

**Winter 2011  
Hormones and Behavior  
Psych 438**

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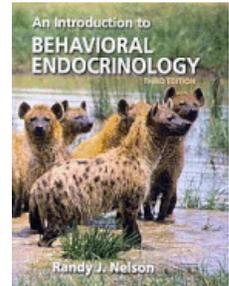
Classroom: TBA  
Class time: Tu, Th 10:00 -11:30 (class will start promptly at 10:10)  
Website: <https://ctools.umich.edu/portal>

**COURSE DESCRIPTION**

In this course, we will examine how hormones can produce changes in behavior, but also how behavioral interactions can alter hormones. We will primarily discuss hormone-behavior interactions in mammalian systems with an emphasis on humans and non-human primates. Throughout the course, we will explore the hormonal influences on sex determination, sexual behavior, mating behavior, parental behavior, dominance and aggression, responses to stressful stimuli, immune function and homeostasis, biological rhythms, learning and memory, and endocrine disruptors. The course will be taught as a mixture of lecture, discussion, and student presentations (the last few weeks of class). Grades will be assigned on the basis of (1) two in-class exams, (2) one-page summaries of additional articles related to weekly topics, and (3) a poster presentation and critique. Students are expected to have a solid background in Biopsychology (Psych 330) or Animal Behavior (Psych 335).

**COURSE MATERIALS**

*An Introduction to Behavioral Endocrinology – Third Edition*, by Randy Nelson (Sinauer Associates, Inc. Publishers, 2005; new copies \$65, used on Amazon \$35) is the course textbook. The book can be purchased at Ulrich’s Bookstore. Several additional readings may be posted on the course website.



**GRADING**

Your grade will be based on your poster presentation, poster critiques, and two exams. At any time during the semester, you may ask for your current points towards the categories below. Relative weighting of grades will be:

Poster presentation	= 25%
Poster critiques	= 5%
First exam	= 35%
Second exam	= 35%

There will be 2 non-cumulative exams in this course. The first exam will be an in-class exam and the second exam will be scheduled during the regular final exam slot for this class. Exams will

be a combination of multiple choice, fill in the blank, and short essay answers. Material covered by the exams will derive from lectures (70%) and assigned readings (30%). You must take exams on the assigned day. Only emergencies (with documentation) will be excused, and in these cases the *make-up exam will be more difficult than the original exam*.

### **POSTER PRESENTATIONS AND CRITIQUES**

You will each present a poster during class time. A poster is a visual way of presenting new or preliminary data, and this format for presentation is frequently used at scientific meetings. Posters generally include a summary of each section of the paper, the most important figures, and possibly photographs to add interest. You will use this format to present results from a scientific paper (of your choice) that is related to topics discussed in class. Generally, posters are designed using Microsoft PowerPoint, but other programs are also available for poster design. After you design the poster, you will print it up for display in class. Posters will be presented across 4 class periods towards the end of the semester. Each student should be prepared to give a 2-3 min summary that discusses (1) why the experiments were conducted, (2) how the experiments were conducted, (3) what the results mean, and (4) why the results are important. Throughout the poster session, presenters should be prepared to answer questions about the poster from others in the class. Students not presenting a poster on a given day will write brief critiques of 3 posters.

Choose a topic that interests you (the topic must be from either the text or one of the class periods) and select a scientific paper (a primary research article – not a review article) that elegantly illustrates a particular point relevant to this topic. Once you have selected an article, you must get my “okay” before continuing with your poster design. Please feel free to come talk to me about where to look for articles that might be appropriate or which paper to choose if you are having difficulty deciding.

### **STUDENTS WITH DISABILITIES**

If you have any special needs for taking examinations (or presenting your poster), please let me know during the first two weeks of class. Visit <http://www.umich.edu/~sswd/> for a disability form that will need to be completed prior to any arrangements.

### **ACADEMIC INTEGRITY**

I strongly enforce University guidelines with regard to plagiarism, cheating, and academic misconduct. The following is the URL for the description of LS&A policies specific to academic integrity:

<http://www.lsa.umich.edu/lsa/cg/bulletin/chap4/conduct/>

If you have any questions about behavioral expectations and guidelines for this class beyond these descriptions, please feel free to contact me.

## COURSE OUTLINE

Jan 06	Introduction to behavioral endocrinology
Jan 11	The endocrine system
Jan 13	Methods for studying hormones and behavior
Jan 18	Organization vs. activation
Jan 20	Sex differences in behavior I
Jan 25	Sex differences in behavior II
Jan 27	Male reproductive behavior
Feb 01	Female reproductive behavior I
Feb 03	Female reproductive behavior II
Feb 08	Parental behavior – <i>guest lecturer, Dr. Jennifer Cummings</i>
Feb 10	Exam review
<b>Feb 15</b>	<b>FIRST EXAM</b>
Feb 17	Social behavior
Feb 22	Aggression
Feb 24	Stress
<b>Mar 01</b>	<b><i>Spring Break – no class</i></b>
<b>Mar 03</b>	<b><i>Spring Break – no class</i></b>
Mar 08	Homeostasis
Mar 10	Biological rhythms – <i>guest lecturer, Dr. Megan Hagenauer</i>
Mar 15	Life history
Mar 17	Sensorimotor function
Mar 22	Learning and memory
Mar 24	Cognition
Mar 29	Endocrine disruptors – <i>guest lecturer, Dr. Elizabeth Peckham</i>
Mar 31	Poster session 1
Apr 05	Poster session 2
Apr 07	Poster session 3
Apr 12	Poster session 4
<b>Apr 14</b>	<b><i>AAPA Conference – no class</i></b>
Apr 19	Exam review
<b>TBA</b>	<b>SECOND EXAM</b>