Application for the Virgil Orr Junior Faculty Award

Ashley B. Keith, PhD
60% Teaching, 25% Service, and 15% Research

Courses Taught:

1. **The Experience (HNRS 100):** 1 credit; 2.5 lecture hours

While holding to the requirements provided by the university for this course, I aim to utilize appropriate anecdotes to relate to students and assure them that adjusting to college life may be difficult for anyone and that Tech offers numerous resources for everyone and every situation.

2. **Introduction to Animal Science (ANSC 111):** 3 credit hours; 3.75 lecture hours

Note: This course is generally taught by a different faculty member; however, the department was currently seeking a new department head so courses were shifted and I gladly taught this course.

3. **Introduction to Animal Science Lab (ANSC 113):** 1 credit; 3 lab hours

This is an extremely interactive an engaging course. It features a variety of experiential learning experiences, such as: learning to collect blood from the jugular and coccygeal veins of various livestock, visual evaluation and appraisal of livestock and meat products, tours of poultry slaughter and processing plants, fecal floats for internal parasites, docking tails on lambs, proper methods of administering injections to livestock, and guest speakers from various industries.

4. **Introduction to Poultry Science (ANSC 201):** 3 credits; 2.5 lecture hours and 3 lab hours

Having access to numerous poultry integrators in north and central Louisiana allows this course access to all aspects of the industry. Students travel to breeder and broiler houses, hatcheries, feed mills, as well as slaughter and processing plants. Many professionals from the industry serve as guest lecturers.

5. **Meat Animal and Carcass Evaluation (ANSC 204):** 3 credits; 2.5 lecture and 3 lab hours'

In classroom, research data and practical narratives are utilized to discuss development and evaluation of livestock and the consumable carcass products they produce.

Tech Farm offers a variety of livestock for evaluation. However, herd sizes are relatively limited. Therefore, this course takes students to livestock shows and local livestock operations to evaluate livestock. Similarly, to understand grading and labeling of meat products, the class visits local grocery stores, in addition to the Meat Science Laboratory.

6. **Introduction to Livestock Management (ANSC 224):** 3 credits; 2.5 lecture and 3 lab hours

I created this course due to a shortage of classes discussing management of food animal species. It includes strong pragmatic lessons on Tech Farm and trips to local livestock operations. Students learn business, research, and practical skills necessary for raising sheep, goats, pigs, beef cattle, dairy cattle, and poultry.

Students are required to complete one of two projects: a management project which involves serving as a consulting group for a given scenario to grow the operation and make it profitable.

7. **Principles of Animal Nutrition (ANSC 301):** 3 credits; 3.67 lecture hours

The course discusses how nutrients are digested, absorbed, and metabolized in each livestock species. As this is generally a difficult course simply due to its inherent content, I strive to utilize interactive discussions, diagrams, videos, and to relate content to "fad" human diets, which has proven beneficial to students.

8. **Physiology of Reproduction (ANSC 318):** 2 credit; 2.5 lecture hours

It is difficult to include all necessary materials into only a 2-credit hour course. To do so, I strived to utilize experiences raising livestock and from graduate school to relate content to real-life application.

Note: This course was only taught one quarter to assist while short-staffed.

9. **Applied Animal Nutrition (ANSC 405):** 3 credits; 2.5 lecture and 3 lab hours

The laboratory component of this course strongly encourages practical application of materials through formulating rations for all livestock species. I aim to relate basic principles of livestock nutrition to creating rations for livestock they may raise and manage in their personal lives and careers. They are also required to complete a project when they market a ration for a given species.

10. Beef Production (ANSC 410): 3 credits; 2.5 lecture and 3 lab hours
A top priority of mine in upper-level livestock production courses is to integrate apply both research and practical production knowledge. As such, students are required to complete a scientific literature review and complete a group management project in which they are given a production scenario involving detailed animal management, land management, a full five-year budget, and marketing of their chosen products. Moreover, the lab portion of the course allows as many experiential lessons as possible, including: blood collection and processing, pregnancy determination, branding, dehorning, vaccinating, tagging, artificial insemination, etc.

11. Broiler Production and Management (ANS 489C): 3 credits; 3.67 lecture hours
As poultry is the number one livestock commodity in the state, it is imperative that we offer more courses in poultry science. Working with the Louisiana Poultry Federation, I designed this course to largely involve guest lectures from all aspects of broiler production. It was also designed similarly to other upper-level livestock production courses with a literature review and management project (development and management of a broiler house). It is currently being taught in the 2019 Spring Quarter, with hopes to add it to the Animal Science curriculum.

12. Sheep and Goat Production (ANS 489C): 3 credits; 2.5 lecture and 3 lab hours
The curriculum for Animal Science students concentrating in Livestock Production requires more upper-level livestock production credits that what the course catalog offers. Therefore, I thought it imperative to work to build courses in the production of all food animal species. This course, currently being taught for the first time in the 2019 Spring Quarter, is designed to mirror current upper-level livestock production courses, requiring a literature review and management project. The recently designed Small Ruminant Center on Tech Farm allows opportunities for students to learn practical skills. If successfully offered again in the 2020 Spring Quarter, it will be added to the Animal Science curriculum.

