ANSC 424
APPLIED LIVESTOCK REPRODUCTION
FALL 2015

Instructor: Dr. Samantha (Sam) Cunningham, Assistant Professor
B12 Knoblauch Hall
Office Phone: 298-1288
Cell Phone: 979-220-5681
Email: s-cunningham@wiu.edu
Office Hours: M & W 11 to 12, Th 9 to 11, or by appointment
APPOINTMENTS ARE ENCOURAGED

Class Time: Lecture: M & W 2 to 2:50 pm in 305 Knoblauch Hall
Lab: T 3 to 4:50 pm in 305 Knoblauch Hall

Lab Fee: $40-Materials fee due by second lab (September 1, 2015)

Reference Text:


Additional Course Materials:
Any additional course materials may also be found online on Western Online:
www.westernonline.wiu.edu

Prerequisite: ANSC 112 or BOT 200 or ZOOL 200

Course Description:
Principles of physiology and functioning of the endocrine system in relationship to reproduction, infertility, and lactation in farm animals.

Course Objective:
Students enrolled in this course will be able to better understand the reproductive process in livestock and be aware of the normal function of the reproductive system through study of both male and female reproductive anatomy and endocrine systems. Students will also learn stages of reproductive function, the relationship between reproduction and lactation, as well as pregnancy and post-partum behavior and anatomy in female livestock. Livestock reproductive diseases and technologies will also be covered as part of this course.

ADA Compliance:
In accordance with University policy and the Americans with Disabilities Act (ADA), accommodations in the area of test and note-taking may be made for any student who notifies the instructor of the need for accommodation. It is imperative that you take the initiative to bring such needs to my attention, as I am legally not permitted to inquire about the particular needs of students. Furthermore, I would like also to request that students who may require special assistance in emergency evacuations contact me as to the most appropriate procedures to follow in such an emergency.
Attendance:
Attendance and participation are important components of this course and are crucial for learning. Attendance is expected and will be monitored at each lecture and lab meeting. Students having 2 or fewer unexcused absences will be eligible for a curve at the end of the semester. Students having 6 or more unexcused absences will have their final course grade reduced by a letter grade at the end of the semester.

If you anticipate an excused absence, please notify me in advance (IN WRITING) through the OARS system (www.wiu.edu/OARS) or by email, prior to an exam, quiz, or homework due date, for example. Accepted excuses would include university related activities/ and personal health with a written excuse from a faculty advisor or a doctor's note. All other excuses will be handled at the discretion of the instructor. The student is responsible for any missed information and/or class material, as well as making arrangements for making up any missed work.

Academic Dishonesty:
Any violation of the Academic Dishonesty Policy in Student Handbook will result in an automatic failure in the course. Plagiarism and cheating are areas of concern for the course. This course is designated to enhance your writing and presentation skills within your academic area, not the ability to copy thoughts and ideas.

All written work will be turned in with a hard copy AND electronically on Western Online where the originality check WILL be utilized and any similarity over 10% to other work WILL NOT BE TOLERATED.

Attention Education Majors:
The changes within the state certification requirements, which go into effect immediately for all of those students who graduate in the spring 2012 and after, you are required to receive a grade of a "C" or better in this course in order to meet these new requirements. With the new university +/- grading system, receiving a "C-" or below will require you to retake this course or find a substitute course to meet School of Agriculture graduation requirements.

Class conduct:
Asking of questions and discussion of relevant information in and outside class is highly encouraged; however, talking to neighbors, texting, sleeping, or studying for other courses during class time will not be tolerated. Come to class ready for discussions (you will be called upon).

NO CELL PHONES. If you have a cell phone that rings during class, you will automatically receive an unexcused absence for that class meeting. If you have an emergency situation where you need to have a cell phone on during class, let me know ahead of time. Cell phones, blackberries, iPhones, or other electronic communication devices with built-in calculators cannot be used for exams and will not be tolerated; only actual calculators will be allowed.

Students who are over disruptive in class will be asked to leave and will be counted absent.

