**UNIVERSITY OF SARGODHA**

**DEPARTMENT Of ANIMAL SCIENCES**

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COURSE OUTLINE Spring 2020

Course Title: **Introduction to Veterinary Preventive Medicine**

Course Code:VMD-202

Credit Hours: 2(1-1)

Instructor: **Dr. Imtiaz Hussain**

Email: **imtiaz.hussain@uos.edu.pk**

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| DESCRIPTION & OBJECTIVES |

The course provides the students theoretical and practical knowledge about important veterinary and public health relation, and skills to diagnose and prevent important livestock diseases in Pakistan.

The key objectives/outcomes of this course are;

* This course introduces the students with basic concept of preventive medicine.
* To aware the students about concept of modern disease diagnostic techniques.

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| INTENDED LEARNING OUTCOMES |

Diagnosis for different common diseases of livestock will become easy for the students. They will have complete knowledge about prevention of different diseases of farm animals. They will become familiar with control strategies to prevent epidemics of different diseases. This course will provide a comprehensive knowledge about vaccines and vaccination schedules of common diseases of our farm animals. Students will be able to collect samples for disease diagnosis.

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| CONTENTS |

**Theory**

Concept of disease and health in animal and human medicine. Importance of animal diseases in national economy, signs of health and disease. Types of animal diseases on the basis of etiology. Stress and immune system, body defense against diseases. Principles of treatment of diseases, prevention, control and eradication of diseases. Etiology, epidemiology, pathogenesis, diagnosis, treatment, prevention, control and eradication (where relevant) of important diseases/disorders of livestock (Haemorrhagic septicaemia, Mastitis, Anthrax, Black quarter, Enterotoxaemia, Tetanus, Pleuropneumonia, Foot and Mouth disease, Rabies, Pox, Newcastle disease, Bird flu, Hemoglobinuria, Indigestion, Diarrhea, Pneumonia, Tympany, Hydrocyanic acid, nitrate & nitrite poisoning). Macro and micro element deficiencies and imbalances relevant in Pakistan. Disinfection, biosecurity and metaphalyxis. Zoonosis, WTO Accord in relation to the animal diseases prevalent in Pakistan. Drug residues, veterinary medicine in relation to human health.

**Practical**

Behavior of different animal species as it relates to the practice of veterinary medicine. Demonstration of methods of restraining of different animal species. Recording the cardinal parameters of health (Body temperature, pulse and respiration). Demonstration of disease diagnostic methods (palpation, auscultation, microscopic examination of feces, skin scrapings, blood, X-ray and ultrasonography. Methods of drug administration in animals (oral and parenteral). Demonstration of veterinary first aid procedures (controlling haemorrhage, dressing wounds, artificial respiration, use of splints in fractures, first aid in snake bite, heat stroke, tympany, drowning, burns, choke etc.).

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| READINGS |

* Frandson, R. D. 1975. Anatomy and Phsiology of Farm Animals. Lea and Febiger, Philadelphia, USA.
* Sisson, A. and J. D. Grossman. 1972. Anatomy of Domestic Animals. W.B. Saunders Co., Philadelphia, USA.
* Ankers R.M. and D.M. Denbow. 2008. Anatomy and Phsiology of Domestic Animals. Blackwell Publishing Ltd., UK.

