

Reproductive Physiology: **BIOL 837**  
Course Outline- SUMMER 2022

**Instructor:** Dr. Nicholas Hobbs

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NOTE: Email is my preferred method of contact. Please give me 24 hours to respond to all emails. General questions about the course can be posted on the Frequently Asked Questions Discussion Board in Canvas.

### **COURSE MATERIALS**

*Textbook:*

"Human Reproductive Biology. 4<sup>th</sup> edition" by Richard Jones and Kristin Lopez (ISBN 0-12-382184-3)

*Technology:* As this is an online class, you will need a computer/laptop with access to the internet, a microphone and webcam, and the following programs: Microsoft PowerPoint, Microsoft Word, and Adobe Acrobat or another program to read PDFs.

### **COURSE DESCRIPTION**

This course discusses the role of hormones in regulating reproduction in mammals, with an emphasis in humans. Topics to be covered include: 1) sexual differentiation of the brain, 2) spermatogenesis and oogenesis, 3) pregnancy, parturition, and lactation, and 4) fertility and sexually transmitted diseases. Background in anatomy and physiology is recommended.

### **COURSE OBJECTIVES**

1. Students will describe the changes that occur in the reproductive system over the lifetime of an individual.
2. Students will identify the major hormones involved in reproduction and describe their role in regulating reproduction in males and females.
3. Students will describe processes that can lead to dysfunction of the reproductive system.

### **GRADING SCHEME:**

<b>Assignment</b>	<b>Points</b>	<b>Due Date</b>
Introduction post	10	Sunday, June 5 <sup>th</sup> by 11:55pm CST
Syllabus Quiz	10	Sunday, June 5 <sup>th</sup> by 11:55pm CST
Discussion Board 1	20	Sunday, June 12 <sup>th</sup> by 11:55pm CST
Discussion Board 2	20	Sunday, June 26 <sup>th</sup> by 11:55pm CST
Discussion Board 3	20	Sunday, July 17 <sup>th</sup> by 11:55pm CST
Group Participation Survey	20	FRIDAY, July 22 <sup>nd</sup> by 11:55pm CST

Weekly Exam 1	50	Sunday, June 5 <sup>th</sup> by 11:55pm CST
Weekly Exam 2	50	Sunday, June 12 <sup>th</sup> by 11:55pm CST
Weekly Exam 3	50	Sunday, June 19 <sup>th</sup> by 11:55pm CST
Weekly Exam 4	50	Sunday, June 26 <sup>th</sup> by 11:55pm CST
Weekly Exam 5	50	Sunday, July 3 <sup>rd</sup> by 11:55pm CST
Weekly Exam 6	50	Sunday, July 10 <sup>th</sup> by 11:55pm CST
Weekly Exam 7	50	Sunday, July 17 <sup>th</sup> by 11:55pm CST
Weekly Exam 8	50	FRIDAY, July 22 <sup>nd</sup> by 11:55pm CST
<b>Total Points</b>	<b>500</b>	

## GRADE ASSIGNMENT

Grades will be assigned using the standard grading scale for the Department of Biology, as follows: A (93-100%), A- (90-92%), B+ (88-89%), B (83-87%), B- (80-82%), C+ (78-79%), C (73-77%), C- (70-72%), D+ (68-69%), D (63-67%), D- (60-62%), and F (below 60%). Grade assignments are final unless there is a calculation error. **There will be no rounding of the grades; a 79.9% is a C+, not a B-**. Scaling of grades is up to my discretion (don't count on it).

## WEEKLY EXAMS

You will have 8 weekly exams for this course. Each exam will cover the material covered that same week. For example, Weekly Test 1 takes place during week 1 (May 31<sup>st</sup> – June 5<sup>th</sup>), and covers materials from week 1 (Chapters 1, 2, and 4). Each exam will be worth 50 points. Forty points will come from multiple choice, fill in the blank, and true/false questions, and the remaining 10 points will come from 1-2 essay questions. All online exams will be available for one week (12:01 AM Central Time Monday through 11:55 PM Central Time Sunday). THE EXCEPTION TO THIS IS FOR WEEKLY TEST 8, AS THE COURSE ENDS FRIDAY, JULY 22<sup>nd</sup>. AS SUCH, THIS EXAM WILL CLOSE AT 11:55 PM CENTRAL TIME ON **FRIDAY, JULY 22<sup>nd</sup>**. You will have 60 minutes to complete each weekly test. Exams are set so that you can exit (Canvas crashes, for example) and re-enter the exam, but the timer keeps running.

