

GE1351: FOOD PRODUCTION AND SECURITY

Effective Term

Semester A 2024/25

Part I Course Overview

Course Title

Food Production and Security

Subject Code

GE - Gateway Education

Course Number

1351

Academic Unit

Infectious Diseases and Public Health (PH)

College/School

Jockey Club College of Veterinary Medicine and Life Sciences (VM)

Course Duration

One Semester

Credit Units

3

Level

B1, B2, B3, B4 - Bachelor's Degree

GE Area (Primary)

Area 3 - Science and Technology

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

This course is intended to provide students with a foundation in food production systems, following a farm-to-fork approach, with a specific emphasis on food-animal production. Main topics include human population growth and increasing demand for food; current challenges in food production and sustainable solutions, production of plant-based food; food-animal production including livestock, poultry, and aquatic species; application of new methods and technologies to increase the efficiency of the food production systems. There will be an emphasis on feeding and farming of food animals throughout the course. This course will also lay the foundation for other subjects, such as livestock husbandry, aquaculture, and food safety.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Outline the global food demands and explain the farm-to-fork approach		x	x	
2	Describe the systems of animal production and the factors affecting the quality and safety of the food products of animal origin		x	x	
3	Discuss factors that influence an animal's nutritional demand and outline strategies farmers can implement to feed their livestock		x	x	x
4	Identify current challenges in the global food-animal production and discuss potential sustainable solutions		x	x	x

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 real-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.

Learning and Teaching Activities (LTAs)

LTAs		Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture	Students will gain knowledge in key topics with a comprehensive learning framework at the start of the course, orienting them to the structure, objectives, and strategies for effective navigation of the program.	1, 2, 3, 4	3 hrs per week for 9 weeks

2	Tutorial	Students will engage in activities that reinforce and deepen their knowledge and understanding of specific topics covered in the course. These reinforcement activities will provide students with opportunities to apply their learning, solidify their grasp of key concepts, and develop a more nuanced and comprehensive understanding of the subject matter. Through these focused reinforcement exercises, students will be able to identify and address any gaps or misconceptions in their knowledge, ensuring a strong foundation for their continued learning and professional development.	1, 2, 3, 4	3 hrs per week for 2 weeks
3	Field trip*	Students will participate in field trips visiting facilities along the farm-to-fork value chain, providing experiential learning to enhance their understanding of the real-world context and practical applications of the course material.	2, 3	2 hrs per week for 3 weeks

Additional Information for LTAs

* These are participation and engagement-required TLA sessions. Students can be absent from no more than one of these sessions per course per semester. Additional absence will constitute a course failure.

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Group essay/presentation	3, 4	35	
2	Field Trip Reports	2, 3, 4	15	

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Assessment Rubrics (AR)

Assessment Task

1. Group essay/presentation

Criterion

Ability to explain why global food production is at risk due to challenges, such as climate change and unsustainable husbandry systems, and potential solutions to these problems

Excellent (A+, A, A-)

Will exhibit high competence in explaining, exploring and integrating the knowledge

Good (B+, B, B-)

Will exhibit good competence in explaining, exploring and integrating the knowledge

Fair (C+, C, C-)

Will exhibit basic competence in explaining, exploring and integrating the knowledge

Failure (F)

Will exhibit lack of competence in explaining, exploring and integrating the knowledge

Assessment Task

2. Field Trip Reports

Criterion

Assess various food production systems and facilities along the farm-to-fork value chain

Excellent (A+, A, A-)

Will exhibit high competence in describing and rating food production systems and facilities

Good (B+, B, B-)

Will exhibit good competence in describing and rating food production systems and facilities

Fair (C+, C, C-)

Will exhibit basic competence in describing and rating food production systems and facilities

Failure (F)

Will exhibit lack of competence in describing and rating food production systems and facilities

Assessment Task

3. Final examination

Criterion

Ability to explain the concepts and the process of food and food-animal production

Excellent (A+, A, A-)

Will exhibit high competence in explaining, and integrating the knowledge in written format

Good (B+, B, B-)

Will exhibit good competence in explaining, and integrating the knowledge in written format

Fair (C+, C, C-)

Will exhibit basic competence in explaining, and integrating the knowledge in written format

Failure (F)

Will exhibit lack of competence in explaining, and integrating the knowledge in written format

Additional Information for AR**Mark Range**

The following is the mark range for each letter grade that must be used for assessment of any examinations or coursework of BVM courses (VM- and GE-coded) offered by PH and VCS:

Letter Grade	Mark Range	Letter Grade	Mark Range
A+	≥92%	C+	54-60.99%
A	87-91.99%	C	50-53.99%
A-	82-86.99%	F	<50%
B+	75-81.99%		
B	68-74.99%		
B-	61-67.99%		

Part III Other Information**Keyword Syllabus**

Food production, food security, food-animal production, sustainable farming

Reading List**Compulsory Readings**

Title	
1	Conklin, A. and Stillwell, T. (2007). World Food Production and Use. Wiley, Hoboken https://onlinelibrary.wiley.com/doi/pdf/10.1002/9780470168721.fmatter
2	Rattray, Brookes, Nicol, Rattray, P. V., Brookes, I. M., Nicol, A. M., & New Zealand Society of Animal Production, publisher, issuing body. (2017). Pasture and supplements for grazing animals (Revised 2017.). Cambridge, New Zealand: New Zealand Society of Animal Production (Inc.) https://julac-cuh.primo.exlibrisgroup.com/permalink/852JULAC_CUH/vit3jk/alma991029474974303408

Additional Readings

Title	
1	http://www.fao.org/ag/againfo/themes/en/animal_production.html
2	http://www.fao.org/3/i6583e/i6583e.pdf
3	https://www.afcd.gov.hk/misc/download/annualreport2019/en
4	https://www.tandfonline.com/doi/full/10.1080/10496500903022613
5	https://www.youtube.com/watch?v=0emw7IkFdK8
6	https://www.youtube.com/watch?v=mnoCy0j7DNs
7	https://www.youtube.com/watch?v=KfB2sx9uCkI
8	https://www.youtube.com/watch?v=5oyo3b0zy3g

Annex (for GE courses only)

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:

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

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

3, 4

PILO 4: Interpret information and numerical data

1, 2, 3, 4

PILO 5: Produce structured, well-organised and fluent text

1, 2, 3, 4

PILO 6: Demonstrate effective oral communication skills

3, 4

PILO 7: Demonstrate an ability to work effectively in a team

3, 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, 4

PILO 9: Value ethical and socially responsible actions

1, 2, 3, 4

PILO 10: Demonstrate the attitude and/or ability to accomplish discovery and/or innovation

4

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

Nil