

**BIOLOGY OF REPRODUCTION**  
**BIOL 383, Fall 2021**

**Instructor:** Dr. Karin Bodensteiner

**Office:** 308 Chemistry-Biology Building

**Phone:** (715) 346-3994

**E-mail:** [kbodenst@uwsp.edu](mailto:kbodenst@uwsp.edu)

**Office Hours:** Tuesdays and Thursdays 11:00 a.m. to 12:00 p.m., or by appointment

**Class Meetings:** CBB 165, Tuesday/Thursday/Friday 10:00-10:50 a.m.

**Additional Course Information:** Available off of Canvas

**Final Exam:** 12:30 to 2:30 p.m., Wednesday December 15, CBB 165

**Textbook:** Biology of Human Reproduction, by Ramón Piñón, Jr. University Science Books, 2002. Available for rent in the bookstore. (Available textbooks on reproduction are limited, and, overall, not great, but the basics of human reproduction are covered well in this book.)

**Course Description:**

Survey of mammalian reproduction with an emphasis on humans, including sexual development and behavior, fertilization, pregnancy, parturition (birth), lactation, natural and synthetic control of contraception, and fertility.

**Prerequisites:** Biology 381 or 385; or instructor consent.

**Student Learning Outcomes: (with diligent effort on their part, students should be able to...)**

1. Describe key reproductive processes from gametogenesis through senescence.
2. Compare and contrast reproductive strategies, processes, and behaviors.
3. Apply knowledge of reproductive biology to broader personal and societal issues.

**Point Distribution:**

|                        |                  |
|------------------------|------------------|
| Lecture Exams          | 4 @ 100 pts each |
| Topic and Outlines     | 20 pts           |
| Annotated Bibliography | 20 pts           |
| Student Presentation   | 80 pts           |
| Professionalism        | 50 pts           |
| <b>Total</b>           | <b>570 pts</b>   |

**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     |
| C+ = 77-79 |            |

**Exams and Other Graded Work:**

Exams: There will be four lecture exams over the course of the semester. Each exam is worth 100 points and will likely consist of multiple choice, definitions, fill-ins, matching, and short answer questions. In addition, application of information provided in lecture to an unknown problem may be required. Course material will build over the semester and it will be important for you to remember and apply basic information learned early on to material covered later in the course. All exams and assignments will count towards the final grade (i.e. no grades will be dropped).

Student Presentations: Over the course of the semester, you will research and present on a topic of your choosing. Your presentations will be given **in class December 7<sup>th</sup>, 9<sup>th</sup>, or 10<sup>th</sup>**. (We will draw numbers to randomly determine presentation order and date). For your presentation, you will choose a topic from the field of reproductive biology that interests you and go with it. For example, you could choose to research a rare developmental disorder, discuss the mechanism behind a reproductive disease, present information on a topic we have not covered in class, or go over something from lecture in more depth. The idea is to expose you to fields of reproductive biology beyond what we can cover in the classroom, to allow you to work on oral presentation skills, and to teach your classmates in the process. To help you get started, your topic must be cleared with your instructor by **Friday, October 1<sup>st</sup>**, an annotated bibliography and tentative outline are **due Friday, October 15<sup>th</sup>**, and a final outline is **due Friday, November 5<sup>th</sup>**. If you have difficulty finding information on your topic, please see me as soon as possible.

**Electronic versions of your presentation are to be uploaded to Canvas by 12:00 p.m. CST, the DAY OF YOUR PRESENTATION.** You should also e-mail it to yourself (or put it on a thumb drive) in case we have problems with the computer or internet on the day you are scheduled to give your presentation. You must also include a minimum of four peer-reviewed scientific articles\*, which should be cited at the end of your presentation.

\*See the library information page here for more information: <http://libraryguides.uwsp.edu/article>

**Some additional guidelines for your presentations:**

- Presentations should be approximately 10 minutes in length with a question and answer period following. Presentations will be critiqued by your classmates and instructor and will be graded on content, format, and overall knowledge of the subject (see rubric posted on Canvas). When you are an audience member for your classmates' presentations, you will be evaluated on your level of participation during the question and answer periods.
- Your presentation should have a single clear purpose, tell a unified story, and be understood readily. The presentation should follow the basic format of: brief introduction/historical background; current research/knowledge of the topic; future directions/recommendations; and a summary/take home message.
- Presentations should be in Microsoft PowerPoint or other suitable, widely accessible presentation software (e.g. Prezi).
- Each slide should have a simple, unified format and be free from nonessential information. (i.e. It is better to use two slides than one cluttered slide).
- Word slides should be typed in bold and double-spaced. The font used should be easily readable by someone in the back of the room.
- Watch color choices. Some people are color blind and this makes some colors (e.g. red and green) difficult to distinguish. It is usually easiest to see slides that have a dark background and light-colored type or a light background and dark colored type. Avoid using 3-dimensional graphs unless 3-dimensional information is being presented.
- The best talks spend an average of 1-2 minutes per slide. A timed rehearsal would be wise (hint, hint).
- Finally, after a semester of research, you will probably know more about your topic than anyone in the room. Speak with confidence and use the presentation to teach the rest of us what you have learned.



