BIOLOGICAL PSYCHOLOGY (PSYC7303)
First Semester, 2021-2022

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Course Description
This course introduces the biological aspects of mental and psychological processes. Topics covered in this course include: anatomy and physiology of the nervous system; brain development; sensation and perception; language; learning and memory; attention and executive functioning; motivation and emotion; sex, gender and sexuality; psychological disorders; and consciousness and free will. Students will attend a series of lectures, which cover the main concepts, theories and empirical findings associated with the subject matter. Students will participate in Problem-Based Learning sessions, in which they are encouraged to think critically and discuss scientific research relevant to the topics of interest.

Learning Outcomes
- To understand the concepts, theories, empirical findings and methods used in biological psychology.
- To describe and explain psychological phenomena in terms of biological processes or mechanisms.
- To discuss, analyze, evaluate and integrate the knowledge in biological psychology with a logical, reasonable, scientific, and critical thinking.
- To relate and apply the knowledge of biological psychology in everyday life situations.
Problem-Based Learning (PBL)

Each class will consist of lectures (1.5 – 2 hours) and PBL activities (1 hour) related to that week’s topic. Students will form into presentation teams, and each team is required to give a presentation on a topic, and to stimulate discussion among other students in the class. The rundown of a PBL session is as follows:

1. To prepare for the PBL session, the students of the presenting team will need to do a preliminary investigation on the topic and meet with their tutor well before the presentation date.

2. One-week prior to the presentation, the presenting team will provide a journal article related to their topic to the whole class. All students in the class are required to read the article before attending the PBL session.

3. During the PBL session, the presenting team will give a brief introduction of the topic and conduct a 20-min small group discussion in the class basing on the selected article. The presentation team can use different strategies to facilitate the class discussion. For example, they may raise a few specific questions for the class to answer.

4. All students are required to participate in this 20-min discussion in their respective groups. By the end of the discussion, every group must report back the discussion results in two minutes.

5. The presentation team then make their presentation with the aim of responding to the results of the class discussion.

6. By the end of the presentation, the presenting team will summarize unresolved questions gathered from class discussion and Q&A, and answer them at the beginning of the PBL session next week.

Students will be assessed on their ability to analyze and critically evaluate the subject matter of that week from a biological psychology perspective. Presentation styles will also be judged as well as each groups ability to conduct class discussion.

Final grade cutoffs

- A = ≥80%
- B = 70%~79%
- C = 60%~69%
- D = 50%~59%
- F = <50%

Course Materials

Textbook

Other references

Articles from scientific journals on biology/neuroscience/physiology that are related to specific topics will be assigned to students in addition to the textbook. Note that the assessments will focus on concepts rather than on materials that come from specific textbooks. Students are also encouraged to use different source of information (see below) to understand those concepts.


Course Website

Students should be able to access the Moodle site for this course through their HKU portal once they have successfully enrolled in the course. Lecture slides, selected journal articles and readings will be posted on Moodle before class. Note that this is your responsibility to check the website regularly for updated information.

Course Schedule

<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Lecture</th>
<th>Reading</th>
<th>Activity/ PBL topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 Sept</td>
<td>The Nervous System – the structure and the cells</td>
<td>Ch. 1 &amp; 3</td>
<td></td>
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<tr>
<td>2</td>
<td>9 Sept</td>
<td>Synapses, Genetics and Brain Development</td>
<td>Ch. 2 &amp; 4</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>16 Sept</td>
<td>Research Methods Wakefulness and Sleep</td>
<td>Ch. 3 &amp; 8</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>23 Sept</td>
<td>Hunger, Body Weight &amp; other Internal Regulation</td>
<td>Ch. 9</td>
<td>Enhancing children’s brain development</td>
</tr>
<tr>
<td>5</td>
<td>30 Sept</td>
<td>Sex, Gender &amp; Sexuality</td>
<td>Ch. 10</td>
<td>The meaning of dreams</td>
</tr>
<tr>
<td>Week</td>
<td>Date</td>
<td>Topic</td>
<td>Chapter(s)</td>
<td>Notes</td>
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<tr>
<td>6</td>
<td>7 Oct</td>
<td>Mid-Term Quiz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>14 Oct</td>
<td>Reading Week</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>21 Oct</td>
<td>Sensations &amp; Perception</td>
<td>Ch. 5 &amp; 6</td>
<td>Body weight modification</td>
</tr>
<tr>
<td>9</td>
<td>28 Oct</td>
<td>Attention &amp; Executive Functions</td>
<td>Ch. 13</td>
<td>Development of Sexual orientation and/or gender identity</td>
</tr>
<tr>
<td>10</td>
<td>4 Nov</td>
<td>Language, Learning &amp; Memory</td>
<td>Ch. 12</td>
<td>Perception</td>
</tr>
<tr>
<td>11</td>
<td>11 Nov</td>
<td>Motivation &amp; Emotion</td>
<td>Ch. 11</td>
<td>Multi-tasking vs. Mindfulness</td>
</tr>
<tr>
<td>12</td>
<td>18 Nov</td>
<td>Psychological Disorders</td>
<td>Ch. 14</td>
<td>Chinese language and bilingualism</td>
</tr>
<tr>
<td>13</td>
<td>25 Nov</td>
<td>Consciousness and Free Will</td>
<td></td>
<td>Rationality vs Emotionality</td>
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**Assessments**

**Mid-Term Quiz (16%)**

The quiz will consist of multiple-choice questions and/or questions requiring short answers. Students will be tested on materials from lectures, class discussion, as well as recommended readings.

