

# GE1351: FOOD PRODUCTION AND SECURITY

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**Effective Term**

Semester A 2025/26

## 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 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 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 LTA 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 ("- " for nil entry) | Allow Use of GenAI? |
|---|------------------------------|----------|---------------|------------------------------|---------------------|
| 1 | Group essay/<br>presentation | 3, 4     | 35            | -                            | No                  |
| 2 | Field Trip Reports           | 2, 3, 4  | 15            | -                            | No                  |

#### 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. See additional information for AR regarding mark range below, as in the BVM programme only C+ and C grades are awarded

**Marginal (D)**

Not applicable for the BVM programme

**Failure (F)**

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

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**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. See additional information for AR regarding mark range below, as in the BVM programme only C+ and C grades are awarded

**Marginal (D)**

Not applicable for the BVM programme

**Failure (F)**

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

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**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. See additional information for AR regarding mark range below, as in the BVM programme only C+ and C grades are awarded

**Marginal (D)**

Not applicable for the BVM programme

**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 <a href="https://onlinelibrary.wiley.com/doi/pdf/10.1002/9780470168721.fmatter">https://onlinelibrary.wiley.com/doi/pdf/10.1002/9780470168721.fmatter</a>  |
| 2     | Ratray, Brookes, Nicol, Ratray, 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.) <a href="https://julac-cuh.primo.exlibrisgroup.com/permalink/852JULAC_CUH/vit3jk/alma991029474974303408">https://julac-cuh.primo.exlibrisgroup.com/permalink/852JULAC_CUH/vit3jk/alma991029474974303408</a> |

**Additional Readings**

| Title |   |
|-------|---|
| 1     | <a href="http://www.fao.org/ag/againfo/themes/en/animal_production.html">http://www.fao.org/ag/againfo/themes/en/animal_production.html</a> |
| 2     | <a href="http://www.fao.org/3/i6583e/i6583e.pdf">http://www.fao.org/3/i6583e/i6583e.pdf</a>   |

|   |   |
|---|---|
| 3 | <a href="https://www.afcd.gov.hk/misc/download/annualreport2019/en">https://www.afcd.gov.hk/misc/download/annualreport2019/en</a>           |
| 4 | <a href="https://www.tandfonline.com/doi/full/10.1080/10496500903022613">https://www.tandfonline.com/doi/full/10.1080/10496500903022613</a> |
| 5 | <a href="https://www.youtube.com/watch?v=0emw7IkFdK8">https://www.youtube.com/watch?v=0emw7IkFdK8</a>                                       |
| 6 | <a href="https://www.youtube.com/watch?v=mnoCy0j7DNs">https://www.youtube.com/watch?v=mnoCy0j7DNs</a>                                       |
| 7 | <a href="https://www.youtube.com/watch?v=KfB2sx9uCkI">https://www.youtube.com/watch?v=KfB2sx9uCkI</a>                                       |
| 8 | <a href="https://www.youtube.com/watch?v=5oyo3b0zy3g">https://www.youtube.com/watch?v=5oyo3b0zy3g</a>                                       |

## 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