Interested in research or want to find out what it is all about?

Research positions are available for undergraduate students who are interested in research in the Department of Animal Sciences. Applicants must commit to full-time research over a 10 week period during summer 2016 and submit an abstract for participation in the CFAES and University Denman undergraduate research forums spring semester 2016. Each position is awarded $3500. The award is distributed in two parts: $3000 is disbursed at the beginning of the summer of research and the remaining $500 is disbursed upon submission of an abstract to the CFAES undergraduate research forum and University Denman undergraduate research forum. Research positions are located in Columbus and at the Ohio Agricultural Research and Development Center in Wooster, Ohio. Detailed position descriptions follow.

The application deadline for Animal Sciences Undergraduate Research Experiences is Saturday, January 31, 2016.

Eligibility:
Minimum requirements for application to these positions include:
- OSU undergraduate student in animal sciences or a related discipline
- Minimum cumulative GPA of 2.50 (research experiences are for non-honors students)
- Anticipated graduation date of spring 2017 or later

Selection of applicants will be made in consultation with Animal Sciences faculty. Applications must include all required components for consideration. Failure to adhere to program submission requirements disqualifies the application.

Students may be eligible to use the experience for internship credit (ANIM SCI 3191), individuals studies credit (ANIMSCI 4193), or graduation with research distinction (ANIM SCI 4999). To be eligible for 3191 credit, students must be Animal Sciences majors and are required to adhere to the departmental internship program requirements (http://ansci.osu.edu). For eligibility for 4999 credit, students accepted for a position must develop an independent research project proposal in consultation with their research mentor and must submit a plan for research distinction to the Department of Animal Sciences and to CFAES. The plan for research distinction must be pre-approved. In addition, a final oral component and research thesis is required (http://ansci.osu.edu/undergraduate/ug-research).
Application Components:
To apply you will need:

1) Application form (http://ansci.osu.edu/undergraduate/ug-research)
2) Personal statement, submitted as part of the application form, discussing your academic intentions, career goals, interest in research, and why the positions chosen interest you.
3) Resume
4) Your most recent advising report including autumn term grade postings (available at http://buckeyelink.osu.edu)

Incomplete applications that fail to provide the information requested in the application form and/or that fail to provide all required components above will not be considered.

Submission Instructions:
E-mail a copy of these items (as attachments) no later than 5:00 pm January 31, 2016 to:

Pasha A Lyvers Peffer
Department of Animal Sciences
lyvers-peffer.1@osu.edu

Include in the subject: ANIM SCI UGR Experience Application 2016

Questions:
Direct all questions regarding the program, eligibility, or application process to:

Pasha A Lyvers Peffer
Department of Animal Sciences
lyvers-peffer.1@osu.edu
POSITION DESCRIPTIONS & LOCATION

EQUINE - Columbus, OH

SUPERVISOR INFORMATION:
Dr. Kimberly Cole, Assistant Professor
Department of Animal Sciences
The Ohio State University, 2029 Fyffe Court
222D Animal Science Building, Columbus, OH 43210-1095

Phone: (614) 292-2625 Fax: (614) 292-1515
Email: cole.436@osu.edu

DETAILED SUMMARY OF DUTIES & RESPONSIBILITIES:
• Assist in collection of data during research trials
• Assist with the feeding and general care of animals on research trials
• Input and organize research data in a spreadsheet
• Assist with data analysis
• Depending on the student’s interests and experience, they may engage in an independent research project
• Prepare a poster for the CFAES Undergraduate Research Forum and Denman Undergraduate Research Forum that are held during Spring term
• The student must provide their own transportation to the OSU Equine Facility and local horse farms

KNOWLEDGE & EXPERIENCE STUDENT WILL GAIN:
Students will apply principles of the research process, from a hypothesis to conducting a research trial to data interpretation as they explore some of the major areas of equine research and the methods used in equine research. Both oral and written communication skills will be enhanced in the process.

Position involves the care and handling of live animals. Weekend and/or non-traditional work week schedules may be required.
RUMINANT NUTRITION (DAIRY) - Columbus, Ohio

SUPERVISOR INFORMATION:
Dr. Maurice L. Eastridge, Professor
Department of Animal Sciences
The Ohio State University, 2029 Fyffe Court
221B Animal Science Building, Columbus, OH 43210-1095

Phone: (614) 688-3059  Fax: (614) 292-1515
Email: eastridge.1@osu.edu
Website Address: http://ansci.osu.edu/eastridge

DETAILED SUMMARY OF DUTIES & RESPONSIBILITIES:
Level of engagement is dependent on the student’s interests and experiences.
- Conduct chemical analyses in the ruminant nutrition laboratory
- Assist in collection of data during research trials
- Assist with feeding animals on research trials
- Input and organize research data in a spreadsheet
- Depending on the student’s interests and experience, they may engage in an independent research project
- Assist with the education of youth about feeding dairy cattle and programs held during the Ohio State Fair
- Prepare a poster for the CFAES Undergraduate Research Forum and Denman Undergraduate Research Forum that are held during Spring Semester. Also, the opportunity will be available to present the student’s research at the Tri-State Dairy Nutrition Conference and the American Dairy Science Association.

