Psychology 331: Physiological Psychology

Location: SCIE 109
Loras College
TTH 9:30-10:50

Psychology Program
Spring 2019

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Additional journal articles and materials will be assigned as needed and posted to the course website

Class Website: You will be able to find PDFs of the lectures and discussions posted to the course website

Course Goals and Overview

This course is titled Physiological Psychology, but could also be called behavioral neuroscience, psychobiology, biopsychology, or brain and behavior. By its nature, Physiological Psychology is a very interdisciplinary area and our discussions will include aspects of anatomy, genetics, cell biology, chemistry, physiology, pharmacology, etc. Some background in biology, physiology or microbiology is helpful but not imperative. Physiological psychology and neuroscience-related topics are rapidly developing areas -- many of the questions posed do not yet have answers. This makes study in the area particularly exciting, but at the same time difficult.

Primary Course Objectives

- To gain factual knowledge that includes terms and methodology related to Physiological Psychology.
- To gain a fundamental understanding of principles, ideas, and theories related to Physiological Psychology.
- To apply the course material to psychological and biological issues, such as drug abuse, motor control, emotions, learning, and memory.

Learning Outcomes
● Students will be able to identify biological/neural structures and their associated functions
● Students will be able to apply factual knowledge about the brain to physical and mental functions and abnormalities.
● Students will demonstrate critical thinking about the advancement of physiological psychology and its application to affect, behavior, cognition, and disease.

Course Requirements, Policies and Assignments

**See ASSIGNMENT DETAILS and COURSE INFORMATION for full documentation**

Course information and assignment details are found in the Syllabi Appendices on the Course Onboarding document called Course Information and Assignment Details (with Assignment Rubrics).

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**Digital Storytelling.** As a class, we will create a web-based resource for students and adults to learn about how psychology interfaces with life. My thinking is that this resource will help understand the applications and misapplications of psychology to our lives. Others who are eager to learn about psychology and science should have access to this material for teaching and learning alike. Thus, your objective is to find a topic along the lines of, “The neuroscience of ______”. I’m always impressed by the number of “neuroscience” articles that I stumble across in Forbes, e.g., “The neuroscience of leadership”. When choosing a topic, you should think something along of the lines of, “I don’t think we know enough about the brain to try to make neuro-reductive statements about this complex cognitive phenomenon.” That why for your research you are able to dive into the controversies and complexities of the topic rather than summarize things we seemingly already know. Topics must be approved first - note that almost all topics on neurodegenerative and psychiatric disorders will likely be rejected (you’re welcome to take NEU301 - Neurobiology of Disease in order to explore those topics).
Your story should include a minimum of 10 empirical research articles (that are not just summarized individually, but discusses your topic in context and how the articles interact with each other), 6 multimedia resources and be the equivalent of an about 2000 word essay (excluding References). Your digital story should be created on medium.com (a blog/story-telling website).

**Digital Storytelling Presentation/Conversation.** Psychology conferences typically host symposium sessions, in which researchers construct talks to present their research findings from a recent study or studies. The last few days of class will consist of an academic symposium. During the session, each student will present their digital story that they have developed over the course of the semester. This also includes a five minute presentation overview completed in powerpoint/google slides.

**Reflection Paper.** Students are asked to write a 3 page, double-spaced reflection paper.

**News Updates.** Students will be asked to give a presentation of 2-4 minute each on topics of their choice across the semester. These presentations will give students an opportunity to summarize either a current event or research finding and discuss how it relates to psychology. News update must be given in the form of a google slide presentation. Presentations are due 2 days before the news update so that I can put it in my presentation for your news update.

**Exams.** There will be four exams. The exam questions may include the following question formats: multiple-choice; fill-in-the-blank; matching; true/false; and short-answer sections.

**Engagement**

In-Class Participation/Activities/Discussion/Critical Thinking Journal

Contribution to the Loras Intellectual Community (Out of class engagement)

**Debate**

We will also engage in two debates across the semester (Education and Law). The neuro prefix is becoming more and more popular to the point that almost everything can be enhanced or viewed through neuroscience. However, are we truly able to take research and insight from neuroscience and apply it in real world contexts? In each debate we will look at an area where there are attempts to insert neuroscience and I will ask you to sign up to take a leading role in 1 of the 2 debates. You may sign up to argue for either the affirmative (yes, neuroscience is good and here’s what we know and how to apply it) or the negative (no, neuroscience is not good here, what we know is flawed and incomplete and we cannot apply it yet). There will be approximately a few available slots for each of the positions on each of the debate days. The rest of the class will serve as judges. I’ll ask that each person arguing the affirmative and negative for the day that they’re signed up for find an article. Each group will choose 5 students to each give a 2-3 minute summary/argument. I have created google documents that I will share with your respective groups so that each person can have a unique article. During each debate,
we will switch back and forth between the 5 affirmative and negative position summary/arguments. After those presentations, teams will have 10 minutes to formulate a rebuttal and then each side will be allowed 5 minutes to voice their rebuttal to the judges. Then we will open the forum to questions from the judges before spending the last few minutes seeing where we fall on the issue. You are asked to submit a one page pre-flection before the debates and a one page reflection after the debates on you thoughts on the topics.

**Comprehension Checks.** The check questions may include the following question formats: multiple--choice; fill--in--the--blank; matching; true/false; and short-answer sections. These will be graded on completion.

**Schedule***

**Important Dates**
1/28 – First day of classes
2/1 - Last day to add
3/8 - Registration for Summer Term
3/10 - Daylight Savings Starts
3/29 - Last day to drop with a semester course with W
4/8 - 4/12 - Registration for Fall Term
4/15 - 4/22 - Spring Break
5/10 – Last Day of Class
5/13 -5/16 – Final Exams

View the [checklist at this link](#) and track your semester.

*Tentative schedule subject to change without notice as instructor deems necessary*