Course Description

Examines the physiological correlates of behavior. Explores current problems, theories, and techniques in physiological psychology with emphasis on central nervous system mechanisms.

Course Textbook


Course Learning Objectives

Upon completion of this course, students should be able to:

1. Analyze the study of physiological psychology from historical beginnings to current understandings in the field. Relate these discoveries across a timeline of events to detail physiological understanding of the human brain.
2. Discuss and describe the structures, regions, and functions of the human brain and associated sensory systems.
3. Describe the contributions of theorists, research methodology, and advances to the field of biological psychology.
4. Evaluate the relationship between the structure and function of movement to symptoms of disorders such as apraxia, Parkinson’s disease, and Huntington’s disease.
5. Compare and contrast the data and hypotheses about the functions of sleep and normal sleep stages as well as how sleep can be altered abnormally by variables such as sleep deprivation, change in circadian rhythms, effects of exercise and mental activity, and sleep disorders.
6. Evaluate the research on the importance of the brain areas in eating and drinking and the differences between obesity, anorexia nervosa, and bulimia.
7. Compare and contrast the components of emotion and describe the main theories that have been used to explain emotion and the functions, structures and main regions of the brain essential to emotion expression, as well as any cultural differences in expression.
8. Analyze research on etiological and psychopharmacological findings related to Autistic spectrum disorders, Anxiety Disorders, PTSD, OCD, Schizophrenia, Alzheimer’s disorder, ADHD, Major Depressive Disorder, Bipolar Disorder, and addictions. Analyze one neurological or psychological disorder in a research paper using scholarly sources to test a hypothesis related to a physiological aspect of that disorder.

Credits

Upon completion of this course, the students will earn three (3) hours of college credit.

Course Structure

1. **Unit Learning Objectives:** Each unit contains Unit Learning Objectives that specify the measurable skills and knowledge students should gain upon completion of the unit.
2. **Unit Lessons:** Each unit contains a Unit Lesson, which discusses unit material.
3. **Reading Assignments:** Each unit contains Reading Assignments from one or more chapters from the textbook. In addition to the textbook, each unit contains Reading Assignments from MyPsychLab.
4. **Key Terms:** Key Terms are intended to guide students in their course of study. Students should pay particular attention to Key Terms as they represent important concepts within the unit material and reading.
5. **Discussion Boards:** Discussion Boards are a part of all CSU term courses. Information and specifications regarding these assignments are provided in the Academic Policies listed in the Course Menu bar.
6. **Unit Assessment:** This course contains one Unit Assessment to be completed at the end of Unit VII. The assessment is composed of written response questions.
7. **Unit Assignments**: Students are required to submit for grading Unit Assignments in Units I-VI and VIII. Specific information and instructions regarding these assignments are provided below. Grading rubrics are included with the all assignments. Specific information about accessing these rubrics is provided below.

8. **Ask the Professor**: This communication forum provides you with an opportunity to ask your professor general or course content related questions.

9. **Student Break Room**: This communication forum allows for casual conversation with your classmates.

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**CSU Online Library**

There is a virtual library with resources, including both journals and ebooks, to support your program and your course at Columbia Southern University. eResources are accessible 24 hours a day/7 days a week from the CSU Online Library gateway page. To access the library, log into myCSU, and then click on CSU Online Library. Resources are organized in the library by title, but if you click on Research Guides, you will find eResources arranged by subject.

The Library Reference service is available 7 days a week; you can reach CSU’s virtual librarians by emailing thevirtuallibrarian@columbiasouthern.edu. These professional librarians will be glad to help you develop your research plan or to assist you in any way in finding relevant, appropriate, and timely information.

 Librarian responses may occur within minutes or hours, but it will never take more than 24 hours for a librarian to send a response to the email address you have provided. Replies to reference requests may include customized keyword search strategies, links to videos, research guides, screen captures, attachments, a phone call, live screen sharing, and meeting room appointments, as well as other forms of instruction.

