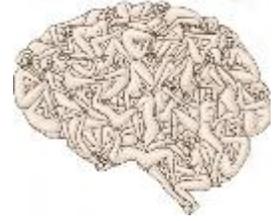


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# Behavioral and Clinical Endocrinology (PSY 452)

Professor Heide Island, Office: Carnegie 305  
B.R.A.I.N. Lab: Carnegie 304; Email: island@pacificu.edu  
Office HR: T/TH., 9:30–11:15 am; Appointment



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## Course Information

Lecture Class: Tues/Thurs., 7:55 – 9:30, Carnegie 306  
Teaching Assistant: Emma Ferns  
Email: fern5217@pacificu.edu

## Course Description

This course introduces the role of hormones in the development and activation of behavior as well as how behavioral interactions regulate endocrine physiology. A central topic of this course concerns the effects of sex steroid hormones on various reproductive behaviors (e.g., sexual and parental behaviors). Other topics covered include: the endocrine regulation of aggressive behavior, biological rhythms, energy balance, stress, learning, memory, and contemporary topics within endocrinology like hormone replacement therapy and the behavioral consequences of endocrine disorders. Further, major classes of hormones including peptide and protein hormones, and the monoaminergic hormones will be discussed. **FAIR WARNING:** This class is largely comparative, so although we discuss human endocrinology, nonhuman animals are the traditional models for this discipline.

## Pre-Requisites

This course is open to students who have successfully completed Introductory Psychology with a C or higher and have junior standing. This is the final course for students completing the Clinical Neuroscience Emphasis (i.e., PSY 252, PSY 352, and PSY 452).

## Student Learning Outcomes

If you put in the time to attend class, do the readings, study a minimum of 5 hours/week outside of class, you put effort into the laboratory exercises, the paper and the presentation, you will:

- read and assess behavioral endocrine research and methodology.
- recognize the mediating role of hormones in behavior.
- evaluate endocrine dysfunction through clinical cases.
- develop evidence-based writing skills.
- write papers using American Psychological Association manuscript style.
- improve your presentation and public speak skills.

## Required Materials

### Required Textbook

Nelson, R. (2011). Behavioral Endocrinology, 4th Ed., Sinauer: Sunderland, MA. ISBN: 0-87893-617-3

American Psychological Association (2001). Publication Manual of the American Psychological Association, 6<sup>th</sup> Ed., Spiral Binding. Washington, D.C.: APA. ISBN: 1557988102

Additional article readings will be available for download through Moodle

### Required Software

**Microsoft Word** is installed on all public-use computers at Pacific, this is considered standard professional software, you must use this program for all of your reports whether on your personal computer or through those available to you through Pacific. **Google Drive and Pages documents will not be accepted.**

## Resources for the Eager Student

Bear, M. F., Connors, B. W., & Paradiso, M. A. (2007). *Neuroscience: Exploring the Brain*, 3<sup>rd</sup> Ed. Philadelphia, PA: Lippincott, Williams, & Wilkins. ISBN: 0-7817-6003-8

### Useful Links

- History of Diabetes
- Endocrine Source
- Behavioral Endocrinology
- Endocrine Web
- Endocrine System
- Diabetes Information
- Cushing Syndrome
- Hormone Replacement Tx
- Frank Beach
- Andropause Information
- Menopause Information
- Hormone Contraceptives
- Hormonal Contraceptive Facts
- Anabolic-Androgenic Steroids

## Grading Criteria

You are expected to **respectfully** participate in class discussions. Your unique and independent perspectives on the reading, the course, and assignments are valuable and contribute to all of our understanding of the material. This is as true for the professor as it is for your classmates. Also recognize that your opinions may differ from other students and also from the professor, this makes them no less valuable. It is important, given these differences in perspectives, that you discuss them in a professional, non-judgmental way, so that everyone feels the class is a safe place for intellectual engagement and growth. We will discuss and establish shared guidelines for how we can do this at the onset of the semester.

## Exams

There are three semester exams total (exam 3 occurs on the scheduled day of the final exam, it is not cumulative and is not optional). There are 77 points possible on each exam but your score is based on 75 points; this provides a point cushion in the event that you misinterpret a question. Assuming all questions are clear, you can earn 2 extra points on each exam or flub two questions without harm to your grade (this is the ONLY bonus point opportunities I provide). Each exam covers 3 weeks worth of lecture, discussion, film, readings, and in the last two weeks of the semester, presentations. All of these sources will be represented on exams, so do take good notes and attend class.

## Empirical Review

You write a comprehensive APA style empirical review on a topic within the area of psychopharmacology. The paper should have a minimum of 10 primary source, peer reviewed articles cited and referenced for a comprehensive paper, other secondary sources (i.e., literature reviews or popular sources) may be used; but do not contribute to the minimum reference number. Also be careful, secondary citations (i.e., referring to a paper you did not read but that is cited in another source is unacceptable). If you discuss a study, you must have that article as a primary citation (note that primary sources and citations are different).

