

# Course Syllabus – Psych 160D / Bio Sci N165:

## Brain Disorders and Behavior



### INSTRUCTOR:

Prof. Alyssa A. Brewer, M.D., Ph.D.

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Office hours: Twice weekly (TBD) and by appointment

Office-hours location: Zoom meeting – see Canvas for access info

### COURSE DESCRIPTION:

This course will explore human behavior from the perspective of brain structure, function, and disease. Weekly topics will include discussion of neurological diseases, neuropsychiatric disorders, and brain lesions affecting such behaviors as sensory perception, motor control, language, memory, and higher cognitive function. Emphasis will be placed on evidence acquired from patient examples, neuroimaging, neuronal recordings and brain stimulation. We will also discuss standard and experimental treatments for many of the conditions and consider medical ethics and policy.

### RECOMMENDED PREREQUISITES:

(PSYCH 7A or PSY BEH 9) and (PSYCH 9A or PSY BEH 11A) and (PSYCH 9B or PSY BEH 11B) or BIO SCI 35 or BIO SCI N110 or COGS 60/PSYCH 60 or COGS 130N/PSYCH 130N

### COURSE CONTENT:

- *Introduction*
  - Unit 1: Neuroanatomy, Neuropathology, Assessment
- *Perceptual Disorders*
  - Unit 2: Visual Disorders
  - Unit 3: Somatosensory & Movement Disorders
  - Unit 4: Auditory & Language Disorders
  - Unit 5: Olfactory & Gustatory Disorders; Synesthesia
- *Neuropsychiatric Disorders*
  - Unit 6: Mood Disorders
  - Unit 7: Frontal Lobe & Thought Disorders
  - Unit 8: Memory Disorders & Dementia

❖ *Please see the course webpages on Canvas for complete syllabus information and course calendar.*

## **COURSE FORMAT:**

### **Overview:**

This course has been designed to be an **online format** for the summer session to complement the in-person format I teach during the academic year. This is a lecture-based course that I have set up so that students can participate according to their own schedules (i.e., it can be taken entirely asynchronously), but I still provide twice-weekly optional synchronous interactions through Zoom discussions. Each week, students will be assigned to watch a set of recorded lecture videos, including various patient examples. Students can complete optional post-video questions to test what they have learned in the videos. Students can also participate in activities (e.g., reading papers, viewing patient videos) on the Canvas Discussion forum related to that week's topics. These online activities will be paired with an optional, one-hour Zoom meeting with me on Tuesday and Thursday afternoons for discussion about that week's lecture topics. Because this is an information-packed course, I have regular quizzes to help students keep on track with learning each unit. There will thus be four quizzes (~1 weekly in the summer) and one final exam. Please see below for additional details.

### **Class Lectures:**

All lecture materials for the course have been posted on the Canvas course page. Lectures have been pre-recorded and posted online via YuJa. The lecture links are posted on the related Canvas page for each unit and are also available through the general YuJa link on the syllabus. ~6 hours of lecture (our normal weekly class time for summer session) will be assigned each week for viewing when students have time and internet access. Some lectures may be slightly longer or shorter than others, but the average time per lecture is 1.5 hours as they have been partly divided by topic. To help you track your understanding of the lecture videos and highlight key learning objectives, each lecture video will have an associated short set of questions (ungraded) available in Canvas.

Lecture slides for each unit are posted as both PDF and PPTX documents on Canvas. A glossary of key terms for each lecture has also been posted with the lectures. Additional notes to help with slide content are included for many of the slides. These notes may provide useful background information, related details, and/or fun facts. *Exam questions will NOT be drawn from the notes section; key info will be duplicated in the glossary of terms.* Slides are designed to be an aid and not the complete source of information on the lectures; viewing the lecture videos and attending Zoom discussions are strongly recommended.

### **Optional Synchronous Zoom Discussions with Dr. Brewer:**

I will hold live Zoom discussion sessions about the lecture content each week on Tuesday and Thursday afternoons from 2 – 3 pm (tentatively). Participation in the Zoom discussions is not required for the course, but is encouraged. The discussions will also be recorded and posted with the YuJa lecture videos for those who aren't able to participate in the discussions directly. The Zoom link to access our discussions will be posted on Canvas once the quarter begins.

