VM2104: INTRODUCTION TO FOOD SAFETY

Effective Term
Semester B 2025/26

Part I Course Overview

Course Title
Introduction to Food Safety

Subject Code
VM - Jockey Club College of Veterinary Medicine and Life Sciences
Course Number
2104

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

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Completion of Year 1 courses with C grade or above (for Bachelor of Veterinary Medicine students)

Precursors
VM2001 One Health

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract
This course equips veterinary students to analyze the complex nature of food production from farm to the fork, including seafood production. It also provides an overview of the multidisciplinary nature of the food industry and food production

systems, while emphasizing food hygiene, quality, and security. Students will investigate the microbiology and epidemiology of major foodborne hazards, and how these enter or can be prevented from entering the food chain. The course introduces the principles of sanitation, food production, food processing, food transportation, and related quality assurance practices and regulations. Additionally, the course covers foodborne outbreak investigation. Global food issues such as food sustainability, climate change, agro-terrorism, and drug residues will be discussed. Furthermore, the course addresses food safety issues concerning milk production, processing, transport, and storage.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Explain how safe food is produced, processed, transported, stored and displayed in order to be able to advise on public health and food safety.	40	x	x	
2	Apply the principles of investigating foodborne illness outbreaks and demonstrate how they can be used in practice to identify, control, and prevent contamination in food supply chains.	15	x	x	x
3	Assess the microbiology and epidemiology of major biological, chemical, and physical foodborne hazards in order to plan and design food safety interventions.	40	x	x	
4	Analyse global food issues such as food security, sustainability, climate change, antimicrobial resistance, and agro-terrorism to hypothesize future impacts on food security and safety and propose recommended prevention strategies.	5	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	Lectures	Students will attend lectures to gain an introduction to food safety principles across the farm-to-fork continuum.	1, 2, 3, 4	3 hrs/wk x 10 wks = 30 hrs in total

2	Tutorials	Students will participate in a case-based learning tutorial to develop their skills in conducting a foodborne outbreak investigation and design food safety interventions.	1, 2, 3	3 hrs in total
3	Field Trips	Students will engage in field trips to observe the food industry in action, gaining firsthand insights into food safety practices and challenges.	1, 2, 3, 4	3 hrs x 2 field trips = 6 hrs in total

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Midterm	1, 3, 4	35	-	No
2	Field trip and tutorial reports	1, 2, 3, 4	15	5% per tutorial / field trip	Yes

Continuous Assessment (%)

50

Examination (%)

50

Examination Duration (Hours)

2

Additional Information for ATs

** A penalty of 5% of the total marks for the assessment task will be deducted per working day for late submissions, and no marks will be awarded for submissions more than 10 working days late.

Assessment Rubrics (AR)

Assessment Task

1. Midterm

Criterion

Comprehensively explains the microbiology and epidemiology of major foodborne infections and intoxications, demonstrating an in-depth understanding of the causes, transmission, and impact of foodborne diseases.

Excellent (A+, A, A-)

Displays a high level of knowledge and comprehensive explanation of food-borne diseases.

Good (B+, B, B-)

Displays a good level of knowledge and thorough description of food-borne diseases.

Fair (C+, C, C-)

Displays a competent level of knowledge and classification of food-borne diseases. 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)
Lacks a competent level of knowledge and identification of food-borne diseases.

Assessment Task
2. Field trip reports

Criterion
Able to complete an inspection in food premises and markets.

Excellent (A+, A, A-)
Comprehensively analyzes and documents the key observations and findings from the field trip, demonstrating a thorough understanding of food premises and market operations.

Good (B+, B, B-)
Explains and documents the key observations and findings from the field trip, demonstrating a solid understanding of food premises and market operations.

Fair (C+, C, C-)
Describes the key observations and findings from the field trip, demonstrating a basic understanding of food premises and market operations. 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)
Fails to adequately analyze and document the key observations and findings from the field trip, demonstrating a lack of understanding of food premises and market operations.

Assessment Task
3. Final Examination

Criterion
Able to demonstrate analysis and detailed explanations of food production, processing and safety.

Excellent (A+, A, A-)
Displays a high level of knowledge and detailed explanation of food production, processing and safety.

Good (B+, B, B-)
Displays a good level of knowledge and description of food production, processing and safety.

Fair (C+, C, C-)
Displays a competent level of knowledge and identification of food production, processing and safety. 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)
Lacks a competent level of knowledge of food production, processing and safety.

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 safety, foodborne illness, foodborne pathogen, foodborne hazards, outbreak investigation, epidemiology, animal welfare, global food security

Reading List

Compulsory Readings

	Title
1	Bad Bug Book, Foodborne Pathogenic Microorganisms and Natural Toxins (2012). 2nd edition. Food and Drug Administration
2	Christine Dodd, Tim Aldsworth, Richard Stein (2017). Foodborne diseases. 32nd edition. Academic Press.
3	Practical Food Safety: Contemporary Issues and Future Directions. 1st Edition. Wiley Blackwell
4	Gracey’ s meat hygiene (2015). 11th edition. Wiley Blackwell

Additional Readings

	Title
1	Nil