Please use the APA style guide for information on how to write an empirical literature review. Here are examples of former students' successful empirical reviews (remember an empirical review begins with a question): *"What is the actual efficacy of anti-depressant medication?"*; *"Hypoactive Sexual Desire Disorder: Legitimate Endocrine Disorder or Pathologizing Female Sexuality?"*; *"Attention Deficit Hyperactivity Disorder: Contemporary, American Problem or Historically Underdiagnosed?"*; *"How Young is Too Young to Prescribe Psychotropic Medications?"*; *"Medical Marijuana: A High Cost or Benefit for Health?"*; *"Alternative Medications to Treat Adult Depression: Psychostimulants Fair Game?"*; *"The Alcoholic's Pill: Can we Moderate Alcoholism with Medication?"*

## "Ted Talk" Presentation

You will present your empirical review during the last two weeks of the semester. You will have 15 minutes for the presentation, with 5 minutes for questions. This is not a PowerPoint presentation. This is an engaging 15-minute narrative of your research topic that may be accompanied by PowerPoint (8-slide) slides. See the Presentation sign up sheet at the back of this syllabus. The date you choose will be the due date for both your presentation and your paper. Please consult with your other course syllabi to establish

first and second choice dates, to be decided in collaboration with the rest of the class the second week of the semester.

### Laboratory Exercises

There will be four laboratory activities, they should be written in APA format, using formal, unbiased language. You should use first person plural for all sections of the paper except the discussion, wherein the singular should be used (e.g., “I”).

### Scholarship Points

Your education does not start and stop in the classroom. Therefore, you are expected to participate in one hour (2 points total) of intellectual investigation outside of the class (1 point/half hour). These are referred to as “scholarly activity points.” Examples of scholarly activity points include: research participation; outside lecture or speaking events related to the course; lecture panels, or professional workshops. Failure to complete the two-points worth of scholarly activity outside of class will result in an incomplete (I) for the course. If points are not made-up within the year, you will receive a letter grade demotion on your transcript. Please use the Scholarly Activity Tracking Sheet on page 6 of this syllabus and submit it for credit the last day of the semester.

#### Scholarship Point Lecture Opportunities

*Alcohol and the Brain*, Dr. Kathleen Grant

Monday, Feb. 22<sup>nd</sup>, 7:00 pm, Newmark Theater, \$17.00 for Students. OHSU Brain Lecture [LINK](#)

*Marijuana and the Brain*, Dr. Nephi Stella

Monday, March 7<sup>th</sup>, 7:00 pm, Newmark Theater, \$17.00 for Students. OHSU Brain Lecture [LINK](#)

### Grading Rubric

Assessment Material	Points	Earned	Rubric
3 Exams (75 pts ea) + Pre/Post Exams	225		A/- = 400 - 358
4 Laboratory Reports (20 pts/report)	80		B +/- = 357 - 318
Empirical Review	70		C +/- = 317 – 278
“TedTalk” Presentation	25		D +/- = 277 – 238
2 Scholarship Activities (1 hr), Complete/Incomplete	C/I		F = 237 – 0
<b>TOTAL POINTS</b>	<b>400</b>		

### Teaching Assistant

The teaching assistant, Emma Ferns is a psychology major who excelled in the Behavioral and Clinical Endocrinology course. You will submit all laboratory reports first to her prior to submitting them for a grade to me. Emma will help you conceptualize the material, APA Style (for your lab write-up), answer questions, and facilitate study sessions. Should you choose to attend her study sessions or office hours, please be prepared, ask questions and take advantage of their knowledge and expertise.

## University Policies

### Classroom Behavior – Rule 1: Be Nice

*From the Pacific University Faculty Handbook (Section 4.1.3)*

*Students should be free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they enroll. Students should have protection through orderly procedures against prejudiced or capricious academic evaluation. At the same time, students are responsible for maintaining standards of academic performance established for each course in which they enroll. Students must also recognize that, as members of a community of learners, they have an obligation to be responsible members*

*of that community, and that the exercise of their freedom of expression does not impinge upon the rights of others in their quest for learning.*

### **Accommodated Learners**

If you have documented challenges that will impede your learning in any way, please contact EDNA GEHRING the Director of LSS at ext.2107 or [gehringe@pacificu.edu](mailto:gehringe@pacificu.edu) The Director will meet with students, review the documentation of their disabilities, and discuss the services that Pacific offers and any ADA accommodations for specific courses.

### **Tutoring and Learning Center (TLC)**

*If you need more writing assistance in addition to the help provided by your professor and the teaching assistants, please take advantage of the TLC in Scott Hall 127. The center focuses on delivering one-on-one and group tutoring services for math and science courses and writing skills in all subjects.*

