City University of Hong Kong
Course Syllabus

offered by Department of Social and Behavioural Sciences
with effect from Semester A 2022 /23

Part I Course Overview

Course Title:	**Biological Basis of Behavior**
Course Code:	**SS5756**
Course Duration:	**One semester**
Credit Units:	**3 credits**
Level:	**P5**
Medium of Instruction:	**English**
Medium of Assessment:	**English**
Prerequisites: *(Course Code and Title)*	**MSSPSY Students : NIL** **Non-MSSPSY Students : SS1101 Basic Psychology I 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 (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	understand major structures of the brain from a neuroanatomical perspective;	20%	✓		
2.	understand research methods and techniques for studying the brain-behavior relationship;	20%	✓		
3.	analyze the biological mechanisms and evolutionary basis of different behaviors; and	30%	✓		
4.	critically evaluate research findings and generate testable hypotheses.	30%		✓	
		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 applicable)
		1	2	3	4			
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.	✓	✓	✓				
In-class Learning Activities	Concepts and materials covered in lectures are made more readily comprehensible via the use of in-class learning activities.	✓	✓					
Term Project	Students are required to formulate and test hypotheses relevant to a designated topic in small groups of 5 to 6. In particular, they are required to collect data or provided with a dataset, analyze the data, and write up the findings in a report. This assignment allows students to develop skills in (1) hypothesis formulation, (2) applying theories/concepts learned in class to write up a report, (3) collecting data, and (4) evidence-based reasoning.		✓	✓	✓			

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 (30% each)	✓	✓	✓				60%	
Presentation (10%)	✓	✓					10%	
Term Project Report (30%)		✓	✓	✓			30%	
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.)

Applicable to students admitted in Semester A 2022/23 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Quizzes (30% each) (60%)	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 limited understanding of the subject matter and can only recall limited content.	Unambiguously poor understanding of the subject matter.
2. Presentation of term project (10%)	Understanding of the core knowledge; use of relevant information; team work; organization	Demonstration of an excellent understanding of theories/concepts and methodologies; effective use of relevant information in presentation; excellent teamwork and highly organized	Demonstration of a good understanding of theories/concepts and methodologies; adequate use of relevant information in presentation; good teamwork and organized	Demonstration of a limited understanding of theories/concepts and methodologies; very limited use of relevant information in presentation; teamwork and organization need improvement	Demonstration of a poor understanding of theories/concepts and methodologies; use of irrelevant information in presentation; poor teamwork and organization
3. Term project Report (30%)	Understanding and application of relevant principles and perspectives to formulate and test hypotheses using appropriate methods	Able to apply relevant principles and perspectives to analyze empirical evidence in behavioral neuroscience; demonstration of excellent understanding of relevant theories, principles and methods in behavioral neuroscience; able to integrate theories or	Able to apply relevant principles and perspectives to analyze empirical evidence in behavioral neuroscience; demonstration of good understanding of relevant theories, principles and methods in behavioral neuroscience; adequate	Limited ability to apply relevant principles and perspectives to analyze empirical evidence in behavioral neuroscience; demonstration of limited understanding of the principles of behavioral neuroscience; minimal data analysis.	Unable to apply any relevant principles and perspectives to analyze empirical evidence in behavioral neuroscience; demonstration of poor understanding of the principles of behavioral neuroscience; fail to analyze data using the appropriate methods.

		evidence from different lines of research; analyze data and interpret major findings appropriately.	data analysis with minimal interpretations of findings.		

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Quizzes (30% each) (60%)	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. Presentation of term project (10%)	Understanding of the core knowledge; use of relevant information; team work; organization	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. Term project Report (30%)	Understanding and application of relevant principles and perspectives to formulate and test hypotheses using appropriate methods	Able to apply relevant principles and perspectives to analyze empirical evidence in behavioral neuroscience; demonstration of excellent understanding of	Able to apply relevant principles and perspectives to analyse empirical evidence in behavioral neuroscience; demonstration of good understanding of relevant theories, principles and methods in behavioral neuroscience;	Able to apply some relevant principles and perspectives to analyse empirical evidence in behavioral neuroscience; demonstration of an adequate understanding of the principles of behavioral neuroscience; able to carry out simple data analysis.	Limited ability to apply relevant principles and perspectives to analyse empirical evidence in behavioral neuroscience; demonstration of limited understanding of the principles of behavioral neuroscience;	Unable to apply any relevant principles and perspectives to analyse empirical evidence in behavioral neuroscience; demonstration of poor understanding of the principles of behavioral neuroscience; fail

		relevant theories, principles and methods in behavioral neuroscience; able to integrate theories or evidence from different lines of research; analyze data and interpret major findings appropriately.	adequate data analysis with minimal interpretations of findings.		minimal data analysis.	to analyze data using the appropriate methods.

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, psychoneuroimmunology, stress responses, 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. (2021). Foundations of behavioral neuroscience (10th ed Global ed.). Boston: Pearson. [eBook]

2.2 Additional Readings

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

1.	Kalat, J. W. (2016). *Biological psychology (12th ed.)*. Singapore: Wadsowrth
2.	Carlson, N. R. (2007). *Physiology of behavior (9th ed.)*. 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