?

What To Do When You Get To Campus

Domestic Students

What to Do When You Get to Campus

Check in with your **academic advisor** in Animal Science.

You must be signed up for employment before the first day of class.

See Kathy Castre in ANSI 101 to fill out employment paperwork. Be sure to bring your driver's license, Social Security Card, a voided check and the name and Social Security number of the person that you would like to name as your beneficiary.

Enroll in classes.

Fill out and submit the "Tuition Waiver Contract". It is in the "Forms" tab on the Graduate School website.

Get a Student ID card at 421 Classroom Building. You must have a copy of your current class schedule in order to obtain your Student ID. <https://it.okstate.edu/services/id-card-services/index.html>.

If you have a motor vehicle, get a parking permit from: <https://parking.okstate.edu/> Click "Online Permit Sales".

International Students

The Graduate College would like international students to get to campus 10 days before classes start to attend orientation, process paperwork and get a Social Security Card.

What to Do When You Get to Campus

Check in with your **academic advisor** in Animal Science.

Visit the ISS office at 250 Student Union. At the ISS office you will:

Receive forms to take to the OSU Health Center

Submit immunization records

Take a TB test. This is a mandatory health screening.

You will take the Health Center forms back to ISS.

Register with the ISS office at 250 Student Union for orientation and to complete immigration processing. Bring your 1-20 or DS-2019, passport, I-94 and ALL other immigration documents. If you are a student sponsored by an embassy, agency or company, bring the letter of sponsorship complete with billing address and contact person to the Coordinator of Sponsored Students at ISS.

Contact your advisor to enroll. After ISS provides you with your department academic information and enrollment permit, take your enrollment permit to meet with your academic advisor and get enrolled.

Attend **Mandatory International Student Orientation** - see the ISS website for complete information: <https://lcl.okstate.edu/iss/>

Learn about immigration regulations for international students

Talk with current students about the OSU Experience

Learn about university services

ISS will help you get a Social Security Card and a Work Permit.

You must be signed up for employment before the first day of class.

See Kathy Castre in ANSI 101 to fill out employment paperwork. Be sure to bring the paperwork you completed with ISS (passport, visa, I-94, I-20, work permit, and Social Security Card. **You must have a Social Security Card (or number) and a Work Permit to complete your employment paperwork.**

Fill out and submit the "Tuition Waiver Contract". <https://grad.okstate.edu/register/tuitionwaiver>

Get a Student ID card at 421 Classroom Building. You must have a copy of your current class schedule in order to obtain your Student ID.

If you have a motor vehicle, get a parking permit from: <https://parking.okstate.edu/>
Click "Parking Portal" in the *Helping Mobilize Stillwater* section.



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Getting Started

Student ID's

For all students and employees, their first ID's are issued free of charge. If the ID is lost, stolen, or mutilated, you will be charged \$20.00 for the replacement cost of a new card. A photo ID must be shown before a card is issued to you. Your ID card can be used to charge for various goods and services around campus, as well as for access to buildings and other services. To contact ID services by phone call 405-744-HELP(4357). Office hours are 8 am-5 pm Monday-Friday in 421 Classroom Building (CLB). You can also e-mail them at <https://it.okstate.edu/services/helpdesk/index.html>. For more information, visit the ID services web page at <https://it.okstate.edu/services/id-card-services/index.html>.

Keys

You will need keys for the building, your office, and the laboratory. Dr. Carter makes office assignments for graduate students. To claim your office key, see Kathy Castre in Animal Science 101. She will issue the keys to you. Remember to double check each key to make sure they work. At the end of your graduate program, you will be required to return all of your keys. If your key is lost or stolen, notify your supervisor and the front office immediately.

E-mail Set-Up

Before setting up your e-mail, you have to set up an O-Key Account. Go to <https://go.okstate.edu/email/>. From this page you can activate your O-Key account and access your email online. Remember your password, because that will get you into "everything digital" at Oklahoma State. Your password will expire every 120 days for security reasons, so be sure to write down new passwords. Check your OSU e-mail account frequently.

Cowboy Mail is at: <https://login.microsoftonline.com>

Computer Labs

There are two computer labs available in the Animal Science building. The ANSI 126 computer lab is open 24 hours/day, 7 days a week. Monday through Friday, students have access from 8 am to 5 pm. Anytime before or after that, you must use your ID to enter. The graduate computer lab is in ANSI 204 A. It is accessible to you at anytime but you will need your key to get in.

Financial Aid

To make the most of funding opportunities for graduate students, you should visit the Office of Scholarships & Financial Aid website: <https://go.okstate.edu/scholarships-financial-aid/financial-aid-process/index.html>.



Health Insurance & UHS

Graduate Teaching Assistant/Graduate Research Assistant

A Graduate student who meets the requirements listed below is eligible and automatically enrolled in the Student Health Insurance Plan.

