



ANSC*6400 Mammalian Reproduction

Winter 2023

Section(s): C01

Department of Animal Biosciences

Credit Weight: 0.50

Version 1.00 - January 04, 2023

1 Course Details

1.1 Calendar Description

Discussions and applications of methodology for collection and examination of gametes and embryos and for measurements of hormones in biological fluids.

1.2 Course Description

Calendar description: Discussions and applications of methodology for collection and examination of gametes and embryos and for measurements of hormones in biological fluids.

Note that the content has been modified to extend beyond the collection and examination of gametes and now includes all aspects of mammalian reproduction.

1.3 Timetable

Lectures Tuesday, Thursday 10:00 a.m. – 11:20 a.m. ANNU 030

1.4 Final Exam

No final exam

2 Instructional Support

2.1 Instructional Support Team

Instructor: Gregoy Bedecarrats
Email: gbedecar@uoguelph.ca
Telephone: +1-519-824-4120 x53692
Office: ANNU 223
Office Hours: by appointment

2.2 Netiquette Expectations

Inappropriate online behaviour will not be tolerated. Examples of inappropriate online behaviour include:

- Posting inflammatory messages about your instructor or fellow students
- Using obscene or offensive language online
- Copying or presenting someone else's work as your own
- Adapting information from the Internet without using proper citations or references
- Buying or selling term papers or assignments
- Posting or selling course materials to course notes websites
- Having someone else complete your quiz or completing a quiz for/with another student
- Stating false claims about lost quiz answers or other assignment submissions

- Threatening or harassing a student or instructor online
- Discriminating against fellow students, instructors and/or TAs
- Using the course website to promote profit-driven products or services
- Attempting to compromise the security or functionality of the learning management system
- Sharing your user name and password
- Recording lectures without the permission of the instructor

2.3 Communicating with Your Instructor

During the course, your instructor will interact with you on various course matters on the course website using the following ways of communication:

- **Announcements:** The instructor will use **Announcements** on the Course Home page to provide you with course reminders and updates. Please check this section frequently for course updates from your instructor.
- **Ask Your Instructor Discussion:** Use this discussion forum to ask questions of your instructor about content or course-related issues with which you are unfamiliar. If you encounter difficulties, the instructor is here to help you. Please post general course-related questions to the discussion forum so that all students have an opportunity to review the response. To access this discussion forum, select **Discussions** from the **Tools** dropdown menu.
- **Email:** If you have a conflict that prevents you from completing course requirements, or have a question concerning a personal matter, you can send your instructor a private message by email. The instructor will attempt to respond to your email within 24 hours.
- **Video Call:** If you have a complex question you would like to discuss with your instructor, you may book a video meeting on Teams (or alternate platform being used by your instructor). Video meetings depend on the availability and are booked on a first

come first served basis.

3 Learning Resources

Lecture slides and all relevant material will be posted on the CourseLink site. No specific text book required.

3.1 Additional Resources

Course Content Definitions (Other)

Reproduction: “the process by which plants and animals give rise to offspring and which fundamentally consists of the segregation of a portion of the parental body by a sexual or an asexual process and its subsequent growth and differentiation into a new individual”
Merriam-Webster Online Dictionary.

Mammalian: any member of the group of vertebrate animals in which the young are nourished with milk from special mammary glands of the mother.

Placental mammal: any member of the mammalian group characterized by the presence of a placenta, which facilitates exchange of nutrients and wastes between the blood of the mother and that of the fetus.

Mammalian Reproduction:

Reproductive organs: ontogeny, gametogenesis

Reproductive cycles: ovarian, menstrual

Heat; Copulation

Fertilization

Implantation/Attachment

Embryogenesis

Parturition

Lactation

3.2 System Requirements

System and Software Requirements

This course will use a variety of technologies including;

- CourseLink (main classroom) for postings and announcements
- Teams (via Office 365) for possible guest speakers synchronous delivery

To help ensure you have the best learning experience possible, please review the list of system and software requirements.

<https://opened.uoguelph.ca/student-resources/system-and-software-requirements>

CourseLink System Requirements

You are responsible for ensuring that your computer system meets the necessary system requirements. Use the browser check tool to ensure your browser settings are compatible and up to date. (Results will be displayed in a new browser window).

<http://spaces.uoguelph.ca/ed/system-requirements/>
<https://courselink.uoguelph.ca/d2l/systemCheck>

3.2 Course Technology and Technical Support

CourseLink

This course is being offered using CourseLink (powered by D2L's Brightspace), the University of Guelph's online learning management system (LMS). By using this service, you agree to comply with the University of Guelph's Access and Privacy Guidelines. Please visit the D2L website to review the Brightspace privacy statement and Brightspace Learning Environment web accessibility standards.

