

# VM2104: INTRODUCTION TO FOOD SAFETY

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## Effective Term

Semester A 2024/25

## 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. The course covers the transportation and handling of cattle, sheep, pigs, poultry, and fish, as well as basic welfare issues in relation to these practices. Additionally, the course explores slaughter techniques (including ritualistic slaughter), meat inspection, slaughterhouse operation, data collection, and animal tracking. Students will investigate the microbiology and epidemiology of foodborne pathogens and intoxications, 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. Global food issues such as food sustainability, agro-terrorism, drug residues, and animal identification 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 (RCVS).	20	x	x	
2	Describe ante mortem-, slaughtering and post mortem inspection in food-producing animals, in order to assess animal health and welfare and identify conditions affecting the quality and safety of products of animal origin and exclude those animals that are unsuitable for the food-chain (RCVS, WOA).H).	35	x	x	
3	Assess the microbiology and epidemiology of major food-borne infections and intoxications in order to plan and design a food safety investigation.	35	x	x	
4	Analyse global food issues such as food security, sustainability, trade and agro-terrorism in order to hypothesize future impacts on food security and safety and propose recommended prevention strategies.	10	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	1 hr/wk (11 weeks)
2	Tutorials	Students will participate in case-based learning tutorials to develop their skills in planning and designing food safety investigations.	1, 2, 3, 4	1 hr/wk (11 weeks)
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/2 times
4	Presentations	Students will collaborate in groups and deliver presentations to explore emerging global food issues and hypothesize their impacts on future food safety and security.	1, 2, 3, 4	1 hr/wk (11 weeks)

**Assessment Tasks / Activities (ATs)**

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Midterm	1, 2, 3	40	
2	Field trip reports	1, 2	10	5% per field trip

**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

#### **Failure (F)**

Lacks a competent level of knowledge and identification of food-borne diseases

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### **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.

#### **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.

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### **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

**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, ante-mortem, post-mortem, slaughterhouse, foodborne illness, foodborne pathogen, outbreak investigation, epidemiology, animal welfare, global food security

**Reading List****Compulsory Readings**

Title	
1	Christine Dodd, Tim Aldsworth, Richard Stein (2017). Foodborne diseases. 32nd edition. Academic Press.
2	Practical Food Safety: Contemporary Issues and Future Directions. 1st Edition. Wiley Blackwell
3	Gracey's meat hygiene. 11th edition. Wiley Blackwell

**Additional Readings**

Title	
1	Nil