Master Course Syllabus

Prerequisite(s): ENGL 1010 or ENGH 1005 with a C+ or higher.

Semester: Spring
Course Prefix: PSY
Course Title: Introduction to Brain and Behavior

Year: 2025
Course and Section #: 2710-601
Credits: 3

Course Description

Introduces neuroanatomy and neurophysiology. Includes how neurons communicate to coordinate various functions and behaviors. Addresses research methods used to study the brain and the nervous-system mechanisms to control functions and behaviors.

Course Attributes

This course has the following attributes:

☒ General Education Requirements
☐ Global/Intercultural Graduation Requirements
☐ Writing Enriched Graduation Requirements
☒ Discipline Core Requirements in Program
☒ Elective Core Requirements in Program
☐ Open Elective

Instructor Information

Instructor Name: L.B. ("Barry") Andelin, PsyD

Student Learning Outcomes

- Explain a basic understanding of neuroanatomy and neurophysiology.
- Summarize what is currently known about the nervous-system mechanisms that underlie behavior.
- Apply scientific methods that are used to produce knowledge about the nervous system mechanisms that underlie behavior.
- Define the capabilities of the brain.

Course Materials and Texts

Textbook:

"**An Introduction to Brain and Behavior**" (5th, 6th, or 7th Edition) by Bryan Kolb, Ian Q. Whishaw, & G. Campbell Teskey [ISBN-10: 1429242280 *(5th Edition).*]

There is also a helpful, *free* **App** called "**3D Brain**" (produced by the Cold Spring Harbor Laboratory DNA Learning Center in New York City), which provides diagrams and images of several of the basic structures in the brain, with "overviews," labels, descriptions, functions, case studies, potential related cognitive disorders, outcomes from damage, etc. It also has research reviews and links. You might find it to be a useful tool that can help in the review of the nervous system, and to help connect these concepts to the ways in which drugs affect our brains and behaviors.

Course Requirements

Quizzes
There will be **7 Quizzes**. Each will consist of 20 multiple-choice, true/false, and (possibly) matching, questions, and will cover the material from class discussions, textbook readings, slides, and class activities. Each quiz is worth 40 points. (40 points per Quiz X 7 Quizzes = 280 points total).

Attendance
The University requires that faculty take attendance. I will be taking attendance each class day after the first day of class. Attendance is **worth approximately 20%** of your overall grade.

In-Class Activities
There will be an in-class activity each week, to include a "Jeopardy Challenge", small group work, special assessments, etc. Each is worth 10 points. This will be an in-class activity and details will be in Modules. The answers and questions are designed to be similar to the types of questions you will find on the quizzes and the final. (10 X 14 = 140)

Learning Objectives
For your benefit, I will be posting "Learning Objectives," as they will definitely be an aid in the learning process and in preparation for quizzes and the final. There will typically be two sets of Learning Objectives that correlate with each of the first 8 chapters in the textbook, and contain questions related to the material in the textbook and class discussions. These Learning Objectives will be posted in Modules, and they will be worth varying point amounts, depending on the number of questions.

Movie Review – "Won't You Be My Neighbor" (40 points): This is a wonderful film about Fred Rogers ("Mr. Rogers") and contains much useful and helpful information that can be of benefit to anyone who is in or is training for a career in one of the "helping" professions and will be working with people. After you watch the film, write a 2.5 to 3-page paper, double-spaced, to be submitted on Canvas. Please see a full description in the "Assignments" section. ***Note***: This is the **documentary** film about Mr. Rogers that came out in 2018, and ***not*** the newer Hollywood version.

Brain Lab
Students will have the opportunity to visit UVU's Brain Lab and be able to interact with actual human brains. They will be able to ask questions about the brain and will be able to hold the brains and see first hand the different structures of the brain. They will also be able to respond to questions and instruction from Dr. Homan.

