



# Course program and reading list

Semester 2 Year 2023

**School:** Baruch Ivcher School of Psychology

Psychology and Neuroscience: An Interdisciplinary Approach B

**Lecturer:**

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**Tutors:**

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**Teaching Assistant:**

Ms. Baillie Sarah Shuster [baillie.shuster@post.runi.ac.il](mailto:baillie.shuster@post.runi.ac.il)

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<b>Course No.:</b>	<b>Course Type :</b>	<b>Weekly Hours :</b>	<b>Credit:</b>
9068	Lecture	2	4

<b>Course Requirements :</b>	<b>Group Code :</b>	<b>Language:</b>
Final Exam	232906810	English

**Prerequisites**

**Prerequisite:**

9067 - Psychology and Neuroscience: An Interdisciplinary Approach A

**Students who took one of the courses listed below will not be allowed to register to the course Psychology and Neuroscience: An Interdisciplinary Approach B (9068):**

8892 - Biological Basis of Behavior B

8937 - Biological Basis of Behavior B

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## Course Description

During the second semester, we will advance into the interface between brain and behavior. We will learn about the principles of evolution, get a glimpse at animal behavior, and investigate the mechanisms of sex and reproduction. We will track the homeostatic processes involving feeding, circadian rhythms, sleep and dreaming, and find out about the hormones that help control them. Finally, we will learn how motor actions are executed, and about the diseases that impair them.

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## Course Goals

The goals of the course are to acquaint students with the principles of evolutionary biology, sensory transduction, homeostasis, and action, and to provide them with information about the biological bases of:

sexual behavior and development

tactile and chemical senses

nutrition and eating disorders

life rhythms, sleep and dreaming

taking actions

movement disorders

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## Grading

Course requirements: Attendance of lectures and recitations (will be enforced in accordance with university policy), 3 quizzes, an assignment and a final exam.

For the recitations which are on Zoom – an open camera is mandatory for full attendance.

Grade components for the semester: 3 quizzes (10%) and 1 assignment (10%), semester exam (80%).

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## Learning Outcomes

Students should be able to:

1. Explain the principles of evolutionary biology, sensory transduction, homeostasis, and action.

2. Provide detailed information about the biological bases of: sexual behavior and development, tactile and chemical senses, nutrition and eating disorders, life rhythms, sleep and dreaming, movement and movement disorders.

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## Lecturer Office Hours

By appointment through e-mail: [slimor@idc.ac.il](mailto:slimor@idc.ac.il)

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## Tutor Office Hours

By appointment through e-mail: [baillie.shuster@post.idc.ac.il](mailto:baillie.shuster@post.idc.ac.il)

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## Teaching Assistant

By appointment through e-mail: [baillie.shuster@post.idc.ac.il](mailto:baillie.shuster@post.idc.ac.il)

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## Reading List

**Textbook: Laura A. Freberg, *Discovering Behavioral Neuroscience*, 3<sup>rd</sup> Ed.**

During this semester, aside from our textbook, there will be readings from another book, found on Moodle:

Alcock, John. (2005). *Animal behavior: an evolutionary approach*. 8<sup>th</sup> edition. Sunderland, Mass.: Sinauer Associates.

<b>Date</b>	<b>Lecture - On Campus</b>	<b>Recitation - Via Zoom</b>
	(Sunday 17:30-19:00)	(Thursday 13:45-15:15)
	<b><i>Receive assignment.</i></b>	
	<b><u>Unit 1: Evolution &amp; Sex</u></b>	Ethology and Evolution: Principles
19,23	Territoriality	-----
March	-----	Alcock chapter 1
	Alcock chapter 1	

26,30	Sex and Reproduction: Chromosomes & Development	Ethology and Evolution: Sex
March	----- Freberg 326-361	----- Alcock chapter 10 (part 1+2)
2,6	<b>Passover – No class</b>	<b>Passover – No class</b>
April		
9,13	<b>Passover – No class</b>	<b>Passover – No class</b>
April		
16,20	Sex Hormones, Sexual Behavior	Sexual Orientation and Attraction
April	----- Freberg 326-361	----- Freberg 326-361
	<b>Assignment due (by 16:00).</b>	Parenting.
23,27	Sex Differences in Nervous System and Cognition	Review for quiz 1
April	----- Freberg 326-361	----- Alcock Parenting 405-410; 426-432. Freberg 358-359
	<b>Unit 2: Body Senses</b>	<b>Quiz 1.</b>
30 April,	Touch	Balance
4 May	----- Freberg 233-240	----- Freberg 231-233
7,11	Temperature & Pain	Review for quiz 2.
May	----- Freberg 240-245	The evolution assignment - Going over important aspects together
	<b>Unit 3: Homeostasis</b>	<b>Quiz 2.</b>
14,18 May	Nutrition - Hunger	Nutrition - Satiety
	----- Freberg 307-315	----- Freberg 315-316

Nutrition and Eating Disorders

21,25 May -----

Freberg 316-323

**Shavuot – No class**

28 May,

Biological Rhythms

Sleep Basics

1 June

Freberg 364-375

Freberg 375-390

4,8

Sleep Disorders

Dreaming.

Review for quiz 3

June

Freberg 392-398

Freberg 390-392.

Solms article.

**Unit 4: Movement**

**Quiz 3.**

11,15

Motor Systems: Muscles and Nerves

Reflexes

June

Freberg 254-265

Freberg 266-268

18,22

Motor Systems in the Brain

General Review

June

Freberg 269-277

25,29

Disorders of Movement, Plasticity and Rehabilitation

General Review.

June

Freberg 278-287

**Make up quizzes** (only for students that could not attend the quiz on the original date and with approval)