Core Syllabus for Dr. Tomie's
Learning Processes (830:311:03) course
Spring 2017

To My Students:

This Core Syllabus contains information relevant to all of my Learning Processes (830:311) courses. Detailed information pertaining to specific Learning Processes courses, including textbooks, office hours, reading assignments, and exam schedules, are described in the course syllabus for Learning Processes provided each semester. The purpose of this Core Syllabus is to inform students of the general goals of my Learning Processes course and the means by which I will attempt to achieve them.

Dr. Tomie

Learning Goals: The learning goals of this course contribute to the more general goals of the Department of Psychology and of the Rutgers School of Arts and Sciences. Students who successfully complete this course will:

$	develop an understanding of the basic methods and historical development of scientific inquiry;

$	develop an understanding of how the physical features of the natural environment shape our behavior;

$	develop an appreciation of the origins and lawfulness of behavior and the factors that contribute to changes in behavior;

$	develop the ability to think logically and analytically about behavior and the determinants of changes in behavior;

$	develop a better understanding of the biological basis of behavior and the relationship between animal behavior and human behavior;

$	develop the ability to apply basic computational skills to gain a better understanding of behavior;

$	develop the ability to apply computational models to generate predictions about behavior and the conditions that encourage changes in behavior;

$	develop a deeper appreciation of how principles of learning may account for changes in the behavior of the drug abuser.

Overview of the Course: The title of this course is Learning Processes. This course will introduce you to the scientific study of behavior with particular emphasis on the analysis of how behavior changes as a function of experience. In this context, two recurring themes will be emphasized during the semester. The first is drug addiction: the changes in behavior exhibited by the drug user who becomes a drug addict will be evaluated in terms of basic principles of learning. The second is the use of mathematical models: computational algorithms will be used to predict the degree to which a subject's experience with a set of events will induce changes in the subject's behavior.

My lectures are not intended to merely summarize material that is presented in the textbook. Sometimes my lectures will cover material that is also in the assigned readings from the textbook, but more typically, my lectures will provide a more in-depth look at a topic covered, but only lightly, by the textbook. It is not unusual for my lectures to include the presentation of formal quantitative models of behavior related to a topic introduced in the textbook. For example, the textbook mentions models of association but does not elaborate on the different types of mathematical expressions that may serve to estimate the degree to which the presence and absence of event A and the presence and absence of event B co-vary with one another. Generally, students are better able to grasp mathematical models when the information is presented in a lecture, as compared to when that information is presented in a textbook.

Attendance: You should attend all classes in this course and all of your other courses. On a class-by-class basis, I have found that poor attendance is highly predictive of poor test performance. Attendance may be taken occasionally and extra credit points will be awarded for achieving a criterion of consistent attendance. In addition, some questions on every exam will be based on lecture material that was only covered during class. It is not OK to miss class, and I do not re-give lectures to those that do, regardless of cause. A student who misses a class is not entitled to more academic servicing than the students who attended the class.

Grading: Course grades will be based entirely on exam performance plus possible extra credit. All exams consist of 30 multiple choice questions. There are 2 Online Hourly Exams (open book, open notes) and an In-Class Midterm Exam and an In-Class Final Exam. Both In-Class Exams are closed book and closed notes.

In determining your final course grade, if the average score (adjusted for extra credit) is 27 or above, then your course grade is an "A". A score of 26.75 is not rounded up to an "A".

If the average score (adjusted for extra credit) is between 26.75 and 25.50, then your course grade is a "B+". A score of 25.25 is not rounded up to a "B+".

If the average score (adjusted for extra credit) is between 25.50 and 24.00, then your course grade is a "B", and so forth.

Absence from an Exam: A written note from a Dean or a doctor, submitted in a timely manner, is required to make up a missed exam without penalty. For those unable to provide the note, a 15% penalty will be assessed. In accordance with University policy, exceptions may be granted

to student-athletes traveling to scheduled events or to students observing a major religious event that prevents their attending the exam. To gain this exception, students must provide, during the first two weeks of the semester, written documentation substantiating their circumstance and the exact dates that those circumstances will interfere with their exam attendance.

Posting to Sakai of Exam Scores and Attendance Credits: The Teaching Assistant will Announce via Sakai when exam scores or attendance credits have been posted to Gradebook. All disputes of the record at Gradebook must be made in writing and submitted to the Teaching Assistant within two weeks of the Announcement of the posting of the score or credit.

Academic Integrity:

Academic Integrity Violations include: cheating, fabrication, denying others access to information or material, and facilitating violations of academic integrity. You are expected to abide by the code of conduct pertaining to academic integrity. I will not allow cheating on examinations, and I take special precautions to reduce the opportunity for cheating, while increasing the likelihood of successful prosecution of offenders. I will vigorously enforce the University's regulations on academic integrity. The University's regulations are appropriately strict, and if you plan to cheat, you should first read the regulations and potential consequences:

http://academicintegrity.rutgers.edu/integrity.shtml

Situational Courtesy:

Upon entering the classroom, turn off cell phones and beepers.

