



## Course Descriptor VTMD514 Milk & Meat Hygiene

<b>Proposed Academic Year</b>	2021 - 22	<b>Last Reviewed Academic Year</b>	
<b>Course Code</b>	VTMD514	<b>Course Title</b>	Milk & Meat Hygiene
<b>Credit hours</b>	2	<b>Level of study</b>	Undergraduate
<b>College / Centre</b>	CAHS	<b>Department</b>	VTMD
<b>Co-requisites</b>		<b>Pre-requisites</b>	

### 1. COURSE OUTLINE

This course will establish the fundamentals of hygienic milk production and handling practices. The course also covers preservation of milk: transportation, storage, contamination: types, sources, effects, milk defects: off flavors, milk-borne diseases, adulteration in milk: status, control methods, HACCP for hygienic milk production. The course also covers topics in meat hygiene: meat sanitation scope and importance, abattoirs: pre-requisites, anti-mortem inspection: disease symptoms, slaughtering and meat handling: hygienic practices and principles, rules for meat industry, red meat hygiene, waste management, quality control, meat-borne diseases and HACCP for hygienic meat production.

### 2. AIMS

The course aims to study a wide range of quality feedstuffs available for use in the feeding of farm livestock. It also aims to give a good understanding on milk production and handling as well as preservation of meat.

### 3. LEARNING OUTCOMES, TEACHING, LEARNING and ASSESSMENT METHODS

<b>Learning Outcomes (Definitive)</b>	<b>Teaching and Learning methods (Indicative)</b>	<b>Assessment (Indicative)</b>
Upon successful completion of this course, students will be able to:		
1. Discuss the basic principles for the Construction of a Functional Abattoir	Lectures, practical field trips	<ul style="list-style-type: none"> <li>Oral in-class assessments and feedback</li> <li>Homework and Formal Examinations</li> </ul>
2. Identify methods of meat preservation.	Lectures, practical field trips	<ul style="list-style-type: none"> <li>Oral in-class assessments and feedback</li> <li>Homework and Formal Examinations</li> </ul>
3. Demonstrate an understanding of the safety issues in meat and milk production.	Lectures, practical field trips	<ul style="list-style-type: none"> <li>Oral in-class assessments and feedback</li> <li>Homework and Formal Examinations</li> </ul>

### 4. ASSESSMENT WEIGHTING



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Assessment	Percentage of final mark (%)
Assignment	20%
Quizzes	20%
Mid-term Examination	20%
Final Examination	40%
<b>TOTAL</b>	<b>100%</b>

### 5. ACHIEVING A PASS

Students will achieve **2** credit hours for this course by passing **ALL** of the course assessments [*Quizzes, Mid-term, Final Examinations\**] and achieving a **minimum overall score of 50%**

***NB \*Ensure that ALL learning outcomes are taken into account***

### 6. COURSE CONTENT (Indicative)

Milk hygiene:

- Milk hygiene in relation to public health.
- Microbial flora of milk and milk products.
- Sources of milk contamination during collection and transport of milk and processing of dairy products.
- Control of milk and milk product contamination.
- Hygienic handling/
- management of dairy equipment Quality control of milk and milk products.
- Milk hygiene
- practices in Oman and other countries.
- Legislation and standards for milk and milk products.
- Milk as a source of disease transmission.

Meat hygiene:

- Pathological conditions associated with the transport of food animals.
- Elements of meat inspection.
- Hygiene in abattoirs.
- Ante-mortem inspection of meat animals.
- Humane and Halal slaughter of animals.
- Postmortem inspection of meat animals.
- Methods of inspection of meat.
- Rigor mortis and examination of lymph nodes. Speciation of meat.
- Health implications of emergency and causality slaughter.
- Hygienic disposal of unsound meat.
- Inspection of poultry and aquatic foods (fish) for human consumption.
- Occupational health hazards in meat processing plants.
- Meat as a source of disease transmission.



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- Food safety, definition, hazard analysis and critical control point (HACCP) system and
- chemical and microbial toxicities associated with milk, meat and aquatic foods.
- Risk analysis: assessment and management and food safety measures.
- Toxic residues (pesticides, antibiotics, metals and hormones) and microbial toxins in food and their health hazards.
- Types of bio-hazards.
- Sanitary and phytosanitary measures in relation to foods of animal origin and aquatic foods.

International and national food safety standards {Office International des Epizootics (OIE), World Trade Organisation (WTO), Sanitary and Phytosanitary (SPS) and Codex Alimentarius.

<b>TOTAL HOURS</b>	<b>30</b>
Plus <b>RECOMMENDED INDEPENDENT STUDY HOURS</b>	<b>15</b>
<b>TOTAL COURSE HOURS</b>	<b>45</b>

**7. RECOMMENDED REFERENCES**

**Core text/s:**

W.G. Wilson (Editors): *Wilson's Practical Meat Inspection*, 7th Ed. Blackwell Publishing. (2005)  
S.M. Saad, A.M. Edris (Editors): *Notes on Meat Hygiene*. Faculty of Veterinary Medicine  
Moshtohour-Benha-Branch Zagazig University. (2012).

**Library + online resources:**

**Open Educational Resources:**