Course Syllabus

Edit

# Brain & Behavior

## PSY 2710 -090 & 290

## Fall 2023

### Instructor

**Instructor**
Ali Froehlich, PhD
**About Ali**
**Contact Ali**

**Office Hours:** If you would like to meet with me, please send a Canvas message to schedule a time. I love having the opportunity to meet students.

### When & Where

**Course website**: **https://utah.instructure.com/courses/906047**
(I recommend bookmarking this page in your web browser for easy access throughout the semester.)

This is a fully online course. There is no requirement to meet in person nor are you required to log in to the website at any particular time. However, to be successful in this course, it is important to participate weekly at a minimum and at times more than once per week.

### Course Materials

Our course is enrolled in the Campus Store's **Inclusive Access program (https://www.campusstore.utah.edu/inclusiveaccess/)** . This means that you will have automatic access to course text in an electronic form through Canvas at a reduced cost, and the charge for the course text will automatically be added to your tuition bill as a course fee. You do not need to do anything for this to happen.

- *An Introduction to Brain and Behavior*, 7th edition,
  by Kolb, Whishaw, and Teskey

Within each weekly guide, you will find a link to the e-text so that you can read the assigned chapter for that week. Another option is to select Bookshelf from the course-level navigation menu.

If you prefer to purchase the course text yourself, you can opt out of the program via the **Inclusive Access program portal (https://portal.verba.io/utah/login)** up until the add/drop day. If you would like to purchase a printed "loose leaf" copy of the text (in addition to Inclusive Access), inquire at the Campus Store or check with me.

Automatic access is provided to all students for the first couple of weeks into the semester. If you opt out of the Inclusive Access program, you will need to purchase your own materials before automatic access to everyone is discontinued.

Finally, if you are able to find a copy of the 6th edition of the text, you are welcome to use that. It will work just as well.

## Time Commitment

Please note that this is a 3 credit course. According to **U of U policy 6-100-III-B (http://regulations.utah.edu/academics/6-100.php)** , you should expect to allocate about 9 hours of your time per week on this course.

## Course Overview

PSY 2710 is designed to be a general survey of the biological foundations of behavior, with an emphasis on the central nervous system. The objectives of the course are: to provide a survey of nervous system structure, organization, function, and development; and to introduce the neural bases of perception, learning, cognition, and neurological and psychiatric diseases.

## Course Outcomes

By the end of this course, you will be able to...

- Identify and label the major anatomical landmarks of the central nervous system, the types and components of nervous system cells, and the major sensory and motor pathways of the nervous system.
- Describe the electrical and chemical basis of neural information processing and transmission, including the electrical signaling properties of neurons, and synaptic structure and function.
- Discuss the functional neuroanatomy of the human visual, auditory, somatosensory, and motor systems; the role of essential structures in the functioning of those systems; and list behavioral syndromes associated with damage to each.
- Compare and contrast different techniques for studying the nervous system in humans and animals.
- Identify and explain the roles of the essential neural structures involved in the guidance and control of motivation, emotions, and regulatory behavior.
- Describe the neuroanatomical basis of complex cognitive processes such as attentional control, memory, and long-term planning.
- Understand scientific reasoning and problem solving, including effective research methods. Be able to use this reasoning to understand and interpret research involving psychological phenomena.

This course also fulfills, in part, the **learning outcomes set for the bachelor's degree in Psychology (https://psych.utah.edu/undergraduate/)** .

## Course Organization

All of the information you will need for each week will be located within the Weekly Guides, which you can access from the Home page. Each week, be sure to locate and open that week's guide to get a summary of the week's events and a detailed list of things to do.

Want to see a big picture of all of the course topics and activities together? Download a copy of the **Brain & Behavior Fall 2023 schedule**. I have this printed off and hung up in my office so that I can keep track as the semester progresses.

### Learning Content & Application Activities

Each weekly module will list a text reading to complete and video lectures to watch based on the text reading for that week. Also, most weeks will list one or more application activities to engage in to help promote learning of the material.

## Announcements & Discussions

I will use the Announcements board to communicate unexpected information as it comes up. Please be sure to set up your Canvas notifications to be notified when a new Announcement is made. You will be held responsible for any information posted there.

The Discussions area is a place where we can interact as a class and where you all as students can share your ideas with each other. We will have regular class discussions that will guide you in applying (and for you to see how others apply) certain topics we are learning about. The Discussions area is a wonderful way for you to be connected with the rest of the class, which enhances learning.

## Grading

Links for assignments due each week will be located within the guide for that week.

**Due Dates and Late Policy**

Due dates, unless otherwise indicated, will fall on Sundays at 11:59pm.

Application Activities (Research in Action activities, Neural Mal/Function Paragraph writing assignments, and Quizzes) have due dates that are suggestions for staying on track. You may still complete these activities after their due dates (up until the last day of the semester) for full credit.

If you anticipate missing the due date for the end-of-semester Neural Mal/Function Project, please reach out to me so that we can work things out on a case by case basis.

**Grading Scale**

Each point is equivalent to 1% of your final grade.