**DISCUSSION BOARDS:** Throughout the semester, students will be presented with three discussion boards related to the topics listed on the course outline below. In these discussion boards, you will be separated into groups and asked to work together. This is a good practice for “real world” situations, in that, in science we rarely work alone. The Discussion Boards will be posted on Canvas. As a group, you will need to turn in one answer for the question(s) posed in the instructions for the discussion board. NOT ALL QUESTIONS FOUND IN THE CASE STUDY WILL HAVE TO BE ANSWERED! You are to discuss the case during the week and turn in the final document to me at [hobbsjn@unk.edu](mailto:hobbsjn@unk.edu). Do NOT submit through Canvas or Google Docs. **You are to format the document as follows:** 1” margins all around, 12pt Arial font, Double spacing, Group name and contributing students in the *right hand corner of the header* (if a student does not participate, do not give them credit!), Discussion Board # and Chapter in *left hand corner of the header*. **The document must contain 2 peer-reviewed primary science research articles.** You do not have a limit to the number of

references used, but you must have a minimum of **2 peer-reviewed scientific primary research** journal articles. In the text, cite references should be by superscripted number<sup>1</sup>. In your reference list, use the following format (note punctuation, capitalization, and abbreviation). The references are listed in the order they are cited in the paper, not in alphabetical or chronological order. They should be single spaced and this is the only part of the paper that is single spaced.

*Journal articles:*

1. Sinoway MP, Kitagawa K, Timsit S, Hashim GA, Colman DR. 1994. Proteolipid protein interactions in transfectants: implications for myelin assembly. J Neurosci Res 37:551-562.

*Web page:*

2. Converse PJ. 2006. Zinc finger protein 175; ZNF175. OMIM. Retrieved on August 1, 2018 from <https://omim.org/entry/601139>.

This is a good practice in having an **informed** opinion. Your answer(s) must be typed and sent to me by email ([hobbsjn@unk.edu](mailto:hobbsjn@unk.edu)). I will accept only one set of answers per group. I would **highly** recommend that you assign a different group leader for each week and have that person compile all of the answers for the group. All of your discussions to answer these questions should be made over Canvas so that I can witness the interactions among the group. I will not be grading these discussions but will be grading the answers you turn in to me. Your group answers **must** be emailed to me by 11:55 pm CST on the Sunday of the week when discussion board ends. For example, the first Case Study is due on Sunday, June 12<sup>th</sup> by 11:55 pm CST. **LATE PAPERS WILL NOT BE ACCEPTED UNDER ANY CIRCUMSTANCES!**

You will have a chance to grade your interactions/participation with each other as part of this process during the final week of the course. You will score yourself and everyone in your group on a 20-point scale using a rubric I will provide to you. I will compile the scores and the comments each of you make. The comments and scores will be returned to each of you, but in an anonymous fashion, so that problems do not arise. If you do not turn in the Group Participation Scores for yourself and your group mates by the due date, you will receive 0 out of 20 points as your score.

I do not expect you to spend 5 hours per week in each of these Discussion Boards. I expect, given the criteria listed in the rubric, for you to post **most days Monday-Friday**. I will not be keeping track of time spent on the Discussion Board, as it takes time to read and respond to the posts. You should be **wanting** to post every day. You do not need a peer-reviewed reference for every post, but if you are stating an opinion, you should provide support for it with data/evidence from a peer-reviewed source (not Wikipedia!).

Remember, Discussion Boards are for just that, **DISCUSSION!** Unless you are the first person answering the question(s) posted, you should **not** be starting a new thread. You should be replying to someone else. I am not concerned that everyone answers the

posted question. The question or questions serve as a prompt for us to begin discussion. I want discussion, not simply posting for points.

What should this look like? (Example taken from Dr. Carlson's Bioethics of HeLa Cells)

*Question: Do birds have fur?*

**Dr. Hobbs:** Birds do not have fur, they have feathers. These feathers are used in mating dances and rituals. Many times, it is the male of the species that has the more ornamental feathers. This helps in attracting a mate (Leghorn 2016)

Reference: Leghorn F. 2016. Use of ornamental feathers in mating. *Ornithology*, 40:55-65. Doi:987.890/99

**Reply from student 1:** Dr. Hobbs, I disagree with you. Some birds do have fur. If we look at the ancient FleeceFlyer, it had a thick covering of purple fur, not feathers. It was a flying bird also. (Jurassic 2015)

Reference: Jurassic P. 2015. FleeceFlyer: The Original One-Eyed One-Horned Flying Purple People Eater. *Wilson's Transactions*, 56: 98-100.

**Reply to student 1 from student 2:** Do you have a picture of this? I would like to know how they determined this could fly? Was it large? This is amazing!

