

Mind, Brain and Behaviour

Spring 2023

Instructor Information

Ulker Isayeva

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Office Hours: By appointment

Class Session

Thursday 15:20 – 17:00 *Extra classes or changes to the schedule will be announced

Textbooks

The Mind's Machine: Foundations of Brain and Behavior
Watson, N.V. & Breedlove, M.S. (2019). Oxford University Press

Discovering Behavioral Neuroscience: An Introduction to Biological Psychology.
Laura A. Freberg (2019). Cengage Learning

Course Description

In this course you will be introduced to the field of cognitive science and biological psychology by studying brain mechanisms and exploring the relationships between the brain, the body, and the mind. This course is designed to make you familiar with the field of behavioral and cognitive neuroscience. We will look at novel methodologies to study brain and behaviour and the latest research in the field. We will also examine psychological, psychiatric, and neurological disorders, and the brain's role in their manifestation and treatment.

Course Objectives

This course is designed to expose students to the biological aspects of behavior. Upon completion of the course, students will recognize and understand the fundamental biological principles that underlie normal and disordered development, behavior, and mental and physical health. Students will be able to apply information from this course to personal and social issues within human behavior and to draw meaningful connections between the course material and the real world.

Assignments

- (1) **Brain Mapping Project:** Map the areas of the brain and describe their functions in a creative project. Prepare a video presenting your project.
- (2) **Response Paper/Presentation:** Find a new research work from Google Scholar regarding some kind of mental disorder and neuroscientific findings related to it.

Write down a summary on the highlights of the research work you read.

1. What is the research question?
2. What is the hypothesis?
3. What kind of methodology did they use?
4. What are the main results?
5. Conclusions, implications, and future directions

Your report must be:

- 12-point font. Maximum 2-3 pages

Present the research work in a 5–10-minute presentation to the class.

(3) **Exams:** There will be 2 exams in this course including midterm and final exams

Cheating and Plagiarism

Just a friendly reminder about cheating and plagiarism—don't do it. **Any student who is caught cheating on an exam, writing another student's project, or copying from another source (e.g., a website, a magazine, a published research article) without proper citations will automatically receive 0 points for that project and be disciplined under the University's regulations for academic honesty.** Students who violate the academic principles of the University may receive a failing grade on the assignment, receive a failing grade in the course, or be suspended from the University.

Grading Guidelines

	% of grade
Attendance/Participation	5
Brain Mapping Project	15
Midterm Exam	25
Response Paper / Presentation	15
Final Exam	40
TOTAL	100

Proposed Course Schedule

Week 1	Introduction to Mind, Brain, and Behaviour
Week 2	Consciousness and Brain

Week 3-4	Brain Anatomy and Neuronal Function
Week 5	Cognitive Neuroscience: Perception, Attention, and Recognition
Week 6	Cognitive Neuroscience: Learning and Memory
Week 7	Neuroimaging and Neurostimulation
Week 8	Midterm Exam Week
Week 9	Social Cognition: Implicit biases and Judgement
Week 10	Social Cognition: Neural substrates of emotion processing
Week 11	Novel methodologies in studying psychology
Week 12	Neuropsychology of psychological disorders
Week 13-14	Summary of latest research in psychological sciences