# EXP3104 – Sensory Processes

Instructor: Ryan Mears, Ph.D.

Spring 2023

E-mail: See course procedures Web: Canvas Office Hours: Friday 11 AM Office: Zoom Conference Office: Zoom Conference Graduate TA: Carla Martinez-Perez and Johan Gamba Segovia Sr

## **Course Description**

This course is an introductory survey of the human senses and their role in perception. A goal of this course is to appreciate that our sensorium receives something different from our resultant awareness and reactions to the world around us. Distributed over and throughout the body, diverse physical sensor arrays receive and transduce signals into neural information. In the pathways of the brain, expansive and hierarchical decoding processes follow the initial sensory encoding. In the end, perception endeavors to apprehend the true nature of the world "out there" rather than merely encode what the senses take in.

## **Course Objectives**

- 1. Consider how we sense the physical environment and what factors influence our perception
- 2. Explore sight, hearing, touch, taste & smell from physiological & behavioral perspectives
- 3. Understand the relation of the nervous system to sensation & perception

## **Required Readings**

Goldstein, E Bruce and James Brockmole (2016). *Sensation and perception*. Cengage Learning.

## **Recommended Readings**

Schnupp, Jan, Israel Nelken, and Andrew King (2011). *Auditory neuroscience: Making sense of sound*. MIT press.

### **Class Schedule**

Since this is a large class dates of exams will not change, although the material covered for each exam might depend on what we have covered up that date. Students are responsible to check for updates on Canvas and in announcements.

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Week	Dates	Exams	Chapter
1	01/09 - 01/13		
2	01/16 - 01/20		1 – Introduction to Perception
3	01/23 - 01/27		2 – Beginning of Perception
4	01/30 - 02/03	Exam 1 (2/3)	3 – Neural Processing
5	02/06 - 02/10		4 – Cortical Organization
6	02/13 - 02/17		5 – Objects and Scenes
7	02/20 - 02/24		6 – Visual Attention
8	02/27 - 03/03	Exam 2 (3/3)	7 – Action
9	03/06 - 03/10		8 – Motion
10	03/13 - 03/17	Spring Break	
11	03/20 - 03/24		9 – Color
12	03/27 - 03/31	Exam 3 (3/31)	10 – Depth and Size
13	04/03 - 04/07		11 – Hearing
14	04/10 - 04/14		12 – Auditory Localization
15	04/17 - 04/21		14 – Cutaneous Senses
16	04/24 - 04/28	Exam 4 (4/26)	15 – Chemical Senses
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### Table 1: Schedule of chapter topics from Goldstein and Brockmole (2016)

## **Grading Policy**

- 40% of your grade will be determined by exams.
- 20% of your grade will be determined by quizzes.



25% of your grade will be determined by lab activity assignments.
5% of your grade will be determined by Sona Research Experience or writing assignments.

NOTE: Although most information is included in Canvas, this multi-page PDF is the primary course syllabus. Please print out this document. I reserve the right to revise the syllabus in order to accomodate the needs of the course. In case of any updates, please pay attention to announcements.

**EXAMS**: Throughout the semester there will be four exams; the fourth exam will *NOT* be cumulative. Each exam will consist of a combination of multiple-choice questions, true/false, fill in the blank, and short answer/essay questions.

**ASSIGNMENTS & QUIZZES**: Perception lab assignments, writing assignments, and quizzes will each comprise 20% of the course grade. Writing assignments and quizzes are designed to help you apply and understand material as you read and watch lectures.

**TEXTBOOK**: Please note that this course participates in the UF All Access program (**Required**). UF All Access will provide you with your required materials digitally at a reduced price and the ability to pay using your student account.

**PROCTORING**: Quizzes and exams for this course are proctored by HonorLock. The benefits of HonorLock are that the proctoring framework is embedded in Canvas without intrusiveness and the need for prior scheduling. The goal of proctoring in this course is to place all students on a level field. Benefits of this technological support for our course include convenience and technical support for assessments online. At the start of the semester please examine and ensure the minimum requirements for your learning environment, and take the practice quiz in Canvas. https://honorlock.com/support/



**QUIZ POLICY**: Each online quiz is available a minimum of a week before its due date and time. Then, after the due date it will disappear, along with the opportunity to get points for it. Each quiz has a time limit of 10 minutes, and the quiz form in Canvas will cease activity at the end of the time period. Quizzes will consit of individually presented multiple-choice and/or short-answer questions. Quizzes are closed book and proctored by HonorLock. Students who share or attempt to share information pertaining to course content in the form that is assessed in quizzes or exams will be referred to Student Conduct and Conflict Resolution (SCCR) Office in the Dean of Students Office. https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/ Honor code violations for quizzes will result in grade sanctions of a 20% point-value reduction on the assignment (i.e., two letter-grades). For more on this go to page 6 of the syllabus.