13. Contemporary Topics (AGSC 516C): 3 credits; 2.5 lecture and 3 lab hours
The first M.S. in Biology student I have served as committee chair for was concentrating in beef cattle production and management. With this, she required credits associated with the topic. Through this course she has been able to review pertinent literature, teach laboratory sections of my courses involving beef cattle production, learned how to collect and process blood, fecal samples, and semen samples, as well as perform glucose assays and temperament scores on beef cattle.

Overall evaluations from students for each course are provided on the last page of the application.

Teaching, Research, and Service Philosophy

Teaching should be both interactive and inquisitive. Similarly, learning is not achieved simply by listening but also by interacting, thinking critically, and questioning. As a student, both in the classroom and in the lab, I was taught to be skeptical so that I think critically and learn to be inquisitive. We should continue to question so that we continue to discover and learn. Additionally, I was taught to consider and value the relationships that exist between educating, conducting research, and being of service to others. I hold these principles as work to educate students, colleagues, livestock producers, youth, and consumers.

At the core of its mission, Louisiana Tech "embodies quality in teaching, research, creative activity, public service, and workforce/economic development. Louisiana Tech (also) maintains as its highest priority the education and development of its students in a challenging, yet safe and supportive, diverse community of learners." Through my career at Louisiana Tech I have been fortunate to teach in the classroom, in the field, and at the lab bench. More importantly, I am privileged to teach students at Tech, as well as youth involved in agriculture, livestock producers, and consumers with no agricultural or livestock experience. I believe it is imperative to Tech faculty to not only educate in the classroom, but also in the field, community, and world.

Teaching in the field is very similar to teaching in the classroom in terms of fostering critical thinking by asking questions, as well as utilizing personal anecdotes for reference and explanation. A key difference is that you must now also maintain their attention while they are actively participating in a hands-on task. In the field of animal science we are often working with livestock that can be unpredictable and

difficult to manage. One of the most rewarding moments for me is seeing students make the connection between what has been discussed in class and what is occurring with an animal during a lab session or vice versa. It is truly rewarding to see students' excitement when they comprehend a topic or have mastered a new skill in the field.

My teaching style and objectives remain fairly consistent when in the research laboratory setting. I begin with basic techniques and move to more complex ones as their dexterity and skill levels increase. The most important things I strive for in the lab are for a researcher to quickly be able to complete the task themselves, for them to understand why we are utilizing that technique or assay, and more importantly, for them to gain a full, in-depth understanding and application of the scientific method. We discuss ideas for future work and analysis on the project or a novel project. Watching a student develop an experiment, analyze data, then form a graph or a chart, and interpret the data for abstracts and publications is immensely gratifying. Additionally, when teaching in the classroom, I strive to insert research data and methods into lectures so that students may gain an understanding of the importance of research.

It is my goal to not only teach the material, but to also promote critical thinking in all aspects of learning. A student may not always use the course material in their future; however, the ability to think critically and the constant desire to learn "how" and "why" will be beneficial in any future endeavor. In doing so, I aim to reach all styles of learning and all levels of interests in the classroom. I hope to encourage and have the same positive impact on their future that my instructors have had on mine. I also constantly strive to illustrate the relationships between teaching, learning, conducting research, and providing service to the community and professions. Finally, I sincerely hope anyone I work with (students, youth, producers, etc.) realize the great impact they can have on others in their communities through acts of service. It is critical for us to continuously give and educate others.

Selected Grants

Ashley B. Keith. *Enhancing Tech Farm through the Development of a Small Ruminant Center*. 2017-2018. Funded by Louisiana Board of Regents Departmental Enhancement Funds. Amount awarded: $25,305.00.

Ashley Keith and Mark Murphey. *Exploring the Benefits of Regano® Supplementation in Sheep Diets.* 2017-2018. Funded by Ralco Nutrition, Inc. Amount Awarded: $5,000.00.

Joshua Adams, Natalie Clay, **Ashley Keith**, Paul Jackson, Gordon Holley, and Waggoner Russell. *Cedar + garlic insect repellent amendment.* 2017-2018. Funded by: Mr. Richard Fewell. Amount Awarded: $17,430.00.

William Green, **Ashley Keith**, and Benny Hennen. *Supplementation of Supreme Gold Plus™ to Beef Cattle Diets during Post-Weaning Period*. 2017. Funded by: Mr. Marc Walther with Supreme Energy Resources, Inc. Amount Awarded: $18,936.00.

Laura R. Gentry, Maureen M. Hillard, and **Ashley B. Keith**. *Implementation of a Nutrition and Physiology Teaching Laboratory for Undergraduate Study and Research at Louisiana Tech University*. 2015-2016. Student Technology Fee Program, Louisiana Tech University. Amount Awarded: $41,700.

Selected Publications

Ashley Keith and Mark Murphey. *Exploring the Benefits of Regano® Supplementation in Sheep Diets.* 2018. Technical Report for Ralco Nutrition, Inc.