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**Unit Assignments**

**Unit I Research Paper Topic**

During Unit VIII, you will submit a Research Paper based upon a topic related to neurological or psychological disorders from Chapters 15-18 of your textbook. The Research Paper will need to be at least 15 pages in length with five scholarly references to support your argument surrounding your topic, answer your research question, or support your points about the need for further research on this topic.

The Research Paper will be submitted in parts throughout Units I, II, IV, VI, and VIII (the final product), to provide appropriate feedback and ensure you are on track with your progress. To see a full overview of the Research Paper, click here to access the PDF.

For your first submission, you will need to choose a topic based upon a neurological or psychological disorder from Chapters 15-18 from which to create research questions. Once you have chosen your topic, you will need to submit an outline of your preliminary research with at least two scholarly references. Within your outline, discuss why you chose your topic, possible subtopics for focus (at least two), possible research questions you could investigate, and the relevance of your two scholarly references to your research. Make sure that your topics, research questions, and references have a biological approach (including psychopharmacology).

Your outline should be at least two pages in length, double spaced, Times New Roman 12 pt font, with appropriate APA style writing.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

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**Unit II PowerPoint Presentation**

Choose a psychotropic drug (antidepressant, anxiolytic (anti-anxiety medication), stimulant, or antipsychotic drug, for example,) and analyze it from a psychopharmalogical point of view. It may also be helpful to visit your local pharmacist or physician to discuss the drug with them, as you may integrate their insights into your presentation. You will need to indicate and perhaps even include a visual to make the following points about your drug:

- Name of drug (brand and generic).
- Classification of drug.
- Approved reasons prescribed (diagnoses or symptoms).
- How the drug is administered (e.g. pill, IV, etc.).
- Neurotransmitter(s) targeted.
• Effect of drug in brain on neurotransmitter, receptors etc.
• Effect on synaptic transmission (e.g. antagonist or agonist)
• Discuss pathways or how it affects neurons in the brain as applicable.
• Visual of how it works in the brain (mechanism of action).
• Insights or comments obtained from a local pharmacist or provider who prescribes this drug.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit III Article Critique

For this assignment, choose a peer-reviewed article to critique related to *physiological psychology and one of the sensory systems in Chapter 6 or 7 using a research method or strategy discussed in this unit or Chapter 5*. Use the databases within the CSU Online Library, or use another source that contains peer-reviewed articles. The purpose of this assignment is for you to practice reviewing articles that contribute to the industry. The authors of these articles are researchers and professionals who have shared or experimented with ideas that demonstrate potential to improve the industry. As a professional in the industry, it is in your best interest to review the literature and trends. This provides you with the opportunity to read about what was successful and how it was accomplished. Plus, it allows you to analyze what was unsuccessful, how you can improve it, or at least how you can avoid repeating the mistakes of others. Use these skills to contribute to research papers and other scholarly writings. If you have not already, hopefully, you will contribute to the industry by publishing an article and sharing with your community of peers.

As you read the article you choose for this assignment, consider the following questions: How could the topic of this article apply to your personal or professional life? How could it apply to an organization you have observed?

The article you choose must meet the following requirements:

- Be peer reviewed
- Relate to the concepts within this course
- Be at least ten pages in length

The assignment that you submit must meet the following requirements:

- Be at least two pages in length.
- Identify the main topic/question.
- Discuss the research method(s) used, its strengths and limitations, as well as the results of your study.
- Critique the article and share your thoughts—what appears to be valid and invalid?
- Include whether or not you agree with the author’s assertions. Why, or why not?

The focus should be on critique of the research methods; however, the topic should coincide with vision, audition, the body senses, and chemical senses from this.

Format your Article Critique using APA style. Use your own words, and include citations and references as needed to avoid plagiarism.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit IV Case Study

Sleep Disorder Case Study

Choose a sleep disorder, and create an original case study based on your disorder. This Case Study should be based on a fictional patient with the sleep issues characterized within your chosen disorder. You should present scholarly discussion(s) to your patient explaining the disorder to them, with appropriate references and citations in APA style to support your points. Also provide your patient with two evidence-based treatments to choose from, and include with references and citations to support them (at least three references required in APA style).