When taking quizzes It's important to *read textbook sections* and *watch lectures before each quiz*. You have only **one** opportunity to take each quiz, so make certain you are well prepared before you start the quiz. Importantly, during quizzes students are *NOT* allowed to view notes or course material. In some cases, figures and factual information will be provided in order to provide context.

**Feedback from quizzes** Learning assessments consist of frequent low-stakes quizzes, and will *NOT be provided online*. Instructive and general feedback for quiz questions is geared toward indicating areas of material that need additional work. Feedback pertaining to missed questions or correct answers will be provided **only during office hours for an individual student**. Office hours meeting to discuss quizzes can be in person or in a closed-room conference on Zoom. Specific instructions for use of audio/visual conferencing on Zoom are on the UF E-learning website. https://elearning.ufl.edu/zoom/



**EXAM POLICY**: Each online exam will be available during only on the date specified in this syllabus. Each exam has a time limit of 60 minutes, and the exam window will cease activity (i.e., automatically close) at the end of the 60 minutes. You have only a single opportunity to take each exam. All online quizzes and examinations must be completed on time (i.e. by the due date and time). Exams summarize what has been learned in the course for a set of modules. Feedback will not be provided on exams in order to support the validity of material for comparison from year to year across classes. Honor code violations for an exam will result in grade sanctions of a 20% point-value reduction on the exam (i.e., two letter-grades). For more information go to page 6.

**LATE POLICY** At the start of the semster, please read through the syllabus for potential conflicts that will occur. Students are expected to be present through the semester on the timetable outlined in this syllabus. A late assignment will be lowered 20% for every day it is late, including weekends.

**LATE POLICY** At the start of the semester, please read through the syllabus for potential conflicts that will occur. Students are expected to progress through the course on the timetable outlined in this syllabus. It is advised that students take quizzes and turn in assignments early, in order to avoid any potential (i.e., but, unlikely) problems with technology. A late quiz or exam will be lowered 10% for every day it is late, including weekends. Once the deadline passes at midnight, the late policy will be implemented by algorithm in Canvas.

Situations where adjustments will not be made

- *Travel* Students are responsible to take quizzes or exams before travelling.
- *Internet Connection Problem* It is the responsibility of each student to take quizzes and exams from locations with a reliable internet connection. A dedicated room for online assessments

is available in UF Library West. To make a reservation for a time of high demand go to the following website: http://ufl.libcal.com/spaces?lid=4458&gid=8873

• *Technical Problems From Other Causes* – Although is the responsibility of each student to have a reliable connection to complete homework and take quizzes and exams, there are other problems that can occur. If there is a different problem, a support ticket must be obtained directly from HonorLock or from the UF help desk. Technical support from these services will be necessary diagnose and certify the source of any problem. *In fact, causes of connection problems, hardware, or other software problems can be adequately diagnosed, so students are encouraged to actively troubleshoot with support personnel.* Course instructors will not respond regarding *any* technical problems that do not have a prior support ticket from UF or HonorLock.

**EMERGENCIES**: In cases of unavoidable emergencies please contact **teaching assistants AND instructor** through Canvas. Emergency inquiries will receive a response typically within 48 hrs. (Please allow additional time on weekends or holidays.)

- Personal medical emergencies will require a letter from a licensed medical professional.
- University sanctioned activities will require advance letter from a University official.
- Approvals of an exception for religious observance must be made several days in advance.

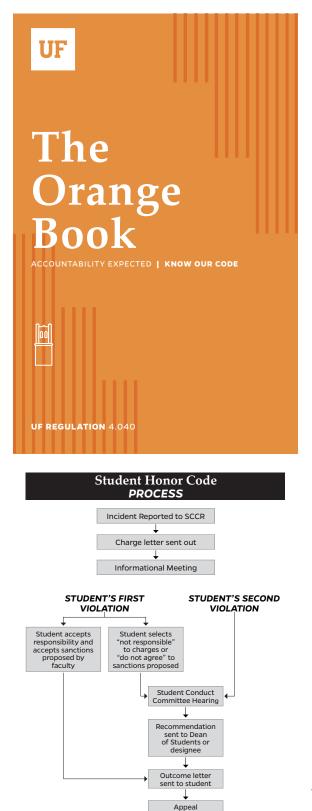
**CLASS EVALUATIONS**: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https:// gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

