

# Course Syllabus

[Jump to Today](#)



**Instructor:** Dr. Dayan Knox, office (217Wolf Hall) , Office hours Wednesday from 3:30-4:30 pm

**Teaching Assistant:** Negin Mohammadmirzaei, Office 128 Wolf Hall, office hours 1:30 pm - 2:30 pm in 128 Wolf Hall, email: [neginm@udel.edu](mailto:neginm@udel.edu) (<mailto:neginm@udel.edu>)

**Class time:** T,R 11:00 am – 12:15 pm

**Class space:** 006 Kirkbride Hall

**Goals:** This class is intended for BA majors interested in acquiring general scientific knowledge about what neuroscience has taught us about brain/behavior function. Students will learn fundamental information about the cellular biology and electrophysiological properties of neurons, neuroanatomy, and how the activity of neurons can yield simple motor action and complex behavioral/psychological functions such as learning and motivation.

**Meeting Times:** Class meets every Tuesday and Thursday from 11:00 am – 12:15 pm from August 27<sup>th</sup> to December 5<sup>th</sup>. This means we have a total of about 26 meeting times for this class. Each class will be divided into three sections; a) Quiz for 10 minutes, b) lecture and class presentation for 30 - 45 minutes, c) 10 - 15 minutes for class presentation that will occur in groups. If time permits we will have 5-10 minutes review of material covered in class. On scheduled days we will also have, 'break-out' sessions. For these sessions, instead of lecture, students will sit in groups and discuss topics that are unclear. Myself and Anna will address questions.

## Course Grade:

Summary: A total of 100 points can be obtained in this class. In addition 5 additional extra credit points can be earned. Points can be earned as follows

1. A) Class Discussion (5 points): This is a measure of the student's activity in the classroom. Certain posts made on the blog on Canvas may also count as class discussion. Points will be assigned to students based on questions raised and answered, answers refuted, and points clarified. Points will be assigned at the end of class. For each awardable comment a student makes, 0.25 points will be awarded. This is separate from Class presentations.

30. B) Quiz (30 points): These will be five multiple choice questions given at the start of every class and will be based on the material covered in the previous class. The only exception to this is the first class. Each quiz is worth 5 points with each question being worth 1 point. The total points awarded for all quizzes will be scaled to yield 30 points. For example, if the total points for quizzes come up to 100, and a student gets 100, this score will be scaled to yield a total score of 30. These quizzes will be done using iClicker so please purchase your iClicker and be prepared to use them. The frequency for this class is AB. Also, the quiz will alternate between individual performance and performance in groups.

1. C) Examinations (50 points): There will be three examinations: Exam I, II, and a final exam. Exams will be a combination of multiple choice, fill in the blanks, and short answer questions based on material presented in class and covered in the book. Exams I and II will be worth 10 points each and the final exam will be worth 30 points. Each exam will only test information about topics covered in the class thus far without overlap. Thus, Exam II will not contain any material covered in Exam I. However, the final exam will be inclusive of all material covered in the class.

1. D) Class Presentations (15 points): Students will form groups of two or three and work on group presentations in class, for class. These presentations will require students to lead a 5 minute discussion on a number of topics relating to brain and behavior. Students not presenting can ask questions about the presentation. Selection of the presenting group will be determined on the day of class itself. While there will be allotted class time for preparation of presentations, it is up to the group if they want to prepare for class presentations outside of class. Topics for presentations are contained in the Syllabus. At first a request for volunteer presentations will be made. If there are no volunteers, a group will be selected to perform the presentation. Remember, in order to obtain five points the selected group **MUST** do the class presentation. It is expected that every group will present three times.

Extra Credit Opportunities (5 points): This will be given to particularly insightful comments during class or on the Canvas discussion board. Allocation of these extra credit points will be determined by the Professor. Also, the top 10 scorers in every exam will be allocated an extra credit point. Keep in mind a student can only get a maximum of 5 points.

Grading Scale: The course grade will be assigned according to the scale indicated below:

A+      97 - 100

A        93 - 96

A-      90 - 92

B+	87 - 89
B	83 - 86
B-	80 - 82
C+	77 - 79
C	73 - 76
C-	70 - 72
D+	67 - 69
D	63 - 66
D-	60 - 62
E+	57 - 59
E	53 - 56
E-	50 - 53
F	< 50

### **Groups**

On the first day of class students will form into groups of 3-4 students and give their group a name. These names will be reported to the TA, Negin Mohammadmirzaei. Students will do presentations as a group and on alternate days take quizzes as a group. Students will have the option of leaving/joining groups, but must seek permission from the instructor and consensus from respective groups.

