

PSY 780
Directed Readings in Cognitive Neuroscience
Fall 2022

Class Schedule:

Monday, 1-3:30 PM
Kastle 206A

Instructors:

Dr. Michael Bardo (Organizer)

Office: B447 BBSRB
Office hours: by appointment
Telephone: 7-6456
Email: mbardo@uky.edu

Dr. Susan Barron

Office: 208 Kastle Hall
Office Hours: By appointment
Telephone: 7-5401
Email: sbarron@uky.edu

Dr. Mark Prendergast

Office: B449 BBSRB
Office hours: by appointment
Telephone: 7-6120
Email: mark.prendergast@uky.edu

Dr. Michael Wesley

Office: 465 East High Street, Suite 200
Office hours: by appointment
Telephone: 3-1332
Email: michael.wesley@uky.edu

Dr. Lauren Whitehurst

Office: 123 Kastle
Office hours: by appointment
Telephone: 7-4473
Email: lauren.whitehurst@uky.edu

Course Objectives: This is a team-taught course that uses an English “tutorial” style approach to give all entry students in the cognitive neuroscience area a solid background in the areas of neuropharmacology, neuroanatomy and neurophysiology. Your reading assignments are outlined on this syllabus and you should come to class prepared to answer questions related to the readings. You can also use class time to clear up confusion regarding information in the readings. The course will be “team-taught” primarily by Drs. Bardo, Barron and Prendergast, with a guest presenters (Drs. Michael Wesley and Lauren Whitehurst) toward the end of the semester. If you have any general questions, please reach out to Dr. Bardo since he is the instructor of record for this semester. If you have specific questions about a discussion or topic, please reach out to the faculty member who covered that lecture.

STUDENT LEARNING OUTCOMES:

By the end of the course, you should be able to:

- describe the cellular subcomponents involved in drug action
- describe the primary anatomical components of the nervous system
- understand the synthesis of neurotransmitters and their receptor actions
- describe the fundamentals of neural activity at the cellular and network levels
- integrate the above basic neural information into sleep and substance use

Course Grading: Your grade will be dependent on your performance on 3 written exams (100 points each) at the end of each of the sections, plus 100 points for a 20-min oral presentation during finals week. Out of a possible maximum of 400 points, grades will be assigned as:

90% (360 points) = A

80% (320 points) = B

70% (280 points) = C

However, based on overall class performance, grades may be curved to insure that at least one-half of the class earns an A for the final grade.

Exams:

Each exam will be a mixture of short answer, essay, and multiple choice questions and will be limited to the information presented/or discussed during that portion of the course. Thus, the exam for that section of the course will be written and graded by whichever faculty member covered that section.

If an emergency arises and you must miss class on an exam day, please let us know prior to class if possible. Make-up exams should be scheduled as soon as possible. Each exam will cover the book chapters listed below and related lecture/discussion notes. Exams may be taken on your portable computer and then emailed to me before leaving the classroom.

End of semester presentations:

The end of the semester presentations will be approximately 15 min (plus 5 min for questions) and will occur during finals week.

The topic should stem from your interest in something from one of the weeks topics and applied to a clinical condition being able to discuss it in terms of CNS regions, neurotransmitters, biochemistry, etc – it will vary, of course, based on the disease/topic that you choose. We ask you to think about this and send Dr. Bardo an email regarding your choice of topic before doing much work on it. **The deadline for sending us your topic choice is November 21.** This presentation will be in front of the class and should be an interesting yet concise description of your topic and what you found. A rubric for grading the oral presentation can be found at the end of the syllabus. Students will also evaluate each other's presentations as an opportunity for constructive comments and criticism and these will be emailed to Dr. Bardo- he will remove all identifying information and provide this feedback to each of you. The template for this individual feedback and the rubric that faculty will use for grading is at the end of the syllabus.

Readings: Instructors will provide either selected readings and/or will use the textbook:

Nestler, Kenny, Russo & Schaefer, *Molecular Neuropharmacology: A Foundation for Clinical Neuroscience*, McGraw-Hill, 2020, Fourth Edition.

COVID-19

We intend to meet in-person, but will transfer to zoon if needed. The policy on masking will be consistent with the policies developed by the university.

Privacy issues and recorded lectures/discussions:

The University has strict guidelines regarding privacy protection for all. All video and audio recordings of lecturers and class meetings, provided by the instructors, are for educational use by students in this class only. They are available only through the Canvas shell for this course and are not to be copied, shared, or redistributed.

As addressed in the Student Code of Conduct, students are expected to follow appropriate University policies and maintain the security of linkblue accounts used to access recorded class materials. Recordings may not be reproduced, shared with those not enrolled in the class, or uploaded to other online environments.

If the instructor or a University of Kentucky office plans any other uses for the recordings, beyond this class, students identifiable in the recordings will be notified to request consent prior to such use. In anticipation of such cases, students may be asked to complete an "authorization of use" form by a faculty member.