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| COURSE SCHEDULE |
| **Weeks** | **Topic** | **Books with Page No.** |
| 1 | Concept of disease and health in animal and human medicine. Behavior of different animal species as it relates to the practice of veterinary medicine. | Veterinary Medicine 10th edition, By O. M. Radostits, C. c. Gay, K.W. Hinchcliff, P. D. Constale, Page (xvii-xxi) |
| 2 | Importance of animal diseases in national economy, signs of health and disease. Demonstration of methods of restraining of different animal species. | Animal Husbandry By S. Iqbal Shah, Page (370-378) |
| 3 | Types of animal diseases on the basis of etiology. Stress and immune system, body defense against diseases. Demonstration of methods of restraining of different animal species. | Animal Husbandry By S. Iqbal Shah, Page (370-378) |
| 4 | Principles of treatment of diseases, prevention, control and eradication of diseases. Recording the cardinal parameters of health (Body temperature, pulse and respiration). | Animal Husbandry By S. Iqbal Shah, Page (379-383) |
| 5 | Etiology, epidemiology, pathogenesis, diagnosis, treatment, prevention, control and eradication (where relevant) of important diseases/disorders of livestock. Recording the cardinal parameters of health (Body temperature, pulse and respiration). | Dairy hygiene and disease prevention, By M. Qamar Bilal, Glossary |
| 6 | Haemorrhagic septicaemia, Mastitis, Anthrax Recording the cardinal parameters of health (Body temperature, pulse and respiration). | Dairy hygiene and disease prevention, By M. Qamar Bilal, Page (109-112) |
| 7 | Black quarter, Enterotoxaemia, Tetanus, Pleuropneumonia. Recording the cardinal parameters of health (Body temperature, pulse and respiration). | Dairy hygiene and disease prevention, By M. Qamar Bilal, Page (117, 118, 129) |
| 8 | Foot and Mouth disease, Rabies, Pox, Newcastle disease. | Dairy hygiene and disease prevention, By M. Qamar Bilal, Page (122-125) |
| **9** | **Mid Test** |  |
| 10 | Foot and Mouth disease, Rabies, Pox, Newcastle disease Demonstration of disease diagnostic methods (palpation, auscultation). | Dairy hygiene and disease prevention, By M. Qamar Bilal, Page (122-125) |
| 11 | Bird flu, Hemoglobinuria, Indigestion. Demonstration of disease diagnostic methods microscopic examination of (microscopic examination feces, skin scrapings). | The Merck veterinary manual, Page (806-816) |
| 12 | Diarrhea, Pneumonia, Tympany Hydrocyanic acid, nitrate & nitrite poisoning. Demonstration of disease diagnostic methods (blood, X-ray and ultrasonography). | The Merck veterinary manual, Page (183-187).Diseases of llivestock 8th edition page (112-116). |
| 13 | Macro and micro element deficiencies and imbalances relevant in Pakistan. Methods of drug administration in animals (oral and parenteral). | The Merck veterinary manual Page (1841, 1909, 1870). |
| 14 | Bird flu, Hemoglobinuria, Indigestion. Demonstration of disease diagnostic methods microscopic examination of (microscopic examination feces, skin scrapings). | The Merck veterinary manual, Page (806-816). |
| 15 | Disinfection, biosecurity and metaphalyxis. Demonstration of veterinary first aid procedures (controlling haemorrhage, dressing wounds, artificial respiration, use of splints in fractures, first aid in snake bite, heat stroke, tympany, drowning, burns, choke etc.). | The Merck veterinary manual 10th edition, Page (1377) |
| 16 | Zoonosis, WTO Accord in relation to the animal diseases prevalent in Pakistan. Demonstration of veterinary first aid procedures (controlling haemorrhage, dressing wounds, artificial respiration, use of splints in fractures, first aid in snake bite, heat stroke, tympany, drowning, burns, choke etc.). | Dairy hygiene and disease prevention, By M. Qamar Bilal, Page (77-84) |
| 17 | Drug residues, veterinary medicine in relation to human health. Demonstration of veterinary first aid procedures (controlling haemorrhage, dressing wounds, artificial respiration, use of splints in fractures, first aid in snake bite, heat stroke, tympani, drowning, burns, choke etc.). | The Merck veterinary manual 10th edition, Page (1379-1399). |
| **18** | **Final term** |  |

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| RESEARCH PROJECT |

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| ASSIGNMENT CRITERIA |

Sessional: 04

Mid-term: 06

Final Exam: 10

Practical: 20