

Sensory Processes Laboratory

Tuesday & Thursday lab meeting location: PSY191

Section I: EXP4174C-2G59 **time:** 9:35-11:30 AM

Section II: EXP4174C-2G72 **time:** 11:45 AM-1:40 PM

Instructor: Ryan Mears (mears@ufl.edu)

TAs: John Shallcross (jshallcross@ufl.edu) & Samarth Bhatt (ssbhatt@ufl.edu)

Course Description

This semester students will gain hands-on experience in the techniques and procedures of perceptual psychophysics and psychology research. Activities in the lab will challenge students to think carefully and critically about every aspect of the research process in order to understand benefits and limitations of the scientific method in psychological research. After completing a progression of small assignments involving data manipulation, students conduct instructor-supervised group projects to replicate a previously published sensory processes experiment¹. Designing and conducting their replication experiment, students will collect behavioral data, and grapple with producing tables, visualizations, and inferential statistics in order to compare data with experimental results from the original research. In the end, students will judge similarities and differences between the methods and results of their own replication experiment in comparison to the published experiment. In order to apply methods of scientific communication, students will summarize results and experiences, do lab write-ups, present data talks, and write a final paper. Students will also learn how to report research in line with requirements of the Publication Manual of the American Psychological Association.

Course Goals

- Understand sensory & cognitive processes using behavioral & neuroscience approaches
- Learn concepts in sensory & cognitive neuroscience and how they are related to research paradigms
- Learn how to openly and reproducibly use experimental data in order to summarize research
- Understand of how experiments work and how to communicate research methods and findings

Course Overview

Week	Topic	CogLab	Projects
1 8-Jan	Blind Spot	#14	
2 15-Jan	Simple Detection & Metacontrast Mask	#2 & #16	
3 22-Jan	Signal Detection & Visual Search	#1 & #7	
4 29-Jan	Spatial Cueing & Change Detection	#12 & #9	
5 5-Feb	Inhibition of Return & Attentional Blink	#10 & #8	
6 12-Feb			Data Talks
7 19-Feb			Replication Design
			Report: Replication
8 26-Feb			Preregistration
Spring Break			
9 12-Mar			Replication Experiments
10 19-Mar			Replication Experiments
11 26-Mar			
12 2-Apr			Replication Presentations
13 9-Apr			Replication Presentations
14 16-Apr			
15 23-Apr			Final Report

¹ Frank, M. C., & Saxe, R. (2012). Teaching replication. *Perspectives on Psychological Science*, 7, 600-604.

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Course Procedures

LABORATORY ASSIGNMENTS: Assignments will comprise 30% of the course grade. If you are absent during a laboratory session, please contact me AS SOON AS POSSIBLE. Late assignments will be given a lower grade.

TECHNICAL & SCIENTIFIC COMMUNICATION ASSIGNMENTS: Presentations or descriptions of research will comprise 30% of course grade.

RESEARCH PROJECT: The final project will comprise 30% of the course grade.

PARTICIPATION: Discussion and lab participation will account for 10% of the final grade. Attendance will be tracked but not graded. Classroom participation is evaluated from informal class assignments and questionnaires.

CLASS ATTENDANCE POLICY: Class attendance is expected. Excused absences are consistent with university policies in the undergraduate catalog (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) and require appropriate documentation.

Grade	Point Range	Percentage Range
A+	200 — 193	100% — 96.5%
A	192 — 186	96% — 93%
A-	185 — 180	92.5% — 90%
B+	179 — 173	89.5% — 86.5%
B	172 — 166	86% — 83%
B-	165 — 160	82.5% — 80%
C+	159 — 153	79.5% — 76.5%
C	152 — 146	76% — 73%
C-	145 — 140	72.5% — 70%
D+	139 — 133	69.5% — 66.5%
D	132 — 126	66% — 63%
D-	125 — 120	62.5% — 60%
F+	119 — 113	59.5% — 56.5%
F	112 — 106	56% — 53%
F-	105 — 0	52.5% — 0%

UF HONESTY POLICY: UF students are bound by The Honor Pledge, which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

CLASS EVALUATIONS: Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

STUDENTS REQUIRING ACCOMMODATIONS: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter, which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

COUNSELING AND WELLNESS CENTER: Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.