Homework and Quizzes:
Late assignments will not be tolerated. Five points will be deducted for each day an assignment is late. Quiz dates are on the tentative course schedule during lecture or lab and students will be provided notice.
Paper:
You will be required to write a research paper specific to the topic of livestock reproduction. The paper will follow the general writing style of the Journal of Animal Science. Possible topics and the schedule and expectations associated with the outline, summary/draft, and final version (due by NOON Friday, November 20) as well as an overview of how the papers will be graded will be provided as part of this syllabus. A hard copy of the paper will be due in my mailbox in KH 145 and an electronic copy will be due to a dropbox on Western Online by NOON on Friday, November 20.

Course Grade:

- 3 Hour Exams: 45%
- Final Exam: 15%
- Quizzes/homework: 20%
- Paper: 20%

Grading Scale:

- 90 to 100 A
- 87 to 89 B+
- 82 to 86 B
- 80 to 81 B-
- 77 to 79 C+
- 72 to 76 C
- 70 to 71 C-
- 67 to 79 D+
- 62 to 66 D
- 60 to 61 D-
- < 59 F

***INFORMATION PROVIDED IN THIS SYLLABUS IS SUBJECT TO CHANGE***
<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Aug</td>
<td>24 M</td>
<td>Introduction and importance of reproduction</td>
</tr>
<tr>
<td></td>
<td>25 Tu</td>
<td><em>Female Anatomy</em></td>
</tr>
<tr>
<td></td>
<td>26 W</td>
<td>Endocrinology</td>
</tr>
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<td></td>
<td>31 M</td>
<td>Endocrinology</td>
</tr>
<tr>
<td>Sept</td>
<td>01 Tu</td>
<td><em>Pregnancy Diagnosis Beef</em></td>
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<td></td>
<td>02 W</td>
<td>Endocrinology</td>
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<tr>
<td></td>
<td>07 M</td>
<td><strong>NO CLASS</strong> Labor Day</td>
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<tr>
<td></td>
<td>08 Tu</td>
<td><em>Female Anatomy</em></td>
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|       | 09 W| Female Anatomy                                                        Quiz 1-Endocrinology
|       |     | **LAST DAY TO SUBMIT PAPER TOPIC FOR APPROVAL**                      |
|       | 14 M| Puberty                                                              |
|       | 15 Tu| *Library—Ms. Linda Zellmer*                                           |
|       | 16 W| Estrous Cycle                                                        Quiz 2-Female Anatomy
|       |     | **OUTLINE OF PAPER DUE**                                              |
|       | 21 M| Estrous cycle                                                        |
|       | 22 Tu| *Male Anatomy*                                                        Quiz 3-Puberty and Estrous Cycle
|       | 23 W| EXAM 1 (*Endocrinology, Female Anatomy, Puberty and Estrous Cycle*)   |
| Oct   | 05 M| Spermatogenesis                                                       |
|       | 06 Tu| *Pregnancy Diagnosis—Beef*                                            |
|       | 07 W| Semen and Sperm                                                       Quiz 4-Male Anatomy
|       | 12 M| Semen and Sperm                                                       |
|       | 13 Tu| *Bull Breeding Soundness Exam*                                        |
|       | 14 W| Finish and review                                                     Quiz 5-Spermatogenesis
|       |     | **DRAFT OF PAPER DUE**                                                |
|       | 19 M| Gestation and pregnancy                                              |
|       | 20 Tu| *Swine semen collection and processing*                               |
|       | 21 W| Exam 2 (*Estrous Cycle, Male Anatomy, Spermatogenesis, Semen and Sperm*) |
| Nov   | 02 M| Lactation                                                            |
|       | 03 Tu| TBA                                                                  |
|       | 04 W| Post-partum recovery                                                  |
|       | 09 M| Estrous synchronization                                               |
|       | 10 Tu| *Parturition*                                                         Quiz 7-Parturition and Lactation
<p>|       | 11 W| Exam 3 (<em>Gestation and Pregnancy, Parturition, Lactation, Post-Partum</em>) |</p>
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<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Activity</th>
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<tr>
<td>16 M</td>
<td></td>
<td>Artificial insemination</td>
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<td></td>
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<td>Quiz 8-Reproductive diseases</td>
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<tr>
<td>17 Tu</td>
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<td>Beef AI</td>
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<tr>
<td>18 W</td>
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<td>Artificial insemination</td>
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<tr>
<td></td>
<td></td>
<td>PAPER DUE</td>
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<td>23-27</td>
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<td>NO CLASS – THANKSGIVING</td>
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**November**

