

Course Syllabus

1	Course title	Physiology of Farm Animals	
2	Course number	0602256	
3	Credit hours	3	
	Contact hours (theory, practical)	3,0	
4	Prerequisites/corequisites	General Biology II (304102)	
5	Program title	B.Sc. Animal Production	
6	Program code	602	
7	Awarding institution	University of Jordan	
8	School	Agriculture	
9	Department	Animal Production	
10	Course level	2 nd -3 rd year	
11	Year of study and semester (s)	1 st semester 2021/2022	
12	Other department (s) involved in teaching the course	None	
13	Main teaching language	English	
14	Delivery method	<input type="checkbox"/> Face to face learning <input checked="" type="checkbox"/> Blended <input type="checkbox"/> Fully online	
15	Online platforms(s)	<input checked="" type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....	
16	Issuing/Revision Date	9-10-2021	

17 Course Coordinator:

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18 Other instructors:

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Office number:

Phone number:

Email:

Contact hours:

Name:

Office number:

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Email:

Contact hours:

19 Course Description:

This course will explore the physiology of blood and lymph system, cardiovascular, respiratory, renal, digestive, endocrine, skeletal, nervous tissues at the systemic, cellular, and molecular levels. Functions and vital processes of the major organ systems are described. Students will be exposed to fundamental information on comparative functional physiology of livestock and poultry. The goal is to establish an understanding of the importance of animal physiology in farm animal production and to enable students to acquire the relevant knowledge of body-systems functions, and to be able to apply this knowledge to the analysis of physiological problems, as may relate to animal production. At the completion of the course, students should understand basic physiological concepts common to multiple systems that ensure homeostasis and promote integration of physiological systems.

20 Course aims and outcomes:

A- Aims:

1. To understand the functions of individual organs.
2. Demonstrate a detailed knowledge of the physiology of the body systems
3. To comprehend the processes that control and regulate important properties of systems.
4. To help students gain a strong understating of the basic principles of physiological mechanisms in the body
5. To integrate the vast network of feedback control that achieves necessary homeostasis.

B- Students Learning Outcomes (SLOs):

Upon successful completion of this course, students will be able to:

Course SLOs	Program ILOs*							
	ILO (1)	ILO (2)	ILO (3)	ILO (4)	ILO (5)	ILO (6)	ILO (7)	ILO (8)
(1) Explain the functional organization & structure of various body systems and its relation to function.	X							
(2) Be familiar with and able to use relevant physiological terms (the language of physiology).	X							
(3) Understand how the integrate functions of all body systems and cells of the body work as a one functional unit.	X							
(4) Be able to apply their knowledge and reasoning skills to physiological problems involving the major farm animal species.	X							
(5) Be able to analyze the biological processes that occur in body organs and their relation to production efficiency.	X							
(6) Learn how to utilize library database, internet web sites and other scientific information resources through assignments.		X						
(7) Be able to solve problems in farm animal production based on physiological knowledge.		X						
(8) Be able to apply the knowledge to conduct scientific experiments and interpret the results based on physiological processes			X					
(9) Apply the learned functions, mechanisms of the various body systems in management practices of farm animals.		X						

*** Program ILOs:**

ILO (1): Demonstrate a deep understanding of the basic principles in the various areas of livestock production; including nutrition, physiology, genetics, health and management.

ILO (2): Apply the acquired knowledge in various areas of livestock production.

ILO (3): Utilize critical thinking and logical reasoning in addressing issues related to livestock production.

ILO (4): Communicate effectively with a wide range of related stakeholders and provide appropriate extension services.

ILO (5): Apply the principles of public safety and environmental protection.

ILO (6): Acquire and apply practical skills along with keeping up with recent advances in livestock production.

ILO (7): Identify basic principles of research methodology and evidence-based decision making.

ILO (8): Abide by the professional, ethical and legal considerations relevant to the livestock production.

