**WELCOME!** This is a research methods course that provides an understanding of the different approaches to animal research, particularly those using rodent models. It provides students with an understanding of the different techniques employed by researchers and the questions they address. This course provides students with HANDS-ON EXPERIENCE WITH ANIMAL RESEARCH USING RODENT MODELS. The course will follow a lecture/discussion/lab format where students will learn about different forms of conditioning (operant/classical) and how these apply to various behavioral tasks such as operant responding, autoshaping, decision-making, locomotion testing, etc. Class will regularly take place in the lab to provide students with hands-on experience with rats and the testing apparatuses. During labs, students will learn how to handle rats and perform and collect data for several behavioral tasks. They will also get a sense of how to design a behavioral experiment, including the use of control groups and counterbalancing. Students will be assigned animals for the semester that they will use to collect and analyze data during lab classes. This will be combined with regular class discussion of research articles dealing with each topic, including some of the earlier reports and more recent applications. The focus of the course will be on trying to prepare students to design and carry out behavioral/animal research in a laboratory setting.

**LEARNING GOALS:** The goal for each student in this course is to understand and be able to clearly articulate the key techniques and concepts in the field of animal research, including: the ethical considerations for animal research, the scientific method, classical
and operant conditioning, and experimental design and data collection. The course will provide each student with a chance to be involved in animal research and understand the process of experimental design, experiment planning, data collection, analysis, and presentation. The course will provide students with an opportunity to learn how to effectively communicate scientific research through a series of brief lab research reports. The objective is for students to learn and receive the good grades they deserve for their hard work and full participation in this class and the topics each week. 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 course material 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.

**LECTURE TOPICS (some topics may span several classes):**
- Course structure and expectations
- Handling techniques – Hands-on workshop
- Ethical considerations in animal research
- Scientific Method: Control groups and counterbalancing
- Animal Training Workshop
- Data collection and analysis
- Motivation & Reward
- Pavlovian/Classical Conditioning
- Unconditioned behaviors
- Skinnerian/Operant Conditioning
- Decision-making
- Addiction – Sensitization and Tolerance

**ASSESSMENT:**
- Midterm Exams (20% each) x 2
- Lab Reports (5% each) x 7
- Quizzes (2% each) x 10
- Minute Papers (5% total + 2% bonus) due each week online (Moodle) by Saturday 5pm

**EXAM SCHEDULE:**
- Midterm I: Wednesday October 19th
- Midterm II: Friday December 9th

**READINGS:** Readings will be based on scientific research articles and research materials, and will include some of the early or initial papers for several behavioral methods (e.g. Ivan Pavlov's description of Classical Conditioning). Students are
expected to do the assigned readings prior to each and every class and complete the associated quiz (when applicable) and to come prepared to discuss the material and the concepts. No textbook is required for the course and readings will be posted on Moodle.

**COURSE REQUIREMENTS AND GRADING:** Assessment consists of two midterm exams involving multiple choice and short answer questions (based on lecture notes, readings and class discussion), lab reports, online quizzes and minute papers. Exams are each worth 20% each, lab reports are worth 5% each, online quizzes 2% each and minute papers are a total of 5%. There will be no final comprehensive exam.

- **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.

- **Clemency policy:** A student is allowed to turn in only one quiz or minute paper (NOT lab report) late and ask for an extension by email with a suitable excuse and still get credit for the work.

- **Attendance and participation:** Students are expected to attend all labs and 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 formally taken, but you will be responsible for all material covered and for any announcements made.

- **Absence from a lab:** Absence from a lab requires prior written justification at least 24hr beforehand. Students who miss a lab are still required to do the lab report AND must meet with Professor Robinson in order to arrange to make up for that lab before the end of the following week/next weeks lab. Failure to make up for the lab will incur a 50% penalty on the lab report.

- **Atmosphere:** It is very important that we respect each other (and our ratty friends) 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.

**NOTE:** Drop/Add Period ends on September 16th, 2016.
Fall Break begins at the end of classes on October 21st and ends on October 26 at 8:00 a.m.
Thanksgiving recess begins at the end of classes on November 22nd and ends at 8:00 a.m. on November 28th.
Last day to withdraw from course: December 2nd, 2016.
ASSIGNMENTS:

**Midterm Exams (20% each):**
Two midterms will each count for 40% 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 and discussed 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 count for 40% of their grade.

**Lab Research Reports (5% each):**
Research report questions will be made available on Moodle as a word document. Lab reports should be completed and submitted on Moodle by the deadline indicated on the Moodle assignment.

**Quizzes (2% each):**
Quizzes will be available online (Moodle) and must be completed before the deadline (typically midnight the day before class).

**Minute Papers (5% + 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 or materials will be posted online. 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 (**Saturday 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.

**FEEDBACK:**
An anonymous message/email form is available 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.

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](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](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.

VIOLATIONS OF THE HONOR CODE:
1. The attempt to give or obtain assistance in a formal academic exercise without due acknowledgement. This includes, but is not limited to: cheating during an exam; helping another student to cheat or to plagiarize; completing a project for someone and/or asking someone to complete a project for you, using answer keys for problem sets from previous offerings of the course.
2. Plagiarism - the presentation of another person’s words, ideas, images, data or research as one’s own. Paraphrasing or using any content or terms coined by others without proper acknowledgement also constitutes plagiarism.
3. The submission of the same work for academic credit more than once without permission.
4. Willful falsification of data, information, or citations in any formal exercise.
5. Deception concerning adherence to the conditions set by the instructor for a formal academic exercise.