All Graduate Teaching Assistants/Research Assistants with a GTA/GRA position at .25 FTE or more taking 9 credit hours spring/fall (2 hours summer) at 0.50 FTE or more taking 6 credit hours spring/fall (2 hours in summer), or on reduced continuous enrollment of 2 credit hours or more for post-candidacy doctoral GTA/GRAs will be automatically enrolled in this insurance plan. You can opt out of this insurance if you are covered by another plan. You will need to submit a Declination Form to HR before the start of classes (form can be found at <https://hr.okstate.edu/student-health-plan>).

Eligible students who do enroll may also insure their dependents. Eligible dependents are the student's legal spouse and dependent children under 26 years of age.

The single person health insurance premium will be subsidized by OSU on your behalf with your qualifying enrollment and assistantship (at least 0.25% FTE). You will be responsible for a \$20 monthly charge through your OSU payroll. <https://hr.okstate.edu/benefits/student-health.html>.

International Students

All international and English Language Institute students taking one (1) or more credit hours are required to purchase this insurance plan and the premium for coverage is added to their tuition billing. International J1 Scholars actively participating in course work or research activities are eligible to enroll in this insurance plan. <https://hr.okstate.edu/student-health-plan>

Important Links

United Health Care <https://www.uhcsr.com/school-page>

OSU University Health Services <https://uhs.okstate.edu/> UHS is the OSU on-campus doctor's office and pharmacy

Contacts

United Health Care: 800-767-0700

OSU Benefits: (405) 744-5449



Grad School Guidelines

OSU Animal & Food Sciences continues to be one of the best Animal & Food Sciences Graduate programs in the country. You will have a fantastic support network to help you through your program. One of the best sources of info is the Graduate College *Current Student Resources* page: <https://gradcollege.okstate.edu/resources/current-student-resources.html>

However, keep in mind that you are a college graduate and are entering a professional setting. You are responsible for your progress through Graduate School. If you don't understand something, ask questions.

Graduate school is vastly different from undergraduate. You are employed and have a responsibility outside of the classroom. In order to fulfill your assistantship obligations, teaching assistant responsibilities, coursework requirements, and research, you will likely be spending much more than 8 hours a day. To be successful, take advantage of every opportunity and stay on top of your program.

Time Lines

Your time in Graduate School will go much faster than you anticipate. It is not unusual for some programs to start a little slow, but most every program will become fast paced relatively quickly.

You need to keep careful tabs on your progress and deadlines. Also, keep in mind your anticipated graduation date and set benchmarks for yourself.

Do not forget to make sure you clearly understand what is expected of you in terms of research so you can set your goals and pace accordingly.

Remember, it is not unusual for writing your thesis or dissertation to take nearly a semester. You might consider working on your literature review as soon as you can and update it throughout your program.

Above all, try to completely finish before leaving. Students who finish research and classes, and then plan to return for the defense often experience much longer times to graduation. Not only that, some students end up not graduating at all.

Get involved right away with other people's projects, talk to your mentor about your project, read constantly, and stay on track with writing. This is your program and your responsibility to keep it moving forward.

Work Load

The work load in Graduate School can seem daunting at times, but, in the end, will help you accomplish your career goals.

Technically, for students on assistantship, you are required to work 20 hours/week teaching or doing research for your mentor. **This is in addition to your course work and research for your thesis or dissertation.**

Thus, it is easy to see how things can quickly build. If you attend class for 2 hours and work 4-5 hours on assistantship duties each day, that only leaves 1-2 hours in an 8 hour workday. It is impossible to fulfill your thesis research and homework requirements in that timeline. A Graduate Student's work week is rarely 40 hours.

Most mentors will permit the 20 hour research assistantship to be applied to thesis or dissertation research. That is entirely up to your mentor. Keep in mind that not all career paths are the same, and Mentors try to help programs meet the needs of the Grad Student. Thus, some programs will require more time in different areas. Don't fall into the "I have to work x hours for the same degree as Joe and he only works y hours". A degree is only part of it; the recommendations and networking are perhaps even more important than the degree. Stay focused on **your** program and goals.

Course Consideration

There is a wide range of courses that can be selected. Each discipline will have required or expected courses. You, your mentor, and your committee will help establish the courses for your program and your goals.

Keep in mind that some courses are ONLY offered every other semester or sometimes every other year. Thus, if you only have 2 years in your program, you will need to take a rotational course when it is offered.

Track these very carefully because if your committee requires you to take a course and you miss the course offering, you might find yourself waiting around an extra semester to fit it in.

Committee

Your Committee will help guide you through your program. Your Mentor will suggest committee members and your members will most likely complement your research program. Often, they will be collaborators on your projects.

For Masters students, your committee will administer your defense. For Ph.D. students, your committee will not only administer your defense, but also conduct your preliminary exams in order for you to advance to a Doctoral Candidate.

Especially for Ph.D. students, though your mentor will suggest committee members, it is acceptable to identify potential members that you feel will strengthen your program and discuss these with your Mentor.

Mentor Styles

You have probably heard that you choose a mentor not a University. Likely, you have chosen a program in an area like Physiology, Nutrition, or Behavior, because of your interests and career goals.

It is important to remember that just as the disciplines vary greatly, so do mentors. Not all mentors run their program the same way, so your experiences will be different from that of your fellow graduate students. Some mentors take a very "hands-on" approach, while others give more flexibility and independence to the student. Some mentors may have an open door policy and some may require appointments.