**Essay Outline (5%)**

Students are required to submit their essay outline for feedbacks. The outline is limited to 500 words, excluding references. Information presented in point form is acceptable, however, please note that the clarity of your ideas is not to be compromised. The deadline for the essay outline is **4 November, 2021, 23:59** via Moodle. Feedbacks on the essay outline can be expected by end of November, the latest.

**Essay (40%)**

Students are required to submit an essay on biological psychology. You may choose to write the essay on your group’s presentation topic or another topic that was covered in this course. The word length of the essay is approximately 2500, excluding title page, references and appendices. Each student must declare along with the essay stating that it is his/her own work. The deadline for the essay is **2 December, 2021, 23:59** via Turnitin on Moodle.
Group Presentation (25%)

Students are required to give a presentation in a team on a topic related to biological psychology. Each team is to gather, assess and interpret relevant information related to the topic. Students need to be able to demonstrate a good understanding of the problem, explain any terminology and provide biological explanations where possible. Students are encouraged to think open-mindedly within alternative systems of thoughts, recognize and evaluate, as need be, their own assumptions and implications.

Students are expected to communicate effectively with others in figuring out solutions to complex problems. The use of videos and images from the internet is welcome. Presentations will be judged for organization and clarity of content, formation and delivery of logical arguments, as well as ability to engage the class. Since this is a group work, the same grade is given to every member of the whole team unless free rider is reported. All the members in the team should be present for the presentation.

Discussion Participation (14%)

Groups are required to take part in the PBL class discussions conducted by other presenting teams. The assessment is based on the quality of the discussion results reported to the class in each PBL session. Since this is a group work, the same grade is given to every member of the group unless free rider is reported.

Important Notes

Feedback Policy. Student may expect to receive feedback within two or three weeks after taking a quiz. Quiz papers will not be returned to students; however, students can get individual feedback about each exam through meeting with course instructor/tutor. For other coursework assignments, students receive feedback within an appropriate timeframe depending on the nature of the assessments. Students will be notified when the marks/comments are available online.

Marks Appeal. Any dispute on marks you received on a written assignment or quiz must be made within a week after the marks are available. Another member of the teaching team will re-grade the materials (without seeing the comments and marks given by the original grader). The average of the two marks will be final.

Make up policy. In the case of a student missing the mid-term quiz due to medical reason (with a valid medical documentation), a make-up quiz in a different format can be arranged within one week after the quiz. Requests for make-up should be send by email to your tutor within 24-hours after the original day of examination. There will be no make-up quizzes arrange for a make-up quiz.
Late assignment policy. Late assignment is subjected to a penalty of 20% deduction per 24-hours of late submission, unless a valid medical proof (medical certificate) is presented.

Academic Honesty. Academic dishonesty will not be tolerated. Any student who engages in any form of academic dishonesty (e.g., cheating on quizzes or exams, plagiarism, interfering with grading, etc.) will receive a grade of F in this course and will be reported to the Department / Faculty Office / University Disciplinary Committee for further disciplinary action. There will be no exceptions. The Department of Psychology has formulated departmental policies and guidelines on student misconduct. You can visit the following webpage for more information: https://psychology.hku.hk/useful-information-to-current-students/ for more information. The University has published a booklet entitled “What Is Plagiarism?” (https://tl.hku.hk/plagiarism/). You are strongly advised to read this booklet, and consult your instructor or tutor if you have any questions.

Plagiarism. A softcopy is required for all written assignments. The softcopy will be checked for plagiarism against a database of articles, books, webpages, and essays submitted by students at HKU and other universities. No credit will be given for an assignment that contains plagiarized materials. Further penalties may also be applied. These penalties may include a zero mark for the course. Plagiarism will also be reported to the Department / Faculty Office / University Disciplinary Committee for consideration of possible disciplinary action. If you are not sure what constitutes the academic offense of plagiarism, checkout the webpage at http://www.hku.hk/plagiarism. Please note that if you reuse any material previously submitted for another course without proper acknowledgement, that also constitutes plagiarism, although you are the author of the original work. This is called self-plagiarism. Also, for group projects, all group members are responsible for the group submission and will receive the same penalty if plagiarized materials are discovered.