A lecture and laboratory course covering the normal and abnormal reproductive conditions of domestic animals. The course will include mammalian reproductive physiology and histology, diagnosis and treatment of reproductive disorders, including infertility, and management of breeding programs for the common domestic species. An introduction to the new reproductive technologies used in theriogenology will be discussed.

**Instructors**

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For questions regarding academic consideration, continuation of study, academic misconduct, safety, confidentiality, and experiential learning involving use of animals, please refer to admin information under Phase 2 on the OVC website.

Course coordinators and instructors will reply to emails concerning questions about course materials or examination materials when possible. Questions by email regarding Monday AM midterms may not be replied to after the preceding Friday at 5 pm.

The objective of this course is for students to acquire an understanding of the reproductive biology and clinical theriogenology of the common domestic species, and develop an appreciation for the importance of reproduction in food animal, equine, mixed and small animal
veterinary practice. These objectives will be taught through various approaches including lectures and laboratories (histology, gross pathology, rectal palpation, vaginal cytology and semen analysis labs)

At the end of the course, the successful student will be able to:

1. Compare and contrast the reproductive cycles, including the endocrinology, gross and histological anatomical features, of the various domestic species, and explain how they relate to reproductive management.
2. Summarize, diagnose and develop a treatment plan for the important clinical conditions of the main domestic species.
3. Perform rectal palpation in cows and mares, identifying the cervix, uterus and ovaries, including corpora lutea and follicles, and interpret the importance of ovarian structures present.
4. Solve case scenarios using an evidence-based approach, utilizing the knowledge of anatomy, cycles, reproductive management and diseases learned throughout the course.
5. Illustrate the anatomical and histological adaptations to male and female reproductive tissues that permit function, but also predispose to disease.

**Evaluation**

Assessment of students will be based on four written midterm examinations and a final examination. All examinations will be cumulative. Examination questions may be in the form of multiple choice, short answer and true / false questions, and visual slides may also be used. An additional laboratory assessment is also included.

**Rectal Palpation Laboratories – The rectal palpation laboratories are elective.** Students planning on pursuing a career in mixed animal, bovine or equine practice are encouraged to sign up for the palpation lab. Students who intend to pursue small animal veterinary practice exclusively are not required to take the palpation lab. A lab introduction will include a video and question/answer session discussing the laboratory. The first cow palpation lab will introduce bovine rectal palpation using our model “Betsy” and tracts. Participation in the equine palpation lab is also elective, however it requires full participation in the bovine lab in the fall semester (all 6 lab sessions) in order to give students basic palpation skills. Therefore, attendance will be taken at the bovine labs. Students who miss one or more bovine palpation labs will not be able to participate in the mare labs unless the bovine lab has been made-up, either in another lab or in pre-arranged make-up time. Please contact Dr. Chenier if you miss a bovine lab to arrange a make up slot. Mare palpation labs will be available by sign-up. A limited number of student spaces will be available for each mare palpation lab due to the limited number of teaching mares in the herd; there may be additional opportunities for those students wishing a second mare palpation lab. Students who take the bovine palpation labs are **not required** to take the equine palpation lab if they do not want to.
***IMPORTANT*** Some laboratories include compulsory written assignments that together carry a value of 6% of the final grade. Completion of the laboratory assignments are required in order for the 6% laboratory grade to be credited. There is no specific mark per-se given for each laboratory assignment. The 6% grade is an assignment completion mark. 3% is awarded for successful completion of each individual lab assignment. Deadlines for submission of assignments will be communicated at each laboratory. Failure to submit the lab assignment will result in a 0/3 grade for that laboratory component of the course. Failure to successfully complete both labs will result in 0/6 for the lab component. Students who must miss any laboratory assignment are required to obtain Academic Consideration as for all examinations. All assignments must be completed to the satisfaction of the appropriate faculty member and the course coordinator. Unsatisfactory assignments must be resubmitted, with ongoing consultation, until they are of appropriate quality. Laboratory content will be included in the midterm and final examinations. Specifically, the labs that include assignments are (1) vaginal cytology lab and (2) semen analysis lab. NOTE that the vaginal cytology laboratory occurs in the first week after returning from Christmas vacation. It is suggested that students make note of this if planning an extended vacation. There will NOT be an opportunity to make up either of these labs outside of the two times offered in the schedule.

Examination Schedule:

<table>
<thead>
<tr>
<th>Midterm #1:</th>
<th>Mon. Oct. 2/17</th>
<th>Value: 4 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm #2:</td>
<td>Monday November 20, 2017</td>
<td>Value: 10 %</td>
</tr>
<tr>
<td>Midterm #3</td>
<td>Thursday January 11, 2018</td>
<td>Value: 10 %</td>
</tr>
<tr>
<td>Midterm #4</td>
<td>Monday, March 5, 2018</td>
<td>Value: 10 %</td>
</tr>
<tr>
<td>Laboratory Assignments (Vaginal cytology and Semen labs)</td>
<td>Value: 6 %</td>
<td></td>
</tr>
<tr>
<td>Final exam:</td>
<td>TBA</td>
<td>Value: 60 %</td>
</tr>
</tbody>
</table>

If a midterm examination is missed and academic consideration is granted, alternative arrangements will be made by the course coordinator on an individual case basis. If academic consideration is not granted, a mark of zero will be allocated for the missed examination. Students must contact the Associate Dean of Students for academic consideration. Midterm Exams are cumulative and will also include material covered in laboratory sessions. The final examination is cumulative and covers all lecture, laboratory and notes material in the course.

**Required:**

- [Resourcerequired]
1. Course Notes Available On-line. The complete notes package will be available on CourseLink for you to view and/or print as your preferences indicate.

2. Lecture Powerpoints as .pdf files online. Every effort will be made by instructors to have powerpoint files up the day before the lecture.

**Recommended: ** ** denotes Highly Recommended**

**Physiology**

1. ** Pathways to Pregnancy and Parturition, 2nd Ed., P.L. Senger, Current Conceptions Inc, WA.

1.** Veterinary Endocrinology and Reproduction, 5th ed; L.E. McDonald

**General: Bovine, Equine and Small ruminant**

** Current Therapy in Large Animal Theriogenology, 2nd Ed. Youngquist

**Equine:**

1. ** Manual of Equine Reproduction; D. Varner; 2002

**Internet Resources -

The Drost Project – visual guide to theriogenology

Marestare.com This website is dedicated to foaling mares. Participant farms have live webcam videos of pregnant mares due to foal and foaling.

[IVIS.org](http://ivis.org) – this is a valuable veterinary resource with conference proceedings and review articles on a wide variety of topics and species. You need to register to access, but registration is free.

Dr. Robert Foster’s reproductive pathology website:
http://www.uoguelph.ca/~rfoster/repropath/repro.htm

**Small Animals:**

1.** Canine and Feline Theriogenology; S.D. Johnson, M.V. Root Kustritz and P.N.S. Olson

2. Canine and Feline Endocrinology and Reproduction; Feldman and Nelson


5. IVIS web site (http://ivis.org/). Go to the “Recent Advances in Small Animal Reproduction” page.
Obstetrics: