

REPRODUCTIVE TECHNOLOGIES
BIOL 490, Spring 2022
Section 01

Instructor: Dr. Karin Bodensteiner
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Class Periods: Mondays 3:00-4:50 p.m. (Synchronous via Zoom)

Meeting ID: 982 6335 7937

Passcode: 883353

Link: <https://wisconsin-edu.zoom.us/j/98263357937?pwd=eTdaRDBudWltL1o4ZmZwbzhFK2tLUT09>

Office Hours: 11:00 a.m. to 11:50 a.m. Monday, Wednesday, and Friday via Zoom (or by virtual appointment)

Meeting ID: 964 8605 7651

Passcode: 664980

Link: <https://wisconsin.edu.zoom.us/j/96486057651?pwd=K2pDbVB2aml2SG5rbW83TjBObGkxUT09&from=addon>

Course Content and Additional Course Information: Material associated with the course will be posted to Canvas as we go through the semester. Please visit the Canvas training site for help with using Canvas, if needed: <https://uwstp.instructure.com/enroll/36GKLY> . We will also be using Zoom for office hours and class meetings, so please familiarize yourselves with Zoom as well.

Zoom Support: <https://www.uwsp.edu/infotech/Pages/Tutorials/Zoom/Zoom.aspx>

Course Description: This seminar course will broadly examine recent advances in reproductive technologies, as well as issues inherent with their use. **The main goal of this seminar is to contribute to your general professional development by improving your ability to communicate in the Biology or Biochemistry major in both oral and written formats.** Students will lead a presentation and discussion of a primary literature article related to a reproductive technology of their choice. In addition, a literature review paper on the chosen reproductive technology will be required. Students will gain experience in areas of literature searching, scientific writing, and preparation and delivery of an oral presentation. **Class attendance and participation is required.**

This course fulfills the **Capstone Experience in the Biology and Biochemistry Majors**. The learning outcomes for this requirement are as follows:

1. Complete a project that integrates knowledge, skills, and experiences related to the discipline.
2. Demonstrate skills, processes, and resources needed to make a successful transition from college to the world beyond.

This course also fulfills requirements in the **Biology and Biochemistry Majors**. These learning outcomes are as follows:

1. Apply discipline-specific standards of oral and written communication to compose an articulate, grammatically correct, and organized presentation/piece of writing with properly documented and supported ideas, evidence, and information suitable to the topic, purpose, and audience.
2. Critique their own and others' writing/oral presentations to provide effective and useful feedback to improve their communication.

Course Assignments and Grading Criteria: Grading for this course will be based on three major criteria: a student presentation (50 points), a written literature review (75 points), and class attendance, participation, and professionalism (60 points).

Point Distribution:

Student Presentation	50 pts
Literature Review	75 pts
<u>Professionalism</u>	<u>60 pts</u>
Total	185 pts

Grading Scale (out of 100% of Total):

A ≥ 93-100	C = 73-76
A- = 90-92	C- = 70-72
B+ = 87-89	D+ = 67-69
B = 83-86	D = 60-66
B- = 80-82	F < 60.0
C+ = 77-79	

Student Presentations:

Each student will be required to give a 40-45 minute presentation and **lead the discussion** on a chosen reproductive technology and a recent primary literature article investigating one aspect of their chosen topic. Discussion leaders will be expected to provide relevant background material, a summary of relevant studies, and a critical evaluation of the research. Searching for appropriate literature articles and reviews will require the use of online index searches and interlibrary loan, so please plan ahead. If you are having trouble using online indexes, please email me or a librarian for assistance. Presentations should be uploaded to Canvas by 12:00 p.m. CST the day of your presentation.

Presentations will be graded by the instructor and will be graded on content, format, and overall knowledge of the subject matter. Participation by the audience is necessary to promote discussion and understanding of the topics being presented. Therefore, when you are not leading the discussion, you will be evaluated on your level of participation. Please read through the selected article or articles, which will be posted by presenters in canvas the week before the presentation. **You are to provide at least five discussion questions for the papers you were assigned.** Questions (which should be typed) must be informed and indicate to me that you read, comprehended, and contemplated the readings. You must upload a copy of your questions to Canvas prior to the class meeting in which the paper is discussed. It would also be a good idea to have a copy of your questions for yourself to aid in your discussion of the readings. **Questions must be uploaded prior to the beginning of the class meeting to receive credit!**

Literature Review:

Each student will complete a term paper that will be evaluated in three phases. The first form of review will be peer evaluations of your paper (10 pts). If your paper is not complete on the date of peer evaluations, you will lose points. The first draft of your paper is worth 25 points and the final draft is worth 40 points. The paper should be 8 – 10 pages long (Times New Roman, size 12, double spaced, with 1-inch margins). The paper should include a description of the reproductive technology you chose and a brief history of it. The paper should also summarize the original research article you presented that relates to the technology (the methodology, results, and conclusions drawn). Also include considerations of future directions for research regarding this topic, which may come from questions you have or ones that are posed by the authors of the manuscripts selected.

Please include a works cited page that cites the **journal articles and books** that you use for the paper. You are being asked to write a scientific review article, and websites are not appropriate resources for this type of paper. Therefore, no internet resources (including Wikipedia) should be included in your bibliography. You are required to include a minimum of 6 references in addition to the primary journal article that you are reviewing. So, a total of 7 or more references should be listed. At least one of these articles should be obtained through interlibrary loan (*please asterisk this article on your works cited page).

Extra credit:

You can earn 1 additional point of extra credit for each completed official consultation with the UWSP Writing Center ([https://www.uwsp.edu/tlc/Pages/Online-Writing-Lab-\(OWL\).aspx](https://www.uwsp.edu/tlc/Pages/Online-Writing-Lab-(OWL).aspx)). To get your extra credit point, cc me (kbodenst@uwsp.edu) when you send your document to a Writing Lab Consultant (tlctutor@uwsp.edu).

Professionalism:

Attendance at all scheduled class meetings is required to succeed in this seminar. If you have a documented health emergency, a family emergency, etc., please contact me regarding your absence and I will be as accommodating as possible. If you have a prearranged excused absence, such as a UWSP sponsored event, graduate school interview, or research conference, etc., I must be informed well before class when possible and receive documentation of your absence. As part of your professionalism grade, you will also be evaluated on course participation, including synchronous, in-class participation.

Complete mutual respect and courtesy is expected and all students should come to class ready to be engaged and actively participate in the learning experience. Open, honest discussion is encouraged and will factor in to your professionalism grade.

Hints for Presenters:

Critical reading of primary literature is not an easy thing to master, and the only way to get good at it is to do it often. It is a skill that many of you will carry onto your professional careers. If you go onto graduate school, you may find yourself in a journal club with faculty and other graduate students doing exactly what we are doing in this seminar- reading and discussing current research. In graduate school, medical school, PA school, and several other professional careers, you will be expected to keep up to date on current research in your area of expertise. You will be expected to identify how these studies fit into your research, what the strengths and weaknesses of the study are, and how you might even improve or add to the study. The most challenging part of reading primary literature is identifying the important points in the paper. As a presenter, it is your task to summarize the paper and prioritize what should be discussed. Below is a rough sketch of how to go about this, but every paper is different, so you will want to keep an open mind.

Summarizing the article can be approached by asking the following questions:

1. *What questions (hypotheses) are being asked in the paper? What is the paper about? Why did they do the work?* This information is typically found in the introduction.
2. *How did the authors go about answering these questions? What was the experimental design?* This is found in the methods section.
3. *What were the findings of the paper? What are the broader implications of this research?* This information is found in the results and discussion section.