Your Case Study should be a minimum of 400 words, Times New Roman 12 pt. font, with appropriate APA style writing. Should you have any questions about the assignment, contact your professor.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.
Unit IV Literature Review

For your second submission for your Research Paper, you will need to write a Literature Review of your sources (at least three scholarly references) related to your topic that supports your research question (e.g. investigation of the biological basis for ADHD).

Before you submit your Literature Review, you need to make sure that you have the following:

- A topic based upon a neurological or psychological disorder that is biological in nature.
- A specific research question related to your topic.
- At least three scholarly references (It is preferable to have more than three).

If there are aspects of sleep or movement symptoms or these side effects related to your disorder, you may want to include these to link to the topic in this unit.

Within your Literature Review, each scholarly reference should be summarized in one paragraph for a total of three-five paragraphs. Your Literature Review should be double spaced, Times New Roman 12 pt. font, with appropriate APA style writing.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit V PowerPoint Presentation

Choose obesity, binge-eating disorder, anorexia, or bulimia as a topic, and create a PowerPoint Presentation about the disorder from biopsychosocial point of view. Be sure to use scholarly outside references to support your points. Include a biological emphasis regardless of your personal opinion/perspective on etiology, which you can also express within the assignment. Your PowerPoint Presentation will need to include causes (etiology) and treatment options that are evidence-based supported by scholarly references. Be sure and include physiological emphasis in your submission.

Your presentation should be at least fifteen slides, business professional, with appropriate APA style writing. You should have at least one slide displaying your references (not included in the minimum slide count).

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit VI Research Paper Outline

For your third submission toward your Unit VIII Research Paper, you will need to submit a draft of your Research Paper with several components to ensure you are on the right track.

- An outline of your research and the intended direction of your argument.
- At least five scholarly resources you have found that contribute to your topic.
- A brief annotated bibliography of two scholarly resources.
- An abstract outlining your topic and your subsequent findings.

This research draft should be double spaced with Times New Roman 12 pt font, and use appropriate APA style writing. While there is no minimum requirement for your draft, you should be thorough in your research so your professor (or a colleague) could adequately determine your intended research and the direction you are going with your paper.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.

Unit VIII Research Paper

For your final submission, you are to submit the Research Paper you have been working on throughout the course. The Research Paper should be at least 15 pages, double spaced, Times New Roman 12 pt. font, with appropriate APA style writing. The Research Paper must contain a minimum of five scholarly references supporting your argument surrounding your topic, answering your research question(s), and supporting your points about the need for further research on this topic.

Information about accessing the Blackboard Grading Rubric for this assignment is provided below.
APA Guidelines

CSU requires that students use the APA style for papers and projects. Therefore, the APA rules for formatting, quoting, paraphrasing, citing, and listing of sources are to be followed. A document titled “APA Guide” is available for you to download from the APA Guide link, found in the Learning Resources area of the myCSU Student Portal. It may also be accessed from the Student Resources link on the Course Menu. This document includes examples and sample papers and provides links to The CSU Success Center and the CSU Online Library staff.

Blackboard Grading Rubrics

Assignment Rubrics

One or more assignments in this course utilizes a Blackboard Grading Rubric. A rubric is a tool that lists evaluation criteria and can help you organize your efforts to meet the requirements of an assignment. Your professor will use the Blackboard Grading Rubric to assign points and provide feedback for the assignment.

You are encouraged to view the assignment rubric before submitting your work. This will allow you to review the evaluation criteria as you prepare your assignments. You may access the rubric in “My Grades” through the “Tools” button in your course menu. Click the “View Rubric” link to see the evaluation criteria for the assignment. Upon receiving your assignment grade, you may view your grade breakdown and feedback in the rubric.

CSU Grading Rubric for Papers/Projects

The course papers will be graded based on the CSU Grading Rubric for all types of papers, unless otherwise specified within assignment instructions. In addition, all papers will be submitted for electronic evaluation to rule out plagiarism. Course projects will contain project specific grading criteria defined in the project directions. To view the rubric, click the Academic Policies link on the Course Menu, or access it through the CSU Grading Rubric link found in the Learning Resources area of the myCSU Student Portal.

