

**City University of Hong Kong
Course Syllabus**

**offered by Department of Biomedical Sciences
with effect from Semester A 2017/18**

Part I Course Overview

Course Title:	Biosphere: Diversity, Functions and Interactions
Course Code:	BMS1801
Course Duration:	One Semester
Credit Units:	3 credits
Level:	B1
Proposed Area: (for GE courses only)	<input type="checkbox"/> Arts and Humanities <input type="checkbox"/> Study of Societies, Social and Business Organisations <input type="checkbox"/> Science and Technology
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: (Course Code and Title)	Nil
Precursors: (Course Code and Title)	Nil
Equivalent Courses: (Course Code and Title)	BCH1002 Biosphere: Diversity, Functions and Interactions (for students who took BCH1002 during academic year from 2011/2012 to 2014/2015)
Exclusive Courses: (Course Code and Title)	Nil

BMS1801 is currently offered only to:

- students undertaking the **Bachelor of Social Sciences (Hons) in Environmental Policy Studies**, who have not obtained a sufficient background in **Biology** to pursue BCH's higher level courses in **Environmental Sciences**;
- students undertaking the **minor programme in Life Sciences**, who are not majoring in **Applied Biology** or **Environmental Science and Management**.

Part II Course Details

1. Abstract

(A 150-word description about the course)

This course aims to provide essential knowledge on life systems and their environments to students without a background in biological sciences. The course will centre on three major themes:

- (a) The diversity of life, including the differences between the major groups of living organisms.
- (b) Cell structure and function, including nutrition, food-webs and energy requirements for the maintenance of life, and key material cycles in nature.
- (c) Ecology and interactions of living organisms, including the concept of keystone species, from a habitat-based perspective.

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.	Describe, using relevant examples, the diversity of life, including the differences between microorganisms, plants and animals.		✓	✓	
2.	Explain the key factors which contribute to the maintenance of life.		✓	✓	✓
3.	Relate interactions between living organisms to ecological concepts and use this knowledge to explore critical environmental issues which may affect sustainability.		✓	✓	✓
* If weighting is assigned to CILOs, they should add up to 100%.		100%			

[#] Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes (PILOs) in Section A of Annex.

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				
Lectures	Basic knowledge will be taught mainly by lectures.	✓	✓					
Tutorials (include In-class activities)	A forum for problem solving by applying the knowledge learned from the lectures.	✓	✓	✓				
Web-based Discussion/ Presentations	Students will be divided into groups to discuss and present a talk about the diversity, functions and interactions in biosphere.	✓	✓	✓				
Short quizzes	Several short quizzes to evaluate the students' learning outcomes	✓	✓	✓				

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: <u>40</u> %								
Short Quizzes	✓	✓					5%	
Tutorial Activities/ Assignments	✓	✓	✓				20%	
Web-based Discussion/ Presentations			✓				15%	
Examination: <u>60</u> % (duration: 2hrs, if applicable)								
* The weightings should add up to 100%.							100%	

"Minimum Passing Requirement" for BMS courses:

A minimum of 30% in coursework as well as in examination, in addition to a minimum of 40% in coursework and examination taken together.

5. Assessment Rubrics

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

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Short Quizzes	The number of correct answers and the quality of the answer.	Accurately answered all the questions. Well organised text and coherent logic.	Correctly answered >80% of the questions.	Correctly answered 60% to 80% of the questions.	Correctly answered 40% to 60% of the questions.	Correctly answered < 40% of the questions.
2. Tutorial Activities/ Assignments	The number of correct answers and the quality of the answer.	Subject is well researched and the content is well organised. The writing is logical and coherent.	The content is substantial. The writing is logical and coherent.	The content is sufficient. The writing is easy to understand.	The content is correctly presented but lacks details. The writing is not easy to understand.	Did not hand in the essay on time. Did not participate the tutorial activities. Or the subject is poorly researched.
3. Web-based Discussion/ Presentations	The content and the style of the presentation. Handling of questions.	Correct questions > 90%.	Correct questions between 75% and 90%.	Correct questions between 60% and 75%.	Correct questions between 50% and 60%.	Correct questions < 50%.

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.)

- Cell structure and function
- The diversity of life
- Nutrition, energy requirements, and the maintenance of life.
- Food webs and energy transfer in nature
- Material cycles in nature
- Pollutant movements in the biosphere
- Ecology and interactions of organisms in nature.
- Populations, communities and ecosystems
- Ecosystem function and dynamics

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.	Campbell N.A. and Reece J.B. (2005). <i>Biology, 7th Edition</i> . Pearson, Benjamin Cummings, San Francisco.
2.	Enger, E.D. (2008). <i>Environmental Science: A Study of Interrelationships</i> . Boston: McGraw-Hill.
3.	Miller, G.T., Jr. and Spoolman, S.E. (2009) <i>Essentials of Ecology</i> . Belmont, CA: Brooks/Cole.
4.	Raven P.H., Johnson G.B., Losos J.B. and Singer S.R. (2008). <i>Biology. 8th Edition</i> . McGraw Hill, New York.

2.2 Additional Readings

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

1.	Online Resources: To be provided, as required, in lectures and tutorials.
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