Video and audio recordings by students are not permitted during the class unless the student has received prior permission from the instructor. Any sharing, distribution, and or uploading of these recordings outside of the parameters of the class is prohibited. Students with specific recording accommodations approved by the Disability Resource Center should present their official documentation to the instructor.

All content for this course, including handouts, assignments, and lectures are the intellectual property of the instructors and cannot be reproduced or sold without prior permission from the instructors. A student may use the material for reasonable educational and professional purposes extending beyond this class, such as studying for a comprehensive or qualifying examination in a degree program, preparing for a professional or certification examination, or to assist in fulfilling responsibilities at a job or internship.

Academic Honesty:

Cheating and plagiarism are not tolerated. Anyone caught cheating will receive a zero for 50% of their grade which will most likely mean failing the course) and necessary action will be taken. If you need further clarification of what cheating or plagiarism are - please read the descriptions in the Student Rights and Responsibilities or the University of Kentucky Student Bulletin.

Students with Disabilities:

If you have a documented disability that requires academic accommodations, please see me as soon as possible. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (725 Rose Street, Multidisciplinary Science Building; 257-2754; Director: David Beach; email address: dtbeac1@uky.edu) for coordination of campus disability services available to students with disabilities.

Course Policy on Classroom Civility:

Our University is committed to the respect and dignity of all and to value differences among members of our academic community. We will follow this University guideline.

Title IV:

Federal regulation mandates that federal financial aid funds (Title IV) may only be disbursed to students who are actually enrolled and engaged in coursework. This regulation mandates that institutions provide evidence of engagement early in each semester. Failure to provide evidence includes sizeable fees and fines for the university. To comply with this mandate, all instructors of undergraduate and graduate courses (including lab courses), independent studies, online courses, and research credit) will be required to confirm student attendance or engagement in classes during the two-week period following the last day to add a class. More information can be found on the Registrar's website. The page contains a link for FAQs as well.

Schedule

Date	Topic	Instructor	Reading
Aug 22	Drugs and Receptors	Bardo	Chap 1
Aug 29	Synaptic Transmission	Bardo	Chap 3
Sept 5	LABOR DAY- NO CLASS		
Sept 12	Signal Transduction	Prendergast	Selected reading
Sept 19	Acetylcholine	Bardo	Chap 6 (pp 180-190)
Sept 26	Exam 1	Bardo	
Oct 3	Monoamines	Bardo	Chap 6 (pp 160-180)
Oct 10	Amino Acids	Prendergast	Chap 5
Oct 17	Peptides and Atypicals	Barron Bardo	Chap 7 and 8
Oct 24	FALL BREAK		
Oct 31	Exam 2	Bardo	
Nov 7	Cell Electrophysiology	Prendergast	Selected reading
Nov 14	Neuroimaging	Wesley	Selected reading
Nov 21	Neural Basis of Sleep	Whitehurst	Chap 13
Nov 28	Neural Basis of Substance Use	Barron Bardo	Chap 16
Dec 5	Exam 3	Bardo	
Dec 12	STUDENT PRESENTATIONS	Bardo	

Final Presentations: Monday December 12, 1:00 – 3:00

Rubric for faculty grading of oral presentations

Name of presenter:

Content (50 points) – 10 points each total:

- Did the content of the introduction provide a link from the current knowledge of the audience to the content of the presentation – Did it indicate the importance of the topic?
- Did the presentation cover the important concepts, the specific questions including the hypothesis - Did the authors have the background necessary to understand the research?
- Was the literature summarized in a useful way for the audience?
- How were questions from your classmates handled? Did answers reflect a knowledge/or understanding? If you did not know the answer- were you honest?

Organization (25 points) – 5 points each total:

- Was the purpose of the presentation and reason for choice of the area of study (or article) clearly stated?
- Did the Intro lay out a clear outline of the organization of the talk?
- Were the important points presented clearly?
- Were there clear conclusions to the presentation?
- Did the conclusion provide either a sense of closure or of necessary future directions?

Planning and Style (25 points) – 5 points each

- Did the presenter plan the amount of material covered to fit in the necessary time (don't worry – if discussion runs over – that is fine)?
- How effective was the use of the visual aids in helping communicate the info? Could they be seen by everyone in the room?
- Did the body language of the presenter (eye contact, use of gestures, posture) – facilitate or hinder communication?
- How was the pace, were words mispronounced? Did the presenter convey interest and excitement in the topic?
- Did the presenter maintain listener's interests? Were examples used to illustrate concepts? Were the examples useful?

Template for peer- evaluations of oral presentations

Your name: _____

Presenter: _____

1) Did the presenter seem knowledgeable on the material?

2) Was the material presented current and related to the topic?

3) Was the presenter able to handle questions easily?

4) Do you have suggestions for the presenter for future presentations?

5) Any other comments that you think might be relevant.