



## **BIOLOGY 447-01**

**SEMINAR IN NEUROSCIENCE (3 CR)**

**A CAPSTONE COURSE FOR STUDENTS MINORING IN NEUROSCIENCE  
SPRING 2017**

**Instructor:** Dr. Meyer-Bernstein

**Phone:** (843) 953-2298

**Email:** meyerbernsteine@cofc.edu

**Class Location:** BERRY104

**Class Time:** Monday 1-4 pm

**Office Hours:** Mondays and Thurs 8:30-  
9:30am or by appointment

**Office Location:** 6 Green Way, Room 201

*Prerequisite(s):* [BIOL 351](#)/[BIOL 352](#)/[PSYC 351](#)/[PSYC 352](#)

*Co-requisite(s):* [BIOL 448](#)/[PSYC 448](#),

*Co-requisite(s) or Prerequisite(s):* [MATH 250](#) or equivalent course in statistics or permission of the instructor.

### **COURSE OVERVIEW:**

This course is designed to expose you to a wide range of topical research in the field of neuroscience and encourage critical thinking and effective communication skills.

### **REQUIRED READING AND MATERIALS:**

Readings will be handed out in class or available on OAKS.

### **STUDENT LEARNING OUTCOMES**

- Students will demonstrate effective communication skills.
- Students will show evidence that they can apply research methods in neurobiology to address questions related to brain and behavior.
- Students will demonstrate effective critical thinking skills by evaluating primary research in the field of neuroscience.

## **COURSE POLICIES AND PROCEDURES:**

The class will meet for 180 minutes, once per week. **Class attendance is mandatory.** If there is an emergency (i.e. you are in the ER) and you must miss a class, contact me immediately. A make-up assignment will be given. If you miss more than one class, you will fail the course and not complete the minor in Neuroscience. **Attendance will be taken at each class meeting.**

## **Student Assignments and Expectations**

### **25%**

*Writing:* During the course of the semester, you will be asked to write concise descriptions of your ongoing research. This will be in the form of an abstract (10%) and a poster (15%) to be submitted to and presented at the SYNAPSE meeting. Students will develop and present a poster on their research at the SYNAPSE meeting to be held on March 25 at Presbyterian College – Clinton, SC. Keep this day open on your schedule! We will work out transportation and registration as it becomes necessary this semester. Assignments will be graded using the poster and oral presentation rubrics provided to you.

### **20%**

*Student Research Seminars:* The ability to create and deliver a good research seminar will also be a focus of the course. At the beginning of the semester, each student will present a brief seminar of their work. This will not be graded, but will be critiqued using student evaluations and class discussions. Using this feedback, and faculty research presentations as models, each student will present their final Bachelor's Essay project at the end of the semester in a public seminar. This will be graded using the presentation rubric provided to you.

### **20%**

*Journal Club Presentations/Discussions:* A significant portion of this course will involve listening to and learning about topical research in the field of neuroscience. Formal research talks by neuroscientists from MUSC, USC and UNG will be given to the class and open to the public. Prior to the seminar, students enrolled in the class will read and discuss primary literature related to the upcoming presentation in a journal club format. Each student will present one primary research paper and lead discussions for that topic. This component of the course is to make you aware of the experimental methodology, design and data analysis used in neuroscience. It is also meant to afford you the opportunity to further develop your critical thinking and presentation skills.

### **35 %**

*Class Participation/Preparation:* Students will be evaluated on their class participation and preparation throughout the semester. In order to receive full credit, a student must come to class with all materials and assignments thoroughly prepared and must actively engage in thoughtful and intellectual discussions during the class period.

**Grade Assignment:**

Your final grade in the course will be based on a percentage of points based on the College of Charleston grading scheme:

<b><u>% of Total Points</u></b>	<b><u>Grade Earned</u></b>
93% and higher	A
90 – 92%	A-
87 – 89%	B+
83 – 86%	B
80 – 82%	B-
77 – 79%	C+
73 – 76%	C
70 – 72%	C-
67 – 69%	D+
63 – 66%	D
60 – 62%	D-
< 60%	F

## TENTATIVE SCHEDULE:

The following schedule represents a tentative plan for the course.

