Psychology 331: Physiological Psychology

Location: Henn 270
Loras College

Psychology Program

Instructor: Jake Kurczek, PhD
Assistant Professor of Neuroscience and Psychology

Office: Henn 193
Phone: 588-7045
E-mail: jake.kurczek@loras.edu
Office Hours: By appointment


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
Psychology
Physiological Psychology – Instructor: Jake Kurczek, Fall 2017

- 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).

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Portfolio</td>
<td>15</td>
</tr>
<tr>
<td>Portfolio Presentation</td>
<td>2</td>
</tr>
<tr>
<td>Exam 1</td>
<td>12</td>
</tr>
<tr>
<td>Exam 2</td>
<td>16</td>
</tr>
<tr>
<td>Exam 3</td>
<td>16</td>
</tr>
<tr>
<td>Exam 4</td>
<td>16</td>
</tr>
<tr>
<td>Checks</td>
<td>5</td>
</tr>
<tr>
<td>Literature Critique</td>
<td>7</td>
</tr>
<tr>
<td>Reflection Paper</td>
<td>2</td>
</tr>
<tr>
<td>Engagement</td>
<td>10</td>
</tr>
<tr>
<td>News Update</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**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.

**Literature Critique**
One of the most important skills to acquire in any scientific field is the ability to think critically about a given topic. In this course you will be required to find an article from BioArXiv or PsyArXiv that reports on a physiological psychology-related topic. This article as a pre-print should not be in print. In groups, your assignment is to review this article and write a 5-page review.

**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)*

**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**
8/27 – First day of classes
9/3 – Labor Day
9/14 - Last day to drop classes without “W”
10/12-10/14 - Homecoming
10/22-10/23 – Fall Free Days
11/4 - Daylight Savings Ends
11/21-11/23 – Thanksgiving
12/7 – Last Day of Class
12/10-12/13 – Final Exams

View the checklist at this link and track your semester.
*Tentative schedule subject to change without notice as instructor deems necessary