### **Textbook**

Foundations of Behavioral Neuroscience, 9<sup>th</sup> edition, Neil Carlson.

## Course Outline

08/27/19, Class 1

- Quiz 1
- Material read - Chapter 2
- Lecture 1 – Introduction to class and historical perspectives of Behavioral Neuroscience
- Presentation A – What is the difference between Psychology and Neuroscience?

### Modules 1: Structure and function of cells in the brain

08/29/19, Class 2

- Quiz 2
- Material read - Chapter 2
- Lecture 2 – Cell types in the brain: Anatomy of neurons and glia
- Presentation B – Why do you think it was so difficult for early philosophers to agree that the brain mediates psychological function?

-

09/03/19, Class 3

- Quiz 3
- Material read - Chapter 2
- Lecture 3 – Generation of the action potential I
- Presentation C – Neurons have a very distinctive shape. Give a reason why you think neurons have the kind of structure they have

09/05/19, Class 4

- Quiz 4
- Material read - Chapter 2
- Lecture 4: Generation of the action potential II and functions of glia
- Presentation D – Are there any advantages to having current conducted by ions, instead of electrons, in neurons?

### Module 2: Psychopharmacology

09/10/19, Class 5

- Class cancelled

09/12/19, Class 6

- Quiz 5
- Material read – Chapter 4
- Lecture 5 – Neurotransmitters – Action, synthesis, reuptake
- Presentation E – Why do you think there are so many different types of neurotransmitters?

09/17/19, Class 7

- Quiz 7
- Material read - Chapter 4
- Lecture 6 – Psychopharmacology and Signal transduction
- Presentation F - Do receptors stay in the membrane indefinitely? If not, what do you think happens to these receptors?

09/19/19, Class 8

- Quiz 8
- Material read – Chapter 4
- Lecture 7 – Actions of Drugs I
- Presentation G – Why do you think humans use drugs? Presented by Group 2

-

09/24/19, Class 9

- Quiz 9
- Material read – Chapter 4
- Lecture 8 – Actions of Drugs II
- Presentation H – Why are some drugs so habit forming and other drugs so difficult to take? Do you think it is ethical to make drugs that are useful habit forming? Presentation is done by Group A

09/26/19, Class 10

- Mock exam 1 followed by review or individual one on one sessions
- Break out session 1: Form into your respective groups and discuss challenging material in the course. Your questions will be answered in a group setting

10/01/19, Class 11

- Exam 1

-

## Module 3: Neuroanatomy

10/03/19, Class 12

- Review of Exam 1
- Material read – Chapter 3
- Lecture 9 – Structure of the nervous system 1
- Presentation I – Why do you think damage to the spinal cord results in such a profound loss in function, but damage to the brain can leave intact so much psychological, motor, and sensory function

10/08/19, Class 13

- Quiz 10
- Material read - Chapter 3
- Lecture 10– Structure of the nervous system 2
- Presentation J – Why do you think clusters of neurons in the central nervous system and in the peripheral nervous system look so different?

10/10/19, Class 14

- Quiz 11
- Material read - Chapter 3
- Lecture 11 – Structure of the nervous system 3
- Presentation K – Humans have varying types of brains with different weights, and sizes and structure of the gyri and sulci. Do you think these changes contribute to differences in psychological function in humans?

## Module 4: Sensory perception

10/15/19, Class 15

- Quiz 12
- Material read – Chapter 6
- Lecture 12 – Vision I
- Presentation L - Why do you think clusters of neurons in the central nervous system and in the peripheral nervous system look so different?

10/17/19, Class 16

- Quiz 13

- Material read - Chapter 6
- Lecture 13 – Vision II
- Presentation M - Open. Three minute presentations from any number of groups with 2 minutes for discussion

10/22/19, Class 17

- Quiz 14
- Material read - Chapter 7
- Lecture 14 – Auditory perception
- Presentation N - Describe some advantages and disadvantages of having photoreceptors as the last layer to receive light in the retina

10/24/19, Class 18

- Mock exam and exam review
- Break out session 2: Form into your respective groups and discuss challenging material in the course. Your questions will be answered in a group setting

10/29/19, Class 19

- Exam II

Module 5: Psychological function mediated by neurobiological activity.

