



To provide the student with a good working knowledge of sheep production in all its aspects.

To let him gain an appreciation of the influence of genetic and environmental factors (Nutrition, disease, Housing, Reproduction, Management, Health, and Market forces) on meat, milk and wool production.

To create student interest and understanding of dynamic process of meat, milk and wool components.

## 20. Course aims and outcomes:

### A- Aims:

The General objective of this course is to establish basic knowledge of how to manage and operate a commercial sheep flock. Also, to gain experience with breeding and genetic methods, nutrition requirements, reproduction, management housing, and disease control.

### B- Intended Learning Outcomes (ILOs):

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

ILOs of the course	PLOs							
	PLO (1)	PLO (2)	PLO (3)	PLO (4)	PLO (5)	PLO (6)	PLO (7)	PLO (8)
<b>1. Exhibit knowledge regarding the basic concepts and subjects of sheep production.</b>	X							
<b>2. Be able to apply their knowledge and reasoning skills to the efficient management of a sheep flock to obtain high production with good quality.</b>		X	X			X		
<b>3. Be able to solve problems or imbalances that may occur in a sheep flock based on acquired knowledge.</b>		X	X	X	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:

Week	Lecture	Topic	Intended Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods**	Resources
1	1.1	Introduction	1	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 4 - 66
	1.2	Breeds and basic concepts in genetics	1	Face to Face	MS Teams + Moodle	Synchronous	Report + Exam	SID 2015: 4 - 66
	1.3	Breeds and basic concepts in genetics		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 4 - 66
2	2.1	Genetic value and selection		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 4 - 66
	2.2	Genetic value and selection	2	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 4 - 66
	2.3	Genetic value and selection	2	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 4 - 66
3	3.1	Mating systems and cross breeding	2	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 4 - 66
	3.2	Mating systems and cross breeding	2	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 4 - 66

	3.3	Mating systems and cross breeding	2	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 4 - 66
4	4.1	Factors affecting reproduction		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 703 - 738
	4.2	Factors affecting reproduction	2	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 703 - 738
	4.3	Hormonal control		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 703 - 738
5	5.1	Out of season lambing		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 703 - 738
	5.2	Pregnancy testing		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 703 - 738
	5.3	Semen collection and AI	3	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 703 - 738
6	6.1	<b>Exam 1</b>	1	Face to Face	MS Teams + Moodle	Synchronous	Exam	
	6.2	Nutrient requirement and essential minerals		Face to Face	MS Teams + Moodle	Synchronous	Homeworks + Exam	SID 2015: 503 - 546
	6.3	Nutrient requirement and essential minerals		Face to Face	MS Teams + Moodle	Synchronous	Homeworks + Exam	SID 2015: 503 - 546
7	7.1	Nutrition of ewe		Face to Face	MS Teams + Moodle	Synchronous	Homeworks + Exam	SID 2015: 503 - 546
	7.2	Lamb feeding	1	Face to Face	MS Teams + Moodle	Synchronous	Homeworks + Exam	SID 2015: 503 - 546
	7.3	Ration formulation	3	Face to Face	MS Teams + Moodle	Synchronous	Homeworks + Exam	SID 2015: 503 - 546

		and feed additives						
8	8.1	Ration formulation and feed additives	1	Face to Face	MS Teams + Moodle	Synchronous	Homeworks + Exam	SID 2015: 503 - 546
	8.2	Feeding systems in Jordan	1	Face to Face	MS Teams + Moodle	Synchronous	Exam	Sheep Production under Extensive Systems in the Near East: Jordan Pastoral System, FAO.
	8.3	Feeding systems in Jordan	1	Face to Face	MS Teams + Moodle	Synchronous	Homeworks + Exam	Sheep Production under Extensive Systems in the Near East: Jordan Pastoral System, FAO.
9	9.1	Starting sheep operation		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 303 - 333
	9.2	Management calendar		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 303 - 333
	9.3	Management calendar		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 303 - 333
10	10.1	Lambing and weaning management		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 303 - 333

