



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

AP718 Animal Growth & Development - JNQF Level: 9

First Semester 2024-2025

Course Catalog

3 Credit Hours. - Understand the concepts of growth and development of domestic animals. - Knowledge of factors which control normal and abnormal growth of bone, skeletal muscle and adipose tissue. - Understand how to use Absolute, Average Absolute, Relative and Average Relative Growth curves to define growth and the best application of each type of curve when trying to describe growth of an animal. - Understand the anatomical, physiological, developmental and biochemical aspects of muscle. - Be able to recognize how different biochemical and physiology considerations can influence growth at the cellular level i. e. enzymes, hormones, organ size.

Teaching Method: On Campus

Text Book

Title	Growth of Farm Animals
Author(s)	T. L. J. Lawrence and V. R. Fowler
Edition	2nd Edition
Short Name	Ref #1
Other Information	CAB international. UK.

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref # 2	New Concepts of Sheep Growth	Rex M. Butterfield	2nd Edition	Published by the Department of Veterinary Anatomy, University of Sydney

Instructor

Name	Prof. Abdullah Mohammad Al-Yousef
Office Location	C4L3

Office Hours	Sun : 11:30 - 12:30 Mon : 10:00 - 13:00 Tue : 14:30 - 15:30 Thu : 09:00 - 10:30
Email	abdullah@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Tue, Thu : 10:30 - 11:30 Room: U

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to Animal Growth	From Ref #1 , From Ref # 2
Week 2	Animal Growth and Carcass Composition	From Ref #1
Weeks 3, 4	Factors affecting growth-and-development	From Ref #1 , From Ref # 2
Weeks 5, 6	Growth of a single sheep	From Ref # 2
Week 7	General aspects of growth	From Ref #1 , From Ref # 2
Weeks 8, 9	Prenatal and postnatal growth	From Ref #1
Weeks 10, 11	Efficiency of Growth	From Ref #1 , From Ref # 2
Week 12	Compensatory Growth	From Ref #1 , From Ref # 2
Weeks 13, 14	Growth and puberty in breeding animals	From Ref #1
Weeks 15, 16	Measuring Growth	From Ref #1

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Understanding the general terms of Animal growth and development [1SLO 1, 1M.PLO1, 1M.PLO2] [1L9K1]	5%	
Understanding the growth and development of deferent types of animals and their carcass composition [1SLO 1, 1M.PLO1, 1M.PLO5] [1L9K1, 1L9K2]	5%	
understanding all the factors affecting growth and development in farm animals [1SLO 2, 1M.PLO1, 1M.PLO2] [1L9K2, 1L9S2]	15%	

Having a good knowledge of the way of a single sheep growth from prenatal stage to maturity and the development of all tissues and organs [1SLO 2, 1SLO 3, 1M.PLO1, 1M.PLO5] [1L9K2, 1L9S2]	15%	
To get knowledge of a general aspects of the growth and development in all types of farm animals [1SLO 1, 1SLO 2, 1M.PLO1, 1M.PLO2] [1L9K1, 1L9K2, 1L9S2]	10%	
understanding the development stage of growth in prenatal and postnatal from fertilization to maturity and death stage [1SLO 1, 1SLO 2, 1SLO 4, 1M.PLO1, 1M.PLO2] [1L9K2, 1L9S2]	10%	
To study all the components of feed that will used efficiently in growth of animals [1SLO 2, 1M.PLO1] [1L9K2, 1L9S2]	10%	
To understand and get knowledge of the term compensatory growth and their types and all the factors affecting it. [1SLO 2, 1SLO 3, 1M.PLO1, 1M.PLO2] [1L9K2, 1L9S2]	10%	
Understanding the relationship between growth and puberty in breeding animals [1SLO 2, 1SLO 3, 1M.PLO1, 1M.PLO2] [1L9K2, 1L9S1, 1L9S2]	10%	
To know all types of tools and methods used to measuring growth [1SLO 3, 1M.PLO3] [1L9S1, 1L9S3]	10%	

Relationship to Program Student Outcomes (Out of 100%)								
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SLO 1	SLO 2	SLO 3	SLO 4	M.PLO1	M.PLO2	M.PLO3	M.PLO4	M.PLO5
7.83	23.25	13.75	2	26.58	16.17	5		5.42

Relationship to NQF Outcomes (Out of 100%)				
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L9K1	L9K2	L9S1	L9S2	L9S3
10.83	39.17	8.33	36.67	5

Policy	
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Course regulation	Regular attendance is expected of all students. Anticipated absences should be cleared with the instructor prior to the absence. Emergency absences should be reported as soon as possible. Make-up exams and work will be allowed only under extenuating circumstances. Each student will also be requested to present a term paper. The student will select a topic of interest relating to the course content. Topics must be approved by the instructor.
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