

Core Syllabus for Dr. Tomie's Learning Processes (830:311:01) course Fall 2018

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 goals of this course are to address the following:

- § What are the methods and procedures employed by scientists interested in studying learning?
- § What evidence is required to support the conclusion that learning has taken place?
- § What are the underlying biological and neurobiological substrates that mediate learning?
- § Why do scientists study the behavior of animals to model psychopathological conditions in humans?
- § Why do scientists use mathematical (arithmetic and algebraic) formulas to model changes in behavior that are due to learning?

Overview of the Course: The title of this course is Learning Processes. This course will introduce you to the scientific study of learning, which is the analysis of how behavior changes as a function of experience. Two recurring themes will be emphasized during the course of the semester. We will view drug addiction through the lens of learning. The behavior of the drug addict changes dramatically as addiction sets in. How can an analysis based on learning explain the seemingly irrational behavior of the drug addict? Also in this course, we will use arithmetic principles to attempt to track the changes in behavior observed during simple learning experiments. If our arithmetic model runs into problems, then we will explore the types of changes or adjustments that are needed for our math formula to recover its predictive validity.

Warning: I do not lecture from the textbook. My lectures often cover materials that are not even mentioned in the Domjan textbook. My lectures will cover materials from both of the "Raccoon Stories" by Zito and Tomie, as well as the Educational Commentary and the Scientific Commentary at the end of each story. Each scientific short story is an example of bibliotherapy, intended to prevent drug addiction by boosting the reader's awareness of how drug addiction gets started, in particular, how the development of a form of Pavlovian conditioning known as sign-tracking contributes to the loss of self-control of drug-taking.

Attendance: You are a University Student. You should attend all class meetings of this course and all of your other courses as well. Poor attendance is highly predictive of poor exam performance and low grades. Attendance will be taken occasionally, and extra credit points will be awarded accordingly. But, more importantly, most of the exam questions will be based on lecture materials that will be 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 missed a class is not entitled to more academic servicing than the students who attended the class. If you miss a class, then you have created a problem for yourself. You have not created a problem for me.

Grading: Course grades will be based entirely on exam performance plus possible extra credit for attending class or other specific and to-be-announced extra credit events. There will be 4 exams, and each of the 4 exams will consist of 30 multiple choice questions. Two of the 4 exams will be Online Hourly Exams (open book, open notes) while the remaining 2 exams will be the In-Class Midterm Exam and an In-Class Final Exam. In-Class Exams are closed book and closed notes.

In determining your final course grade:

If your point total (sum of all exam scores plus extra credit points) is 108 (or higher), then your average score is at least $108/120 = 90\%$, which is an "A".

If your point total is 102-107, then your average score is 85%-89%, which is a "B+".

If your point total is 96-101, then your average score is 80% - 84%, which is a "B".

If your point total is 90- 95, then your average score is 75%-79%, which is a "C+".

If your point total is 84- 89, then your average score is 70% - 74%, which is a "C".

If your point total is 72- 83, then your average score is 60% - 69%, which is a "D".

If your point total is 71 or lower, then your average score is 59% or lower, which is an "F".

Absence from an Exam: If you miss an exam, then your score for that exam is zero. If you miss an exam due to illness, then your absence from the exam may be excused. To be excused, you must provide a written note from a doctor indicating the dates of illness. Hurtado will not provide a student with a note; however, Hurtado will provide a note if requested to do so by a Dean. That is the process. If you miss an exam for reasons other than illness, then you can explain your situation to a Dean, who may provide written documentation of the seriousness of your situation. In which case, your absence from the exam may be excused.

If your absence from an exam is unexcused, then your exam score is zero unless you take the make-up exam, which will be accompanied by a 15% penalty assessment. The make-up exam will be scheduled at the convenience of the TA. If you miss the make-up exam, then your exam score is zero and you will receive no further opportunities to take the exam.

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, student-athletes must provide, during the first two weeks of the semester, on or before Friday, September 21, written documentation from the Athletic Department substantiating their travel schedule.

To gain this exception, students whose major religious observance conflicts with the date of an exam must provide, during the first two weeks of the semester, on or before Friday, September 21, written documentation, on official letterhead signed by an official of their religious organization, substantiating the exact dates that those religious circumstances will interfere with their exam attendance.

Posting to Sakai of Exam Scores and Attendance Credits: The Teaching Assistant will post an announcement 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. You cannot wait until the end of the semester to dispute a grade or score that was posted to Gradebook more than two weeks earlier.

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 are allowed to make audio recordings of my lectures provided that the audio recordings are for your own personal use. You are not allowed to take a picture of any of my lecture slides at any time during my lectures.

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.

Please feel free to raise your hand to request clarification or to engage further discussion of a point of interest. Wave your raised hand back-and-forth (making it easier for me to see) if your raised hand goes un-noticed. Stand up and wave your raised hand if I am so blind that I still do not see you. Speaking of which, I have a 70% hearing loss (Vietnam), and most of my hearing loss is in the range of human speech, so please speak up when asking a question.

Learning Processes (01:830:311:01) Fall 2018 Dr. Tomie
MW5 (3:20 PM - 4:40 PM) Livingston Campus Tillet 232

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E-Mail: mn593@scarletmail.rutgers.edu

Telephone: 848-445-2576 (leave message)

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. Each exam will consist of 30 multiple choice questions. A perfect score on all 4 exams will result in a total exam score of 120 points. All of the exams 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 September 24 and November 12). The In-Class Midterm Exam will be given on Monday, October 15. The In-Class Final Exam will be given in accordance with the University's Final Exam Schedule (on Friday, December 21).

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. 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.
3. 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. At the end of the semester, your attendance extra credit points (either 4 or 0) will be added to the total of your exam score points.

WEEK OF READING ASSIGNMENT
MONDAY

Sep 3 Chapter 1: Introduction.

Sep 10 Chapter 2: Elicited Behavior, Habituation and Sensitization.

Sep 17 Chapter 3: Classical Conditioning: Foundations.

Sep 24 Chapter 4: Classical Conditioning: Mechanisms.

ONLINE HOURLY EXAM #1: MONDAY, SEPTEMBER 24

Oct 1 Chapter 4: Classical Conditioning: Mechanisms.

The Tail of the Raccoon: Secrets of Addiction

Oct 8 Chapter 5: Instrumental Conditioning: Foundations.

Tail I: Educational and Scientific Commentaries

Oct 15 Chapter 6: Schedules of Reinforcement and Choice Behavior.

IN-CLASS MIDTERM EXAM: MONDAY, OCTOBER 15

Oct 22 Chapter 6: Schedules of Reinforcement and Choice Behavior.

The Tail of the Raccoon, Part II: Touching the Invisible

Oct 29 Chapter 7: Instrumental Conditioning: Motivational Mechanisms.

The Tail of the Raccoon, Part II: Touching the Invisible

Nov 5 Chapter 8: Stimulus Control of Behavior.

Tail II: Educational and Scientific Commentaries

Nov 12 Chapter 9: Extinction of Conditioned Behavior.

ONLINE HOURLY EXAM #2: MONDAY, NOVEMBER 12

Nov 19 Chapter 9: Extinction of Conditioned Behavior.

Nov 26 Chapter 10: Aversive Control: Avoidance and Punishment.

Dec 3 Chapter 11: Comparative Cognition I: Memory Mechanisms.

Dec 10 Chapter 12: Comparative Cognition II: Special Topics.

IN-CLASS FINAL EXAM
IN ACCORDANCE WITH UNIVERSITY'S FINAL EXAM SCHEDULE:
FRIDAY, DECEMBER 21 (12:00 NOON - 1:30 PM)