

# ANIMAL & DAIRY SCIENCES



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# MISSISSIPPI STATE UNIVERSITY

# STUDENT SPOTLIGHT



## Jessica Brown

Jessica Brown is an animal and dairy sciences major from Houma, Louisiana. She anticipates graduating in May 2019. Her favorite thing about home is the culture that the area has. She says south Louisiana is very unique. "There's just something about it being different that I love." We asked her what her favorite part about being a Mississippi State bulldog was and she said being able to be a part of the atmosphere during sporting events. Jessica said being able to be so hands-on with her college has truly been the main reason why she loves the College of Agriculture and Life Sciences so much. In her spare time, you can find her reading, listening to music, and being outdoors. After graduation, she plans to continue her education at Mississippi State's College of Veterinary Medicine.

# **NEW COURSE OFFERING FOR ANYONE INTERESTED IN VET SCHOOL OR PURSUING A CAREER WITH LIVESTOCK**



## **THE DETAILS**

**Immunology and Disease in Large Livestock Species**

**Spring 2019 - ADS4633/6633 - MWF 10 to 10:50 - Dr. Stone**

**Also being offered online (Campus V) for schedule flexibility**

## **TOPICS WILL INCLUDE**

- **The function and dynamics of the cattle and equine immune systems and what mechanisms aid in detection and defense within the body**
- **How vaccines work, how they differ, and when they are appropriate to use**
- **Differences in antibiotics, appropriate uses, and the importance of withholding**
- **Various diseases and health issues within equine and beef and dairy cattle, including why, when, and how these problems occur and their impact**
- **Why disease is an animal welfare issue.**
- **What are practical methods of disease control and their importance**

**MISSISSIPPI STATE ANIMAL & DAIRY SCIENCES**

**CONTACT DR. STONE AT [AES784@MSSTATE.EDU](mailto:AES784@MSSTATE.EDU) FOR MORE INFORMATION**

# FALL T-SHIRTS



Sydney Taylor Peek ► Mississippi State University Collegiate Cattlemen's Association

Admin · Follow · September 11 ·

T-shirt's proofs are here!!! If you would like to order our fall T-shirt, comment below or text or pm [Alex Pittman](#) with your name and tshirt size. They are comfort color and cost \$20. Money will be due at our next meeting on October 2. We must have your money before ordering! We can also ship T-shirt's for \$8!



# KNOW YOUR ADMISSION REQUIREMENTS

## Freshman Resident Requirements

### Admission Requirements

**MS RESIDENTS**

NON-RESIDENTS

INTERNATIONAL

### MS Residents

Full admission to Mississippi State University will be granted to high school graduates who complete the required College Preparatory Curriculum (CPC) along with one of the following:

- A minimum 3.20 grade-point average on the CPC.
- A minimum 2.50 grade-point average on the CPC and a composite score of 16 or higher on the ACT or a combined score of \*860 or higher on the SAT.
- A minimum 2.0 grade-point average on the CPC and a composite score of 18 or higher on the ACT or a combined score of \*940 or higher on the SAT.
- Standing in the top 50 percent of the class with a composite score of 16 or higher on the ACT or a combined score of \*860 or higher on the SAT.
- Use College Board's SAT Score Converter to compare scores from the old SAT and the new SAT.

\*Scores listed are based on the new SAT.

Beginning in Fall 2015: Full admission to Mississippi State University will be granted to high school graduates who satisfy the National Collegiate Athletic Association standards for student-athletes who are full or partial qualifiers under Division I guidelines.

# KNOW YOUR ADMISSION REQUIREMENTS

## Freshman Non-Resident Requirements

### Admission Requirements

MS RESIDENTS

**NON-RESIDENTS**

INTERNATIONAL

## Non-Residents

Beginning in Fall 2015: Full admission to Mississippi State University for non-residents of Mississippi will be granted to high school graduates who complete one of the following:

- Complete the College Preparatory Curriculum with a minimum 2.50 grade-point average and a composite score of 20 or higher on the ACT or a combined score of \*1020 or higher on the SAT.
- Use College Board's SAT Score Converter to compare scores from the old SAT and the new SAT.
- Satisfy the National Collegiate Athletic Association standards for student-athletes who are full or partial qualifiers under Division I guidelines.

\*Score listed is based on the new SAT.

# KNOW YOUR ADMISSION REQUIREMENTS

## Transfer Requirements

### Admission Requirements

Students may transfer to Mississippi State University from regionally accredited community, junior or senior colleges for any period of enrollment, provided they have earned a 2.0 GPA on all college courses attempted (as computed by Mississippi State University), as well as earned a 2.0 GPA on the 30-hours of core courses. Applicants must list all colleges attended on the application for admission, must be in good standing with the last college or university attended, and must meet one of the following options for admission.