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<tr>
<th>Date</th>
<th>Day</th>
<th>Activity</th>
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<tbody>
<tr>
<td>30 M</td>
<td></td>
<td>Embryo transfer</td>
</tr>
<tr>
<td>01 Tu</td>
<td></td>
<td>TBA</td>
</tr>
<tr>
<td>02 W</td>
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<td>Reproductive Problems</td>
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**December**

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<th>Activity</th>
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<tbody>
<tr>
<td>07 M</td>
<td></td>
<td>Herd Reproductive Analysis</td>
</tr>
<tr>
<td>08 Tu</td>
<td></td>
<td>Other new technologies</td>
</tr>
<tr>
<td>09 W</td>
<td></td>
<td>Finish and review</td>
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<th>Date</th>
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<th>Activity</th>
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<tr>
<td>14 M</td>
<td></td>
<td>FINAL EXAM – 3 pm</td>
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_final will include material from Exams 1, 2, & 3 and since Exam 3. Approx. 70% old, 30% new_

Students with an “A” in the course (and fewer than 2 unexcused absences) may choose not to take the final exam.
There will be three stages in the development of your research paper: (1) an outline, (2) a draft stage with 2-3 pages of writing, and (3) the final version. The goal is to have the final version as a scientific, technically accurate, and up-to-date coverage of your selected topic that could serve as an information source for people who are searching for information on specific livestock reproduction related topics.

Schedule for Research Paper development:
(1) Topic approval by instructor on Wednesday, September 9
(2) Outline Due by lecture time on Monday, September 21
(3) Draft Due by 5pm on Wednesday, October 14
(4) Final Version Due by 5 p.m. Wednesday, November 18

All 4 steps of development must be typed in 12 pt font and double spaced.

(1) Outline
The outline should be no more than two pages in length and should have your name and topic at the top of the first page. There are 3 specific components to the outline: (i) the first component will be a general guide as to how your paper will be laid out, showing the sub-topic areas and the flow of the paper; (ii) the second component will be a typed, double-spaced paragraph, approximately 100 to 150 words long describing what you know about the topic at that point, and (iii) the third component will be 3 to 5 references you have to this point as a Literature Cited section. The paragraph must be double-spaced, written in third-person, passive tense, and, the references must be presented in the *Journal of Animal Science* format as a Literature Cited section (example shown below). The points of the outline are to develop and practice organization of thoughts, writing style and format for the Literature Cited section. The outline grade counts as one homework grade.

**Literature Cited**


The sources in the Literature Cited section need to be in alphabetical order by the last name of the first author.
The citation fields of the sources in the Literature Cited section follow the order of:
(1) author(s) of the paper, web page, etc., (2) year of publication, (3) the title of the paper,
chapter, web page, report, etc., (4) the source journal, book, organization, etc., and (5) volume
and page numbers if journal article (or URL and date accessed if web source, or, name of
publishing company and city if a book).

Any journal article that is obtained through the internet is cited as a journal article, NOT as a
web source.

Magazine articles, newspaper articles, information from internet blogs, and information from
internet discussion groups cannot be used as references. Scientific journal articles are the
preferred source, but any report or information from any governmental agency or university
web site is fine. Industry group web pages may or may not be appropriate, depending upon the
paper topic or information provided. Private web pages of ranches or individuals, etc. are
usually not appropriate as sources, but, this also depends upon the topic and information.

(2) Draft
This must be comprised of 500 to 750 words (2 to 3 pages) of writing as it will appear in the
final version. The purpose of this stage is to evaluate your writing style, interpretation and
presentation of pertinent data, and use of citations. Citations are used in the text of the paper
with the author and year format (i.e. Smith, 1999; Smith and Jones, 2007; Smith et al., 2009,
etc.) as done in the Journal of Animal Science as opposed to MLA or some other format. This
draft must include a minimum of 5 references. This is to be written in the same style as the
final version (double-spaced, passive tense, third person, reporting actual values from
references, use of citations in text, etc.). The draft grade counts as one homework grade.
Examples of bad and good writing styles:
Bad:
You need to watch your cows to see how fat they are if you want them to drop calves.
Good:
Cow-calf producers should monitor body condition of their cows if they want to enhance
reproductive performance.
Bad:
Angus have more marbling than Limousin. Limousin have better yield grades than Angus.
Good:
Wheeler et al. (2005) reported that Angus-sired steers had more marbling
than Limousin-sired steers (584 vs. 504), but had less desirable yield grades (3.4 vs. 2.4).
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Bad:
I believe that calves should be implanted because .........................
Good:
Many studies have shown that use of implants .............................

