



BIOLOGY 447-01

SEMINAR IN NEUROSCIENCE (3 CR)

**A CAPSTONE COURSE FOR STUDENTS MINORING IN NEUROSCIENCE
SPRING 2018**

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 9-10 am 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:

Attendance Policy:

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 Saturday, April 14 at High Point – High Point, NC. 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. You will each present a mini journal club on a paper related to your research topic at the beginning of the semester. Throughout the semester, formal research talks by neuroscientists will be given to the class. 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:

| <u>% of Total Points</u> | <u>Grade Earned</u> |
|---------------------------------|----------------------------|
| 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 |

SNAP Students/Special Accommodations/Athletes:

Students needing special accommodations should see the professor within the first week of class. If there is a student in this class who has a documented disability and has been approved to receive accommodations through the Center for Disability Services/SNAP (Students Needing Access Parity), please come and discuss this with me during my office hours.

College of Charleston Honor Code and Academic Integrity:

Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved.

Incidents where the instructor determines the student's actions are related more to a misunderstanding will be handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student's file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XXF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student's transcript for two years after which the student may petition for the XX to be expunged. The F is permanent. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

Students should be aware that unauthorized collaboration--working together without permission-- is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others' exams, fabricating data, and giving unauthorized assistance.

Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.

Students can find the complete Honor Code and all related processes in the Student Handbook at <http://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php>

Academic Support Services—The Center for Student Learning

The CSL, located on the first floor of the library, offers a wide variety of tutoring and other academic resources that support many courses offered at the College. Services include walk-in tutoring, by appointment tutoring, study strategies appointments, Peer Academic Coaching (PAC), and Supplemental Instruction (SI). All services are described and all lab schedules are posted on the CSL website <http://csl.cofc.edu> , or call 843.953.5635 for information.

TENTATIVE SCHEDULE:

The following schedule represents a tentative plan for the course.

| | Date | In Class | Assignment Due in Class | Assignment for the Week |
|----|-------------|---|--|--|
| 1 | 8 January | Course Introduction | | |
| 2 | 15 January | No Class – Martin Luther King holiday observed | | Work on Student Research Presentations Submit Journal Club article to Dr. MB for approval |
| 3 | 22 January | Student Research Presentations (8 minutes each) | 8 minute PowerPoint presentation | |
| 4 | 29 January | Student presentations: Mini Journal Club | 10 minute PowerPoint presentation | |
| 5 | 5 February | Journal Club: Guest Speaker TBA | Completed JC summaries & Questions | |
| 6 | 12 February | Journal Club: Guest Speaker TBA | Completed JC summaries & Questions | |
| 7 | 19 February | Journal Club: Guest Speaker TBA | Completed JC summaries & Questions | Work on abstract |
| 8 | 26 February | Abstract Workshop | 3 printed copies of SYNAPSE abstract due in class | |
| 9 | 5 March | Journal Club: Guest Speaker TBA | Completed JC summaries & Questions | <ul style="list-style-type: none"> • Schedule 30 minute individual consultation with Dr. Meyer-Bernstein to finalize abstract. • Submit approved abstract. • Abstract deadline: TBA |
| 10 | 12 March | Journal Club: Guest Speaker TBA | Completed JC summaries & Questions | |
| 11 | 19 March | No Class – Spring Break | | Work on SYNAPSE poster |
| 12 | 26 March | SYNAPSE Poster Workshop | Bring electronic copy of your finalized poster to class. We will review and have time to make corrections. | Work on SYNAPSE poster |
| 13 | 2 April | No class: Individual consultations on Monday/Tuesday. | | <ul style="list-style-type: none"> • Schedule 30 minute individual consultation with Dr. Meyer-Bernstein to finalize poster. • Upload poster on OAKS by midnight on Wednesday, April 4. |
| 14 | 9 April | Student Research Seminars (30 minutes each) | BE Presentations | <ul style="list-style-type: none"> • Work on BE presentations • Submit poster for printing <u>by 5 pm on Wed. April 11.</u> • SYNAPSE on Sat, April 14. |
| 15 | 16 April | Student Research Seminars (30 minutes each) | BE Presentations | |

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|----|----------|----------------------------------|--|--|
| 16 | 23 April | MUSC: Frontier's in Neuroscience | | This is an all-day event. I expect you to be there at least from 1-4 pm. |
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Important Dates:

March 7?, SYNAPSE Abstract Submission Deadline for travel awards

March 14?, SYNAPSE Abstract Final Deadline

April 14, SYNAPSE at High Point University, High Point, NC

April 23, MUSC Frontier's in Neuroscience Research Day, Charleston, SC

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) by midnight on the Friday prior to your assigned day.