You should assume that all other students have read the paper and have a copy of the paper in front of them. They should have notes and questions they have regarding the paper. However, if a lull in the discussion occurs you can ask the audience broad topic questions such as:

- Was the methodology appropriate for the questions being asked?
- How could the experimental design be improved?
- Did the conclusions follow from the data clearly? Could other conclusions be drawn from the data that the authors did not mention? Or did they draw too big of a conclusion from their data?

Additional guidelines and grading rubrics will be posted on Canvas.

Biology Comprehensive Exam:

Satisfactory completion of this course requires the completion of the Biology Department Comprehensive Exam. Test scores are used to assess general student learning. Scores will not be made available to you nor your instructor and will have no bearing on grades. However, your BIOL 490 grade will be withheld until the exam is taken.

Other Guidance:

- Please monitor your own health each day. If you are not feeling well or believe you have been exposed to COVID-19, do not come to class; email your instructor and contact Student Health Service (715-346-4646). As with any type of absence, students are expected to communicate their need to be absent and complete the course requirements as outlined in the syllabus.
- Maintain a minimum of 6 feet of physical distance from others whenever possible.
- Do not congregate in groups before or after class; stagger your arrival and departure from the classroom, lab, or meeting room.
- Wash your hands or use appropriate hand sanitizer regularly and avoid touching your face.
- Please maintain these same healthy practices outside the classroom.

Grade Discrepancies:

Grades will be posted on Canvas throughout the semester. If there are discrepancies on any assignments, they can be addressed with the instructor, in person, up to one week after the grade is posted. After this time, the grade will stand with whatever was originally granted.

Academic Policies:

Academic misconduct (as outlined and defined by Chapter 14 in the Academic Handbook: <https://www.uwsp.edu/acadaff/Pages/handbook.aspx>) will not be tolerated. Cheating or plagiarism will result in a score of zero for a give assessment and/or additional disciplinary action.

Disability Services:

Any student who feels that they may need an accommodation based on the impact of a disability should contact the Disability and Assistive Technology Center (room 609 Albertson Hall, datctr@uwsp.edu). If you have already registered with this office and would like to discuss your class accommodations for the semester, please meet with me.

Emergency Response Guidance:

- In the event of a medical emergency call 9-1-1 and guide emergency responders to victim.
- In the event of a tornado warning, proceed to lowest level interior room without windows. Avoid wide-span structures (gyms, pools, or large classrooms).
- In the event of a fire alarm, evacuate building in a calm manner, meet on sidewalk to east of building, near UWSP sign. Notify instructor or emergency command personnel of any missing individuals.
- Active Shooter/Code React – Run/Escapes, Hide, Fight. If trapped hide, lock doors, turn off lights, spread out and remain quiet. Call 9-1-1 when it is safe to do so. Follow instructions of emergency responders.
- See UW-Stevens Point Emergency Procedures at www.uwsp.edu/rmgt/Pages/em/procedures for details on all emergency response protocols at UW-Stevens Point.

COURSE SCHEDULE:

1/24	Syllabus and Overview of Course Introduction to Reproductive Technologies
1/31	How to Read and Review a Scientific Journal Article Seminar Presentation Hints and use of PowerPoints Pick Reproductive Technologies and Dates for Presentations
2/7	How to Search for Research Articles: (Tentatively Scheduled in LB 316 Computer Lab)
2/14	Instructor Meetings/Course Check-In
2/21	Student Presentations
2/28	Student Presentations
3/7	Student Presentations
3/14	In class Peer Evaluations; ROUGH DRAFT of Paper Due (10 pts)
3/21	SPRING BREAK
3/28	Student Presentations
4/4	Student Presentations FIRST DRAFT of Paper Due (25 pts)
4/11	Student Presentations
4/18	Student Presentations
4/25	Student Presentations
5/2	Student Presentations
5/9	Presentation Make-up (if needed) / Overview of Semester FINAL DRAFT of Paper Due (40 pts)