### **Reading List:**

There is **NO required textbook** for the course. Class lectures can be supplemented with readings from the *optional* course text, *Human Neuropsychology*, 2<sup>nd</sup> edition by G. Neil Martin, Pearson Publishing. Most students do *not* use the optional textbook. PDF copies of the textbook may be available online at times. If you have questions about textbook access, please contact Dr. Brewer.

### **Office hours:**

Our TA(s) will be holding weekly office hours via Zoom meetings. Please see the Course Staff and Office Hours page on the Canvas course space for TA office hours and contact information.

## **COURSE REQUIREMENTS AND GRADING:**

### **Course Grading Overview:**

Grades will be determined by performance on the quizzes (60%) and final exam (40%). Up to 4% extra credit is also available. No letter grades are assigned to scores until I calculate a final course percentage for each student. Your scores on each assignment are weighted by what percentage that assignment contributed to your final grade. Also note that Canvas does not yet properly handle some extra credit calculations, so I typically calculate final grades outside of Canvas in Excel.

**Quizzes:** There will be 4 quizzes, the lowest score of which will be dropped (i.e., only 3 will count towards the final grade). The 3 best quiz scores will account for a combined 60% of the final grade (20% each). Each quiz will cover course material presented in the lectures in the week(s) of lectures prior to the quiz. Check the Canvas webpage for specific lectures/slides that will be covered on each quiz. Make-up quizzes will only be considered for medical and personal emergencies; please talk to Dr. Brewer BEFORE the exam about the possibility of taking a makeup quiz. The dates during which each quiz will be available online are posted on Canvas. Quizzes will be monitored online using the Respondus lockdown browser system. A practice quiz is available to test out your computer set up with Respondus. If you have problems with Respondus or you do not have access to a webcam or appropriate computer hardware, please talk to Dr. Brewer to work out other options.

**Final Examination:** This exam is mandatory (i.e., cannot be dropped), and will account for 40% of the final grade. The final exam will consist of true/false, matching, and multiple choice questions. The final exam will also be monitored online using the Respondus lockdown browser system. The exam will be available for several days during finals week; specific dates for exam availability will be posted on Canvas.

### **Extra Credit (4%):**

Extra credit is voluntary, but may earn you up to 4 percentage points of extra credit that will be applied to your final grade. There are two options – research paper and Sona research – for extra credit, and you may mix and match points from both options to reach the full 4% of extra credit.

- **OPTION 1: RESEARCH PAPER**

One option for extra credit this quarter is a 4-page research paper, which will be submitted through Canvas. A well-focused, up-to-4-page, double-spaced paper on a topic related to this course will earn up to 4 percentage points of extra credit applied to your final course grade. Because research options for the alternative extra credit plan of participating in research as a subject through Sona Systems may be more limited than normal with the current restrictions on in-person research, you may choose to complete a combination of Sona research credits and research paper to acquire the full 4 points of extra credit. You will receive 1 extra credit percent for each page of the research paper, up to 4 pages. For example, if you only complete 2 credits of Sona research, you may pair that with a 2-page research paper to receive the full 4 extra credit percentage points.

The paper can be a review of recent research on a relevant issue, a proposal for a research project, or a new theoretical proposal. Other approved paper ideas will also be accepted. Most students have written a paper discussing 1-3 published scientific articles related to any brain disorder. Please include a reference section for any papers discussed; however, the bibliography does not need to be extensive (i.e., it would be fine to include 3 references for just the 3 cited papers on which your paper is based).

Maximum margin size is 1 inch, and maximum font size is 12 pt. The paper must be composed of up to 4 pages of text and be double-spaced. References may be listed on a fifth page.

**Papers are due by the same deadline as the final exam** (see Canvas for dates). Late papers will not be accepted. I will grade your papers and post your scores as soon as possible after the final exam (typically 1-3 days).

