

The Hong Kong University of Science and Technology
Division of Social Science
SOSC2240 Biological Psychology
Course Syllabus
Spring Semester 2021

Lecture Time: Wednesday, Friday 15:00 - 16:20

Venue: Zoom (link in Canvas)

Teaching Team:

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Course Description

This course introduces the biological approach to psychology. Comparative studies on non-human animals and the issue of genetic inheritance of behavior will be discussed. Emphasis will be placed on key principles of human nervous system function and how they are reflected in human thought and behavior. Key topics covered include the organization of the brain, the visual system, how learning and memory occur in the brain, and the cognitive and behavioral consequences of brain injury and disease.

Intended Learning Outcomes

On completion of this course, you will be able to:

1. Describe major signaling mechanisms, structures, and pathways of the human nervous system from functional perspectives.
2. Analyze the relationship between different functional systems of the human brain and mind and behavior.
3. Analyze the implications of brain damages on cognitive and behavioral output.
4. Describe methods used in brain research and analyze their advantages and limitations.
5. Identify the limitations of the biological approach to psychology and the limitations of current knowledge about the relationship between brain activity and mental function.

Communication Platform

<http://canvas.ust.hk>

Learning Activities

1. *Lectures.* The lectures introduce the science of biological psychology through a variety of activities (polls, demonstrations, videos, class discussion, etc.). They form the foundation of your learning in this course. Past studies have shown that lecture attendance and participation facilitate learning and predict course grades.
 - Lecture slides will be available on Canvas one day before each lecture. Note that some contents (mainly examples) will be removed from the uploaded version; this is to encourage you to take your own notes and generate your own examples.

- If you miss a lecture, you can access the recording on Canvas. It will be available at the latest one day after each lecture.
2. *Tutorials*. Four tutorials will be held throughout the semester during lecture time. They will consist of either in-class activities or research paper discussion. You may be required to do preparatory reading before attending the tutorials.
 3. *Tutorial assignments* (15% x 2, ILO#1,2,3). For tutorial 1 and 2 (see lecture schedule), you will need to write a short essay (500 words) about a topic related to the tutorial discussion. The assignments will be released during the tutorial sessions and you will have a few weeks to complete them.
 4. *Essay* (30%, ILO#2,3,4,5). The essay requires you to synthesize an argument based on your interpretation of multiple scientific evidence on a given topic. The maximum word count for the essay is 1,500 words.
 5. *Group presentation* (10%, ILO#2,3,4,5). You will be paired with a classmate to discuss your individual essay. You will need to review each other's arguments, discuss the differences, and reach a common conclusion. The submission will be in the form of narrated PowerPoint presentation file upload.
 6. *Quizzes* (10% + 20%, ILO#1,2,3,4,5). The first quiz will be in True/ False format (10%) and the second quiz will be in the form of short-essay questions (20%). Both quizzes will be done in Canvas. Materials discussed in the lectures and tutorials are tested (please refer to the lecture schedule for the corresponding lecture topics):
 - Quiz 1 covers lecture # 1-8 and tutorial # 1-2.
 - Quiz 2 covers lecture # 9-16 and tutorial # 3-4.

(Detailed guidelines regarding these learning activities will be released in due course.)

Assessment Dates and Deadlines

Tutorial 1 assignment	13 Mar	12 noon
Quiz 1	19 Mar	15:00 – 15:30
Tutorial 2 assignment	01 Apr	12 noon
Essay	03 May	12 noon
Quiz 2	07 May	15:00 – 16:00
Group presentation	19 May	12 noon

Schedule (subject to minor changes)

Week	Date	Lecture #	Topic
1	3 Feb		Introduction
1	5 Feb	1	Nerve cells and impulses
2	10 Feb	2	Synapses
2	12 Feb		Public holiday
3	17 Feb	3	Neuroanatomy
3	19 Feb	4	Neurodevelopment and brain plasticity
4	24 Feb	5	Research methods
4	26 Feb		Tutorial 1
5	3 Mar	6	Vision 1
5	5 Mar	7	Vision 2
6	10 Mar	8	Audition
6	12 Mar		Tutorial 2
7	17 Mar	9	Conscious and unconscious processes
7	19 Mar		Quiz 1
8	24 Mar	10	Learning and memory 1
8	26 Mar	11	Learning and memory 2
9	31 Mar		Mid-term break
9	2 Apr		Mid-term break
9	7 Apr		Tutorial 3
9	9 Apr	12	Emotion
10	14 Apr		Tutorial 4
10	16 Apr		Essay consultation
11	21 Apr	13	Decision making
11	23 Apr	14	Language and social processes
12	28 Apr	15	Psychological disorder 1
12	30 Apr	16	Psychological disorder 2
13	5 May		Group assignment consultation
13	7 May		Quiz 2

Suggested Textbook (on Library Course Reserve)

Kalat, J. W. (2019). *Biological psychology* (13th ed.). Boston, MA, USA: Cengage.

Points to Note

1. *Learning attitude.* Be active in class, ask questions, give answers. Your participation not only helps you learn more but also enables us to teach better! Think about what you want to learn and how you are going to learn them. Use grades, scores, and comments from us to understand how much and how well you have learned and how you can improve.
2. *Academic integrity.* We will thoroughly investigate every suspect case of cheating or plagiarism. We will heavily penalize confirmed cases and report them to the Head of the Division of Social Science for further review or action. Read <http://ugadmin.ust.hk/integrity/index.html>. Make sure you understand what constitutes

academic honesty.

3. *Penalties*. Penalties apply to assignments that are submitted late or over the word limit. Find the details in the assignment guidelines.
4. *Make-up quiz*. Make-up quiz will be granted only to absentees with medical condition, which is supported by a medical certificate. Other requests for make-up quiz will generally not be catered to. More details will be made available in the assignment guidelines.
5. *Student feedback*. Two course feedback sessions will be conducted: a mid-term survey and the end-of-semester university SFQ. You are also encouraged to email or speak with the teaching team directly about any concerns or questions you may have about the course. We will respond to your email within 2 business days.