10/31/19, Class 20

- Review of exam II
- Material read – Chapter 8
- Lecture 16 – Sleep and Biological Rhythms
- Presentation O - Narcolepsy

11/05/19, Class 21

- Quiz 17
- Material read - Chapter 15
- Lecture 18 –Emotions
- Presentation P – How many different types of emotions are there?

11/09/19, Class 22

- Quiz 18
- Material read - Chapter 15
- Lecture 20 – Emotional learning and memory
- Presentation S

11/19/19, Class 23

- Quiz 19
- Material read - Chapter 16
- Lecture 20 – Habit formation
- Presentation Q

11/21/19, Class 24

- Quiz 20
- Material read - Chapter 14
- Lecture 20 – Neurological Disorders
- Presentation U

Thanksgiving Break

11/25/19 – 11/29/19

12/03/19, Class 25

- Material read – Chapter 15
- Lecture 22 – Cognitive Disorders
- Presentation V
- Optional material review

12/05/19, Class 26

- Mock Final exam
- Break out session 3: Form into your respective groups and discuss challenging material in the course.  
Your questions will be answered in a group setting

Final Exam



TBD

### **Attendance:**

Attendance is not required for this class but is STRONGLY encouraged. Anything discussed in class may be included on an exam, even if that information is not found in the textbook or online resources. Thus, it is in everyone's best interest to attend. If you miss class, you can get the outline from the PowerPoint on Canvas, and/or obtain notes from a classmate.

### **Office hours:**

Office hours are opportunities for students to clarify concepts that are unclear or address questions concerning the assignments, and are not meant to find out what material was presented in a class that the student may have missed.

### **Grade Appeals:**

If, after receiving an exam, quiz, or critique back during class, you think a mistake has been made in the grading of your exam, please do not ask about this during class. Write/type your questions/concerns, and provide reference to specific pages from the book to support your concern, and turn these questions into me at the end of the class period or via email. You will receive a response, and any grade adjustment necessary, within one week. THIS IS THE ONLY WAY that your concerns will be addressed. ONLY written questions and comments THAT YOU SUPPORT will be evaluated.

### **Academic Dishonesty/Plagiarism/Cheating:**

We encourage students to work and study together whenever possible. If you cheat on ANY assignment (even extra credit), you will receive a grade of F (Failing) for the course. Plagiarism is when you represent someone else's ideas or words as your own and is considered as cheating. Please avoid academic dishonesty at all costs

### **Misconduct in class or on written components of the class**

Obscenity is not tolerated in class. Every swear word you say in class will result in the loss of 10 points. The same applies for exams. You will lose 10 points for every obscenity written on an exam. It is up to the instructor's discretion to judge if a swear word was incidental, by accident, or intentional. Swear words that are uttered by accident and/or incidental (in the opinion of the instructor) will not be penalized. If you are being disruptive in class I will ask you to leave. If you do not leave I will have to call campus safety/police to remove you. Please, let's not let things escalate to this level.

## Student Disabilities:

Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD). SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.






## Students' Rights and Responsibilities:

Please refer to the following web site for a complete listing of all student rights and responsibilities

## NOTE:

The course syllabus provides a general plan for the course. We are committed to following the syllabus but there is no guarantee that we will. Altering the syllabus may also mean changing the nature or timing of exams/assignments. By continuing in the course after reading the syllabus, you are indicating that you accept the terms of the syllabus.

## Course Summary:

Date	Details	
Tue Sep 10, 2019	 <a href="https://udel.instructure.com/calendar?event_id=2566675&amp;include_contexts=course_1474777">Class cancelled (https://udel.instructure.com/calendar?event_id=2566675&amp;include_contexts=course_1474777)</a>	11am to 12:15pm
Thu Sep 19, 2019	 <a href="https://udel.instructure.com/calendar?event_id=2568048&amp;include_contexts=course_1474777">Group 2 doing the Presentation (https://udel.instructure.com/calendar?event_id=2568048&amp;include_contexts=course_1474777)</a>	11am to 12:15pm
	 <a href="https://udel.instructure.com/courses/1474777/assignments/7344820">Assessment Quiz 8-27-19 (https://udel.instructure.com/courses/1474777/assignments/7344820)</a>	
	 <a href="https://udel.instructure.com/courses/1474777/assignments/7344839">Quiz 1 8-29-19 (https://udel.instructure.com/courses/1474777/assignments/7344839)</a>	
	 <a href="https://udel.instructure.com/courses/1474777/assignments/7344838">Quiz 2 9-3-19 (https://udel.instructure.com/courses/1474777/assignments/7344838)</a>	