## **Professionalism:**

Attendance: Your commitment to your classes is among the most important things in your life right now. You are expected to attend all lectures and to arrive on time and ready to learn. Three unexcused absences will result in a 1/3 reduction in your final grade. If you will miss a class due to a college-sanctioned event, you must notify your instructor in advance. Exams must be taken at the assigned time and alterations to this schedule will only be made for personal injury or emergencies (e.g. death in the family, serious accident, or hospitalization). In such cases, evidence of some kind must be provided and you are expected to make arrangements within 24 hours of the exam to schedule a make-up. Make-up exams and assignments should be completed within one week whenever possible, and format will be at the discretion of the instructor. It is your responsibility to get notes for any missed classes.

Behavior: Complete mutual respect and courtesy is expected and all students should come to class ready to be engaged and actively participate in the classroom experience. Open, honest discussion is encouraged and will factor in to your professionalism grade. To facilitate active learning, cell phones and other electronic devices must be turned off and stowed away while class is in session.

Lecture materials and recordings for this course are protected intellectual property. Students in the course may use course materials and recordings for their personal use as related to participation in this class. Students may also take notes on course material. Students may not copy or share lecture materials outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from selling their personal notes or being paid for taking notes without the instructor's express written permission. Unauthorized use of copyrighted materials (lecture notes, slides, and recordings) constitutes copyright infringement under university policy, and University of Wisconsin System Chapters 14 and 17, governing student academic and non-academic misconduct.

## **Face Coverings:**

- Currently, at all UW-Stevens Point campus locations, the wearing of face coverings is mandatory in all buildings, including classrooms, laboratories, studios, and other instructional spaces. Any student with a condition that impacts their use of a face covering should contact the [Disability and Assistive Technology Center](#) to discuss accommodations in classes. Please note that unless everyone is wearing a face covering, in-person classes cannot take place.

## **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 or exams, they can be addressed with the instructor, in person, up to one week after the assignment is handed back in class. 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 given 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](mailto: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/Escape, 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](http://www.uwsp.edu/rmgt/Pages/em/procedures) for details on all emergency response protocols at UW-Stevens Point.

## COURSE SCHEDULE

| Week   | Date  | Topic  | Relevant Chapter(s) |
|--------|-------|--|---------------------|
| 1      | 9/2   | Course Introduction  | 1                   |
|        | 9/3   | Reproductive Anatomy   |                     |
| 2      | 9/7   | Reproductive Anatomy   |                     |
|        | 9/9   | Reproductive Anatomy   |                     |
|        | 9/10  | Reproductive Endocrinology   | 3                   |
| 3      | 9/14  | Reproductive Endocrinology   | 3                   |
|        | 9/16  | Mitosis and Meiosis  | 2                   |
|        | 9/17  | Sexual Differentiation in Mammals                                  | 4                   |
| 4      | 9/21  | Abnormalities of Sexual Differentiation                            | 14                  |
|        | 9/23  | X-Chromosome Article Discussion                                    |                     |
|        | 9/24  | <b>Exam 1</b>  |                     |
| 5      | 9/28  | Oogenesis and Follicular Development                               | 5                   |
|        | 9/30  | Oogenesis and Follicular Development                               | 5                   |
|        | 10/1  | Ovulation and the Menstrual Cycle; <b>Topic Due</b>                | 5                   |
| 6      | 10/5  | Contraception and Fertility Control                                | 15                  |
|        | 10/7  | The Testes and Testicular Function                                 | 6                   |
|        | 10/8  | The Testes and Testicular Function                                 | 6                   |
| 7      | 10/12 | The Brain and Reproduction   | 7                   |
|        | 10/14 | Puberty  | 8                   |
|        | 10/15 | Puberty; <b>Draft Outline &amp; Bibliography Due</b>               | 8                   |
| 8      | 10/19 | <b>Exam 2</b>  |                     |
|        | 10/21 | Stress and Reproduction  | 9                   |
|        | 10/22 | Stress and Reproduction  | 9                   |
| 9      | 10/26 | Aging and Reproduction   | 10                  |
|        | 10/28 | Fertilization  | 11                  |
|        | 10/29 | Fertilization  | 11                  |
| 10     | 11/2  | Implantation and Early Development                                 | 11                  |
|        | 11/4  | Gastrulation and Neurulation                                       | 11                  |
|        | 11/5  | Placentation, Parturition, and Lactation; <b>Final Outline Due</b> | 12                  |
| 11     | 11/9  | Placentation, Parturition, and Lactation                           | 12                  |
|        | 11/11 | <b>Exam 3</b>  |                     |
|        | 11/12 | Reproductive Toxicology  | 13                  |
| 12     | 11/16 | Reproductive Toxicology  | 13                  |
|        | 11/18 | Infertility  | 16                  |
|        | 11/19 | Assisted Reproductive Technologies                                 | 16                  |
| 13     | 11/23 | Assisted Reproductive Technologies                                 | 16                  |
|        | 11/25 | <b>Thanksgiving Break</b>  |                     |
|        | 11/26 | <b>Thanksgiving Break</b>  |                     |
| 14     | 11/30 | Reproductive Cancers   | 16                  |
|        | 12/2  | Reproductive Cancers   | 16                  |
|        | 12/3  | Biology of Human Sexuality   | 18                  |
| 15     | 12/7  | <b>Student Presentations</b>                                       |                     |
|        | 12/9  | <b>Student Presentations</b>                                       |                     |
|        | 12/10 | <b>Student Presentations</b>                                       |                     |
| Finals | 12/15 | <b>Exam 4; 12:30 – 2:30 p.m., CBB 165</b>                          |                     |