#### THREE OPTIONS FOR ADMISSION

#### INTERNATIONAL

### Three Options for Admission

1. Complete the 30-hours of core courses listed below with a 2.0 GPA on those courses and earn an overall 2.0 GPA on all hours attempted\*
  - o English Composition – 6 semester hours
  - o College Algebra, Quantitative Reasoning, or a higher-level math – 3 semester hours
  - o Natural Science – 6 semester hours
  - o Humanities and Fine Arts – 9 semester hours
  - o Social or Behavioral Sciences – 6 semester hours
2. Earn an A.A. degree (associate in art) or a higher degree from a regionally accredited community, junior, or senior college with a 2.0 GPA\*.
3. Meet the requirements for entering freshmen (based on your ACT/SAT scores and high school transcript) and earn an overall 2.0 GPA on all hours attempted\*

*\*as computed by Mississippi State University*

# SPRING AI SCHOOL

Registration for Spring 2019 Artificial Intelligence School is now available. The Course will be held March 14-16, 2019, and registration is \$450.

Email Brandi Karisch at [brandi.karisch@msstate.edu](mailto:brandi.karisch@msstate.edu) for more information





# NORTH MISSISSIPPI BEEF EXPO

## PLEASE JOIN US FOR THE 2018 NORTH MISSISSIPPI BEEF EXPO

OCTOBER 26, 8:00 A.M., BATESVILLE CIVIC CENTER  
290 CIVIC CENTER DRIVE, BATESVILLE, MS 38606

8:00- Registration

**9:00- Gene Lowery**

*"Preparing Cattle for the Feedlot Stage"*

**9:45- Dr. Jason Banta: Nutrition**

*"Pre-Weaning and Pre-Conditioning"*

10:30- Break and Trade Show

**11:00- Dr. Amelia Woolums: Stocker Health**

*"Disease Diagnosis and Prevention"*

11:45- Lunch and Trade Show

**12:45- Andy Berry: MS Cattlemen's Association**

**1:15- Producer Panel**



**MISSISSIPPI STATE UNIVERSITY™  
EXTENSION**



For more information, contact Lance Newman at [lance.newman@msstate.edu](mailto:lance.newman@msstate.edu) or 662-832-4586.

# UPCOMING EXTENSION EVENTS

## **Beef Extension - Dr. Brandi Karisch & Cobie Rutherford**

Oct. 20-21, 2018 MSU Artificial Insemination Insemination School, MSU Campus

Oct. 26, 2018 North MS Beef Expo, Batesville, MS

Phone: (662) 325-7465 or [brandi.karisch@msstate.edu](mailto:brandi.karisch@msstate.edu)

(662) 325-4344 or [cobie.rutherford@msstate.edu](mailto:cobie.rutherford@msstate.edu)

Beef Calendar: <http://extension.msstate.edu/livestock/beef/beef-calendar>

## **Dairy Events - Dr. Amanda Stone**

Sept. 27-29, 2018 Breakfast on the Farm, Bearden Dairy, Starkville, MS

Phone: (662) 325-8773 or [amanda.stone@msstate.edu](mailto:amanda.stone@msstate.edu)

Website: <http://extension.msstate.edu/dairy>

## **4-H Events - Dr. Dean Jousan**

August 2018 Animal Lines Newsletter that focuses on the District, State, and Regional 4-H Horse Shows held from June to last week is online:

<https://extension.msstate.edu/newsletters/4h-animal-lines-newsletters/2018/august-2018-4-h-animal-lines>

(662) 325-2424 or [dj230@msstate.edu](mailto:dj230@msstate.edu)    [www.http://extension.msstate.edu/4-h](http://extension.msstate.edu/4-h)

## **Equine Events - Dr. Clay Cavinder**

Contact Dr. Cavinder for information about programs and events.

Phone: (662) 325-7566 or [clay.cavinder@msstate.edu](mailto:clay.cavinder@msstate.edu)

Website <http://extension.msstate.edu/agriculture/livestock/equine/upcoming-programs>

