Course Syllabus

offered by Department of Infectious Diseases and Public Health
with effect from Semester A 2020/21

Part I   Course Overview

Course Title:	Food Production and Security
Course Code:	GE 1351
Course Duration:	1 semester
Credit Units:	3 credits
Level:	B1
Proposed Area: *(for GE courses only)*	☐ Arts and Humanities ☐ Study of Societies, Social and Business Organisations ☑ 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)*	Nil
Exclusive Courses: *(Course Code and Title)*	Nil

Part II Course Details

1.   Abstract

This course examines systems of food production from the capture of solar energy and atmospheric nitrogen to human consumption. Topics include human population growth and increasing affluence and their impact on global demand for food; energy flow through trophic levels; world climate zones, the development of agricultural systems adapted to local climates, and the impact of perturbations in rainfall on food production; Hardin's essay entitled: "The Tragedy of the Commons" and the parlous state of unmanaged resources, particularly seafood stocks; the use of livestock to enable non-arable land to be used for food production and the development of livestock breeds for more efficient production of food or fibre in particular environments; livestock production economics including the growth of trade and transport infrastructure; urbanisation, and income disparity and their impacts on local and national food security; storage of commodities and foodstuffs; and the role of food processing industries in converting agricultural commodities into human foods. Foods (eggs, meats and dairy products) of animal origin will be emphasised throughout.
Notes:
- You must be vaccinated against influenza to take this course – it is a requirement for access to farms.
- In addition to lectures, there are tutorials in some weeks and field trips in others. The field trips are longer in duration and therefore there is the potential for timetable clashes with other courses. Hence you should not take this course if you have classes in other courses during the same half-day.

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.	Outline global food requirements and describe the roles of animals in human food production systems		✓	✓	
2.	Describe the businesses of animal production, the factors affecting the quality and safety of food products of animal origin (RCVS) and sequence food production pathways from the initial capture of solar energy or atmospheric nitrogen to the supermarket shelf			✓	
3.	Outline the regulation of animals and animal products (AVBC) from the farm to the supermarket shelf			✓	
4.	Explain why global human food production is vulnerable to climate change and why free-living animal populations need to be managed in the modern world		✓	✓	
* 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	4	5	6	
Lectures	Introduction to topics and provision of learning framework	✓	✓	✓	✓			2 hrs /wk
Tutorials	Reinforcement and deepening of knowledge and understanding of topics	✓	✓	✓	✓			1 hr/second wk
Field trips	Visits to facilities along the 'farm to fork' food chain (compulsory)							4 hrs/second wk
Essay	Learning of the critical evaluation and presentation of information based on writing about one of the topics					✓	✓	

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	5	6		
Continuous Assessment: 50%								
Tutorials - Group presentations	✓		✓	✓	✓		25%	Due week 13
Essay	✓	✓		✓	✓	✓	25%	2500 words; due week 8
Examination: 50% (duration: 2 hours)								

* The weightings should add up to 100%.　　　　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 (A+, A, A-)	Good (B+, B, B-)	Adequate (C+, C, C-)	Marginal (D)	Failure (F)
1. Tutorial	Ability to explain the process of food production from the capture of solar energy and atmospheric nitrogen to human consumption of food products	Will exhibit high competence in understanding, explaining, exploring and integrating the knowledge	Will exhibit good competence in understanding, explaining, exploring and integrating the knowledge	Will exhibit basic competence in understanding, explaining, exploring and integrating the knowledge	Will exhibit some deficiencies in understanding, explaining, exploring and integrating the knowledge	Will exhibit lack of competence in understanding, explaining, exploring and integrating the knowledge
2. Essay	Ability to provide information relevant to the topic of the essay and explain it in detail	Will exhibit high competence in obtaining, understanding, explaining, and integrating the knowledge in written format	Will exhibit good competence in obtaining, understanding, explaining, and integrating the knowledge in written format	Will exhibit basic competence in obtaining, understanding, explaining, and integrating the knowledge in written format	Will exhibit some deficiencies in obtaining, understanding, explaining, and integrating the knowledge in written format	Will exhibit lack of competence in obtaining, understanding, explaining, and integrating the knowledge in written format
3. Examination	Ability to explain the process of food production from the capture of solar energy and atmospheric nitrogen to human consumption of food products	Will exhibit high competence in understanding, explaining, and integrating the knowledge in written format	Will exhibit good competence in understanding, explaining, and integrating the knowledge in written format	Will exhibit basic competence in understanding, explaining, and integrating the knowledge in written format	Will exhibit some deficiencies in understanding, explaining, and integrating the knowledge in written format	Will exhibit lack of competence in understanding, explaining, and integrating the knowledge in written format

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.)

    Food production, animal industries, climate zones

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.	Conklin, A. and Stillwell, T. (2007). *World Food Production and Use*. Wiley, Hoboken.

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

Doherty, Peter C. (1998). *Harnessing science to solve global poverty and hunger: flexibility and freedom of action are essential for rapid progress*. Melbourne University Press.

A. Please specify the Gateway Education Programme Intended Learning Outcomes (PILOs) that the course is aligned to and relate them to the CILOs stated in Part II, Section 2 of this form:

GE PILO	**Please indicate which CILO(s) is/are related to this PILO, if any** *(can be more than one CILOs in each PILO)*
PILO 1: Demonstrate the capacity for self-directed learning	4, 5
PILO 2: Explain the basic methodologies and techniques of inquiry of the arts and humanities, social sciences, business, and science and technology	1, 2
PILO 3: Demonstrate critical thinking skills	5, 6
PILO 4: Interpret information and numerical data	5, 6
PILO 5: Produce structured, well-organised and fluent text	5
PILO 6: Demonstrate effective oral communication skills	4
PILO 7: Demonstrate an ability to work effectively in a team	4
PILO 8: Recognise important characteristics of their own culture(s) and at least one other culture, and their impact on global issues	1, 2
PILO 9: Value ethical and socially responsible actions	1
PILO 10: Demonstrate the attitude and/or ability to accomplish discovery and/or innovation	5

GE course leaders should cover the mandatory PILOs for the GE area (Area 1: Arts and Humanities; Area 2: Study of Societies, Social and Business Organisations; Area 3: Science and Technology) for which they have classified their course; for quality assurance purposes, they are advised to carefully consider if it is beneficial to claim any coverage of additional PILOs. General advice would be to restrict PILOs to only the essential ones. (Please refer to the curricular mapping of GE programme: http://www.cityu.edu.hk/edge/ge/faculty/curricular_mapping.htm.)

B. Please select an assessment task for collecting evidence of student achievement for quality assurance purposes. Please retain at least one sample of student achievement across a period of three years.

Selected Assessment Task