Motivation & Reward
NS&B 227 – Fall 2015

Instructor: Mike Robinson, PhD.
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Office Location: 003 Judd Hall
Office Hours: Tuesdays between 1-3pm
Course Schedule: 9am - 10.20am Tuesdays and Thursdays
Class Location: Exley Science Center 121

Course Overview:

This course is designed to provide students with a better understanding of motivation and reward from a behavioral neuroscience perspective. Some of the broader topics covered in this class include: the theories behind motivation, reward and reinforcement, and how they apply to feeding, drinking, sex, aggression and drugs of abuse. The first few classes are designed to provide students with the fundamental knowledge and tools necessary to understand some of the principle behaviors executed by our brain and nervous system, and will highlight the importance of neurotransmitters and synaptic transmission. For each of the subsequent topics I will provide a brief overview of the main concepts and the fundamental knowledge needed to go further in the given field/area. A brief history and the major findings in the domain will be covered and some of the most recent discoveries or theories will be presented.

The course is organized around lectures but will include some in class discussion of the assigned readings. Lectures will often contain material that is not thoroughly covered in the readings.

Learning Goals:

The goal for each student in this course is to understand and be able to clearly articulate the key concepts underlying Motivation & Reward across a variety of domains. Beyond the knowledge gained in the class about the material covered, the course aims to provide students with the opportunity to learn how to synthesize complex scientific concepts and communicate them clearly both to experts and to the general public. Students are expected to learn and work on how to effectively communicate scientific research through an Article Review, Highlights, Minute Papers and Short Answer questions. Please make an
appointment with me if you have difficulty with your work in this course. It is strongly suggested that students avail themselves of the opportunity to clarify and discuss research topics and assignments during faculty office hours. Office hours are not opportunities to obtain information missed during absences from class. Such material should be obtained from classmates.

Topics Covered:
The Nervous System (recap), Homeostasis & Motivation, Reward & Reinforcement, Substance Abuse, Fluid Regulation, Feeding, Sex, Gambling

Readings:
The reading list will be provided. All of the assigned readings can be found on the Moodle website. Readings for the assigned lecture should be done before coming to class.

Assignment Schedule:
- Midterm I (30%): October 20th, 2015
- Midterm II (30%): December 10th, 2015
- Article Review/Press Release (30%): October 23rd, 2015
- Highlights (10%) are due 5 days after the assigned lecture (see Moodle schedule)
- Minute Papers (2% bonus) are due online (Moodle) by Sunday 5pm that week

Assignments:
Midterm Exams (30% each):
The two midterms will each count for 30% of the final grade. They will each consist of multiple-choice, fill in the blanks and short answer questions. Questions will be drawn primarily from what was covered in class but may also cover the assigned readings. Short answer questions will require students to briefly describe in their own words a concept or function covered in the course or to apply knowledge or reasoning from the course to discuss a topic. If a student misses one of the midterms with a justifiable reason, the remaining midterm will each count for 60% of their grade.

Article Review (30%):
Students are required to write a short (500 word limit) review of a scientific article (from a list provided). The review should be in the style of a press release.
It should be accessible to the general public, convey the major findings of the article and their impact and relevance to science and society.

Highlights (10%):
Students will be assigned a specific lecture in the course for which they will be responsible to write 5 highlights in the form of bullet points (not to exceed 100 characters each). These highlights must cover the most important points or take home messages from that lecture. These highlights will be posted on Moodle (with the author’s name; but not the grade) to help other students review and better understand lectures. The purpose is to learn how to synthesize and be clear and concise when communicating scientific principles. These assignments will be due no later than 5 days after the lecture (Tuesday lecture → Sunday; Thursday lecture → Tuesday).

Minute Papers (2% bonus):
Minute papers will provide the opportunity to reflect on the class briefly. Students will be asked to: briefly summarize the 2-3 main points of each lecture that week, share the most confusing point(s) and provide any comments or feedback on the class so far. Some of the most confusing topics will be addressed at the start of the following lecture. You are strongly encouraged to attend office hours if any topic needs further clarification. Minute papers will be due online (Moodle) at the end of each week (Sunday 5pm) and will cover the lecture(s) of that week. In order to receive the 2% bonus, students must submit a Minute Paper for every week (all or nothing). Missed lectures should still be covered by going through slides and any notes from fellow students.

Course Requirements:
- **Important:** Students must take/submit all assessments. Exams missed, or assignments not turned in or turned in late without adequate justification will receive a 0. All work is expected to be the student’s own.
- **Attendance and participation:** Students are expected to attend all classes and class participation is greatly encouraged. You are expected to do the assigned readings before coming to class. Your participation (and presence) in class is imperative to the structure of the class, so I encourage you to not skip class unless you are extremely sick or have an adequate excuse. Attendance will not be taken, but you will be responsible for all material covered and for any announcements made.
- **Atmosphere:** It is very important that we respect each other in this class (and all courses where sensitive topics are discussed). Please be courteous to your peers and refrain from off-topic comments with your neighbor, using your cell phones
(unless it is an emergency), or checking your email/Facebook/Twitter while you are in class. If you cannot refrain from these activities, I may ask you to leave class.

**Feedback:**
An anonymous message/email form will be posted on Moodle to allow students to directly communicate with me in order to raise questions or issues with the course or the material. This is a place for constructive comments or concerns. Be aware that Moodle does not currently allow me to respond anonymously other than by general announcements in class (if required).
A mid- and end of semester course evaluation will be posted on Moodle to provide feedback in order to help improve the course.

**Disclaimer:**
Some of the information and topics covered in this course may be controversial or contain sensitive material relating to topics such as eating disorders/obesity, sexual orientation or various forms of addiction. If you, or someone close, has been directly or closely affected by one of these areas and you feel like it may raise some issues, feel free to contact me directly (or anonymously) ahead of the lecture covering that topic.

**NOTE:** Drop/Add Period ends on September 18th, 2015.
Fall Break begins at the end of classes on October 23 and ends on October 28 at 8:00 a.m.
Thanksgiving recess begins at the end of classes on November 24 and ends at 8:00 a.m. on November 30.
Last day to withdraw from course: December 4th, 2015.

**Students with Disabilities:**
Wesleyan University is committed to ensuring that all qualified students with disabilities are afforded an equal opportunity to participate in and benefit from its programs and services. To receive accommodations, a student must have a documented disability as defined by Section 504 of the Rehabilitation Act of 1973 and the ADA Amendments Act of 2008, and provide documentation of the disability. Since accommodations may require early planning and generally are not provided retroactively, please contact Disability Resources as soon as possible. If you believe that you need accommodations for a disability, please contact Dean Patey in Disability Resources, located in North College, Room 021, or call 860-685-5581 for an appointment to discuss your needs and the process for
requesting accommodations. Students are responsible for registering with Disabilities Services, in addition to making requests known to me in a timely manner. If you require accommodations in this class, please make an appointment with me as soon as possible, so that appropriate arrangements can be made. The procedures for registering with Disabilities Services can be found at http://www.wesleyan.edu/studentaffairs/disabilities/Student/index.html

**Academic Honesty:**
You are expected to adhere to Wesleyan’s Honor Code as stated in the Student Handbook (http://www.wesleyan.edu/studentaffairs/studenthandbook/standardsregulations/studentconduct.html) when it comes to cheating and plagiarism. Academic dishonesty is an inexcusable act and none of these will be tolerated in this class. The sanctions provided in this policy will be used to deal with any violations. If I begin to suspect plagiarism, I will have you attach a signed version of the honor code to submitted assignments.