- **OPTION 2: RESEARCH THROUGH SONA SYSTEMS HUMAN SUBJECTS LAB POOL**

You may earn extra credit by participating in experimental research through the Social Ecology Human Subjects Lab. Participation in research is completely voluntary; there are alternative ways to accrue extra credit for this course. **It is your responsibility to read through the policies on the [HS Lab Student Participation Page](#) and note the deadlines listed on the [SONA login page](#).** To participate in research, login to SONA and view the list of available studies. Studies are listed randomly and change throughout the quarter as they become available. If you agree to participate in an experiment, you form a contract with the researcher to be present at the assigned time and designated place. **If you accrue 2 unexcused no-shows your account will be limited and you will not be able to sign up for additional studies for the remainder of the quarter.** You will earn 1 SONA credit for each hour of research participation. For example, 1 hour of research participation = 1 SONA credit.

You may assign a total of 4 SONA credits to this course. You must allocate each credit earned to the course(s) of your choice. This course is listed in SONA as something like '**SS23\_COGS 160D\_PSYCH 160D\_BIOSCI N165\_Brain Disorders\_Brewer.**' It is your responsibility to check your credit assignments before the stated deadlines on the SONA login page, as accounts will be disabled and no changes, extensions, or exceptions will be made. No credit will be given if a student

does not properly allocate his or her credit. For questions about the HS Lab or SONA please contact [sereslab@uci.edu](mailto:sereslab@uci.edu).

Visit the [Human Subjects Lab website](#) for more details. Participation is available through links on that website or directly on the [UCI Sona Systems page](#). Please note that available research units may fill up over the quarter, so sign up as soon as you can if you are planning to do this option. Sona access closes just before finals week, so be sure to **finish your units and assign your credits to Brain Disorders BEFORE the deadline**. During finals week (*not* before), I will have access to the submitted credits, and will post your scores on Canvas under Assignments (*Extra Credit: Sona Research*). Please note that the maximum number of credits assigned to extra credit will be 4 points; if you assign more Sona credits than that to this class, I will reduce the final score down to 4. Sona usually offers 0.5 credits for signing up. This 0.5 credit will count towards your 4 total credits. See below for the policy statement for human subjects lab and subject compliance.

#### POLICY STATEMENT FOR HUMAN SUBJECTS LAB AND SUBJECT COMPLIANCE

When signing up to participate in research through Sona Systems, as a way to earn extra course credit, please be aware of the Human Subject Lab's policy:

1. Be sure that you meet the eligibility criteria for the research study before signing up.
2. Arrive on time since many studies begin exactly at the scheduled time.
3. If you need to cancel your appointment, do so no later than one hour before your scheduled appointment through the Sona Systems website and by calling the researcher for the study or the lab manager.

Students who do not comply with the above policy statements will not earn the extra credit points.

Moreover, students who fail to follow the above policies twice during a quarter will not be permitted to use the Human Subjects Lab as a means to earn extra course credit for the remainder of that quarter.

Students may still earn extra course credit by completing the alternative option as described in the course syllabus. The alternative option must be comparable to participation in research through the Human Subjects Lab in terms of time, effort, and educational benefit.

#### COURSE EVALUATIONS

Please complete the online course evaluations available during the middle of the quarter and the last week of the course. Your feedback is very useful for improving the course and for my performance evaluations and is much appreciated.

#### ACADEMIC HONESTY POLICY

Academic dishonesty is unacceptable and will not be tolerated. Academic dishonesty includes cheating, forgery, dishonest conduct, plagiarism, and collusion in dishonest activities. Students who are guilty of academic dishonesty will automatically receive a grade of F and will not be permitted to retake the course. UCI's policies on academic dishonesty can be found here:

<https://aisc.uci.edu/students/academic-integrity/index.php>

## **CAMPUS SUPPORT SERVICES**

- Disability Services: <https://dsc.uci.edu/>
- Learning and Academic Resource Center: <https://larc.uci.edu/all-services/>
- Counseling and Emergency Services: <https://counseling.uci.edu/>

\*Please see the Canvas course web space for additional student resources.

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