KNOWLEDGE & EXPERIENCE STUDENT WILL GAIN:
An understanding of the importance of the accuracy of laboratory analyses will be gained as students explore the major areas of research in ruminant nutrition. The research process, from a hypothesis to conducting a research trial to data interpretation, will be explored through the research methods used in ruminant nutrition.
SKELETAL MUSCLE BIOLOGY AND MEAT SCIENCE – Columbus, OH

SUPERVISOR INFORMATION:
Dr. Eric England, Assistant Professor
Department of Animal Sciences
The Ohio State University, 2029 Fyffe Court
122D Animal Science Building, Columbus, OH 43210-1095

Phone: 614-247-7863  Fax: 614-292-2929
Email: england.146@osu.edu

DETAILED SUMMARY OF DUTIES & RESPONSIBILITIES:
• Assist with animal harvest and postmortem tissue collection
• Gain proficiency in basic and advanced laboratory techniques
• Collect and analyze data from multiple research projects
• Attend laboratory group meetings and provide a research status update
• Help with laboratory maintenance and upkeep
• Participate in a poster presentation at the CFAES Undergraduate Research Forum and/or Denman Undergraduate Research Forum during Spring 2017

KNOWLEDGE & EXPERIENCE STUDENT WILL GAIN:
The student will gain knowledge and experience working with skeletal muscle and meat from a variety of livestock species. The student will become proficient in a number of the following techniques based on the laboratory needs and student’s interests: muscle sample collection and processing, muscle metabolite analysis, histology, PCR, SDS-PAGE, immunoblotting, HPLC, and meat quality analysis.
RUMINANT NUTRITION & MICROBIOLOGY (DAIRY) - Columbus, Ohio

SUPERVISOR INFORMATION:
Jeff Firkins, Professor
14 Animal Science Building
2029 Fyffe Road
Columbus, OH 43210

Phone: (614)292-7147
Email: firkins.1@osu.edu

DETAILED SUMMARY OF DUTIES & RESPONSIBILITIES:
The student is primarily expected to assist other graduate students in conducting research experiments in the field of animal nutrition. Additional job responsibilities may include the planning and conducting of assigned experiments, data entry into spreadsheets, and statistical analyses of experimental data. The student may also be required to help in the housekeeping tasks in the lab.

KNOWLEDGE & EXPERIENCE STUDENT WILL GAIN:
The internship will provide an opportunity for the student to gain valuable laboratory experience and understand the basics of research in animal nutrition. The practical knowledge gained in the lab will augment the theoretical information the student would obtain in classes and this will help them to understand the scientific process better. Interaction with the faculty, research staff, graduate and undergraduate students will provide an opportunity to improve communication skills and learn how to work as part of a research group. Laboratory techniques and skills acquired during the internship will be helpful in future endeavors in academia or industry.
SWINE BEHAVIOR RESEARCH - Columbus, OH

SUPERVISOR INFORMATION:
Dr. Monique Pairis-Garcia, Assistant Professor
222E Animal Sciences Building
2029 Fyffe Rd.
Columbus, OH 4310

Phone: 614-688-1968  Fax: 614-292-1515
Email: pairis-garcia.1@osu.edu

DETAILED SUMMARY OF DUTIES & RESPONSIBILITIES:
The objective of this study is to evaluate feeding patterns and behaviors of a sow herd transitioning from individually housed stalls to group housing utilizing the Gestal® as the sole feeding system. This project will quantify feeding patterns and frequencies of group housed sows and determine how experience and time using the Gestal® feeder alters sow feeding behavior.

Responsibilities include:
• Complete pre-training requirements (by May 31st, 2016) and be competent in working with video equipment
• Be attentive and consistent when scoring video, but be able to work independently on the project without supervision of professor
• Be engaged in the project and ask questions as needed
• Have regular meetings with Dr. Pairis-Garcia to give a progress and update report and to discuss any concerns or challenges experienced

KNOWLEDGE & EXPERIENCE STUDENT WILL GAIN:
The student will become proficient in behavioral sampling techniques and the concepts of behavioral methodology that can be applied to future research projects. A unique skill set in collecting behavioral data utilizing a professional software program for collection, analysis and presentation of behavioral data will be developed. The student will understand the importance and application of work to current industry needs and gain experience supporting data results with peer reviewed literature and participation in scientific conferences and poster presentations.
SWINE NUTRITIONAL IMMUNOLOGY & DEVELOPMENTAL NUTRITION-Wooster, OH

