Course Objectives:
- To familiarize students with current and classic scientific literature in areas of:
  - Measuring farm animal behavior
  - Measuring and assessing farm animal welfare
- To give graduate students an opportunity to interact with graduate students with similar interests at different universities

Collaborating Institutions
Texas Tech University
University of Illinois
Iowa State University

Course Format
This course will meet online and by video conference, if possible. Students will receive a reading list at the start of the semester. Students will prepare written summaries of the papers, and will be assigned parts of papers or whole papers to present to the group. Instructors will ask questions and students will prepare answers.

For each paper (or parts of papers, or set of papers, depending on the complexity of the papers), students will be assigned as a primary, secondary or tertiary reviewer. All students must read and be familiar with all papers. Instructors will provide questions about the papers before class. For a given paper, the responsibilities of student reviewers are:

**Primary reviewer.** This person first summarizes the paper. Including the major findings that are important. The primary reviewer sends their review to the secondary and tertiary reviewer, and the instructors 1 day before class meeting time. The primary reviewer supports the paper.

**Secondary reviewer.** This person identifies the weak points of the paper. This person sends their review to the primary and tertiary reviewer, and the instructors 1 day before class meeting time.

**Tertiary reviewer.** This person adds to or corrects the comments of the primary and secondary reviewer.

For a given topic (paper, part or a paper or collection of papers), the assigned students take a total of 5 minutes to summarize the paper as described above. Then the 3 assigned students will answer the instructor’s questions for 5 minutes. Instructors will clarify and add to the discussion. Then, for the next 5 minutes, the entire class can comment on what has been said and on the instructor questions.

It is important that primary, secondary and tertiary students prepare information prior to class.

One instructor will lead the discussion, one will keep the group focused on the topic at hand, and one will be the time keeper.

Grading
Students will be graded in participation, abstracts, and 2 exams. Grades will be based on the
following points:
6 abstracts @ 25 points each  150
2 exams @ 100 points each    200
Participation                 150

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Total                           500

90 % = A
80 % = B
70 % = C
60 % = D
< 60 % = F

Class schedule

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<th>Week</th>
<th>Date</th>
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<tbody>
<tr>
<td>1</td>
<td>Feb 2</td>
<td>7 (midterm)</td>
<td>Mar 16 or 23</td>
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<td>2</td>
<td>Feb 9</td>
<td>8</td>
<td>Mar 30</td>
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<td>Feb 16</td>
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<td>Feb 23</td>
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<td>5</td>
<td>Mar 2</td>
<td>11</td>
<td>Apr 20</td>
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<td>6</td>
<td>Mar 9</td>
<td>12 (final)</td>
<td>Apr 27</td>
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Topics

General theories of measuring farm animal welfare: Leader All

**JM Week 1. Terminology**


**AJ Week 2. Concepts of measuring welfare: physiology, behavior, performance and health.**


**STUDENTS WILL FIND A RESEARCH RELATED PAPER AND PREPARE AND SUBMIT AN ABSTRACT BEFORE THIS CLASS MEETS.**

**All Week 3. Alternative concepts of animal welfare: feelings, physiology, vocalizations, & asymmetry**

Duncan, I. 1993. Welfare is to do with what animals feel. J. Ag & Appl Ethics 6:8-14. [feelings approach]


**STUDENTS WILL FIND A RESEARCH RELATED PAPER AND PREPARE AND SUBMIT AN ABSTRACT BEFORE THIS CLASS MEETS.**

**JS Week 4. Measuring welfare over short and long periods**


**Measuring Behavior: Leader John McGlone**

*Week 5. Sampling methods*


No abstracts due.

*Week 6. Time-lapse and validation of behavioral methods*


STUDENTS FIND A RESEARCH PAPER THAT USES A GIVEN BEHAVIORAL MEASURE AND STUDENTS WILL WRITE AN ABSTRACT THAT INCLUDES ASSESSMENT OF THE SAMPLING METHOD

*Week 7. Mid term Exam*

**Behavioral measures of farm animal welfare: Leader Anna Johnson**

*Week 8. Early reviews*


*Week 9. Behavioral needs and motivation*


STUDENTS WILL FIND A RESEARCH RELATED PAPER AND PREPARE AND SUBMIT AN ABSTRACT BEFORE THIS CLASS MEETS.

Physiological, performance and health measures of farm animal welfare: Leader Janeen Salak-Johnson

Week 10. Aspects of the Immune System and health as measures


STUDENTS WILL FIND A RESEARCH RELATED PAPER AND PREPARE AND SUBMIT AN ABSTRACT BEFORE THIS CLASS MEETS.

Week 11. Aspects of the Neuroendocrine System and Performance as measures


STUDENTS WILL FIND A RESEARCH RELATED PAPER AND PREPARE AND SUBMIT AN ABSTRACT BEFORE THIS CLASS MEETS.
Week 12. Final Exam April 27\textsuperscript{th} 8:00-9:30 am

Class Schedules

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<tr>
<th>Item</th>
<th>Texas Tech</th>
<th>U Illinois</th>
<th>Iowa State</th>
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<tr>
<td>Classes start</td>
<td>Jan 11</td>
<td>Jan 17</td>
<td>Jan 9</td>
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<td>March 13-17</td>
<td>March 20-24</td>
<td>March 13-17</td>
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<td>Last class</td>
<td>May 2</td>
<td>May 3</td>
<td>April 28</td>
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