## Flexible Course Schedule

WEEK	LECTURE	OF NOTE	READING
<b>WEEK 1</b> Jan. 27 & 29	Syllabus, Pre-test, Introduction to BE/Methods		Nelson, Ch. 1, Pp. 1-35
<b>WEEK 2</b> Feb. 3 & 5	Methods Neuroendocrine Systems	<i>Lab 1: BE Methods, Blood Typing</i>	Nelson, Ch. 2, Pp. 37-88
<b>WEEK 3</b> Feb. 10 & 12	Neuroendocrine Systems	<i>Lab 2: Virtual Rat Endocrine Physiology DUE - Lab 1: BE Methods, Blood Typing Report<sup>1</sup></i>	Nelson, Ch. 3, Pp. 89-142
<b>WEEK 4</b> Feb. 17 & 19	Sex differences in behavior	<i>DUE – Research Topic DUE - Lab 2: Virtual Rat Report</i>	Nelson, Ch. 4, Pp. 143-200
<b>WEEK 5</b> Feb. 24 & 26	<b>Tues., EXAM 1</b> (Ch. 1-3) Male Reproductive Behavior		Nelson, Ch. 5, Pp. 201-273
<b>WEEK 6</b> Mar. 3 & 5	Male Reproductive Behavior	<i>DUE – Research Topic Annotated Bibliography</i>	Nelson, Ch. 6, Pp. 277-334
<b>WEEK 7</b> Mar. 10 & 12	Female Reproductive Behavior		Nelson, Ch. 7, Pp. 335-390
<b>WEEK 8</b> Mar. 17 & 19	Parental Behavior	<i>Lab 3: Female Reproductive Cycle</i>	Nelson, Ch. 7 Pp. 335-390
<b>WEEK 9</b> Mar. 24 & 26	<b>Spring Break No Classes</b>		
<b>WEEK 10</b> Mar. 31 & Apr. 2	<b>Tues., EXAM 2</b> (Ch. 4 - 7) Social Behavior	<i>Due - Lab 3: Female Cycle Report</i>	Nelson, Ch. 8, Pp. 391-452
<b>WEEK 11</b> April 7 & 9	Homeostasis	<i>Lab 4: Urine and Glucose Metabolism</i>	Nelson, Ch. 9 (Skip 10) Pp. 453-510
<b>WEEK 12</b> April 14 & 16	Stress	<i>Due Lab 4: Urine and glucose metabolism Report</i>	Nelson, Ch. 11 (Skip 10) Pp. 579-623
<b>WEEK 13</b> April 21 & 23	Affective Disorders	<i>Due – Papers</i>	Nelson, Ch. 13 (Skip 12) Pp. 579-623
<b>WEEK 14</b> April 28 & 30	<b>Tues., EXAM 3</b> (Ch. 8-9, 11, 13) <b>Thurs., “Ted Talks”</b>	<i>Due – PowerPoint Presentation</i>	
<b>WEEK 15</b> May 5	<b>Tues., “Ted Talks”</b> <b>Thurs., “Ted Talks”</b>	<i>Due – PowerPoint Presentation</i>	
<b>WEEK 16</b> Sat., May 9	<b>FINAL EXAM - Cumulative</b>		Carnegie 311 3:00 – 5:30 pm

<sup>1</sup> For all due dates except the presentations (due the day of your presentation), materials are due the end of the week Friday at 5:00 pm via email attachment.

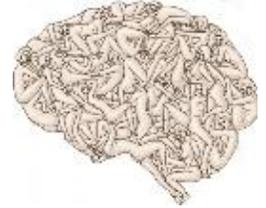
## Behavioral and Clinical Endocrinology Presentation Schedule

ASSIGNED DATE	PRESENTER	TENTATIVE TOPIC
<b>April 30<sup>th</sup></b>		
9:30 – 9:50		
9:50 – 10:10		
10:10 – 10:30		
10:30 – 10:50		
10:50 – 11:11		
<b>May 3<sup>rd</sup></b>		
9:30 – 9:50		
9:50 – 10:10		
10:10 – 10:30		
10:30 – 10:50		
10:50 – 11:11		
<b>May 5<sup>th</sup></b>		
9:30 – 9:50		
9:50 – 10:10		
10:10 – 10:30		
10:30 – 10:50		
10:50 – 11:11		

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### COURSE CONTACT OF UNDERSTANDING

I, \_\_\_\_\_ (PRINT YOUR NAME) hereby acknowledge that I have received a copy of the Introduction to Psychopharmacology course (PSY 420) syllabus for spring 2016. I have read the syllabus and I understand the policies, requirements and expectations of the course. I recognize that it is my responsibility to seek clarification regarding any aspect of the syllabus, if the course requirements, assignments, attendance, or grading policies if they are unclear to me.

\_\_\_\_\_  
SIGN YOUR NAME

\_\_\_\_\_  
DATE

\_\_\_\_\_  
PRINT YOU NAME

### Meaningful Information for the Course

What's your major?

Minor?

What is your end game plan (i.e., what career goals do you hope to achieve when you complete college)?

What area(s) of biopsychology/neuroscience do you find most interesting?

Why?

What do you expect from this course?

What are your concerns regarding this course?

How can I help you overcome these?

Have you recently experienced an injury?

Is yes, does the injury affect your attention, learning, comfort? If so, how?

What topics involving drugs, the brain, and social policy (relevant to psychopharmacology) are of interest to you?

What grade do you expect to earn from this course?    A/A-        B+/B/B-        C+/C/C-

What is your behavioral plan to achieve this grade (if you don't have one, please consider visiting with me during office hours)?