SUPERVISOR INFORMATION:
Dr. Sheila Jacobi, Assistant Professor
207 Gerlaugh Hall
1680 Madison Avenue
Wooster, OH 44691

Phone: 330-263-3959  Fax: 330-263-3949
Email: jacobi.1@osu.edu

DETAILED SUMMARY OF DUTIES & RESPONSIBILITIES:
The student will assist in execution of experiment, data collection, analysis and presentation of the results involving swine nutrition and intestinal health. The position will provide experience in animal care, dietary treatments, laboratory techniques, statistical analysis, and interpretation of results. Integration of findings with current literature in the area will be required for presentation of results at the CFAES Undergraduate Research Forum and Denman Undergraduate Research Forum that are held during the spring term.

KNOWLEDGE & EXPERIENCE STUDENT WILL GAIN:
The student’s research will aim to identify nutritional programing of the baby pig intestinal health and immune function. Basic techniques in molecular biology and immunology will be learned to evaluate the role bioactive nutrients role in programing intestinal health.
RUMINANT NUTRITION & NUTRIENT MANAGEMENT – Wooster, OH

SUPERVISOR INFORMATION:
Dr. Chanhee Lee, Assistant Professor
313 Gerlaugh Hall, 1680 Madison Ave.
Wooster, OH 44691

Phone: 330/2633794   Fax: 330/2633949
Email:  lee.7502@osu.edu

DETAILED SUMMARY OF DUTIES & RESPONSIBILITIES:
Students will be involved in nutrient management projects (ruminant nutrition, nutrient excretion, manure management). The duties of students are: assisting in sample analyses in the lab, sampling from ruminants (beef or dairy), and data management. Students will work closely with the supervisor, research technician, and graduate students. Depending on students’ interest and experience, an independent research project will be assigned. In addition, depending on students’ outputs, students will have an opportunity to present their results in a national conference.

KNOWLEDGE & EXPERIENCE STUDENT WILL GAIN:
Improving ruminant productivity and mitigating environmental impacts will be a focus. By assisting a research technician and graduate student in running animal studies, students will understand a scientific research process. Various techniques (analyses and sampling) and basic knowledge on ruminant nutrient management (feed to manure; environmental impacts) will be obtained. By working as part of a group and participating in national conferences, students will improve their communication skills.
MOLECULAR AND CELLULAR BIOLOGY – Columbus, OH

SUPERVISOR INFORMATION:
Kichoon Lee, Associate Professor
222F Animal Science Building
2029 Fyffe Court
Columbus, OH 43210-1095

Email: lee.2626@osu.edu

DETAILED SUMMARY OF DUTIES & RESPONSIBILITIES:
• Assist with the collection of data during poultry and swine research trials in the area of
  Nutrition and Molecular Biology.
• Assist with data analysis and interpretation of results.
• Prepare a poster for the CFAES Undergraduate Research Forum and Denman
  Undergraduate Research Forum that are held during the Spring term.

KNOWLEDGE & EXPERIENCE STUDENT WILL GAIN:
Student will gain an understanding of basic laboratory techniques, the research process, and
the value of communicating research. A basic understanding of molecular genetics with
regard to the developmental biology of adipose and muscle tissues will be a focus.
SMALL RUMINANT & FEEDLOT NUTRITION-Wooster, OH

SUPERVISOR INFORMATION:
Dr. Relling, Alejandro Assistant Professor
114 Gerlaugh Hall
Wooster, OH  44691

Phone: 3302633900  Fax: 3302633949
Email: relling.1@osu.edu

DETAILED SUMMARY OF DUTIES & RESPONSIBILITIES:
The student will work on beef and sheep nutrition projects.
- Assist in collecting and analyzing feed samples, estimate dry matter intake.
- Assist in measuring growth and estimating feed efficiency in ruminants
- Assist in conducting chemical analyses in the ruminant nutrition laboratory
- Assist with the feeding and general care of animals on research trials
- Input and organize research data
- Assist with data analysis
- Depending on the student’s interests and experience, they may engage in an independent research project
- Prepare a poster for the CFAES Undergraduate Research Forum and Denman Undergraduate Research Forum that are held during Spring term

KNOWLEDGE & EXPERIENCE STUDENT WILL GAIN:
An understanding of the importance of animal management practice and the accuracy of laboratory analyses will be gained as students explore the major areas of research in ruminant nutrition. The research process, from a hypothesis to conducting a research trial, analyzing the samples and the data and data interpretation, will be explored through the research methods used in ruminant nutrition.