

Jordan University of Science and Technology
Faculty of Veterinary Medicine
Department of Veterinary Pathology and Public Health
1st Semester 2019/2020

Course Information	
Course Title	Animal Nutrition
Course Number	VM 321
Prerequisites	VM 104, VM 224
Course Website	e-learning
Instructor	Dr. Mofleh S. Awawdeh
Office Location	C1L3
Office Phone	22068
Office Hours	Sunday: 11:30-12:30 Tuesday: 12:30-1:30, 2:30-3:30 Wednesday: 10:30-11:30 Thursday: 10:30-11:30, 11:30-12:30 If I am in my office, all students are welcome.
E-mail	mawawdeh@just.edu.jo , dr.awawdeh@gmail.com
Teaching Assistant	None
Course Description	
The course will discuss the fundamentals of animal nutrition including: feedstuffs and their use in livestock feeding, nutrients and how they are digested, absorbed, and metabolized by ruminant and monogastric animals. Additionally, nutrient requirements, diet formulation, and feeding management of livestock animals will be covered. Finally, nutritional (deficiency and toxicity) and metabolic disorders will be studied.	

Text Book	
Title	*** Basic Animal Nutrition and Feeding (5 th Ed. 2005) by Pond, Church, Pond, and Schoknecht. John Wiley & Sons, Inc. (Recommended).
	*** Livestock Feeds and Feeding (5 th Ed. 2002) by Kellems and Church. Pearson Education Inc. (Recommended).
	* Animal Nutrition (6 th Ed., 2002) by McDonald, Edward, Greenhalgh, and Morgan. Pearson Education Inc. (Recommended).
	*Applied Animal Nutrition (3 rd Ed. 2005) by Cheeke. Pearson Education Inc. (Recommended).
	Nutrient Requirements of Dairy Cattle (2001) by National Research Council.
	Nutrient Requirements of Beef Cattle (2000) by National Research Council.

Assessment Policy		
Assessment Type	Expected Due Date	Weight
First Exam	Tuesday	30%
Second Exam	Tuesday	30%
Final Exam	Announced by registration office	40%

Course Objectives		Weights
1) Differentiate between ruminant and monogastric animals in terms of nutrient utilization.		10%
2) Understand differences in feedstuffs and their use in livestock feeding.		30%
3) Understand different nutrients and how they are digested, absorbed, and metabolized by ruminant and monogastric animals.		30%
4) Formulate rations and feeding dairy and beef cattle, sheep, horses, poultry, and companion animals (cats and dogs).		30%

Learning Outcomes: Upon successful completion of this course, students will be able to
<ul style="list-style-type: none"> Differentiate between monogastric and ruminant animals in terms of nutrient utilization.
<ul style="list-style-type: none"> Recognize different feedstuffs and their use in animal feeding.
<ul style="list-style-type: none"> Understand the metabolism of major nutrients and their deficiency and toxicity signs.
<ul style="list-style-type: none"> Formulate diets and feed different livestock animals.

Course Content		
Week	Topics	Handouts
1	Introduction	1
1	GIT & Nutrition	2
2	Rumen Microbiology & Motility	3
2	Major Nutrients	4
3	CHO Metabolism	5
4	Protein Metabolism	6
5	Lipid Metabolism	7
5	Energy Metabolism	8
6	Macro-Minerals	9
7	Micro-Minerals	10
8	Vitamins	11
9	Feed Analysis	12

9	Feedstuffs	13
10	Diet Formulation	14
11	Feeding dairy cattle	15
12	Feeding beef cattle	16
12	Feeding Sheep	17
13	Feeding Horses	18
14	Feeding poultry	19
15	Feeding cats & dogs	20

Additional Notes	
Assignments	It is expected that all academic work completed in this class is done individually by you.
Exams	Three exams (1 st , 2 nd , and final)
Cheating	Plagiarism and cheating are serious offenses and may be punished by failure on the exam, paper, or project; failure in the course according to JUST rules.
Attendance	Highly recommended and required by JUST rules. There will be no makeup for quizzes and HW for unexcused absence.
Workload	Depends on your attendance, participation, and taking complementary notes.
Graded Exams	Will be discussed with students.
Participation	Required and highly recommended.