Communication Forums

These are non-graded discussion forums that allow you to communicate with your professor and other students. Participation in these discussion forums is encouraged, but not required. You can access these forums with the buttons in the Course Menu. Instructions for subscribing/unsubscribing to these forums are provided below.

Click here for instructions on how to subscribe/unsubscribe and post to the Communication Forums.

Ask the Professor

This communication forum provides you with an opportunity to ask your professor general or course content questions. Questions may focus on Blackboard locations of online course components, textbook or course content elaboration, additional guidance on assessment requirements, or general advice from other students.

Questions that are specific in nature, such as inquiries regarding assessment/assignment grades or personal accommodation requests, are NOT to be posted on this forum. If you have questions, comments, or concerns of a non-public nature, please feel free to email your professor. Responses to your post will be addressed or emailed by the professor within 48 hours.

Before posting, please ensure that you have read all relevant course documentation, including the syllabus, assessment/assignment instructions, faculty feedback, and other important information.

Student Break Room

This communication forum allows for casual conversation with your classmates. Communication on this forum should always maintain a standard of appropriateness and respect for your fellow classmates. This forum should NOT be used to share assessment answers.
Grading

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<tr>
<td>Discussion Board (8 @ 2%)</td>
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<tr>
<td>Unit Assessment</td>
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<tr>
<td>Research Paper Topic</td>
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<td>PowerPoint Presentations (2 @ 7%)</td>
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<td>Article Critique</td>
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<td>Case Study</td>
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<td>Literature Review</td>
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<td>Research Paper Outline</td>
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<td>Research Paper</td>
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Course Schedule/Checklist *(PLEASE PRINT)*

The following pages contain a printable Course Schedule to assist you through this course. By following this schedule, you will be assured that you will complete the course within the time allotted.
### PSY 4021, Physiological Psychology

#### Course Schedule

By following this schedule, you will be assured that you will complete the course within the time allotted. Please keep this schedule for reference as you progress through your course.

<table>
<thead>
<tr>
<th>Unit I</th>
<th>Introduction, Structure, and Functions of Cells of the Nervous System</th>
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<tbody>
<tr>
<td><strong>Review:</strong></td>
<td>□ Unit Study Guide</td>
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</tbody>
</table>
| **Read:** | □ Chapter 1: Introduction  
□ Chapter 2: Structure and Functions of Cells of the Nervous System  
□ MyPsychLab Modules:  
  o Explore the Concept: The Virtual Brain  
  o Explore the Concept with Virtual Brain: Neural Conduction and Synaptic Transmission |
| **Discuss:** | □ Discussion Board Response: Submit your response to the Discussion Board question by Saturday, Midnight (Central Time) |
| **Submit:** | □ Research Paper Topic by Tuesday, Midnight (Central Time) |
| Notes/Goals: |  |

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<th>Unit II</th>
<th>Structure of the Nervous System and Psychopharmacology</th>
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<tr>
<td><strong>Review:</strong></td>
<td>□ Unit Study Guide</td>
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</table>
| **Read:** | □ Chapter 3: Structure of the Nervous System  
□ Chapter 4: Psychopharmacology  
□ MyPsychLab Modules  
  o Explore the Concept with Virtual Brain: Development of the Nervous System  
  o Explore the Concept with Virtual Brain: Nervous System  
  o Explore the Concept with Virtual Brain: Drug Addiction and Brain Reward Circuits |
| **Discuss:** | □ Discussion Board Response: Submit your response to the Discussion Board question by Saturday, Midnight (Central Time)  
□ Discussion Board Comment: Comment on another student’s Discussion Board response by Tuesday, Midnight (Central Time) |
| **Submit:** | □ PowerPoint Presentation by Tuesday, Midnight (Central Time) |
| Notes/Goals: |  |
## PSY 4021, Physiological Psychology