You may not make any type of recording or photographic record without my consent.

Sit near an exit if entering the classroom late or leaving the classroom early.

Texting, twittering, surfing the internet, online shopping, playing computer games, and other disruptive behaviors are distracting to serious students who are sitting near you. Sit in the back rows of the classroom if you are inclined to indulge in these activities.

Wave your raised hand (making it easier for me to see) if you want to ask a question or request additional discussion of a topic. The lecture slides are easier to see in the dimmed lighting of the large lecture hall, but the trade-off is that the raised hand is more likely to go un-noticed.

Learning Processes (01:830:311:03)   Spring 2017   Dr. Tomie
MW (3:20 PM - 4:40 PM)   Livingston Campus   Beck Hall Aud

Dr. Tomie's Office: Room 251, Life Sciences Building, (next to Wright Chemistry Labs)
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Teaching Assistant, Alyssa McCarthy
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Office Hours: Mondays, 1:30 PM - 2:30 PM, or by appointment.
E-Mail: alyssa.mccarthy@rutgers.edu

REQUIRED TEXTBOOKS (All required textbooks are available at RU / Barnes & Noble College
Bookstore):

> Domjan, M. (2010). *The Principles of Learning and Behavior* (7th Edition). Cengage Learning.
> ISBN: 978128588563.   The 6th Edition is substantially similar and may also be used.
>
> Zito, B., and Tomie, A. (2014). *The Tail of the Raccoon: Secrets of Addiction.* Princeton, NJ: ZT
> Enterprises LLC. ISBN: 9870991349531. Including Educational Commentary and Scientific
> Commentary. Also available as a Kindle E-Book.
>
> Zito, B., and Tomie, A. (2015). *The Tail of the Raccoon, Part II: Touching the Invisible.*
> Princeton, NJ: ZT Enterprises LLC. ISBN: 9870991349555. Including Preface, Educational
> Commentary and Scientific Commentary. Also available as a Kindle E-Book.

EXAMS: There will be four exams. All of the exams are cumulative but each exam will emphasize
materials presented since the last exam. Two of the exams are Online Hourly Exams given during
the regularly scheduled Monday class period (on February 6 and April 10). The In-Class Midterm
Exam will be given on Monday, February 27. The In-Class Final Exam will be given in
accordance with the University's Final Exam Schedule, on Wednesday, May 10.

GRADING:

1.   Each of the four exams will account for 25% of your course grade.

2.   To make up a missed exam without penalty the student must provide a written note from a Dean
or a doctor. For those unable to provide a note, the absence is unexcused and a 15% penalty will
be assessed.

3.   The make-up exam will be scheduled at the convenience of the TA. An additional 15% penalty
will be imposed for an unexcused absence from the make-up exam.

4.   Attendance will be taken 5 times during the semester. Four extra credit points will be awarded to
students who attend at least 4 of the 5 attendance events. Zero extra credit points will be awarded
to students who attend 0, 1, 2, or 3 of the 5 attendance events. Attendance extra credit points
(either 4 or 0) will be added at the end of the semester to the sum of your exam scores.

WEEK OF   READING ASSIGNMENT
MONDAY

Jan 16   Chapter 1: Introduction.

Jan 23   Chapter 2: Elicited Behavior, Habituation and Sensitization.

Jan 30   Chapter 3: Classical Conditioning: Foundations.

Feb 6   Chapter 3: Classical Conditioning: Foundations.
            ONLINE HOURLY EXAM #1: MONDAY, FEBRUARY 6

Feb 13   Chapter 4: Classical Conditioning: Mechanisms.
            The Tail of the Raccoon: Secrets of Addiction

Feb 20   Chapter 5: Instrumental Conditioning: Foundations.
            Tail I: Educational and Scientific Commentaries

Feb 27   Chapter 5: Schedules of Reinforcement and Choice Behavior.
            IN-CLASS MIDTERM EXAM: MONDAY, FEBRUARY 27

Mar 6   Chapter 6: Schedules of Reinforcement and Choice Behavior.
            The Tail of the Raccoon, Part II: Touching the Invisible

Mar 13   **SPRING BREAK**

Mar 20   Chapter 7: Instrumental Conditioning: Motivational Mechanisms.
            The Tail of the Raccoon, Part II: Touching the Invisible

Mar 27   Chapter 8: Stimulus Control of Behavior.
            Tail II: Educational and Scientific Commentaries

Apr 3   Chapter 9: Extinction of Conditioned Behavior.

Apr 10   Chapter 9: Extinction of Conditioned Behavior.
            ONLINE HOURLY EXAM #2: MONDAY, APRIL 10

Apr 17   Chapter 10: Aversive Control: Avoidance and Punishment.

Apr 24   Chapter 11: Comparative Cognition I: Memory Mechanisms.

May 1   Chapter 12: Comparative Cognition II: Special Topics.

IN-CLASS FINAL EXAM
IN ACCORDANCE WITH UNIVERSITY'S FINAL EXAM SCHEDULE:
WEDNESDAY, MAY 10 (12:00 NOON - 1:30 PM)