Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: https://catalog.uvu.edu/

Semester: Spring
Year: 2025
Course Prefix: PSY
Course and Section #: 2710-004
Course Title: Introduction to Brain & Behavior
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
Other: *Click here to enter text.*

Instructor Information

Instructor Name: James Taylor, PhD

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

"An Introduction to Brain and Behavior" 7th edition by Kolb, Whishaw, & Teskey

Course Requirements

Course Assignments, Assessments, and Grading Policy

Quizzes: Quizzes will be available on Canvas at the start of each module. The questions for the quiz will be based on the learning outcomes for the module. Students will have the opportunity to take each quiz twice, and the final score will be an average of performance on the two attempts. For each quiz attempt, a randomized subset of questions will be pulled from a question bank.

- NOTE: Students may use their personal notes while taking the quizzes, but may NOT reference any other sources for the information including, but not limited to: the textbook, other people's assistance, and websites.

Activities: There will be one or more activities assigned for each module. The activities will give you an opportunity to test your knowledge with more application than available with the quizzes. The style and nature of the activities will vary by module.

Peer-Generated Assessments: These in-class assignments are un-scheduled but will take place at least once per chapter. You will form a group with other students and generate questions regarding the current material.

Sources & Citation Quiz: The will be only one Source & Citation Quiz. This quiz will allow you to practice differentiating between primary and secondary sources, and then identifying correct formatting of an article citation in APA (7^{th} edition) style. It can be taken as frequently as you like, with only the highest score maintained.

Article Summaries: There will be two article summaries due throughout the course. A separate module, "Article Summaries", provides detailed instructions for the assignment, a grading rubric, examples, and several resources to help you complete the assignments.

Briefly, you will be required to find and summarize original scientific articles from a peer-reviewed journal. These summaries will be due at specific dates during the semester and are not associated with the main content modules.

Exams

Exam questions will consist of a mix of question formats including multiple choice, identification, fill-in-the-blank, short answer, and long answer/essay format.

- NOTE: Exams are to be taken as they would be in class. That means that students should not use any resources to assist them in taking the exam including, but not limited to: the textbook, personal notes, other people's assistance, and websites.

Final Exam

The final exam will be a comprehensive exam. The exam will be open for students during finals week on the dates provided in the course schedule.

- The final exam is to be taken just as the other exams: without additional resources
- A grade of less than 50% will result in a failing grade for the class regardless of other performance in the course.

Grading Scale:

Grade	Percent
A	94-100
A-	90-93
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 0-59

Required or Recommended Reading Assignments
Textbook from course materials chapters 1-8
Instructor-generated interactive content on Canvas

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.

Required Course Syllabus Statements

Generative AI

Potential employers may eventually expect many employees to know how to use tools like ChatGPT to generate content, code, and data. You should learn how to use artificial intelligence (AI) and in what instances AI can be helpful to you. Remember, AI programs are not a replacement for your human creativity, originality, and critical thinking. Writing, thinking, and researching are crafts you must develop over time to develop your own voice.

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; don't accept anything AI generates at face value without checking it critically.
- Finding accurate information on your topic.
- Drafting an outline to organize your thoughts.
- 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 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 contains misinformation or unethical content). Your use of AI tools must be appropriately documented and cited 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 get in touch with the course instructor for a conversation before submitting your work. Additional university resources regarding the use of AI are available through theUVU Office of Teaching and Learning.

Using Remote Testing Software

☐ This course does not use remote testing software.

☒ This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may

require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

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.