### Course Schedule

#### Unit III

**Methods and Strategies of Research, Vision, Audition, the Body Senses, and the Chemical Senses**

**Review:**
- Unit Study Guide

**Read:**
- **Chapter 5:** Methods and Strategies of Research
- **Chapter 6:** Vision
- **Chapter 7:** Audition, the Body Senses, and the Chemical Senses
- **MyPsychLab Modules:**
  - Explore the Concept with Virtual Brain: The Visual System
  - Explore the Concept with Virtual Brain: The Mechanisms of Perception

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, Midnight (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, Midnight (Central Time)

**Submit:**
- **Article Critique** by Tuesday, Midnight (Central Time)

**Notes/Goals:**

#### Unit IV

**Control of Movement, Sleep, and Biological Rhythms**

**Review:**
- Unit Study Guide

**Read:**
- **Chapter 8:** Control of Movement
- **Chapter 9:** Sleep and Biological Rhythms
- **MyPsychLab Modules**
  - Explore the Concept with Virtual Brain: Control of Movement by the Brain
  - Explore the Concept with Virtual Brain: Sleep and Dreaming

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, Midnight (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, Midnight (Central Time)

**Submit:**
- **Case Study** by Tuesday, Midnight (Central Time)
- **Literature Review** by Tuesday, Midnight (Central Time)

**Notes/Goals:**
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<th>Reproductive Behavior, Emotion, and Ingestive Behavior</th>
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<tr>
<td><strong>Review:</strong></td>
<td>Unit Study Guide</td>
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<tr>
<td><strong>Read:</strong></td>
<td>Chapter 10: Reproductive Behavior</td>
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<td>Chapter 11: Emotion</td>
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<td>Chapter 12: Ingestive Behavior</td>
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<td>MyPsychLab Modules:</td>
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<td>o Explore the Concept with Virtual Brain: Hormones and Sex</td>
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<td>o Explore the Concept with Virtual Brain: Emotion and Stress</td>
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<td>o Explore the Concept with Virtual Brain: Hunger and Eating</td>
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<td>PowerPoint Presentation by Tuesday, Midnight (Central Time)</td>
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**Notes/Goals:**

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<td>Unit Study Guide</td>
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<tr>
<td><strong>Read:</strong></td>
<td>Chapter 13: Learning and Memory</td>
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<td>Chapter 14: Human Communication</td>
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<td>MyPsychLab Modules:</td>
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<td>o Explore the Concept with Virtual Brain: Learning and Memory</td>
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<td>o Explore the Concept with Virtual Brain: Lateralization and Language</td>
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<td><strong>Submit:</strong></td>
<td>Research Paper Outline by Tuesday, Midnight (Central Time)</td>
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**Notes/Goals:**
## Unit VII
### Neurological Disorders, Schizophrenia, and the Affective Disorders

**Review:**
- Unit Study Guide

**Read:**
- **Chapter 15:** Neurological Disorders
- **Chapter 16:** Schizophrenia and the Affective Disorders
- **MyPsychLab Modules:**
  - Explore the Concept with Virtual Brain: Brain Damage and Neuroplasticity

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, Midnight (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, Midnight (Central Time)

**Submit:**
- **Assessment** by Tuesday, Midnight (Central Time)

### Notes/Goals:

## Unit VIII
### Anxiety Disorders, Autistic Disorder, ADHD, Stress Disorders, and Drug Abuse

**Review:**
- Unit Study Guide

**Read:**
- **Chapter 17:** Anxiety Disorders, Autistic Disorder, Attention-Deficit/Hyperactivity Disorder, and Stress Disorders
- **Chapter 18:** Drug Abuse
- **MyPsychLab Modules:**
  - Explore the Concept with Virtual Brain: Emotion and Stress
  - Explore the Concept with Virtual Brain: Drug Addiction and Brain Reward Circuits

**Discuss:**
- **Discussion Board Response:** Submit your response to the Discussion Board question by Saturday, Midnight (Central Time)
- **Discussion Board Comment:** Comment on another student’s Discussion Board response by Tuesday, Midnight (Central Time)

**Submit:**
- **Research Paper** by Tuesday, Midnight (Central Time)

### Notes/Goals: