

# Hormones and Behavior

PSYC489G/NACS728O – Spring 2018  
Biology-Psychology Building (BPS), Room 0283  
9:30-10:45AM, every Tuesday and Thursday  
<https://myelms.umd.edu/courses/1240872>

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Office hours: 10-11:30AM (Monday), 10:45AM-12:15PM (Thursday), or by appointment  
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## I. Course Description

Hormones and Behavior is a lecture-based course, which introduces students to the field of behavioral endocrinology – an interdisciplinary field, which involves the study of genetic, molecular, and cellular levels of analyses of individual and social behaviors. The course takes a historical perspective, emphasizing connections among key theories and tracing the emergence of important hypotheses.

## II. Goals

The overall goal of this course is to expose upper level undergraduate students to interactions among hormones, brain, and behavior. The course is organized around the conceptual themes that hormones affect behavior by influencing one or more of three “components” of behaving animals – input mechanisms, the central processing mechanisms of the nervous system, and output mechanisms. This course, while covering some molecular and cellular approaches, aims to be accessible for non-biological students who have succeeded in PSYC301 or a comparable course.

## III. Required Text

*Introduction to Behavioral Endocrinology* (2017, 5th Edition; Nelson, R.J., Kriegsfeld, L.J.; Sinauer Associates.)

- Readings listed in the course schedule are required. You are expected to have read this material *prior* to class.
- Pages not listed in the course schedule are recommended, but not required.

## IV. Required Activity

### Syllabus Quiz (due January 29, 2018 by 11:59p)

The syllabus quiz is designed to ensure that all course policies are understood. You will be allowed to retake the quiz as many times as needed to score 100%. One (1) extra credit point will be awarded if a score of 100% is earned on the 1<sup>st</sup> attempt.

## V. Recommended Activities

Your textbook is accompanied by a [companion website](#), which provides a number of resources to help you learn the material presented during the course. While you are *not required* to complete any of the activities related to the course material, they will greatly

increase your understanding of some of the course concepts and may improve performance on assessments. These activities can be found within the course schedule.

## VI. Course Evaluation

Your course grade will be calculated based on the following:

- **Primary Literature Assignments (25%)**

All primary literature assignments will be uploaded to ELMS by the due dates listed below. Your lowest grade will be automatically dropped. No late assignments will be accepted. Exceptions will not be made for individual students.

- Primary Literature Assignment 1 - February 23, 2018
- Primary Literature Assignment 2 - March 2, 2018
- Primary Literature Assignment 3 - March 30, 2018
- Primary Literature Assignment 4 - April 20, 2018
- Primary Literature Assignment 5 - May 3, 2018

- **Exams (75%)**

All exams will be administered in-class during normal class time, except where noted. All exams will be objective in format (multiple choice, fill in the blank, true/false). The questions will draw upon material covered in class as well as material covered in your required reading assignments. Exams will be given on the following dates:

- Exam 1 - February 13, 2018
- Exam 2 - March 15, 2018
- Exam 3 - April 17, 2018
- Final Exam - May 14, 2018 (Monday, 8:00AM – 10:00AM)

- **Extra Credit**

There will be a number of opportunities to earn a maximum of 10 extra credit points throughout the semester. All extra credit points will be added to the lowest score earned on either exam 1, 2, or 3. You will not be able to add extra credit points to your final exam. These opportunities will be announced in class and posted on ELMS. No late submissions will be accepted. Exceptions will not be made for individual students.

## VII. Specific Course-Related Policies

Grading and Make-Up Exam Policy

- The following grading scheme will apply: A: 94.0-100%; A-: 90.0-94.0%; B+: 87.0-90.0%; B: 84.0-87.0%; B-: 80.0-84.0%; C+: 77.0-80.0%; C: 74.0-77.0%; C-: 70.0-74.0%; D+: 67.0-70.0%; D: 64.0-67.0%; D-: 61.0-64.0; F: 0-61.0%. Grades will not be rounded up, which means that if you have a 93.99%, you have earned an A- in the course. Incomplete grades, which are awarded at the end of the semester, will not be given based on unsatisfactory performance. Students who are performing poorly should be mindful of the withdrawal date deadline (April 11, 2018) and are encouraged to consult with me well in advance.
- All exams, including the final, are worth 100 total points. Your lowest exam grade will be automatically dropped. This eliminates the need for make-up exams for any reason (e.g., illness, appointments/interviews, multiple exams on same day, etc.). All students are required to take the final exam. There is no option to drop the final exam.
- Make-up exams will not be given under any circumstance and exceptions will not be made for individual students.
- Students walking into the exam late will not be permitted to take the exam if the first exam has already been turned in. There are no exceptions to this rule.

## VIII. Standard Course Related Policies

You are personally responsible for making yourself aware of the relevant course and University policies. For policies on academic integrity, code of student conduct, sexual misconduct, non-discrimination, accessibility, attendance, absences, or missed assignments, student rights regarding undergraduate courses, official UMD communication, mid-term grades, complaints about course final grades, copyright and intellectual property, final exams and course evaluations, and other related campus resources, please visit <http://www.ugst.umd.edu/courserelatedpolicies.html>.

## IX. Course Evaluation

Your participation in the evaluation of courses through CourseEvalUM is a responsibility you hold as a student member of our academic community. Feedback is confidential and important. CourseEvalUM will open for Spring semester courses in early May 2018. Go to [www.courseevalum.umd.edu](http://www.courseevalum.umd.edu) to complete your evaluations.

## X. Course Schedule<sup>1</sup>

Week	Date	Class	Topic	Chapter	Required Readings
UNIT ONE: Chapters 1 and 2					
1	25 - Jan (Th)	1	Introduction and Course Overview; Hormone-Behavior Relationships	1	Syllabus; pp: 1-16
2	30 - Jan (Tu)	2	Endocrine System I	2	pp: 35-56 <sup>2</sup>
	1 - Feb (Th)	3	Endocrine System II	2	pp: 56-74 <sup>3</sup>
3	6 - Feb (Tu)	4	Endocrine System III	2	pp: 74-83 <sup>4</sup>
	8- Feb (Th)	5	Unit One Wrap-Up/In-Class Exam Review		
	<b>13- Feb (Tu)</b>	<b>6</b>	<b>EXAM #1</b>		
UNIT TWO: Chapters 3-6					
4	15 - Feb (Th)	7	Sex Differences in Behavior: Sex Determination and Differentiation I	3	pp: 87-109 <sup>5</sup>
	20 - Feb (Tu)	8	Sex Differences in Behavior: Sex Determination and Differentiation II	3	pp: 118-127 <sup>6</sup> ; 130-132
5	22 - Feb (Th)	9	Sex Differences in Behavior: Animal Models and Humans I	4	pp: 143-146; 148-154; 159-167
	27 - Feb (Tu)	10	Sex Differences in Behavior: Animal Models and Humans II	4	pp: 170-186
6	1 - Mar (Th)	11	Male Reproductive Behavior <sup>7</sup>	5	pp: 206-209; 213-235; 251-254; 255-259; 262-272

<sup>1</sup> Subject to change. All changes will be announced in class and on ELMS.

<sup>2</sup> [Drag-and-drop hormone matching exercise](#), [The Interactive Physiology website](#), [Chemical Communication Systems](#), [The Hypothalamus and Endocrine Function](#), [Major Endocrine Glands](#)

<sup>3</sup> [Male Reproductive Anatomy](#), [Female Reproductive Anatomy](#), [Families of Transmitters](#)

<sup>4</sup> [Hypothalamic—Pituitary—Endocrine Axis](#), [Mechanisms of Hormone Action](#), [Mode of Action of Protein and Peptide Hormones](#)

<sup>5</sup> [Development of the Male and Female Reproductive Tracts](#)

<sup>6</sup> [Development of Sexual Dimorphism](#), [The Aromatization Hypothesis](#)

<sup>7</sup> Guest Lecture: Dean Gregory Ball, College of Behavioral and Social Sciences

7	6 - Mar (Tu)	12	Female Reproductive Behavior I	6	pp: 275-281; 283-284; 288-298; 303-306; 308-311
	8 - Mar (Th)	13	Female Reproductive Behavior II	6	pp: 313-316; 318-325; 326-328
8	13 -Mar (Tu)	14	Unit Two Wrap-Up/In-Class Exam Review		
	<b>15 -Mar (Th)</b>	<b>15</b>	<b>EXAM #2</b>		
9	20 -Mar (Tu)		NO CLASS - SPRING BREAK		
	22 -Mar (Th)		NO CLASS - SPRING BREAK		
			UNIT THREE: Chapters 7-10		
10	27 -Mar (Tu)	16	Parental Behavior I	7	pp: 337-341; 349-364 <sup>8</sup>
	29 -Mar (Th)	17	Parental Behavior II	7	pp: 364-370; 376-387
11	3 -Apr (Tu)	18	Hormones and Social Behavior	8	pp: 392-404; 410-415; 420-421 <sup>9</sup>
	5- Apr (Th)	19	Homeostasis and Behavior	9	pp: 458-479; 482-490; 495-501 <sup>10</sup>
12	10 - Apr (Tu)	20	Biological Rhythms <sup>11</sup>	10	pp: 513-579
	12 - Apr (Th)	21	Unit Three Wrap-Up/In-Class Exam Review		
	<b>17 - Apr (Tu)</b>	<b>22</b>	<b>EXAM #3</b>		
13			UNIT FOUR: Chapters 11-13		
	19 - Apr (Th)	23	Stress I <sup>12</sup>	11	pp: 581 - 628
14	24 - Apr (Tu)	24	Stress II <sup>13</sup>	11	pp: 581 - 628
	26 - Apr (Th)	25	Learning and Memory	12	pp: 629-653 <sup>14</sup>
	1 - May (Tu)	26	NO CLASS		
15	3 - May (Th)	27	NO CLASS		
16	8- May (Tu)	28	Hormones and Affective Disorders	13	pp: 676-700 <sup>15</sup>
	10 - May (Th)	29	Course Wrap-Up/Final Exam Review		
	<b>14 - May (M)</b>		<b>Final Exam</b>		<b>8:00 – 10:00 AM</b>

<sup>8</sup> [Maternal Care](#)

<sup>9</sup> [The Costs of Defending a Territory](#)

<sup>10</sup> [Homeostasis](#)

<sup>11</sup> Guest Lecture: Dr. David Yager, PSYC

<sup>12</sup> Guest Lecture, Dr. Farrah Madison

<sup>13</sup> Guest Lecture, Dr. Farrah Madison

<sup>14</sup> [Sensitization in Aplysia](#), [Learning and Memory](#), [Hippocampal Anatomy and LTP](#)

<sup>15</sup> [Porsolt Test](#)