PSB 4934: Neuroscience of Consciousness

Ryan P. Mears, Ph.D.

Fall 2022

E-mail: mears@ufl.edu Web: ufl.instructure.com/courses/461758

Office Hours: Fri noon-1 PM Class Hours: Mon, Wed, Fri 3:00 - 3:50 PM Office: 357 Psychology Building Class Room: 100 Williamson Hall

Course Description

Conscious awareness is a hallmark of human experience. In this class we will consider cutting edge neuroscience of mechanisms and neural signs as we discuss abnormal, disrupted, and non-human consciousness.

Relevant topics to this course will include:

 $\bullet \ an est hesia \bullet coma \bullet \ dreams \bullet free-will \bullet \ hallucination \bullet \ hallucinogens \bullet \ illusion \bullet \ imagination \ \bullet \ sleep$

Course Objectives

- 1. Understand phenomenology, theories, and potential functions of consciousness
- 2. Learn to differentiate correlations versus causes of conscious processes
- 3. Learn about cutting edge neuroscience research on conscious awareness

Required Readings

Harley, Trevor (2021). The Science of Consciousness. Cambridge University Press.

Nunez, Paul L (2016). The New Science of Consciousness: Exploring the Complexity of Brain, Mind, and Self. Prometheus Books.

Required Technology: Canvas and Perusall

- Please review all information on how discussion and participation will be graded.
- Please read *Discussion and Participation* on 3rd page of the syllabus for details on how contribution points are scored.
- There is potential for much extra credit based on being active and contributing through annotations, comments, and discussions.

Class Schedule

Students must read the following before each class session. Importantly, I'll reserve the right to change class readings and assignment dates if needed (i.e., for the benefit of the class). Students are encouraged to watch all lectures and check Canvas for updates.

Table 1: Schedule of chapter topics

Week	Dates	Due Dates	Harley, 2021	Nunez, 2016
1	Aug 22 - Aug 26		Problem of Consciousness-1	
2	Aug 29 - Sep 02		Mind-Body-2 Free-Will-3	
3	Sep 05 - Sep 09	Group Presentations		Brain Structure and Function-3
4	Sep 12 - Sep 16	Group Presentations	Consciousness Research-6	
5	Sep 19 - Sep 23		Self/Identity-7	
6	Sep 26 - Sep 30	Exam 1 (Sept 30)		
7	Oct 03 - Oct 07			States-4
8	Oct 10 - Oct 14	Group Presentations	Cognition-8	Signatures-5
9	Oct 17 - Oct 21	Group Presentations	Perception-9	
10	Oct 24 - Oct 28	Exam 2 (Oct 28)		
11	Oct 31 - Nov 04			Rhythms-6
12	Nov 07 - Nov 11	Group Presentations		Synchrony-7
13	Nov 14 - Nov 18	Group Presentations	Neural Correlates-10	Networks-8
14	Nov 21 - Nov 25	Thanksgiving Break		
15	Nov 28 - Dec 02	Exam 3 (Dec 7)		
16	Dec 05 - Dec 09	Finals Week (no final)		

Grading Policy

- 45% of your grade will be determined by essay exams (15% each).
- **50**% of your grade will be determined by five assignments (10% each) including presentations and response papers. Group presentations will be peer evaluated.
- 15% of your grade will be determined by your participation in class and on Perusall.

Frankly, there's a lot of reading in this course, but very little of it is difficult or overly technical. Reading assignments will be on Perusall, and the reading assignments are scored for a grade. Please understand that this approach benefits students above all else. The time and effort that you put into reading and commenting on Perusall will pay off in class discussion and the take home exams. Information on scoring of reading assignments will be available on Canvas. Exams, assignments,

and discussions sum to an excess of credit (i.e., more than 10%). So, do your best to complete everything available.

EXAMS: Throughout the semester there will be three exams; Each exam will be essay response, and there will be a week to turn in answers to questions. Final grades for the course will be determined by UF undergraduate guidelines: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

DISCUSSION & PARTICIPATION: Discussion and participation will account for 15% of the final grade. 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.

ASSIGNMENTS: (More information will be provided soon about presentations & response papers.)

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.

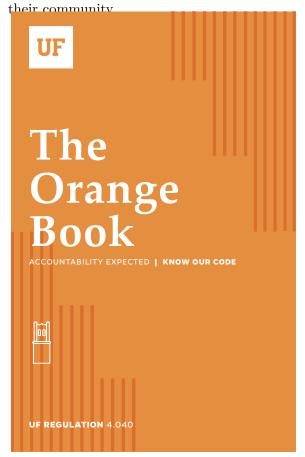
Course and Institution Policies

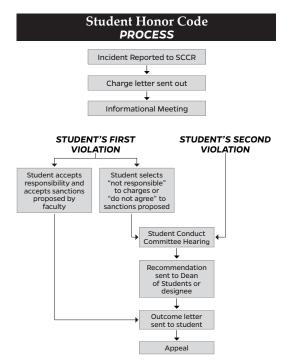
COURSE RECORDINGS Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

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 mutual 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





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.
- 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 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.
- 3. 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.

COURSE 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/.