A 100-93| A- 92-90| B+ 89-87| B 86-83| B- 82-80| C+ 79-77| C 76-73| C- 72-70| D+ 69-67| D 66-63| D- 62-60| E below 60

### Neural Mal/Function Project and Paragraphs (70 pts total)

This project will allow you to consider the course material on a weekly basis in an analytical and creative way. You will choose a neural function or malfunction topic from a list provided to base the project on.

**Neural Mal/Function Paragraphs**

(10 x 5 pts each = 50 points)

Each week you will research and write 1-2 concise paragraphs about how that week's textbook chapter information relates to your neural function or malfunction topic of interest. You will be required

to include 2 citations in each week's writing assignment. At least 1 of the 2 citations must be from a primary source that is not directly from the textbook (i.e., citation of a relevant empirical research article or review article).
The other citation can be from a secondary source (i.e., webpage or science communication article that explains a topic).

**Neural Mal/Function Project**

(20 points)

Over the course of the semester the individual weekly paragraphs will accumulate into a paper that fully relates each week's chapter topic and your overall understanding of our brain and behavior. You'll be asked to put an edited version of a paper that compiles each week's writing assignment together into one document and is edited for organization and flow. This will be turned in at the end of the semester as a final paper.

## Quizzes (30 pts total)

(5 x 6 pts each = 30 points)

There will be six multiple-choice quizzes, about one every other week.

Quizzes will mostly cover the material from the previous two chapters but will also include at least some questions from earlier chapters. Quizzes are open book and open material, but they are timed. Once you begin a quiz, you will be locked out of it at the end of that time, so do be sure to prepare for the quizzes *before* beginning them. You will not have time to look up the material during the quiz if you have not prepared for it.

Good news is that you can retake a quiz as many times as you like. Do note that each time the questions will change. The highest score will be applied to your final grade.

You should complete a quiz in the week it is assigned (by its due date) in order to stay on track in the course and not fall behind. However, quizzes will remain available until the end of the semester so that you can retake them, and there will be no penalty for completing a quiz late.

## Group Discussions

I have created individual discussion boards for neural mis/function project topics. These discussion boards are optional, but I encourage you to engage with other students to learn more about your topic of interest. Check the discussion board for your topic out!

## Extra Credit

You can earn extra credit towards your final grade in a few ways. One is by participating in experiments run by the psychology department. This is a wonderful way to see what the research process is all about from the participant's point-of-view. You may earn 1 extra credit point for each hour of participation, *up to 3 points max*. Go to the **Department of Psychology's Participant Pool**

**website (https://psych.utah.edu/research/)** for more information. All research participation must be completed by the last day of classes.

You may also receive 2 points of extra credit by producing some sort of multi-media expression of your
Cumulative In-Class Research and Writing assignment. This could be a 3-minute Tik-Tok style explainer video, a YouTube style science education video (5 min), a visual art piece (of any type) with a short, written-description and title, a piece of music or poem with a short, written description and title, a comic book/strip, or any other multi-media expression of your topic (discuss with me).

Finally, if you are able to answer another student's question in the **Course Questions discussion board** before I am able to get to it, and if your answer is of high quality, you will earn 1/2 point of extra credit for each question answered in this way.

## Student Resources & Support

### Students with Disabilities

I strive to make online course content and materials accessible to everyone. If you find it difficult to access this course or any of its content, please let me know so that I can make improvements for everyone.

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the **Center for Disability & Access (http://disability.utah.edu/)**, 162 Olpin Union Building, 801-581-5020. CDA will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability & Access.

I am committed not only to the letter but also the spirit of the ADA. If you qualify for accommodations in any aspect of the course, *I encourage you to use them, starting with the first class*. Please reach out to me or the Center for Disability & Access directly as soon as possible so that we can make arrangements.

### Safety Statement

The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit **safeu.utah.edu (http://safeu.utah.edu/)**.

### Inclusivity Statement

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status, and other unique identities. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

## Other Student Support Resources

- **American Indian Resource Center (https://diversity.utah.edu/airc/)**
- **Black Cultural Center (https://diversity.utah.edu/bcc/)**
- **Campus Accessibility (https://accessibility.utah.edu/)**
- **Campus Connect (https://getinvolved.utah.edu/)**
- **Career & Professional Development Center (https://careers.utah.edu/)**
- **Center for Childcare & Family Resources (https://childcare.utah.edu/)**
  **(https://childcare.utah.edu/)**
- **Center for Equity & Student Belonging (https://diversity.utah.edu/cesb/)**
- **(https://childcare.utah.edu/) Center for Student Wellness (https://wellness.utah.edu/)**
- **Dream Center (for undocumented students) (https://dream.utah.edu/)**
- **English Language Institute (https://continue.utah.edu/eli)**
- **Learning Center (https://learningcenter.utah.edu/)**
- **LGBTQ+ Resource Center (https://lgbt.utah.edu/)**
- **Office of Equal Opportunity and Affirmative Action (including sexual misconduct)**
  **(https://oeo.utah.edu/)**
- **SafeUT (https://safeut.org/)**
- **Student Health Center (https://studenthealth.utah.edu/)**
- **Student Success Coaches (https://ssa.utah.edu/)**
- **Student Support Services (TRIO) (https://trio.utah.edu/)**
- **Transfer Scholars Program (https://diversity.utah.edu/cesb/transfer/)**
- **University Counseling Center (https://counselingcenter.utah.edu/)**
- **University Writing Center (https://writingcenter.utah.edu/)**
- **Utah Neurodiversity Workforce Program (https://unwp.utah.edu/)**
- **Veterans Support Center (https://veteranscenter.utah.edu/)**
- **Women's Resource Center (https://womenscenter.utah.edu/)**
- **You@Utah (https://you.utah.edu/)**

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact a Student Success Advocate for support. You can find more information on the **Basic Needs Collective website (https://basicneeds.utah.edu/)** .