Yes, I will be in Discussion Board M-F, this is the reason I set it up. I love to discuss with you! I will play "devil's advocate". I will ask questions, etc. I am also **the only** person who gets credit for saying "Awesome! I agree!" or any phrases like this.

If you have any questions on the score you earned for the week, please simply email me. Also, please email any questions!

As this is an online format, tone and expression may not be readily discerned from your posts. Please avoid the use of online or text message abbreviations or symbols. Your posts should show respect for the views and experiences of your other classmates. I will remove any offensive posts from the board and these posts will not be considered for grading purposes.

#### TENTATIVE SCHEDULE

Week	Topic(s)	Chapter(s)	Evaluation
1 (May 31)	Endocrinology, Brain, and Pituitary Gland; Female and Male Reproductive Systems	1, 2, 4	Syllabus Quiz Introduction Post Weekly Exam 1
2 (June 6)	Sexual Differentiation; Brain Sex	5, 16	Weekly Exam 2 Discussion Board 1
3 (June 13)	Puberty; Reproductive Aging	6, 7	Weekly Exam 3
4 (June 20)	Menstrual Cycle; Gamete Transport and Fertilization	3, 9	Weekly Exam 4 Discussion Board 2

5 (June 27)	Human Sexual Response; Pregnancy	8, 10	Weekly Exam 5
6 (July 5)	Labor and Birth; The Neonate and the New Parents	11, 12	Weekly Exam 6
7 (July 11)	Induced Abortion; Infertility	14, 15	Weekly Exam 7 Discussion Board 3
8 (July 18)	Contraception; Sexually Transmitted Diseases	13, 17	Weekly Exam 8 Group Participation Survey

### **Policy on Incomplete**

To be considered for an “Incomplete” in Biology 837:

1. You must submit the reasons you cannot complete the scheduled work. This must include a copy of your class schedule and description of your responsibilities outside the classroom. This should be done in writing and include confirmation from your employer when appropriate.
2. You must specify the assignments you have missed and a schedule of plans to complete them.

I expect all students to progress through the requirements for Biology 837 in a timely fashion. Unless your circumstance is quite remarkable, do not consider an incomplete.

### **Academic Integrity Policy**

This policy is stated in the Graduate Catalog or at

<https://catalog.unk.edu/graduate/academics/academic-regulations/expectations-in-the-classroom/academic-integrity-policy/>

The bottom line is no cheating. Plagiarism will not be tolerated.

### **Students with Disabilities**

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students with documented disabilities. To receive accommodation services for a disability, students must be registered with the UNK Disabilities Services for Students (DSS) office, 175 Memorial Student Affairs Building, 308-865-8214 or by email [unkdso@unk.edu](mailto:unkdso@unk.edu)

### **UNK Statement of Diversity & Inclusion**

UNK stands in solidarity and unity with our students of color, our LatinX and international students, our LGBTQIA+ students and students from other marginalized groups in opposition to racism and prejudice in any form, wherever it may exist. It is the job of institutions of higher education, indeed their duty, to provide a haven for the safe and meaningful exchange of ideas and to support peaceful disagreement and discussion. In our classes, we strive to maintain a positive learning environment based upon open communication and mutual respect. UNK does not discriminate on the basis of race, color, national origin, age, religion, sex, gender, sexual orientation, disability or political affiliation.

Respect for the diversity of our backgrounds and varied life experiences is essential to learning from our similarities as well as our differences. The following link provides resources and other information regarding D&I: <https://www.unk.edu/about/equity-access-diversity.php>

### **Students Who are Pregnant**

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students who are pregnant. To receive accommodation services due to pregnancy, students must contact Cindy Ference in Student Health, 308-865-8219. The following link provides information for students and faculty regarding pregnancy rights. <http://www.nwlc.org/resource/pregnant-and-parenting-students-rights-faqs-college-and-graduate-students>

### **Reporting Student Sexual Harassment, Sexual Violence or Sexual Assault**

Reporting allegations of rape, domestic violence, dating violence, sexual assault, sexual harassment, and stalking enables the University to promptly provide support to the impacted student(s), and to take appropriate action to prevent a recurrence of such sexual misconduct and protect the campus community. Confidentiality will be respected to the greatest degree possible. Any student who believes she or he may be the victim of sexual misconduct is encouraged to report to one or more of the following resources:

**Local Domestic Violence, Sexual Assault Advocacy Agency** 308-237-2599

**Campus Police (or Security)** 308-865-8911

**Title IX Coordinator** 308-865-8655

Retaliation against the student making the report, whether by students or University employees, will not be tolerated.

### **Problems/Questions**

If you have questions then ask or come and see me or contact me via e-mail or phone. If you are having problems with the course come and see me before it is too late (not the week before your position paper is due or when the course is over).