



# Biological Psychology

## Course Details

**Course Designator & Number: MADR 3018**

**Number of Credits: 3**

**Language of Instruction: English**

**Contact Hours: 45**

**Instructor: Ksenija Jovanovic, PhD**

## Course Description

The course is equivalent to PSY 3061. It begins with brief overviews of the structure of the central nervous system, basic principles of nervous conduction and synaptic transmission, neurotransmitter systems, and basic techniques used in biological psychology research. We will then review current knowledge on the biological substrates of a range of behaviors and mental processes, including perception, memory, emotion, and sleep. The course will also examine the biological basis of a variety of neuropsychological disorders and forms of mental illness, including addiction, depression, and anxiety. Finally, the course will take advantage of its location in Madrid to understand biological psychology within a Spanish cultural and scientific context.

## Course Objectives

The course is designed to convey the ways in which current approaches in biological psychology are directed towards better understanding the underlying basis of psychological states and treating mental illness. During the course, you should become comfortable with the basic details of brain function and gain a general understanding of the biology of behavior, mental states, and mental illness. You should also begin to develop the skills to understand techniques and evaluate results of neurobiological and behavioral experiments.

## **Methodology**

The classes are lectureLbased, combined with class discussion, activities, and students' presentations. Student participation is strongly encouraged, and fully expected, throughout the course.

## **Required Reading / Materials**

We will use the textbook Biopsychology by Pinel P.J. & Barnes S.J. 2017; 10th Ed, Publisher: Pearson) or Biopsychology by Pinel, John P.J. 2014; 9th Ed, Publisher: Pearson). In addition to the chapters in the textbook, a small number of supplemental journal articles will be assigned during the course. These articles will be discussed in class.

# Grading

## Grading Rubric

Letter Grade	Score or Percentage	Description
A	93–100	Achievement that is outstanding relative to the level necessary to meet course requirements.
A-	90–92	Achievement that is significantly above the level necessary to meet course requirements.
B+	87–89	
B	83–86	
B-	80–82	Achievement that meets the course requirements in every respect.
C+	77–79	
C	73–76	
C-	70–72	Achievement that is worthy of credit even though it fails to fully meet the course requirements.
D+	67–69	
D	60–66	
F	0–59	Represents failure (or no credit) and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I.

## Summary of How Grades Are Weighted

Assignments	Percentage of Grade
Midterm Exam	30%
Final Exam	30%
Slide show projection	25%
Questions	5%
Quizzes	10%
Total	100%

## Assessment Details

### Exams

There will be two exams: a midterm and a final. Exams will consist of multiple choice and short answers question. Questions will be based on material covered in class and readings. Exam questions are designed to test students understanding of basic terminology and concepts, and their ability to apply these concepts.

### Slide show presentation + questions

Students will work in pairs to prepare a slide show in PowerPoint and present it to the rest of the class. The slide show will summarize a scientific paper in the field of biological psychology. Each student will submit a question about each of the selected papers prior to class.

# Course Content

Schedule is subject to change depending on how quickly we progress through the material.

## Unit 1

Introduction: Overview of syllabus/Key themes

## Unit 2

Anatomy of Nervous system

## Unit 3

Genetics, Evolution, & Behavior

## Unit 4

Neural Conduction/Synaptic Transmission

## Unit 5

Research Methods: Animal versus Human Research

## Unit 6

Sensorimotor control/Spinal cord mechanisms/Motor system overview

## Unit 7

Nervous System damage and recovery

Midterm Exam

## Unit 8

Neuroplasticity/Learning and Memory

## Unit 9

Hunger & Eating

## **Unit 10**

**Sleep & Rhythms**

## **Unit 11**

**Emotion and Social Behavior**

## **Unit 12**

**Affective disorders and Schizophrenia**

## **Unit 13**

**Addiction**

## **Unit 14**

**Final Exam**

# Policies

## Attendance Policy

Regular attendance and punctuality are mandatory in order to earn full marks. Nevertheless, students are allowed ONE UNJUSTIFIED absence. From that one on, each absence will decrease the final grade. Instructor may deny the access to the classroom if the student arrives more than 10 minutes after the class has started. In the case of absences, it is the student's responsibility to find out what information was given in class including any announcements made.

## University of Minnesota Policies & Procedures

Academic integrity is essential to a positive teaching and learning environment. All students enrolled in University courses are expected to complete coursework responsibilities with fairness and honesty. Failure to do so by seeking unfair advantage over others or misrepresenting someone else's work as your own can result in disciplinary action. The University Student Conduct Code defines scholastic dishonesty as follows:

### Scholastic Dishonesty

Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis.

Within this course, a student responsible for scholastic dishonesty can be assigned a penalty up to and including an "F" or "N" for the course. If you have any questions regarding the expectations for a specific assignment or exam, ask.

### Student Conduct

The University of Minnesota has specific policies concerning student conduct. This information can be found [on the Learning Abroad Center website](#).