

PSYCH 300: Learning and Adaptive Behavior

Syllabus: Spring, 2009

Class meets in Roger Milliken Science Center 233, MWF 9:30-10:20 am. Lab is every Tuesday 2:30-5:30 in the Experimental Methodology Lab: RMSC-225 and in the Behavioral Processes Labs: RMSC-224.

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Office: RMSC-231C Behavioral Processes Labs: RMSC-224 Methodology Lab: RMSC-225

Rather than establishing office hours, I maintain an open door policy. Please come by frequently to talk about the course, your academic and career options, and so we can get to know one another well.

Note: I maintain a website dedicated to this course at <http://webs.wofford.edu/reidak/>. This site contains links to pages describing the lecture and laboratory schedule, homework and laboratory assignments, certain handouts, the exam schedule, the syllabus, and your grades. These pages are updated often. The textbook publisher also provides a very good web site for our textbook. This site contains examples, study guides, and sample quizzes. Each of you will need to sign up at <http://www.psychology-textbooks.com/login/signup.php>. When you have created your account, you can go to the list of courses at <http://www.psychology-textbooks.com/> and enroll on the Pearce: Animal Learning and Cognition course. To do this, you will need to enter the special Wofford College enrollment key: **wofford**.

Course Description: A thorough survey of modern learning and conditioning principles. This course emphasizes the experimental analysis of learning and adaptive behavior. It demonstrates how our behavior follows general principles, usually without our awareness, and how these general principles have been discovered in laboratory research. It also shows how applied behavior analysis can be used to create positive changes in our lives and those around us. The required laboratory component exposes students to the techniques of the experimental analysis of behavior. It also allows students to carry out research with rats, as well as serving as their own subjects in experiments and behavior modification projects. Students will use computer spreadsheets to organize and analyze the quantitative data they collect, carry out tests of inferential statistics on these data, and create technical, publication-quality graphs that depict the quantitative relations in the data they have collected from their experiments on learning and memory.

Course Goals: The goals of this course are to learn the fundamental principles of behavior, be able to identify them and apply them in your personal life, to learn to use the correct vocabulary associated with these behavior principles, to learn how these fundamental principles were discovered, and to learn how to produce new knowledge in the science of behavior by carrying out laboratory experiments. In particular, students will:

1. Learn to identify the general behavioral principles, shared across the animal kingdom, that are responsible for normal human behavior.
2. Learn to identify the adaptive mechanisms produced by natural selection that govern their own social behavior.
3. Design and carry out experiments that test the validity of behavioral explanations.

Required Textbooks:

Machado, A. & Silva, F. J. (2004). *The psychology of learning: A student workbook*. Pearson Education, Inc., Upper Saddle River, NJ. (ISBN: 0-13-091768-0).

Pearce, J. M. (2008). *Animal Learning & Cognition, 3rd Ed.* Psychology Press: New York. (ISBN: 978-1-84169-656-0)

Course Requirements and Methods of Evaluation:

Your grade will be based on the average of three examinations (including the final exam), approximately biweekly quizzes (about six of them), assignments from the student workbook, the quality of your laboratory research, lab participation, and attendance. The final exam will be comprehensive. Each exam will contribute the same amount to your grade and will be based on 100 points. Quizzes will generally contain multiple-choice questions, whereas exams will generally contain short-answer questions in which you identify terminology, distinguish between ideas, and apply your knowledge to novel situations. Questions taken from the Psychology GRE will be distributed beforehand and used in the evaluation process. A separate grade for the laboratory component of the course will not be assigned; nevertheless, several of the activities (such as written research reports) will be graded. The graded lab portion of the course will contribute about 25% to the overall grade.

The laboratory portion of the course is divided into two parts: (a) the daily experience of “running” the rats or human participants in the experiments (in which students normally work in pairs), and (b) a weekly group meeting in the methodology lab where students learn how to analyze their data, watch films about evolution and animal behavior, and learn the techniques of applied behavior analysis. They also work in student-centered learning groups to design methods of data analysis, the creation of publication-quality graphs, and the creation and delivery of formal presentations of their research using PowerPoint.

Nasty Rules: Class attendance is important and mandatory. Unexcused absences (including labs) will lower your grade. In accordance with College policy (see your handbook), excused absences include those due to documented medical need or an *official* college event. **Excused absences require written documentation** (don’t just tell me you didn’t feel well – bring a note from Student Health – besides, I will probably forget that you told me!). Excused absences will not directly affect your grade as long as you make up the missed work, but you are responsible for the material covered in your absence. It is your responsibility to obtain the material from other students, so do not expect the professor to provide it to you individually after the class is over (other than handouts). If you miss class, never ask the professor if you missed anything important! You did, and the material is probably not in the text.

Much material will be available only from the lectures and labs. Lectures will not normally come from the text. The text was selected in part because it does a good job of explaining how behavior principles apply to our lives and across species. The lectures will amplify this material and explain classic experiments that show how we know that these principles are true. You are expected to complete every daily reading assignment before class. Do not wait until after the lecture to read the assigned material. Lectures will assume you have completed the assigned reading. The relative contribution of the exams may be altered to consider factors such as class participation, extra credit, and lab work.

No late work will be accepted except under special circumstances that you must discuss with me in advance. This includes exams as well as homework assignments, in-class assignments, lab assignments, and quizzes.

Statement for Academic Integrity: <http://www.wofford.edu/studentLife/honorCode.pdf>. In all situations, the responsibilities and procedures of the Wofford College Honor Code will be followed. Note: For this course, accessing any tests, exams, GRE questions, or papers from previous semesters or other students will be considered an explicit violation of the honor code. This explicitly prohibits the use of tests, exams, GRE questions, and papers maintained by individuals or groups (on or off campus) or those passed down from students previously enrolled in this course. If you have received any of this material as you begin the course, you must dispose of it immediately.

Precision in Language and Study Suggestions

The subject matter in this course relies greatly on a technical vocabulary that will require considerable effort on your part to learn to use correctly. Students are typically shocked by their first attempt at reading a journal article in this field because of its technical terminology and the necessity for precision and clarity in discussions of behavioral mechanisms. Understanding of this vocabulary and your ability to generate this terminology are important independent of this course as well -- professors quickly "size up" applicants by their use of terminology during graduate-school interviews.

The study of learning and memory in humans has reliably demonstrated one important fact of relevance to all students. The learning and memory of material from behavior analysis textbooks and lectures are vastly improved by the simple practice of expressing the material in your own words. Typically, learning and recall are best after you have explained the material to another person either orally or in writing. Nevertheless, nothing can replace the constant, daily usage of the correct terminology. On a daily basis, you should express the material from your daily reading in your own words and try to master the day's terminology. You will have to accept the responsibility of practicing the correct vocabulary by creating opportunities to use it. It will be very important for you to master this precise terminology and be able to express yourself without errors.

The professor reserves the right to make alterations to this syllabus.