ANSC 424
APPLIED LIVESTOCK REPRODUCTION
FALL 2013

Instructor: Dr. Samantha (Sam) Cunningham, Assistant Professor
B12 Knoblauch Hall
Office Phone: 298-1288
Email: s-cunningham@wiu.edu
Office Hours: M & W 11 to 12, Th 10 to 12, or by appointment

Class Time:
Lecture: M & W 2 to 2:50pm in 306 Knoblauch Hall
Lab: T 3 to 4:50pm in 305 Knoblauch Hall

Lab Fee: $50-Materials fee due by first lab (August 27, 2013)

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:
1. Understand the reproductive process in livestock
2. Be aware of the normal functioning of the reproductive system
3. Be aware of clinical aberrations which may occur
4. Understand basic management and manipulation of the reproductive process

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.
Attendance cont’d:
If you anticipate an excused absence, please notify me in advance, 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.

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.

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.

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.
**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

**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 5pm Wednesday, November 13) as well as an overview of how the papers will be graded will be provided as part of this syllabus.

***INFORMATION PROVIDED IN THIS SYLLABUS IS SUBJECT TO CHANGE***
## Tentative Course Schedule

**Aug**
- **19 M**  Introduction and importance of reproduction
- **20 Tu**  *History of reproduction – Introduction to terminology and female anatomy*
- **21 W**  Endocrinology
- **26 M**  Endocrinology
- **27 Tu**  *Female Anatomy*
- **28 W**  *Female Anatomy*  Quiz 1-Endocrinology

**Sep**
- **02 M**  **NO CLASS – LABOR DAY**
- **03 Tu**  *Library—Ms. Linda Zellmer*  LAST DAY TO SUBMIT PAPER TOPIC FOR APPROVAL
- **04 W**  *Female Anatomy*
- **09 M**  Puberty  Quiz 2-Female Anatomy
- **10 Tu**  *Male Anatomy*
- **11 W**  Estrous Cycle  OUTLINE OF PAPER DUE
- **16 M**  Estrous cycle  Quiz 3-Puberty
- **17 Tu**  *Pregnancy diagnosis—beef*
- **18 W**  **EXAM 1 (Endocrinology, Female Anatomy, and Puberty)**

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<tr>
<th>Oct</th>
<th>01 Tu</th>
<th>NO CLASS  Bull Test</th>
<th><strong>DRAFT OF PAPER DUE</strong></th>
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<tr>
<td></td>
<td>02 W</td>
<td>semen and Sperm</td>
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- **07 M**  semen and Sperm  Quiz 6-Spermatogenesis
- **08 Tu**  *Bull Breeding Soundness Exam*
- **09 W**  Finish and review  School of Agriculture Career Fair
- **14 M**  Gestation and pregnancy
- **15 Tu**  *Swine semen collection and processing*
- **16 W**  **Exam 2 (Estrous Cycle, Male Anatomy, Spermatogenesis, Semen and Sperm)**

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<th>Nov</th>
<th>21 M</th>
<th>Gestation and Pregnancy</th>
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<tr>
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<td>22 Tu</td>
<td><em>Pregnancy diagnosis - swine</em></td>
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<td>23 W</td>
<td>Parturition            Quiz 7-Gestation and Pregnancy</td>
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- **28 M**  Lactation
- **29 Tu**  TBA
- **30 W**  Post-partum recovery  Quiz 8-Parturition and Lactation
**Nov** 04 M  Estrous synchronization  
05 Tu  *Major reproductive diseases*  
06 W  Exam 3 (*Gestation and Pregnancy, Parturition, Lactation, Post-Partum*)  

11 M  Artificial insemination  
12 Tu  *Beef AI*  
13 W  Artificial insemination  

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<th>Date</th>
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<td>18 M</td>
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<td>Embryo transfer</td>
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| 19 Tu |  | *Other new technologies*  
| 20 W |  | Reproductive Problems  

**11 M**  Quiz 9-Reproductive diseases  
**12 Tu**  Beef AI  
**13 W**  Artificial insemination  
**18 M**  Embryo transfer  
**19 Tu**  Other new technologies  
**20 W**  Reproductive Problems  

**25-29**  NO CLASS – THANKSGIVING

**Dec** 02 M  Herd Reproductive Analysis  
03 Tu  *Pregnancy diagnosis-Sheep*  
05 W  Finish and review  

**09 M**  **FINAL EXAM  – 3 pm**  
*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 Tuesday, September 3
(2) Outline Due by lecture time on Wednesday, September 11
(3) Draft Due by 5pm on Tuesday, October 1
(4) Final Version Due by 5 p.m. Wednesday, November 13

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

(3) Final Version
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). 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. The review and grading instrument used for the final version is found on the following page.

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ANSC 406 Research Paper Evaluation Sheet

Paper content (65 points)  __________ 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)  __________ points

Writing style:

Use of citations:

Flow of paper:

Grammatical/typographical errors:

___________ Grade
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Potential Research Paper Topics

Artificial Insemination
Brucellosis
Castration Methods
Chalmydiosi
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 Campylobacteriosis)

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