Final Exam
The Final Exam will consist of 80 multiple-choice questions. It will focus on main concepts, rather thansmall details, and will make up approximately 10-12% of your overall course grade. This is a

Departmental Final and you must earn 50% (40 points) on it to pass the Final (and, perhaps to pass the class). (Please know that it is definitely do-able. All Brain & Behavior students have passed it in the last 4 years+)

General Description of the Subject Matter of Each Lecture or Discussion

Introduction to Biopsychology
1. Describe neuroscience and biopsychology
2. Overview of definitions for behavior and composition of the brain
3. Outline support for a materialist view of brain and behavior connections as compared to other perspectives

Overview of the Nervous system
1. Overview divisions of the nervous system
2. Orient to anatomical terminology
3. Describe the structure and function of the meninges and ventricular system
4. Identify the function and relative locations of basic neuroanatomy
5. Describe basic stages of neurodevelopment

Cells of the Nervous System
1. Compare the functions of glial cells and neurons
2. Identify neuron morphology
3. Overview basic components of cells
4. Describe protein synthesis
5. Overview some of the known interplay of genetics and behavior

Membrane potentials
1. Describe the properties of membrane potentials in neurons
2. Model electrical signals of the neuronal membrane

Synaptic Transmission
1. Identify the basic structures or features of synapses
2. Model the process of synaptic transmission related to neurotransmitters
3. Compare types of neurotransmitters and receptors
4. Identify neurotransmitter systems in the nervous system

Psychopharmacology & Hormones
1. Define basic terminology used in psychopharmacology
2. Identify the primary steps by which drugs interact with the nervous system to alter behavior
3. Compare types of drugs based of drug effect
4. Identify the general role of hormones on behavior an the nervous system

Methods of Biopsychology
1. Describe the rationale behind experimental designs in biopsychology
2. Differentiate between measurement and manipulation
3. Compare different methods used to explore the interactions between behavior and the nervous system.

GRADING POLICY HERE

Grade Breakdown

A	= 94%+	A- =	90% - 93.9%
B+ =	87% - 89.9%	B =	84%% - 86.9%
B- =	80% - 83.9%	C+ =	77% - 79.9%
C	= 74%% - 76.9.9%	C- =	70% - 73.9%
D+ =	67% - 69.9%	D =	64% - 66.9%
D- =	60% - 63.9%	F =	Below 60

<u>*Note:*</u> The above assignments, exams, quizzes, etc. are **subject to possible modification as needed** through class discussion and/or notification as the course progresses.

The workload for this class, as with most classes, is typically 3 hours out of class for each hour in class. And, for this class, we will be covering the material in only the first 8 chapters of the textbook.

Make-up Work/Extra Credit
Make-up Work may be provided for excused absences. Please contact me regarding this as the need arises. Extra Credit points may also be made available as needed and will be announced as the semester advances.

Late Assignments/Tests
Since timeliness is an important professional characteristic, and because the flow of the class is dependent on students completing assignments before due dates**, late assignments will receive less than full credit, with the amount to be determined**. *It is only fair that those who put forth enough effort to submit assignments on time receive full credit.* There are **exceptions** to this, of course, under certain circumstances (illness, personal or family crisis); if you feel such a circumstance has happened to you, then please talk to me as soon as possible.

Required Course Syllabus Statements

AI Syllabus Statement

Adapted from Temple University statement on AI in classes.

AI programs are not a replacement for your human creativity, originality, and critical thinking. Writing, thinking, and researching are crafts that you must develop over time to develop your own individual voice. At the same time, you should learn how to use AI and in what instances AI can be helpful to you.

The use of generative AI tools (e.g., ChatGPT, Google Bard, etc.) is permitted in this course for the following activities:

- Brainstorming and refining your ideas.
- Fine tuning your research questions.
- Finding information on your topic.
- Drafting an outline to organize your thoughts; and
- Checking grammar and style.

The use of generative AI tools is not permitted in this course for the following activities:
- Impersonating you in classroom contexts, such as by using the tool to compose discussion board prompts/responses assigned to you or content that you put into a Teams/Canvas chat.
- Completing group work that your group has assigned to you, unless it is mutually agreed upon that you may utilize the tool.
- Writing a draft of a writing assignment.
- Writing entire sentences, paragraphs, or papers to complete class assignments.

You are responsible for the information you submit based on an AI query (for instance, that it does not violate intellectual property laws, or contain misinformation or unethical content). Your use of AI tools must be properly documented and cited in order to stay within university policies on academic honesty. Any student work submitted using AI tools should clearly indicate what work is the student's work and what part is generated by the AI. In such cases, no more than 25% of the student work should be generated by AI. *If*

any part of this is confusing or uncertain, please reach out to me for a conversation before submitting your work.