	Date	In Class	Assignment Due in Class	Assignment for the Week
1	<b>Week 1</b> 16 January	No Class – Martin Luther King holiday observed		Work on Student Research Presentation
2	<b>Week 2</b> 23 January	Course Introduction		Work on Student Research Presentations
3	<b>Week 3</b> 30 January	Student Research Presentations (8 minutes each)	8 minute PowerPoint presentation	
4	<b>Week 4</b> 06 February	Journal Club: <b>Dr. Jim Fadel</b> (shortened class because of Neuropalooza on Friday)	Completed JC summaries	Attend Neuropalooza on Friday Feb 10 from 2-5 pm in SSMB Auditorium (Dr. Fadel is the speaker)
5	<b>Week 5</b> 13 February	SYNAPSE ABSTRACTS due in class.	SYNAPSE abstract 3 copies	<ul style="list-style-type: none"> <li>• Schedule 30 minute individual consultation with Dr. Meyer-Bernstein to finalize abstract if you are applying for travel award.</li> <li>• Submit approved abstract.</li> <li>• Abstract deadline for travel awards is February 17.</li> </ul>
6	<b>Week 6</b> 20 February	TBD		<ul style="list-style-type: none"> <li>• Schedule 30 minute individual consultation with Dr. Meyer-Bernstein to finalize abstract.</li> <li>• Submit approved abstract.</li> <li>• Abstract deadline is Feb 24</li> </ul>
7	<b>Week 7</b> 27 February	<b>Dr. Teubner-Rhodes</b> Post-Doctoral Scholar Otolaryngology, Head & Neck Surgery MUSC	Completed JC summaries & Q	
8	<b>Week 8</b> 06 March	<b>No Class – Spring Break</b>		Work on SYNAPSE poster
9	<b>Week 9</b> 13 March	<b>Dr. Abby Meyer</b> Assistant Professor Psychology Department University of North Georgia	Completed JC summaries & Q	Upload poster on OAKS by midnight on Wednesday, March 15
10	<b>Week 10</b> 20 March	Journal Club <b>Dr. Nimmerjahn</b>	Completed JC summary Completed poster	March 24-25 SYNAPSE at Presbyterian College (Dr. Nimmerjahn is the speaker)
11	27 March	Frontier's in Neuroscience (MUSC) at Galliard Auditorium		All-day event. I expect you to be there at least from 1-4pm. Work on summary assignment due next week.

12	03 April	<b>Dr. Claudia Grillo</b> Research Associate Professor Department of Pharmacology, Physiology & Neuroscience School of Medicine University of South Carolina	<ul style="list-style-type: none"> <li>• Summaries from Frontier's.</li> <li>• Completed JC summaries &amp; Q</li> </ul>	
13	10 April	<b>Daniel Lench, PhD candidate</b> MUSC, Institute of Psychiatry	Completed JC summaries & Q	Work on BE presentations
14 15	17 April 24 April	Student Research Seminars (30 minutes each)  Student Research Seminars (30 minutes each)	BE Presentations	

**Important Dates:**

**Feb 10, Neuropalooza**

**Feb 17, SYNAPSE Abstract Submission Deadline for travel awards**

**Feb 24, SYNAPSE Abstract Final Deadline**

**March 24-25, SYNAPSE at Presbyterian College, Clinton**

**March 27, MUSC Frontier's in Neuroscience Research Day**

**Class agendas**

**Guest speakers:**

- 2:00-2:30 Paper presentation Student #1**
- 2:35-3:05 Paper presentation Student #2**
- 3:10-3:40 Group Discussion lead by Students #1 and #2**
- 3:45-5:00 Research Seminar presentation/Q&A**

**Student PowerPoint presentations should be 30 minutes in length for journal club. Students should be prepared to lead a 30 minute discussion.**

**Student presentations MUST be emailed to me ([meyerbernsteine@cofc.edu](mailto:meyerbernsteine@cofc.edu)) by midnight on the Friday prior to your assigned day.**