

Department of Population Medicine
POPM*6950-02:
Practical Application of Assisted
Reproductive Technologies
Spring 2020

Course Coordinator and instructor

Tracey Chenier
tchenier@uoguelph.ca

Co-evaluator: Cathy Gartley

Office Hours:

By appointment

Teaching Assistants:

N/A

Class schedule:

Tuesdays and Fridays, 10:00 – 11:20 am in room TBD

Description:

Assisted reproductive technologies are under increasing demand from producers and breeders as they find novel ways to maximize high quality genetics and gain access to new markets around the world. This course will cover the current technologies and their clinical application in veterinary medicine.

Objectives: Students who complete this course will:

- Develop an understanding of comparative embryology of various veterinary species.
- Be able to perform morphological evaluation of bovine and equine embryos.
- Understand the various reproductive technologies available in veterinary medicine, and
- their technological and practical limitations.

Course approach:

The course will consist of assigned readings and seminars which are discussed during two 80 minute sessions per week (online or classroom). Laboratory practical sessions on embryo evaluation and handling, ovum pickup (postmortem samples) and sperm preparation are planned and may/may not be available depending on the situation at the University given the current pandemic.

Pre-requisites: None. Enrollment limited to current Theriogenology graduate students.

Pre-class preparation:

To enhance learning during classroom sessions, pre-class readings, videos or other preparation will be assigned. Details will be provided for each session. Students are expected to complete the readings prior to the class and come to class prepared to discuss the topic.

Course Topics

"This is a tentative topics list."

1. Gametes - biology, species differences
2. Fertilization in vivo and in-vitro.
3. Embryology and how it impacts species differences in ART.
4. In Vitro Fertilization I. Technical aspects
5. In Vitro Fertilization II. Limitations and problems.
6. Ovum Pick-up (bovine and equine) and ICSI in the horse.
7. Embryo Transfer, Embryo Cryopreservation
8. Evaluation of Bovine and Equine Embryos
9. Sperm recovery and preparation techniques
- 10 Ethical issues, industry acceptance, veterinary obligations

Overview of evaluation methods:

Student Topic Presentations = 40% (2 X 20%; Students will prepare and present two in-depth seminars on a topic)

Final exam = 60% (*Term essay/project*)

Note: co-evaluator is Dr. Cathy Gartley

Due dates

Assignments and project reports are due on due date and time as indicated. Late submissions will be penalized. Complete details will be provided at the start of the course.

Reading material (to be assigned weekly - available on-line from the UofG library):

CourseLink

Additional course materials and information regarding all assignments will be posted on the CourseLink website. The website can only be accessed by persons who are registered for the class, therefore it is imperative that students ensure that they are registered for the class and have access to CourseLink. If you have any problems accessing CourseLink, contact CCS at x58888 or 58888help@uoguelph.ca

Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Graduate Calendar - Grounds for Academic Consideration:

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars. Graduate Calendar - Registration Changes:

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg-reg-regchg.shtml>

Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student. When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway. Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability. Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day. More information can be found on the SAS website: <https://www.uoguelph.ca/sas>

Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community-faculty, staff, and students-to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Graduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs. Academic Calendars <https://www.uoguelph.ca/academics/calendars>