Version 2: From Dr. George Rudolph

ChatGPT (and similar Tools) in This Course
Use ChatGPT as a learning assistant, not as a crutch. If you use it, cite it at the top of your code. You are responsible to make sure that any code or content does what it is supposed to do and says what you want it to say. Don't accept anything it generates at face value without checking it critically. These days potential employers will expect you to know how to use tools like ChatGPT to generate code, so it is a skill we need to teach you. If it helps you learn some things faster, GREAT because we can spend class time on more interesting topics. Just remember: If you REALLY want to do well, work for it.

Version 3: From the English Dept

Plagiarism

As explained in UVU's Student Rights and Accountabilities page, all students are expected "to maintain absolute integrity and high standards of individual honesty in academic work, and to observe a high standard of conduct for the academic environment." Under such expectations, the UVU English department views plagiarism as a serious offense that does not align with the university's mission and values. Our expectation is that every student's work will be their own and use outside sources in a manner that consistently gives proper credit to those sources through established academic conventions.

Plagiarism has occurred if you:
- Use the exact wording of another author or source in such a manner that it appears to be your own, regardless of the form in which those words originally appeared (e.g., a book, article, lecture, web site, speech, graphic, or any other form such as an AI text generator)
- Paraphrase (put into your own words) another author's wording in a manner where the language and/or syntax is too similar to the original passage and is not properly cited.
- Fail to clearly acknowledge the partial or full authorship of someone else when submitting work.
- Fail to cite or quote textual resources properly, despite the instructor's attempts at educational intervention.
- Fabricate false information that is not corroborated by the actual research used on a writing project.
- Have someone else, paid or otherwise, write your paper or use a paper mill site that contains ready-to-use papers written by other people.
- Generate and submit a paper using artificial intelligence, such as ChatGPT.

While the above actions can happen with intentionality to deceive, plagiarism can also happen accidentally (due to careless resource use, not using proper citation methods, and not understanding the conventions of our chosen style guide). Though intentional vs accidental is often a judgment call for an instructor, it's important to note that accidental plagiarism is still plagiarism—a serious need to address the incident arises regardless. Though the resulting consequences may vary based on the degree of intentionality, any form of plagiarism will be addressed with equal seriousness.

The UVU English department is also keeping up with artificial intelligence chat bots such as ChatGPT. Believing the technology is here to stay, and will only grow, we feel it's important to understand both its strengths and limitations. AI is already proving its usefulness in brainstorming writing ideas, simplifying complex topics, and performing rudimentary research. We believe AI is a tool with potential usefulness for writers. However, AI is also fraught with serious issues. It possesses accuracy problems while simultaneously sounding very confident about its incorrectness. It also frequently generates fake citations and quotations. It cannot understand the complexities and contexts of human communication. Finally, the way AI is trained on other texts poses several ethical questions about copyright and intellectual theft of property (along with uncritically inheriting the biases of the texts it's trained on). Know that UVU does utilize a plagiarism check.

To be clear, copying the exact wording of an AI chatbot is considered plagiarism and means that a student will be held accountable for violating academic integrity. Although many citation guides are already presenting ways to properly use and cite AI, we do not currently believe that citing AI in your work is in line with the standards of academic writing that value knowing the exact author(s) or sources that informed your writing.

If you are suspected of plagiarism, the first step will always be a conversation with your instructor (in-person or via Teams). If the infraction is very minor or clearly unintentional, there may be no sanctions at all. However, a lowered grade and/or the chance to revise the paper may also be possible. In more serious cases, the assignment may receive an automatic zero.

The most serious infractions may lead to your instructor filing an incident report with the Student Conduct office. In this scenario, you have the right to appeal the report with the English department chair. Regardless of the chair's decision, the incident report remains a part of your permanent record. If you are unhappy with the chair's ruling, you then have the right to file an appeal with the Dean. The Dean's decision on the matter will be final.

Required University Syllabus Statements

Accommodations/Students with Disabilities
Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU Accessibility Services at accessibilityservices@uvu.edu or 801-863-8747. Accessibility Services is located on the Orem Campus in BA 110.
Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at DHHservices@uvu.edu

DHH is located on the Orem Campus in BA 112.

Academic Integrity
At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their rights and responsibilities. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in UVU Policy 541: *Student Code of Conduct*.

Equity and Title IX
Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation
UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.
To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a [specially dedicated space](#) for meditation, prayer, reflection, or other forms of religious expression.