21. Topic Outline and Schedule:

We will use the e-learning and Microsoft teams as platforms in this course

Week	Lecture	Topic	Intended Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)
1	1.1	Introduction and Course Syllabus		Face to Face
	1.2	<ul style="list-style-type: none"> •Introduction -Terminology -Cell physiology and biology 	2	Face to Face
	1.3	Video on YouTube (Cell membrane)	1,2	Blended
2	2.1	<ul style="list-style-type: none"> •Introduction -Cell membrane Transportation 	3	Face to Face
	2.2	Holiday		
	2.3	Homework 1 (e-learning)	1,2	Blended
3	3.1	<ul style="list-style-type: none"> •Introduction -Cell membrane Transportation 	4	Face to Face
	3.2	•Introduction	3,4	Face to Face

		-Homeostasis		
	3.3	Quiz 1	2-4	Blended
4	4.1	SNPs, PCR, Transgenic animals	5	Face to Face
	4.2	Knock-out, Cloned Mice and Livestock	6	Face to Face
	4.3	Video on YouTube Homework 2 (e-learning)	3-6	Blended
5	5.1	<ul style="list-style-type: none"> • The Blood Vessels and Blood Pressure -Describe Arterioles, Capillaries, and Veins -Describe blood composition and function 	2,3,7	Face to Face
	5.2	<ul style="list-style-type: none"> • The Blood Vessels and Blood Pressure -Describe blood composition and function -Describe patterns and physics of blood flow 	4,9	Face to Face
	5.3	Homework 3 (e-learning) Exam 1 (11-11-2021) (15 points)	8 (for home work)	Blended
6	6.1	<ul style="list-style-type: none"> • Cardiac Physiology -The Heart as a Pump - Describe the function (and related anatomy) of the cardiovascular system 	1,3,5	Face to Face
	6.2	<ul style="list-style-type: none"> • Cardiac Physiology - Describe the function (and related anatomy) of the cardiovascular system - Electric Properties of the Cardiac Cell 	2,4	Face to Face
	6.3	Quiz 2	5,7	Blended
7	7.1	<ul style="list-style-type: none"> • Cardiac Physiology - Describe the factors involved in the regulation of arterial blood pressure -Control of blood Volume 	1,3,5	Face to Face
	7.2	<ul style="list-style-type: none"> • Respiratory system - Describe the Structure and Functions of the respiratory system 	1,2	Face to Face
	7.3	Homework 4 (e-learning)	8	Blended
8	8.1	<ul style="list-style-type: none"> • Respiratory system - Gas exchange and oxygen transport - Control of respiration 	4,5	Face to Face
	8.2	<ul style="list-style-type: none"> • Respiratory system - Respiration in mammals - Respiration in birds 	3	Face to Face
	8.3	Quiz 3 Video on YouTube	5,7	Blended

9	9.1	<ul style="list-style-type: none"> • Respiratory system - Case study 	9	Face to Face
	9.2	<ul style="list-style-type: none"> • Digestive system - Gastrointestinal physiology - Comparative Digestive Physiology of Mono-gastric and Ruminants 	1,2	Face to Face
	9.3	Exam 2 (2-12-2021) (15 points) Homework 5 (e-learning)	8 (for home work)	Blended
10	10.1	<ul style="list-style-type: none"> • Digestive system - Comparative Digestive Physiology of Mono-gastric and Ruminants - Describe the nervous and hormonal regulation of digestion 	3,4	Face to Face
	10.2	<ul style="list-style-type: none"> • Digestive system - Describe the nervous and hormonal regulation of digestion - Paper discussion 	5,7	Face to Face
	10.3	Homework 6 (e-learning) Video on YouTube	8	Blended
11	11.1	<ul style="list-style-type: none"> • Urinary system - Kidney structure and function 	1,2	Face to Face
	11.2	<ul style="list-style-type: none"> • Urinary system - Water and electrolyte regulation - Acid-base balance 	3	Face to Face
	11.3	Quiz 4	3,4	Blended
12	12.1	<ul style="list-style-type: none"> • Urinary system - Homeostasis and systems integration 	1-3	Face to Face
	12.2	<ul style="list-style-type: none"> • Urinary system - Case study 	8-9	Face to Face
	12.3	Homework 7 (e-learning)	7	Blended
13	13.1	<ul style="list-style-type: none"> • The Endocrine System - Describe hormone actions and their receptors - Describe the functions of hormones secreted by the glands - Describe hormonal regulation and reproduction - Describe hypothalamus and pituitary 	1,2,4	Face to Face
	13.2	<ul style="list-style-type: none"> • The Endocrine System - Describe endocrine control of growth - Describe pineal gland and circadian rhythm - Describe thyroid gland - Describe adrenal glands 	2-4	Face to Face

