Jordan University of Science and Technology
Faculty of Veterinary Medicine
Department of Veterinary Clinical Sciences
PRODUCTION MEDICINE AND ELECTRONIC FARMING
VM473

COURSE INFO	
Course Title	**Production Medicine and electronic farming**
Course Number	**VM473**
Course Coordinator	**Dr. Myassar Alekish**
Office Location	**G1L2**
Office phone	**22017**
Office hours	**Monday 10:15-12:15** **Sunday 12:30-2:30**
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READING MATERIALS	
Text Book	• **Otto M. Radostits. 3rd edition 2001, Herd Health Food Animal Production Medicine.** • **Dairy Production Medicine. Carlos A. Risco, Pedro Melendez Retamal. Published Online: 30 AUG 2011.** • **Radostits, et al., 10th edition 2007, Veterinary Medicine: A textbook of the diseases of Cattle, Sheep, Pigs, Goats and Horses** • **Bovine Medicine, Peter Cockcroft: 2015. 3rd Ed. Published online.**
Additional Reading (Books)	• **Howard J., 1998, Current Veterinary Therapy, Food animal practice**

Additional Reading (Journals)	● **Smith B., 4th edition 2008. Large Animal Internal Medicine** ● **American Journal of Veterinary Medical Association** ● **Bovine Practitioner** ● **Vet Clin North Am. Large animal practice** ● **Veterinary Record** ● **American Journal of Veterinary Research**

GRADING	
Exam	**Weight**
Mid Exam	**40**
Assignment	**20**
Final Exam	**40**
Total	**100**

COURSE DESCRIPTION:

Students will begin identifying and accumulating the specialized knowledge, skills and resources needed for veterinary Herd Production Medicine (HPM) in their species of interest. Industry and academic professionals will make presentations in their areas of expertise.

Current electronic recordkeeping is in a state of relative neglect. At their most basic level, therefore, in this course, we will begin by considering the messy recordkeeping environment in which we currently live. We will then gradually build up a set of concepts, tools and strategies that our students can use through their future career by using virtually web-based platforms.

OBJECTIVES OF THE COURSE:

At the end of the course, each student will be able to:

- Orient students to HPM
- Acquaint students with HPM resource materials.
- Acquaint students with the diverse opportunities available in HPM.
- Enable students to begin identifying and acquiring the skills for providing HPM services to clients in animal agriculture.
- Gain awareness of trends and practices in contemporary recordkeeping environments.
- Understand the nature of electronic records in different settings.
- Be aware of social, legal, and policy implications for individuals and organizations keeping records in electronic form.
- Be able to analyze a variety of problems related to electronic records and propose solutions that are appropriate in particular contexts.
- Be able to evaluate various electronic recordkeeping strategies

Weeks	Topic
1-2	● **Introduction to Herd Production Medicine** ▪ What is veterinary production medicine? ▪ What specialized skills and knowledge are required? ▪ What are the basic differences between production and traditional veterinary medicine? ▪ How biosecurity and biosafety issue is one of the core pillars in farm management
3	● **Record systems and herd monitoring in production-oriented health management programs in food-producing animals** ▪ Why keep record ▪ What kinds of records need to be kept ▪ What steps need to be taken to set up a record system ▪ What kinds of records are there ▪ Dairy records analysis and evaluation of performance
4-5	● **Mastitis control in dairy herds** ▪ Definition and terminology ▪ Why mastitis control should be part of health program ▪ Epidemiology of mastitis ▪ Screening tests for detecting mastitis ▪ Mastitis classification ▪ Contagious ▪ Environmental

6	● **Health management of dairy calves and replacement heifers** ▪ Causes of economic loss in dairy calves ▪ Epidemiology of dairy calf disease ▪ Risk factors for dairy calf disease ▪ Environmental, housing, and management practices ▪ Principles of control and prevention of infectious diseases of dairy calves ▪ Calf nutrition from calf to weaning ▪ Objectives of raising herd replacements ▪ Components of heifer health management programs
7-9	● **Dairy cattle nutrition** ▪ Levels of nutritional services ▪ Digestive physiology of dairy cow ▪ Factors affecting nutrient requirements ▪ Nutrient requirement of dairy cows ▪ Feeds for the dairy cow ▪ Feeding systems for dairy herds ▪ Balancing ration ▪ Monitoring dairy feeding programs ▪ Metabolic diseases and nutrition
10-11	● **Housing and environment for dairy cattle** ▪ Planning for management ▪ Animal environment and ventilation ▪ Animal lying spaces ▪ Housing systems ▪ Calf and heifer housing

	▪ Sorting, handling, and restraint for treatment ▪ Manure management ▪ Lameness in dairy cattle ▪ Internal parasitism ▪ Behavior problems with direct economic impact
12	● **Lameness in Dairy cattle** ▪ Noninfectious disorders of bovine foot ▪ Infectious disorders of foot skin ▪ Capture of lameness data for analysis and interpretation of foot health ▪ Use of information on lameness
13	● **Health and production management in sheep flocks** ▪ Causes of economic losses in sheep flocks ▪ Types of flock health programs ▪ Targets of performance in sheep flocks ▪ Management of ewe flocks ▪ Nutrition of ewes during gestation and early lactation ▪ Optimize perinatal survival of lambs

Production Medicine and Electronic Farming Lab

Four assignments are required as follow:

Assignment #	Topic	Due date	Evaluation
1	“Electronic Animal ID system “	8/11/2022	25
2	Farm visit I report	30/11/2022	25
3	“PDF system”	22/11/2022	25
4	Farm visit 2 report	28/12/2023	25

The assignments should be hand written, and handed on to the professor on the due date by hand.