



Jordan University of Science and Technology
Faculty of Agriculture
Animal Production Department

AP435 Ruminant Nutrition

First Semester 2020-2021

Course Catalog

3 Credit Hours. The process of digestion and metabolism in ruminants. Nutrient requirements of ruminants at various stages of their life cycle; energy partitioning, metabolic disorders, environmental influences on feeding ruminants. (Prerequisite: AP 232).

Text Book

Title	The Ruminant Animal-Digestive Physiology and Nutrition.
Author(s)	D. C. Church
Edition	1st Edition
Short Name	Ref 1
Other Information	

Instructor

Name	Prof. Belal Obeidat
Office Location	M1L3
Office Hours	Sun : 10:00 - 12:00 Mon : 09:00 - 10:00 Tue : 10:00 - 12:00 Wed : 09:00 - 10:00
Email	bobeidat@just.edu.jo

Class Schedule & Room

Section 1:
Lecture Time: Mon, Wed : 11:30 - 13:00
Room: منصة الكترونية

Prerequisites		
Line Number	Course Name	Prerequisite Type
613330	AP333 Range Animal Nutrition	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Anatomy and Development of GIT in ruminant	From Ref 1
Week 2	Digestion and Fermentation Process	From Ref 1
Week 3	Rumen microbiology	From Ref 1
Week 4	Carbohydrates fermentation, digestion, absorption, and metabolism	From Ref 1
Week 5	Protein fermentation, digestion, absorption, and metabolism	From Ref 1
Week 6	Fat fermentation, digestion, absorption, and metabolism	From Ref 1
Week 7	Energy metabolism	From Ref 1
Week 8	Vitamins in Ruminant Nutrition	From Ref 1
Week 9	Minerals in Ruminant Nutrition	From Ref 1
Week 10	Intake, and intake regulation in ruminants	From Ref 1
Week 11	Feedbunk Management	From Ref 1
Week 12	Metabolic disorders	From Ref 1
Week 13	Ration Formulation	From Ref 1
Week 14	Feeding and Nutrition of Dairy Cattle	From Ref 1
Week 15	Feeding sheep	From Ref 1

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Understand the anatomy and physiology of the ruminant digestive tract	10%	Midterm Exam
Understand the process of microbial fermentation of carbohydrates, protein and fat.	10%	Midterm Exam
Understand the nutrition and nutritional management of ruminants	20%	Midterm Exam
Understand of the nutritional implications on animal growth, production and reproduction	20%	Midterm Exam, Final
Know how to formulate of proper rations for ruminants	10%	Final
Know some of the nutritionally related disorders and understand the mechanisms that underlie these disorders.	15%	Final

Understand basics of dairy cattle and sheep nutrition	15%	Final
---	-----	-------

Relationship to Program Student Outcomes (Out of 100%)			
SLO 1	SLO 2	SLO 3	SLO 4

Evaluation	
Assessment Tool	Weight
Midterm Exam	50%
Final	50%

Policy	
Exams	All exams are closed book and notes. The final exam is comprehensive (covers all the material). Incomplete exams need approval from the department chair
Cheating	Prohibited; and in case of cheating the student will be subject to punishment according to the university regulations
Attendance	Up to 20% in accordance with university policy
Participation	Participation is highly encouraged and mandated
Withdraw	According to the timeline defined by the university regulations

Date Printed: 2021-11-14