Joshua Adams, Natalie Clay, **Ashley Keith**, Paul Jackson, Gordon Holley, and Waggoner Russell. *Cedar + garlic insect repellent amendment.* 2017-2018. Funded by: Mr. Richard Fewell. Amount Awarded: $17,430.00.

William Green, **Ashley Keith**, and Benny Hennen. *Supplementation of Supreme Gold Plus™ to Beef Cattle Diets during Post-Weaning Period*. 2017. Funded by: Mr. Marc Walther with Supreme Energy Resources, Inc. Amount Awarded: $18,936.00.

Selected Service Activities

Professional Memberships:

Louisiana Egg Commission, member	Winter 2019-Present
American Society of Animal Science, member	Fall 2016-Present
North Louisiana Agri-Business Council, member	Fall 2016-Present
Louisiana Poultry Federation, Executive Secretary	Fall 2017-Present
Louisiana Poultry Federation, member	Fall 2016-2017
Louisiana Broiler Council, advisor	Winter 2017-Present

Advising:

Advisor of the Louisiana Beta Chapter of the Fraternity of Alpha Zeta	2015-Present
Advisor of the Louisiana Tech University Block and Bridle Club	2015-Present

Committees:

Faculty Advisory Council to the Dean	2017-2019

Selected Activities:

- Time Out for Tech – Met with prospective students and their families during the recruiting event
  - October 2015, October 2016, September 2017
- FFA Area I Leadership Career Development Events – Judged the Job Interview contest
  - January 2016, December 2016, December 2017, and December 2018
- Area I FFA CDE – Poultry Judging – Prepared and administered contest with the help of students
  - March 2016, March 2017, March 2018, and March 2019
- Louisiana Producer Artificial Insemination Course at Hill Farm Research Station in Homer, LA
  - Served as an instructor on two lectures and hands-on component of the course
  - April 2016 and May 2018
- Louisiana Producer Artificial Insemination Course at Tech Farm – Hosted and served as an instructor on two lectures and hands-on component of the course – September 2018
- Spoke at Cattle Producers of Louisiana Meeting – Topic: Louisiana Tech Beef Cattle Operation and Research – April 2016
- Summer Orientation Sessions: Honors, Transfer, and General Sessions – 2016, 2017, and 2018
- Hosted a Sheep and Goat Hoof Trimming Clinic at the Louisiana Tech University Sheep and Goat Unit - November 2016
- Goat Showmanship Clinic for Lincoln Parish 4-H participants – Invited instructor - November 2016
- Ag Expo Livestock Show – Assisted with the show and coordinated students to help LSU AgCenter
  - January 2016, 2017, 2018 and 2019
- Louisiana Broiler Council Seminar – Assisted the Broiler Council in planning and hosting the event
  - March 2017, February 2018, March 2019
- Louisiana Poultry Federation Annual Convention – Work as Secretary of the Federation to plan and host the event; Recruit students to work the even registration
  - October 2017 and 2018
- Hosted approximately 20 FFA members from Slidell High School and Pine High School for a tour of the School of Agricultural Sciences and Forestry – June 2017
- Louisiana Animal Responder Boot Camp – Created lectures and served as an instructor for food animal handling – April 2018
- State FFA Livestock Judging Contest – Helped create officials for contest and judge oral reasons
  - April 2018
- Northwest Arkansas Large Animal Technical Emergency Response Training Boot Camp - Created lectures and served as an instructor for food animal handling – August 2018
- Jackson Parish Showmanship Clinic – Invited instructor - September 2018
- Claiborne Parish Livestock Board Meeting - Gave a presentation entitled “Aging and Quality of Market Goats in Livestock Shows” – January 2019

Overall Student Evaluations of Courses Taught

	Fall 2015	Winter 2015-16	Spring 2016	Fall 2016	Winter 2016-17	Spring 2017	Summer 2017	Fall 2017	Winter 2017-18	Spring 2018	Summer 2018	Fall 2018	Winter 2018-19	Spring 2019
The Experience (HNRS 100)												3.9		
Introduction to Animal Science (ANSC 111)	3.8													
Introduction to Animal Science Lab (ANSC 113)						3.9								
Introduction to Poultry Science (ANSC 201)			3.6						3.8				3.6	
Meat Animal and Carcass Evaluation (ANSC 204)				3.9				3.9				4.0		
Introduction to Livestock Management (ANSC 224)						4.0				4.0				N/A
Showing and Fitting of Livestock (ANSC 225B)														N/A
Principles of Animal Nutrition (ANSC 301)			3.8	3.8		3.9		4.0		3.7	N/A	4.0		
Physiology of Reproduction (ANSC 318)				3.7										
Applied Animal Nutrition (ANSC 405)		3.8			4.0		N/A		3.8		N/A		3.6	
Beef Production (ANSC 410)		3.7			4.0				4.0					
Broiler Production and Management (ANS 489C)														N/A
Sheep and Goat Production and Management (ANS 489C)														N/A
Contemporary Topics (AGSC 516)												N/A		N/A