The WIU Writing Center has many resources for students online about academic writing at
www.wiu.edu/uwc. It is very important to understand what plagiarism is, and how to avoid it. The main
ways to avoid plagiarism are: (1) do not turn in the same or a very similar paper for more than one course
(someone else’s or your own), (2) paraphrase what your resources have said, don’t ever copy, and (3) give
credit to where you got information through use of citations. A useful resource about defining and avoiding
plagiarism may be found at http://wpacouncil.org/files/WPAPlagiarism.pdf
The actual paper (final version) will follow the general style and format of the *Journal of Animal Science* (which can be viewed at [http://www.asas.org](http://www.asas.org)). The final version should be comprised of 1,250 to 1,500 words (about 4 to 5 pages of writing not counting cover page or Literature Cited section). The final version of the paper should include somewhere between 10 and 15 sources in your Literature Cited section, but exceptions may occur with specific topics. The paper layout will consist of the following sections:

1. **Cover page** (your name, paper title, date and “Student Research Summary ANSC 424 Western Illinois University”) – this will be on a separate page.
2. **Introduction** (about 100 words) – why is this topic important, and what will you discuss.
3. **Literature Review** (summary of research findings, what were the actual results of the study and how do they fit with results from other studies; you can use sub-headings or not, this must contain only writing in paragraph style, i.e. no bulleted lists, no tables, figures, graphs, pictures, etc.)
4. **Summary** (about 100 words) – why was it important to discuss this topic, and what were the take-home main points, how should producers/consumers use this information, etc.
5. **Literature Cited** (single spaced within citations, double spaced between citations and in alphabetical order based on last names of first authors as shown on previous page)

The headings (2 through 5 above) should be boldfaced and centered (like “Literature Cited” is on the previous page). Your paper should be typed as a single Microsoft WORD file or converted to a single pdf file, be double-spaced (this is single-spaced), have one-inch margins, have a ragged right edge (i.e. not right-hand justified), use 12 point font (this is Calibri 12 pt), and emailed as an attachment to s-cunningham@wiu.edu along with a printed copy of the final version. The grade for the final version of the paper is worth 20% of the grade in the course.

**Academic Dishonesty:**
Any violation of the Academic Dishonesty Policy in Student Handbook will result in an automatic failure in the course. Plagiarism and cheating are areas of concern for the course. This course is designated to enhance your writing and presentation skills within your academic area, not the ability to copy thoughts and ideas.

All written work will be turned in with a hard copy AND electronically on Western Online where the originality check WILL be utilized and any similarity over 10% to other work WILL NOT BE TOLERATED.

**ACADEMIC DISHONESTY WILL NOT BE TOLERATED. VIOLATION WILL RESULT IN AUTOMATIC FAILURE OF THIS COURSE.**
ANSC 424 Research Paper Evaluation Sheet

Paper content (65 points)  

Adequate coverage of topic:

Important questions/areas not included:

Importance of topic conveyed to reader:

Supporting data from sources:

Interpretation and presentation of data from sources:

Style and form, adherence to guidelines (35 points)  

Writing style:

Use of citations:

Flow of paper:

Grammatical/typographical errors:

Grade
ANSC 424
Potential Research Paper Topics

Artificial Insemination
Brucellosis
Castration Methods
Chalmydiosis
Cryopreservation of semen, embryos, etc.
Embryo Development
Embryo Transfer
Epididymitis
Estrus Synchronization
IBR/BVD Complex
In vitro Fertilization
Irregular Estrous Cycles
Leptospirosis
Mastitis
Trichomoniasis
Parvovirus (swine)
Pregnancy Detection Techniques
Vibriosis (Genital Campylobacterosis)

**Please see instructor regarding topics that are not on this list.**