<http://www.uoguelph.ca/web/privacy/> <https://www.d2l.com/legal/privacy/>
<https://www.d2l.com/accessibility/standards/>

Technical Support

If you need any assistance with the software tools or the CourseLink website, contact CourseLink Support.

Email: courselink@uoguelph.ca

Tel: 519-824-4120 ext. 56939 Toll-Free (CAN/USA): 1-866-275-1478

Support Hours (Eastern Time):

Monday thru Friday: 8:30 am–8:30 pm

Saturday: 10:00 am–4:00 pm

Sunday: 12:00 pm–6:00 pm

Teams (via Office 365)

Office 365 Teams is a collaboration service that provides shared conversation spaces to help teams coordinate and communicate information. This course may use Teams for one on one meetings with your Instructor. It is recommended that you use the desktop version of Teams. As a student you are responsible for learning how to use Teams and it's features.

For Teams Support visit the CCS website for more information.

<https://www.uoguelph.ca/ccs/services/office365/teams>

3.2 Technical Skills

As part of your learning experience, you are expected to use a variety of technologies for assignments, lectures, teamwork, and meetings. In order to be successful in this course you will need to have the following technical skills:

- Manage files and folders on your computer (e.g., save, name, copy, backup, rename, delete, and check properties);
- Install software, security, and virus protection;
- Use office applications (e.g., Word, PowerPoint, Excel, or similar) to create documents;
- Be comfortable uploading and downloading saved files;
- Communicate using email (e.g., create, receive, reply, print, send, download, and open attachments);
- Navigate the CourseLink learning environment and use the essential tools, such as Dropbox, Quizzes, Discussions, and Grades (the instructions for this are given in your

course);

- Access, navigate, and search the Internet using a web browser (e.g., Firefox, Internet Explorer); and
- Perform online research using various search engines (e.g., Google) and library databases.

3.2 Library Access

As a student, you have access to the University of Guelph's library collection, including both physical and electronic materials. For information on checking out or couriering physical library items, accessing electronic journals and returning items to the library, visit the library's website.

If you are studying off campus and would like to access the library's electronic resources, use the Off Campus Login and login using your Single Sign On credentials or using your last name and library barcode.

<https://www.lib.uoguelph.ca/>

<https://www.lib.uoguelph.ca/campus-login>

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. By the end of these course students will be familiar with the general concepts and processes involved in mammalian reproduction. Students will also have acquired basic theoretical knowledge of techniques routinely used for the study of reproduction (molecular, cellular and hormone assays).
2. Based on personal interest, students will be able to understand and discuss in depth a specific topic related to mammalian reproduction (after summarizing the state of knowledge in that specific area, students will challenge current concepts and propose a

novel and innovative experimental approach to further advance research).

5 Teaching and Learning Activities

5.1 Lecture

Topics: Lecture Content

The purpose of lectures is mainly to refresh students on general anatomical structures of the reproductive system, physiological events associated with reproduction, and general techniques used. In addition, specific lectures will be given by invited speakers based on students' interests.

Tue, Jan 10, 10:00 AM - 11:20 AM

Topics: Introduction / Overview of the semester

Thu, Jan 12, 10:00 AM - 11:20 AM

Topics: Sexual differentiation/germ cell formation

Tue, Jan 17, 10:00 AM - 11:20 AM

Topics: The reproductive axis and its hormones.

Thu, Jan 19, 10:00 AM - 11:20 AM

Topics: Male reproductive system (testis/spermatogenesis)

Tue, Jan 24, 10:00 AM - 11:20 AM

Topics: Female reproduction (general anatomy)

Thu, Jan 26, 10:00 AM - 11:20 AM

Topics: Female reproduction (ovarian cycle)

Tue, Jan 31, 10:00 AM - 11:20 AM

Topics: Female reproduction (uterine/menstrual cycle)

Thu, Feb 2, 10:00 AM - 11:20 AM

Topics: Fertilization/implantation

Tue, Feb 7, 10:00 AM - 11:20 AM

Topics: Embryogenesis/pregnancy

Thu, Feb 9, 10:00 AM - 11:20 AM

Topics: Parturition/lactation

Tue, Feb 14, 10:00 AM - 11:20 AM

Topics: Catch up lecture

Thu, Feb 16, 10:00 AM - 11:20 AM

Topics: Practice journal club presentation by me!