There is no "one size fits all" to Graduate programs. If you have concerns, talk to your mentor first and foremost. Always remember that you are working with your mentor in your discipline because that is where you want to go career-wise. Other disciplines or mentors might have different approaches to their graduate students, but that should be of no concern to you. Stay focused on your program and your goals.

remember, you are not finished until your thesis or dissertation is complete with corrections.

Seminar

Graduate Seminar
Fridays, 12:30-1:30
124 ANSI

The Department of Animal & Food Sciences graduate students are encouraged to attend as many AFS seminars as possible. AFS Seminars feature invited speakers presenting various topics related to animal agriculture and food/meat sciences as well as graduate students and faculty presenting their research.



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Opportunities to Present Your Research

Scientific Meetings & Societies

- You should immediately seek to join the professional organization most closely aligned with your discipline. An example is the American Society of Animal Science, but ask your PI which society(ies) you should investigate.
- You should strive to present your work via poster or oral presentation at a national or regional meeting. It is a great opportunity to network with future employers.
- Remember, the meetings are like being at a job interview, so conduct yourself accordingly.
- There are several opportunities on campus to present your data in order to polish your speaking and presentation skills. You should take full advantage of these opportunities.

Annual Whiteman Competition for Outstanding Oral Presentation of a Scientific Paper

Joe V. Whiteman, 1919-2005, was born in Illinois, graduated from New Mexico A&M College in 1943, and served as an infantry officer in Europe during World War II. Joe worked in livestock Extension in Colorado and New Mexico before completing a PhD degree in Animal Breeding in 1952 at Oklahoma A&M.

Dr. Whiteman joined the faculty in Animal Husbandry in 1953, enjoying a highly distinguished career in teaching and conducting sheep genetics research at Ft. Reno until his retirement in 1983. He also served as Graduate Programs Coordinator for 15 years. His former students serve on many Animal Science faculties and in industry leadership positions throughout the nation. Dr. Whiteman taught numerous courses in the department. Each included a lot of "Whiteman Philosophy".

He assisted many students and fellow faculty in experimental design and statistical analyses for their research. Dr. Whiteman used many of the same teaching techniques he learned teaching soldiers going into battle. It was loud, direct, stern, tough, high standards and, at times, brutally honest. Hence, Dr. Whiteman became one of our best known and most unique teachers, subsequently, also one of the most highly remembered, respected, and appreciated by alumni.

Through it all, Dr. Whiteman loved students and had an extreme desire to help each student achieve their true potential.

At retirement, the Joe V. Whiteman Award annual competition for effective graduate student research presentations was established by Dr. Whiteman. This award provides significant cash awards annually to the top three graduate students.

Food and Agricultural Products Center (FAPC) Food Science Research Symposium

The FAPC Food Science Research Symposium includes oral and poster presentations of research conducted at the FAPC and OSU and a keynote address featuring topics pertinent to the food and agricultural industries.

OSU 3 Minute Thesis Competition - The 3MT®

The 3MT® first held at The University of Queensland in 2008 is a research communication skills development activity to help prepare students to present their research and its relevance to a non-specialist but educated audience in a cogent but concise manner. Students have only 3 minutes and one static slide to convey to their audience what they do and its importance in a manner that makes their hearers want to know more! Since its inception, enthusiasm for the 3MT® concept has grown with the 3MT® adoption by numerous universities. OSU held its first 3MT® competition in 2013. Animal & Food Sciences MS student, Sabra Billup, was the 1st place winner of the OSU 3MT® in 2017.

Three Minute Presentation - 3MP

Competition for Non-thesis Master's, Specialist and Graduate Certificate Students

The importance of graduate degree holders being able to explain what they do and its relevance to society in an engaging and concise manner has been identified by business leader as a crucial skill they seek in prospective employees. The Three Minutes Thesis (3MT®) has been used with great success to train OSU research master's and doctoral students in this skill, and for the first time last year, non-thesis master's, specialist and graduate certificate students developed the same communication skills in the Three Minute Presentation (3MP) competition.

Eligibility

Students are eligible to compete in the 3MP provided that they are currently enrolled in a non-thesis master's degree, specialist, or graduate certificate program. The 1st place winners of the 2015 3MP and 2016 MC Competitions are not eligible to participate.

Annual Graduate Research in the Biological Sciences Symposium

Symposium themes:

- Genomics, transcriptomics and proteomics
- Bioinformatics
- Structural biology
- Virology
- Microbiology and molecular genetics
- Plant, animal and human diseases

Purchasing Card Conflict of Interest

If you will have a purchasing card (P-Card), you will need to file a conflict of interest form. You will receive a reminder email to fill out the form.

A conflict of interest exists when a Significant Financial Interest could substantially compromise an employee's judgment in the performance of University duties. A conflict of interest depends on the situation and not on the character or actions of an individual. Employees are responsible for disclosing Significant Financial Interests that would reasonably appear to be affected by, or to affect their University duties. You must file your conflict of interest statement in ANSI 101.