	13.3	Video on YouTube	1-4	Blended
14+15	14.1	<ul style="list-style-type: none"> • The Endocrine System - Describe integrated stress response - Describe endocrine pancreas and control of fuel metabolism - Describe parathyroid gland and control of calcium metabolism 	3-5	Face to Face
	14.2	<ul style="list-style-type: none"> • The Endocrine System - Case study 	8-9	Face to Face
	14.3	Quiz 5	1-4	Blended

22 Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
Midterm Exam	30	Lecture 1.1 to 9.1	1-9	1-9	JU Exams
Assignments (Home works)	20	As mentioned above	1-9	As mentioned above	E-learning
Quizzes	10	As mentioned above	1-5, 7	As mentioned above	JU Exams
Final Exam	40	All	1-5, 7-9	To be announced	JU Exams

23 Course Requirements

(e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

Students should activate their JU accounts on the Microsoft teams.



24 Course Policies:

A- Attendance policies:

Each student is expected to take their own notes (part from the exam) and to attend class. Absence from lectures shall not exceed 15%. Students are expected to attend all lectures but if a student is absent from class, it is their responsibility to get the material that was missed. You must get any handouts or notes from your classmates

B- Absences from exams and submitting assignments on time:

Exams will consist of **multiple choice, true/false, matching, and/or fill-in-the-blank questions**. Exams will cover all material presented for each section. Make-up exams will only be provided for students with an excused absence AND supporting documentation. The questions and/or format of any make-up exam may differ from that of the original exam. Scheduling of a make-up exam will vary depending upon available dates/times but **MUST** occur before the next-scheduled exam date.

C- Health and safety procedures:

Students should follow the Jordanian government guide.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

Academic dishonesty will NOT be tolerated. This includes cheating, fabrication or falsification, plagiarism, abuse of academic materials, complicity in academic dishonesty, falsifying grade reports, and misrepresentation to avoid academic work. For this course, evidence of any form of academic dishonesty will result in all involved students receiving zero points for any associated exam, or assignment

E- Grading policy:

We will follow the University grading policy.

F- Available university services that support achievement in the course:

Students account on E-learning, and Microsoft teams

25 References:

A- Required book(s), assigned reading and audio-visuals:

Anna Fails, Christianne Magee. Anatomy and Physiology of Farm Animals. 2018. 8th edition. Wiley Blackwell



26 Additional information:

Study Questions (*Extra Credit*): Extra credit points can be earned by submitting quiz/exam-type questions related to the lecture material, including the associated answer. Questions will be sent to E-learning to serve as a study aid for all students. ***Questions are due at 10:30 AM on Sunday.*** Each question needs to be written for the course content that has been presented since the most recent quiz/exam content. The instructor will notify the class each week (in class and/or via email through E-learning) of the specific content that must be addressed. Approved question types include multiple choice. Students can earn up to 0.5 bonus point each week in which a question is submitted. No points will be awarded for late submissions. Students that have an excused absence covering multiple days in a week may contact the instructor to discuss possible accommodations. **At the end, every student can earn 3 points extra.**