## 2018 Refereed Publications

- Dinh, T.T.N.**, J.F. Legako, M.F. Miller, J.C. Brooks. Effects of USDA quality grade and cooking on water-soluble precursors of beef flavor. *Meat Science*. 146 (2018) 122-130. <https://doi.org/10.1016/j.meatsci.2018.08.008>.
- Littlejohn, Brittni P., David G. Riley, Thomas H. Welsh, Jr, Ronald D. Randel, **Scott T. Willard**, and **Rhonda C. Vann**. Use of random regression to estimate genetic parameters of temperament across an age continuum in a crossbred cattle population. *Journal of Animal Science*. 2018. 96:2607–2621. doi: 10.1093/jas/sky180.
- Vu, P. T. T., A. J. Holtcamp, A. T. Sukumaran, M. V. V. Le, D. H. Nguyen, & **T. T. N. Dinh**. (2018). Effects of market type and time of purchase on oxidative status and descriptive off-odors and off-flavors of beef in Vietnam. *Meat science*, 145, 399-406. <https://doi.org/10.1016/j.meatsci.2018.07.018>.
- Ishak, G. M. , S. T. Bashir, G. A. Dutra, G. D. A. Gastal, M. O. Gastal, **C. A. Cavinder**, **J. M. Feugang**, and E. L. Gastal. In vivo antral follicle wall biopsy: a new research technique to study ovarian function at the cellular and molecular levels. *Reproductive Biology and Endocrinology* (2018) 16:71. <https://doi.org/10.1186/s12958-018-0380-8>.
- Humphrey, R. M., Z. Yang, M. S. Hasan, **M. A. Crenshaw**, **D. D. Burnett**, J. K. Htoo and **S. F. Liao**. The compensatorily -gained pigs resulted from feeding a methionine-deficient diet had more fat and less lean body mass. *Journal of Applied Animal Nutrition*, Vol. 6; e6; page 1 of 7. <https://doi.org/10.1017/JAN.2018.5>.
- Griffin, Courtney M. , BS; Jenna A. Scott, BS; **Brandi B. Karisch, MS, PhD**; Amelia R. Woolums, DVM, MVSc, PhD, DACVIM, DACVM; **John R. Blanton, MS, PhD**; Ray M. Kaplan, DVM, PhD, DEVPC, DACVM; William B. Epperson, DVM, MS, DACVPM (Epidemiology); David R. Smith, DVM, PhD, DACVPM (Epidemiology). A randomized controlled trial to test the effect of on-arrival vaccination and deworming on stocker cattle health and growth performance. *The Bovine Practitioner*, Vol. 52, No. 1.
- Sun, Yuhang , Jin Liu, Gengping Ye, Fang Gan, Mohammed Hamid, **Shengfa Liao**, Kehe Huang. Protective effects of zymosan on heat stress-induced immunosuppression and apoptosis in dairy cows and peripheral blood mononuclear cells. *Cell Stress and Chaperones*. <https://doi.org/10.1007/s12192-018-0916-z>.
- Woolums, Amelia R., **Brandi B. Karisch**, Jonathan G. Frye, William Epperson, David R. Smith, **John Blanton Jr.**, Frank Austin, Ray Kaplan, Lari Hiott, Tiffanie Woodley, Sushim K. Gupta, Charlene R. Jackson, Michael McClelland. Multidrug-resistant *Mannheimia haemolytica* isolated from high-risk beef stocker cattle after antimicrobial metaphylaxis and treatment of bovine respiratory disease. *Veterinary Microbiology* 221 (2018) 143-152. <https://doi.org/10.1016/j.vetmic.2018.06.005>.
- Sukumaran, Anuraj T., Alexander J. Holtcamp, Yan L. Campbell, **Derris Burnett**, Mark W. Schilling, **Thu T.N. Dinh**. Technological characteristics of pre- and post-rigor deboned beef mixtures from Holstein steers and quality attributes of cooked beef sausage. *Meat Science*. 145 (2018) 71–78. <https://doi.org/10.1016/j.meatsci.2018.06.001>.
- Hart, CG, BE Voelz, KE Brockus, **CO Lemley**. Hepatic steroid inactivating enzymes, hepatic portal blood flow and corpus luteum blood perfusion in cattle. *Reproduction in Domestic Animals*. 2018;53:751–758.
- Camacho, L.E., **C.O. Lemley**, S.T. Dorsam, K.C. Swanson, K.A. Vonnahme. Effects of maternal nutrient restriction followed by realimentation during early and mid-gestation in beef cows. II. Placental development, umbilical blood flow, and uterine blood flow responses to diet alterations. *Theriogenology*. <https://doi.org/10.1016/j.theriogenology.2018.04.013>.