Tue, Feb 21 - Thu, Feb 23

Topics: WINTER BREAK NO LECTURES

Tue, Feb 28, 10:00 AM - 11:20 AM

Topics: Guest lecture / Special topic I

Thu, Mar 2, 10:00 AM - 11:20 AM

Topics: Journal club by students (2 students)

Tue, Mar 7, 10:00 AM - 11:20 AM

Topics: Guest lecture / Special topic II

Thu, Mar 9, 10:00 AM - 11:20 AM

Topics: Journal club by students (2 students)

Tue, Mar 14, 10:00 AM - 11:20 AM

Topics: Guest lecture / Special topic III

Thu, Mar 16, 10:00 AM - 11:20 AM

Topics: Journal club by students (2 students)

Tue, Mar 21, 10:00 AM - 11:20 AM

Topics: Guest lecture / Special topic IV

Thu, Mar 23, 10:00 AM - 11:20 AM

Topics: Journal club by students (if necessary)

Tue, Mar 28, 10:00 AM - 11:20 AM

Topics: Guest lecture / Special topic V

Thu, Mar 30, 10:00 AM - Fri, Mar 31, 11:20 AM

Topics: Review of the semester session. Preparation for the final presentation.

Tue, Apr 4, 10:00 AM - 11:20 AM

Topics: Guest lecture / Special Topic VI

Thu, Apr 6, 10:00 AM - 11:20 AM

Topics: First round of Final Presentations (2 students)

Tue, Apr 11, 10:00 AM - 11:20 AM

Topics: Second round of Final Presentations (2 students)

Thu, Apr 13, 10:00 AM - 11:20 AM

Topics: Final round of final presentations (if required)

Mon, Apr 17, 10:00 AM - 11:20 AM

Topics: Added round of final presentations if necessary

6 Assessments

6.1 Marking Schemes & Distributions

Name	Scheme A (%)
Journal club (preparation, presentation, discussion)	20
Review (written Report)	35
Proposal (presentation)	35
Class Participation	10
Total	100

6.2 Assessment Details

Journal club (preparation, presentation, discussion) (20%)

Due: Starting after winter break

Learning Outcome: 1, 2

Students will select an article based on technical or theoretical challenges, and after a summary presentation, the paper will be open for discussion. Up to two articles (2 students) will be presented per session. Additional information on specific content and format, along with guidelines and rubrics, will be provided on the CourseLink site.

Thursdays, 10:00 – 11:20 starting Starting March 2.

Review (written Report) (35%)

Due: Mon, Mar 20, 12:00 AM

Learning Outcome: 1, 2

Each student will select a specific topic based on their own interest. Students will be responsible to search the literature relevant to the topic and, produce a comprehensive written review (6-8 pages excluding at least 15 references). Additional information on specific content and format, along with guidelines and rubrics, will be provided on the CourseLink site.

Due date: Tuesday March 20, 2023.

Proposal (presentation) (35%)

Due: Mid April (during exam period).

Learning Outcome: 1, 2

After reviewing their specific topic, students will be asked to advance knowledge by proposing a novel experimental paradigm. This proposal will be presented in front of the class in a formal PowerPoint presentation (20 min presentation with 10 min for discussion). The presentation should include an introduction/summary (based on the literature review), a statement of rationale and objectives, a technical approach (materials and methods), expected results, and potential pitfalls.

Note that it should not correspond to your MSc project but rather push the envelope if you had access to significant budget and state of the art equipment. Presentation dates: mid-April (during exam period).

Additional information on specific content and format, along with guidelines and rubrics, will be provided on the CourseLink site

Class Participation (10%)

Date: Ongoing

Learning Outcome: 1, 2

This includes actively participating, especially during guest/specific topic lectures and fellow students' presentations.

7 Course Statements

7.1 Late Policy

As per policy, late assignments submission will result in a reduced by 5% per day after the deadline for the submission of the assignment to a limit of six days.

Extensions will be considered for medical reasons or other extenuating circumstances. If you require an extension, discuss this with the instructor as soon as possible and well before the due date. Barring exceptional circumstances, extensions will not be granted once the due date has passed. These rules are not designed to be arbitrary, nor are they inflexible. They are designed to keep you organized, to ensure that all students have the same amount of time to work on assignments, and to help to return marked materials to you in the shortest possible time.

8 University Statements

8.1 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.

8.2 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.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

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

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

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

8.3 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.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

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

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

8.4 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.

8.5 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 make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

For Guelph students, information can be found on the SAS website
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

8.6 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.

Undergraduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

8.7 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.

8.8 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>

8.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email.

This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

8.10 Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g.. final exam or major assignment).

8.11 Covid-19 Safety Protocols

For information on current safety protocols, follow these links:

- <https://news.uoguelph.ca/return-to-campus/how-u-of-g-is-preparing-for-your-safe-return/>
- <https://news.uoguelph.ca/return-to-campus/spaces/#ClassroomSpaces>

Please note, these guidelines may be updated as required in response to evolving University, Public Health or government directives.
