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:
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Course No.: Course Type : Weekly Hours : Credit:
9068  Lecture  2  4

Course Requirements : Group Code : Language:
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
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.

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

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%).

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: slim@idc.ac.il

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**Tutor Office Hours**

By appointment through e-mail: baillie.shuster@post.idc.ac.il

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**Teaching Assistant**

By appointment through e-mail: baillie.shuster@post.idc.ac.il

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**Reading List**

**Textbook:** Laura A. Freberg, *Discovering Behavioral Neuroscience, 3rd Ed.*

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


<table>
<thead>
<tr>
<th>Date</th>
<th><strong>Lecture - On Campus</strong></th>
<th><strong>Recitation - Via Zoom</strong></th>
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<tbody>
<tr>
<td>19/23 March</td>
<td>(Sunday 17:30–19:00)</td>
<td>(Thursday 13:45–15:15)</td>
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<tr>
<td><strong>Unit 1: Evolution &amp; Sex</strong></td>
<td><strong>Receive assignment.</strong></td>
<td>Ethology and Evolution: Principles</td>
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<td>Territoriality</td>
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<td>Alcock chapter 1</td>
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Alcock chapter 1
March

26,30

Sex and Reproduction: Chromosomes & Development

Freberg 326-361

Ethology and Evolution: Sex

Alcock chapter 10 (part 1+2)

2,6

April

Passover – No class

Passover – No class

9,13

April

Passover – No class

Passover – No class

16,20

April

Sex Hormones, Sexual Behavior

Freberg 326-361

Sexual Orientation and Attraction

Freberg 326-361

Assignment due (by 16:00).

Sex Differences in Nervous System and Cognition

Freberg 326-361

Parenting.

Review for quiz 1

Alcock Parenting 405-410; 426-432.

Freberg 358-359

April

23,27

Unit 2: Body Senses

Touch

Freberg 233-240

Balance

Freberg 231-233

7,11

Temperature & Pain

Freberg 240-245

Review for quiz 2.

The evolution assignment – Going over important aspects together

Unit 3: Homeostasis

Nutrition – Hunger

Freberg 307-315

Nutrition – Satiety

Freberg 315-316
Nutrition and Eating Disorders

21, 25 May

Freberg 316-323

Shavuot – No class

28 May, 1 June

Biological Rhythms

Freberg 364-375

Sleep Basics

4, 8 June

Sleep Disorders

Freberg 392-398

Dreaming.

11, 15 June

Unit 4: Movement

Motor Systems: Muscles and Nerves

Freberg 254-265

Reflexes

18, 22 June

Motor Systems in the Brain

Freberg 269-277

General Review

25, 29 June

Disorders of Movement, Plasticity and Rehabilitation

Freberg 278-287

General Review.

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