## 2018 Refereed Publications

- Lemley, C.O.**, L.E. Camacho, D.M. Hallford, K.A. Vonnahme. Uteroplacental secretion of progesterone and estradiol 17beta in an ovine model of intrauterine growth restriction. *Animal Reproduction Science*. 193 (2018) 68-78. <https://doi.org/10.1016/j.anireprosci.2018.04.001>.
- T. Williams, **B. Rude**, **S. Liao**, C. Mochal-King, **M. Nicodemus**. Effects of fat supplementation on plasma glucose, insulin and fatty acid analysis in ponies maintained on a forage- based diet. *Journal of Animal Physiology and Animal Nutrition*. 2018;1–8. DOI: 10.1111/jpn.12905.
- Gastal, G.D.A., **J.M. Feugang**, F.L.N. Aguiar, A.P.R. Rodrigues, J.M. Scimeca, G.A. Apgar, W.J. Banz, E.L. Gastal. Cryopreservation and in vitro culture of white-tailed deer ovarian tissue. *Theriogenology*. 113 (2018) 253-260.
- Velho, Ana Luiza Cazaux, Einko Topper, Erika Menezes, **Thu Dinh**, Abdullah Kaya, Arlindo Alencar Moura, **Erdogan Memili**. Metabolomic markers of fertility in bull seminal plasma. *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0195279>.
- Owen, MPT , EN Ferjak, **CA Cavinder**, KJ McCarty, KC Yankey, CG Hart, **DD Burnett**, **TTN Dinh**, **CO Lemley**. Effects of body condition score (BCS) on steroid- and eicosanoid- metabolizing enzyme activity in various mare tissues during winter anoestrus. *Reproduction in Domestic Animals*. 2018;53:296–303. <https://doi.org/10.1111/rda.13104>.
- Park, Seong B., **Scott T. Willard**, Christy S. Steadman, Atul A. Chaudhari, Shreekumar R. Pillai, Shree R. Singh, **Peter L. Ryan** and **Jean M. Feugang**. Proteomic analysis of antimicrobial effects of pegylated silver coated carbon nanotubes in Salmonella enterica serovar Typhimurium. *Journal of Nanobiotechnology*. (2018) 16:31 <https://doi.org/10.1186/s12951-018-0355-0>.
- Cavinder, C. A.**, PAS, E. N. Ferjak, C. A. Phillips, **D. D. Burnett**, and **T. T. N. Dinh**. REVIEW: The importance of overall body fat content in horses. *The Professional Animal Scientist* 34:125–132. <https://doi.org/10.15232/pas.2017-01708>.
- Sukumaran, Anuraj T. , Alexander J. Holtcamp, April K. Englishbey, Yan L. Campbell, Taejo Kim, Mark W. Schilling, **Thu T.N. Dinh**. Effect of deboning time on the growth of Salmonella, E. coli, aerobic, and lactic acid bacteria during beef sausage processing and storage. *Meat Science* 139 (2018) 49–55.
- Wang, T., **M. A. Crenshaw**, N. Regmi, **B. J. Rude**, M. S. Hasan, A. T. Sukumaran, **T. Dinh**, and **S. F. Liao**. 2018. Effects of dietary lysine level on the content and fatty acid composition of the intramuscular fat in late-stage finishing pigs. *Canadian Journal of Animal Science*. 98: 241-249. DOI: [dx.doi.org/10.1139/cjas-2017-0083](https://doi.org/10.1139/cjas-2017-0083).
- Owen, M.P.T., K.J. McCarty, C.G. Hart, C.S. Steadman, **C.O. Lemley**. Endometrial blood perfusion as assessed using a novel laser Doppler technique in Angus cows. *Animal Reproduction Science*. 190 (2018) 119-126. <https://doi.org/10.1016/j.anireprosci.2018.01.015>.
- Feugang, Jean M.** , **Shengfa F. Liao**, **Scott T. Willard**, and **Peter L. Ryan**. In-depth proteomic analysis of boar spermatozoa through shotgun and gel-based methods. *BMC Genomics*. (2018) 19:62 DOI 10.1186/s12864-018-4442-2.
- Liao, Shengfa F.**, Naresh Regmi, Guoyao Wu. Homeostatic Regulation of Plasma Amino Acid Concentrations. *Frontiers in Bioscience, Landmark*. 23, 640-655, January 1, 2018.



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**Feugang, Jean M. , Shengfa F. Liao, Scott T. Willard, and Peter L. Ryan.** In-depth proteomic analysis of boar spermatozoa through shotgun and gel-based methods. *BMC Genomics*. (2018) 19:62 DOI 10.1186/s12864-018-4442-2.

**Liao, Shengfa F.,** Naresh Regmi, Guoyao Wu. Homeostatic Regulation of Plasma Amino Acid Concentrations. *Frontiers in Bioscience, Landmark*. 23, 640-655, January 1, 2018.

## 2018 Book Chapters:

Jain, Sapna, Seong B. Park, Shreekmar R. Pillai, **Peter L. Ryan**, **Scott T. Willard** and **Jean M. Feugang**. Applications of Fluorescent Quantum Dots for Reproductive Medicine and Disease Detection. In *Unraveling the Safety Profile of Nanoscale Particles and Materials—From Biomedical to Environmental Applications*, Chapter 6, pp. 133-148, <http://dx.doi.org/10.5772/intechopen.72978>.