

Core Syllabus for Dr. Tomie's  
Learning Processes (830:311:03) course  
Fall 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 goal of this course is to improve your understanding of:

- § what constitutes evidence of learning and the methods and procedures employed by investigators of learning processes;
- § the biological and neurobiological basis of learning;
- § the role of animal behavior to model the causes of psychopathological behavior in humans;
- § the use of computational approaches to predict changes in behavior 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 behavior with particular emphasis on the analysis of how behavior changes as a function of experience. We will emphasize two recurring themes during the semester. Addiction researchers have concluded that drug addiction is a learning process. The behavior of the drug user who becomes a drug addict is consistent with basic principles of learning. Also in this course, we will examine the use of mathematical models to generate learning curves that enable identification of the underlying psychological processes responsible for changing the behavior of the experimental subject.

My lectures cover materials that are not covered in the Domjan textbook, which offers a broad survey of the learning landscape. My lectures, on the other hand, are intended to provide a more in-depth look at a more restricted range of selected topics. It is not unusual for my lectures to include the presentation of a formal math model of behavior that is only briefly mentioned in the Domjan textbook.

My lectures will cover materials from both of the "Raccoon Stories" by Zito and Tomie. These scientific short stories, created in the vein of bibliotherapy, are intended to boost awareness of sign-tracking, a reflexive, involuntary, and triggered, directed action pattern, based on Pavlovian conditioning, that develops due to the mere experience of pairings of an object with a reward. Sign-Tracking confers addiction vulnerability, and its salient behavioral attributes overlap the functions of the dopamine reward pathway, lending credence to Sign-Tracking as an emergent animal behavior model of drug addiction.

**Attendance:** You should attend all classes in this course and all of your other courses. 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. Most of the exam questions will be based on lecture materials that were 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 for attending class or other specific events. 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 your point total (sum of all exam scores plus extra credit) 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:** A written note from a Dean or a doctor, must be submitted within 96 hours (4 days) of the exam, to make up a missed exam without penalty. 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. For those unable to provide the written 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,

on or before Friday, September 15, written documentation substantiating their religious circumstance and 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 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. In the lowered lighting of the large lecture hall, the slides are easier to see, but the trade-off is that the raised hand is more likely to go un-noticed. Please feel free to raise your hand to request clarification or to engage further discussion of a point of interest.

Motivation and Emotion (01:830:364:02) Fall 2017 Dr. Tomie  
TTh5 (2:50 - 4:10 PM) CAC AB 2225

Dr. Tomie's Office: Room 251, Life Sciences Building (next to Wright Chemistry Labs)

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Teaching Assistant: Emma Millon

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Office Hours: Thursdays, 10:00 - 11:00 AM, or by appointment

Telephone: 848-445-4036 (leave message)

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

LeDoux, J. (1996). *The Emotional Brain: The Mysterious Underpinnings of Emotional Life*. New York: Touchstone/Simon & Schuster Publishing. ISBN: 0684836599.

Zito, B., and Tomie, A. (2014). *The Tail of the Raccoon: Secrets of Addiction*. Princeton, NJ: ZT Enterprises LLC. ISBN: 9870991349531. 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. 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 Thursday class period (on September 28 and November 16). The In-Class Midterm Exam will be given on Thursday, October 19. The In-Class Final Exam will be given in accordance with the University's Final Exam Schedule (on Friday, December 15).

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  
TUESDAY

READING ASSIGNMENT

Sep 5 Preface: (pp. 1-10).

Sep 12 Chapter 1: What's Love Got To Do With It? (pp. 11-21).

**The Tail of the Raccoon: Secrets of Addiction**

Sep 19 Chapter 2: Souls on Ice (pp. 22-41).

**The Tail of the Raccoon: Educational and Scientific Commentaries**

Sep 26 Chapter 2: Souls on Ice (pp. 22-41).

**ONLINE HOURLY EXAM #1: THURSDAY, SEPTEMBER 28**

Oct 3 Chapter 3: Blood, Sweat, and Tears (pp. 42-72).

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

Oct 10 Chapter 4: The Holy Grail (pp. 73-103).

**Tail II: Educational and Scientific Commentaries**

Oct 17 Chapter 4: The Holy Grail (pp. 73-103).

**IN-CLASS MIDTERM EXAM: THURSDAY, OCTOBER 19**

Oct 24 Chapter 5: The Way We Were (pp. 104-137).

Oct 31 Chapter 6: A Few Degrees of Separation (pp. 138-178).

Nov 7 Chapter 7: Remembrance of Emotions Past (pp. 179-224).

Nov 14 Chapter 7: Remembrance of Emotions Past (pp. 179-224).

**ONLINE HOURLY EXAM #2: THURSDAY, NOVEMBER 16**

Nov 21 Chapter 8: Where the Wild Things Are (pp. 225-266).

Nov 28 Chapter 8: Where the Wild Things Are (pp. 225-266)

Dec 5 Chapter 9: Once More, With Feelings (pp. 267-303).

Dec 12 Chapter 9: Once More, With Feelings (pp. 267-303).

**IN-CLASS FINAL EXAM  
IN ACCORDANCE WITH UNIVERSITY'S FINAL EXAM SCHEDULE:  
FRIDAY, DECEMBER 15 (8:00 AM - 9:30 AM)**