Guidelines for Answering

Short Answer

Read the questions CAREFULLY! Ask yourself, what are they specifically asking? Overall, give a specific, clear, to the point explanation

How to do that:

1. Get right to the point. Don't rewrite the question!
2. Answer in specific terms, not in general. A good way to do this is to use examples (e.g. from the readings or class discussions).
3. When using examples, make sure that it is clear why you are using that particular example to answer the question. Make sure that all examples are scientifically sound and are explained using appropriate scientific terms.
4. When making general statements, such as "with proper information, parks can be greatly improved," be sure to follow them up with answers to questions such as who, what, why, and how.
5. Avoid making all-encompassing statements, such as using the words "all," "every," "no one," etc...unless they are true.
6. Be prepared to defend every statement you make with recognized facts. For example, if you make a statement, follow it up with information from the text, lecture notes, or other recognized authority or a specific example

True and False

True or False—If it is False then change the sentence to make it true



Multiple Choice

Note that multiple choice questions can actually be very difficult and are in this course!

Studying for a Multiple Choice Test:

1. Make sure that you identify and understand thoroughly everything that your instructor emphasized in class.
2. Pay particular attention to fundamental terms and concepts that describe important events or features, or that tie related ideas and observations together. These are the items that most commonly appear on multiple choice exams.
3. As you study your class notes and your assigned readings, make lists and tables. Concentrate on understanding multi-step processes, and on ideas, events, or objects that form natural sequences or groupings. Look for similarities and differences that might be used to distinguish correct choices from distracters on an exam.
4. If your textbook highlights new vocabulary or key definitions, be sure that you understand them. Sometimes new words and concepts are collected at the end of a chapter. Check to be sure that you have not left any out by mistake.
5. Brainstorm possible questions with several other students who are also taking the course. Practice on sample questions provided at the ends of each chapter in your book

Answering Multiple Choice Questions:

The most important thing to remember when answering multiple choice questions is that you are looking for the **BEST ANSWER, NOT ONLY A CORRECT ANSWER**, and not one which must be true all of the time, in all cases, and without exception.

There are many strategies for maximizing your success on multiple choice exams. The best way to improve your chances, of course, is to study carefully before the exam. There is no good substitute for knowing the right answer. Even a well-prepared student can make silly mistakes on a multiple choice exam, however, or can fall prey to distracters that look very similar to the correct answer.

Tips

1. Always cover up the possible responses with a piece of paper or with your hand while you read the *stem*, or body of the question. Try to anticipate the correct response before you are distracted by seeing the options that your instructor has provided. Then, uncover the responses.
2. If you see the response that you anticipated, circle it and then check to be sure that none of the other responses is better.
3. If you do not see a response that you expected, then consider some of the following strategies to eliminate responses that are probably wrong.

None of these strategies is infallible. A smart instructor will avoid writing questions for which these strategies work, but you can always hope for a lapse of attention.

1. Responses that use absolute words, such as "always" or "never" are less likely to be correct than ones that use conditional words like "usually" or "probably."
2. "Funny" responses are usually wrong.



3. "All of the above" is often a correct response. If you can verify that more than one of the other responses is probably correct, then choose "all of the above."
4. "None of the above" is usually an incorrect response, but this is less reliable than the "all of the above" rule. Be very careful not to be trapped by double negatives.
5. Look for grammatical clues. If the stem ends with the indefinite article "an," for example, then the correct response probably begins with a vowel.
6. The longest response is often the correct one, because the instructor tends to load it with qualifying adjectives or phrases.

Name of Course Coordinator: Dr. Mohamed Abedal-Majed	Signature: M.ayoub	Date: 9-10-2021
Head of Curriculum Committee/Department: -----	Signature: -----	
Head of Department: -----	Signature: -----	
Head of Curriculum Committee/Faculty: -----	Signature: -----	
Dean: -----	Signature: -----	