**Additional Campus Resources (https://cte.utah.edu/instructor-education/related-resources/)**

| WEEK | TOPIC/ ASSIGNMENTS | DUE DATE |
|---|---|---|
| **WEEK 0** | **START HERE** | |
| *Learning Content* | | |
| *Activities* | Introductions discussion (due end of Wk 2)<br>Syllabus quiz | Sept 3 |
| **WEEK 1: AUG 21 - 27** | **ORIGINS OF BRAIN & BEHAVIOR** | |
| *Learning Content* | Chapter 1 | |
| *Activities & Assignments* | Neural Mal/Function Paragraph Ch 1 | Aug 27 |
| **WEEK 2: AUG 28 - SEPT 3** | **NERVOUS SYSTEM STRUCTURE & FUNCTION** | |
| *Learning Content* | Chapter 2 | |
| *Activities & Assignments* | Neural Mal/Function Paragraph Ch 2<br>Quiz 1 | Sept 3<br>Sept 3 |
| **WEEK 3: SEPT 4 - 10** | **NERVOUS SYSTEM FUNCTIONAL UNITS** | |
| *Learning Content* | Chapter 3 | |
| *Activities & Assignments* | Neural Mal/Function Paragraph Ch 3 | Sept 10 |
| **WEEK 4: SEPT 11 - 17** | **NEURAL ELECTRICAL SIGNALING** | |
| *Learning Content* | Chapter 4 | |
| *Activities & Assignments* | Neural Mal/Function Paragraph Ch 4<br>Quiz 2 | Sept 17<br>Sept 17 |
| **WEEK 5: SEPT 18 - 24** | **HOW NEURONS COMMUNICATE & ADAPT** | |
| *Learning Content* | Chapter 5 | |
| *Activities & Assignments* | Neural Mal/Function Paragraph Ch 5 | Sept 24 |
| **WEEK 6: SEPT 25 - OCT 1** | **NEUROPHARMACOLOGY, PART 1** | |
| *Learning Content* | Chapter 6.1 & 6.2 | |
| *Activities & Assignments* | | |
| **WEEK 7: OCT 2 – 8** | **NEUROPHARMACOLOGY, PART 2** | |
| *Learning Content* | Chapter 6.3 & 6.4 | |
| *Activities & Assignments* | Neural Mal/Function Paragraph Ch 6<br>Quiz 3 | Oct 8<br>Oct 8 |
| **WEEK 8: OCT 9 - 15** | **FALL BREAK** | |
| | | |

| | | |
|---|---|---|
| **WEEK 9: OCT 16 – 22** | **NEUROSCIENCE METHODS, PART 1** | |
| *Learning Content* | Chapter 7.1 & 7.2 | |
| *Activities & Assignments* | | |
| **WEEK 10: OCT 23 - 29** | **NEUROSCIENCE METHODS, PART 2** | |
| *Learning Content* | Chapter 7.3 – 7.8 | |
| *Activities & Assignments* | Neural Mal/Function Paragraph Ch 7 | Oct 29 |
| **WEEK 11: OCT 30 - NOV 5** | **VISION AND SENSATION, PART 1** | |
| *Learning Content* | Chapter 9 | |
| *Activities & Assignments* | | |
| **WEEK 12: NOV 6 - 12** | **VISION AND SENSATION, PART 2** | |
| *Learning Content* | Chapters 10 & 11 | |
| *Activities & Assignments* | Neural Mal/Function Paragraph Ch 9,10,11<br>Quiz 4 | Nov 12<br>Nov 12 |
| **WEEK 13: NOV 13 - 19** | **SLEEP** | |
| *Learning Content* | Chapter 13 | |
| *Activities & Assignments* | Neural Mal/Function Paragraph Ch 13 | Nov 19 |
| **WEEK 14: NOV 20 - 26** | **LEARNING & MEMORY, PART 1** | |
| *Learning Content* | Chapter 14.1 - 14.3 | |
| *Activities & Assignments* | | |
| **WEEK 15: NOV 27 - DEC 3** | **LEARNING & MEMORY, PART 2** | |
| *Learning Content* | Chapter 14.3 & 14.4 | |
| *Activities & Assignments* | Neural Mal/Function Paragraph Ch 14<br>Quiz 5 | Dec 3<br>Dec 3 |
| **WEEK 16: DEC 4 - 10** | **WRAP UP** | |
| *Learning Content* | | |
| *Activities & Assignments* | Neural Mal/Function Project | Dec 10 |