City University of Hong Kong Course Syllabus

offered by College/School/Department of Applied Social Sciences with effect from Semester B 2017/2018

Part I Course Overview

| Course Title: | Biological Basis of Behavior |
|-------------------------|---|
| | |
| Course Code: | <u>SS5756</u> |
| | |
| Course Duration: | One semester |
| | |
| Credit Units: | 3 credits |
| | |
| Level: | <u>P5</u> |
| Medium of | |
| Instruction: | English |
| Medium of | |
| Assessment: | English |
| Prerequisites: | |
| (Course Code and Title) | SS2023 Basic Psychology or its equivalent |
| Precursors: | |
| (Course Code and Title) | Nil |
| Equivalent Courses: | |
| (Course Code and Title) | Nil |
| Exclusive Courses: | |
| (Course Code and Title) | Nil |

Part II Course Details

1. Abstract

This course aims to enable students to (1) understand research methods and findings of biological psychology, with an emphasis on the brain-behavior relationship, (2) apply research findings and theories to explain real life experiences, and (3) generate new ideas through critical evaluation of theories and research findings in biological psychology.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

| No. | CILOs | Weighting | Discov | ery-en | riched |
|-----|--|-------------|--------------|----------|--------|
| | | (if | curricu | ılum re | lated |
| | | applicable) | learnin | ng outco | omes |
| | | | · . | e tick | where |
| | | | approp | oriate) | |
| | | | A1 | A2 | A3 |
| 1. | understand major structures of the brain from a | 20% | ~ | | |
| | neuroanatomical perspective; | | | | |
| 2. | understand research methods and techniques for | 20% | \checkmark | | |
| | studying the brain-behavior relationship; | | | | |
| 3. | analyze the biological mechanisms and evolutionary | 30% | ✓ | | |
| | basis of different behaviors; and | | | | |
| 4. | critically evaluate research findings and generate | 30% | | ✓ | |
| | testable hypotheses. | | | | |
| | | 100% | | | |

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

- A2: Ability Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.
- A3: Accomplishments Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)

(TLAs designed to facilitate students' achievement of the CILOs.)

| TLA | Brief Description | | CILO No. | | | | Hours/week (if | |
|----------|---|---|----------|---|---|--|----------------|--|
| | | 1 | 2 | 3 | 4 | | applicable) | |
| Lectures | Major principles and research methods in biological psychology are described and explained, with an emphasis on (1) the relationship between brain structure and function, and (2) between physiology and behavior. | ~ | × | ✓ | | | | |

| Online Learning Activities | Concepts and materials covered in lectures are made more readily comprehensible via the use of online learning activities in the MyPsyLab. This encourages continual engagement in learning. <u>http://pearsonmylaband</u> | ~ | ~ | | | | |
|----------------------------------|--|---|---|---|---|--|--|
| Reading Assignments | mastering.com Students are required to analyze an assigned reading in biological psychology and share what they have learned with the class. This serves to stimulate critical thinking as well as interest in the subject. | | ~ | × | × | | |
| Group Presentations | Students are required to take part in presenting an assigned reading in small groups in which they will learn to critically evaluate established paradigms and research findings in biological psychology. | | ~ | ~ | ~ | | |

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

| Assessment Tasks/Activities | CILO No. | | | | | Weighting | Remarks |
|---|----------|--------------|---|---|--|-----------|---------|
| | 1 | 2 | 3 | 4 | | | |
| Continuous Assessment: 100% | | | | | | | |
| Quizzes (3 hrs) (55%) | ✓ | \checkmark | ✓ | | | 55% | |
| Independent Learning Activities (15%) | ~ | ~ | | | | 15% | |
| Tutorial Presentation (15%) | | ~ | ✓ | ✓ | | 15% | |
| Presentation Report (15%) | | ✓ | ✓ | ✓ | | 15% | |
| Examination: 0% (duration: , if applicable) | | | | | | | |
| | | | | | | 100% | |

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

| Assessment Task | Criterion | Excellent | Good | Fair | Marginal | Failure |
|-----------------|--|---|---|---|---|---|
| | | (A+, A, A-) | (B+, B, B-) | (C+, C, C-) | (D) | (F) |
| 1. | Understanding of the subject matters | Demonstrate excellent understanding of the subject matters. | Demonstrate good understanding of the subject matters, though missing some of the points. | Demonstrate adequate understanding of the core of the subject matters. | Demonstrate limited understanding of the subject matter and can only recall limited content. | Unambiguous poor understanding of the subject matter. |
| 2. | Understanding of the subject matters | Demonstrate excellent understanding of the subject matters. | Demonstrate good understanding of the subject matters, though missing some of the points. | Demonstrate adequate understanding of the core of the subject matters. | Demonstrate limited understanding of the subject matter. | Unambiguous poor understanding of the subject matter. |
| 3. | Understanding of key concepts; use of relevant information; team work | Demonstration of an excellent understanding of theories/concepts and methodologies relevant to the assigned reading; effective use of relevant information in presentation; excellent team work and highly organized | Demonstration of a good understanding of theories/concepts and methodologies relevant to the assigned reading; adequate use of relevant information in presentation; good team work and organized | Demonstration of a certain degree of understanding of theories/concepts and methodologies relevant to the assigned reading; minimal use of relevant information in presentation; adequate team work and organization | Demonstration of a limited understanding of theories/concepts and methodologies relevant to the assigned reading; very limited use of relevant information in presentation; team work and organization need improvement | Demonstration of a poor understanding of theories/concepts and methodologies relevant to the assigned reading; use of irrelevant information in presentation; poor team work and organization |
| 4. | Understanding and application of relevant principles and perspectives | Able to apply relevant principles and perspectives to analyse empirical evidence in behavioral neuroscience; | Able to apply relevant principles and perspectives to analyse empirical evidence in behavioral neuroscience; | Able to apply some relevant principles and perspectives to analyse empirical evidence in behavioral neuroscience; | Limited ability to apply relevant principles and perspectives to analyse empirical evidence in behavioral neuroscience; | Unable to apply any relevant principles and perspectives to analyse empirical evidence in behavioral neuroscience; demonstration of poor |

| demonstration of excellent understanding of relevant theories, principles and methods in behavioral neuroscience; able to integrate theories or evidence from different lines of | demonstration of good understanding of relevant theories, principles and methods in behavioral neuroscience. | demonstration of an adequate understanding of the principles of behavioral neuroscience. | demonstration of limited understanding of the principles of behavioral neuroscience. | understanding of the principles of behavioral neuroscience. |
|---|---|---|--|--|
| different lines of research. | | | | |

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

(An indication of the key topics of the course.)

Brain structure, neuroanatomy, the nerve cell, methodologies, neural development, lateralization, brain damage, wakefulness and sleep, internal regulation, control of movement, psychoneuroimmunology, stress responses, learning and memory, mental disorders, evolution and behaviour.

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1. Carlson, N. R. (2014). *Foundations of Behavioral Neuroscience (9th ed.)*. Singapore: Pearson.

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

| 1. | Kalat, J. W. (2013). <i>Biological psychology (11th ed.)</i> . Singapore: Wadsowrth |
|----|--|
| 2. | Carlson, N. R. (2007). <i>Physiology of behavior (9th ed.)</i> . Boston: Pearson |
| 3. | Zillmer, E. A., Spiers, M. V., & Culbertson, W. C. (2001). Principles of |
| | Neuropsychology. Belmont, CA; Thomson Learning |
| 4. | http://psychology.wadsworth.com/book/kalatbiopsych9e/ |
| 5. | http://www.brainsource.com/neuropsy.htm |