**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.

ADDITIONAL SUPPORT FOR STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (http://www.dso.ufl. edu/drc/). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

**POLICY ON SEXUAL HARASSMENT** Sexual Harassment is not tolerated in this class, in the Department of Psychology, or at the University of Florida. Sexual harassment includes: the inappropriate introduction of sexual activities or comments in a situation where sex would otherwise be irrelevant. Sexual harassment is a form of sex discrimination and a violation of state and federal laws as well as of the policies and regulations of the university. All UF employees and students must adhere to UF's sexual harassment policy which can be found here: https://hr.ufl.edu/forms-policies/policies-managers/sexual-harassment/. Please review this policy and contact a university official if you have any questions about the policy. As mandatory reporters, university employees are required to report knowledge of sexual harassment to UF's Title IX coordinator. For more information about UF's Title IX office see: https://titleix.ufl.edu/. You can also complete a Sexual Harassment Report online (Title IX) at: https://titleix.ufl.edu/title-ix-reporting-form/.

ACADEMIC HONESTY GUIDELINES: The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust and respect. Students are expected to pursue knowledge with integrity. Academic integrity, as a shared value, is dependent on the mustual trust and respect by all members of an academic community. Cheating threatens all who are part of this shared system, and therefore, it's essential to report any violations to the UF SCCR Office. Please encourage others to act with respect for their community.



### 3. Violations of the Student Honor Code

The Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Student 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."

### A. CHEATING.

A Student cannot use unauthorized materials or resources in any academic activity for academic advantage or benefit. Cheating includes but is not limited to:

- Using any materials or resources prepared by another Student without the other Student's express Consent or without proper attribution to the other Student.
- Using any materials or resources, through any medium, which the Faculty has not given express permission to use and that may confer an academic benefit to the Student.
- 3. Using additional time, or failing to stop working when instructed, on any time-bound academic activity.
- Failing to follow the directions of a proctor of any academic activity, when such conduct could lead to an academic advantage or benefit.
- Collaborating with another person, through any medium, on any academic activity, when Faculty has expressly prohibited collaboration.

### B. COMPLICITY IN VIOLATING THE STUDENT HONOR CODE.

Attempting, aiding, encouraging, facilitating, abetting, conspiring to commit, hiring someone else to commit, giving or receiving bribes to secure, or being a participant (by act or omission) in any act prohibited by the Student Honor Code.

### C. FALSE OR MISLEADING INFORMATION.

A Student cannot use unauthorized materials or resources in any academic activity for academic advantage or benefit. Cheating includes but is not limited to:

- A Student must not make a false or misleading statement during the Investigation or resolution of an alleged Student Honor Code violation.
   A Student must not make a false or misleading statement for the
- A Student must not make a false or misleading statement for the purpose of procuring an improper academic advantage for any Student.
- A Student must not use or present fabricated information, falsified research, or other findings if the Student knows or reasonably should be aware that the information, research, or other finding is fabricated or falsified.

### D. INTERFERENCE WITH AN ACADEMIC ACTIVITY.

- A Student must not take any action or take any material for the purpose of interfering with an academic activity, through any means over any medium.
- 2. A Student must not be disruptive to the testing environment or other academic activity.

### E. PLAGIARISM.

A Student must not represent as the Student's own work all or any portion of the work of another. Plagiarism includes but is not limited to:

- Stealing, misquoting, insufficiently paraphrasing, or patch-writing.
   Self-plagiarism, which is the reuse of the Student's own submitted work, or the simultaneous submission of the Student's own work, without the full and clear acknowledgment and permission of the Faculty to whom it is submitted.
- Submitting materials from any source without proper attribution.
   Submitting a document, assignment, or material that, in whole or in part, is identical or substantially identical to a document or assignment the Student did not author.

## F. SUBMISSION OF ACADEMIC WORK PURCHASED OR OBTAINED FROM AN OUTSIDE SOURCE.

A Student must not submit as their own work any academic work in any form that the Student purchased or otherwise obtained from an outside source, including but not limited to: academic materials in any form prepared by a commercial or individual vendor of academic materials; a collection of research papers, tests, or academic materials maintained by a Student Organization or other entity or person, or any other sources of academic work.

### G. UNAUTHORIZED RECORDINGS.

A Student must not, without express authorization from Faculty, make or receive any Recording, through any means over any medium, of any academic activity, including but not limited to a Recording of any class or of any meeting with Faculty. Students registered with the Disability Resource Center who are provided reasonable accommodations that include allowing such Recordings must inform Faculty before making such Recordings.

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