	10.2	Lambing and weaning management		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 303 - 333
	10.3	Feeding management		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 303 - 333
11	11.1	Pastoral system in Jordan.		Face to Face	MS Teams + Moodle	Synchronous	Exam	Sheep Production under Extensive Systems in the Near East: Jordan Pastoral System, FAO.
	11.2	Pastoral system in Jordan.		Face to Face	MS Teams + Moodle	Synchronous	Exam	Sheep Production under Extensive Systems in the Near East: Jordan Pastoral System, FAO.
	11.3	<b>Exam 2</b>	2	Face to Face	MS Teams + Moodle	Synchronous		Lab manual 10
12	12.1	Sheep behavior and handling		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 104 - 145
	12.2	Sheep behavior and handling		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 104 - 145
	12.3	Principles of facilities' layout and location		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 104 - 145

13	13.1	Principles of facilities' layout and location		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 104 - 145
	13.2	Sheep handling setups		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 104 - 145
	13.3	Portable and permanent facilities		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 104 - 145
14	14.1	Health considerations		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 204 - 270
	14.2	Health considerations	4	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 204 - 270
	14.3	Diseases of lambs and ewes	4	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 204 - 270
15	15.1	Diseases of lambs and ewes	4	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 204 - 270
	15.2	Health program	4	Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 204 - 270
	15.3	Health program		Face to Face	MS Teams + Moodle	Synchronous	Exam	SID 2015: 204 - 270

- Teaching methods include Synchronous lecturing/meeting; Asynchronous lecturing/meeting
- Evaluation methods include Homework, Exam ...etc

## 22. Evaluation Methods:

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

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
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Homeworks	20%	Different topics of the course	See the students learning outcomes (SLOs) table	Throughout the semester	Face to Face
2 Midterm Exams	30%	Topics covered until the weeks 5 & 12		(14-4-2022) (12-5-2022)	Face to Face
Final Exam	50%	All covered topics		16 (According to admission and registration unit)	Face to Face

### 23. Course Requirements

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

### 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 his 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 **some Essay and Calculation 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:

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

<b>Two one-hour exams:</b>	<b>30 %</b>	
<b>Homeworks + Reports</b>	<b>20 %</b>	
<b>Final exam:</b>	<b>50 %</b>	<b>Registration</b>

#### 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:

1. SID, The Sheepman's Production Handbook, 2015, Sheep industry development program, inc. Denver, Colorado, USA.
2. Sheep Production under Extensive Systems in the Near East: Jordan Pastoral System, FAO.
3. إنتاج الأغنام. محمد الحرب و محمد جهاد الطباع. جامعة القدس المفتوحة. ٢٠٠٠.

B- Recommended books, materials, and media:

Nutrient requirement of sheep, 1985, NRC, USA.

Breeding and Improvement of Farm Animals, by J. E. Legates and E. J. Warwick. McGraw-Hill, 1990.

Sheep and Wool, by M. P. Botkin, R. A. Field and C. L. Johnson. Printice Hall, 1988.

The Behavior of Sheep, by J. J. Lynch, G. N. Hinch and D. D. Adams. CAB International, 1992.

Sheep production: Feeding, growth and health, S. N. McCutcheon, M. F. McDonald and G. A.

Wickham, Ray Richards Pub., 1986.

إنتاج الضأن والصوف مصطفى كمال عمر حماده، دار المطبوعات الجديدة. ١٩٧٣.

أساسيات إنتاج الأغنام والماعز وتربيتها، ج. القس وز. الجليلي ود. عزيز. وزارة التعليم العالي، جامعة بغداد العراق ١٩٩٣.

## 26. Additional information:

- **Concerns or complaints should be expressed in the first instance to the module lecturer; if no resolution is forthcoming, then the issue should be brought to the attention of the module coordinator (for multiple sections) who will take the concerns to the module representative meeting. Thereafter,**



problems are dealt with by the Department Chair and if still unresolved the Dean and then ultimately the Vice President. For final complaints, there will be a committee to review grading the final exam.

- For more details on University regulations please visit: <http://www.ju.edu.jo/rules/index.htm>

Name of Course Coordinator **Prof. Mohammad J Tabbaa**-----Signature: ----- Date: -----

Head of Curriculum Committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of Curriculum Committee/Faculty: ----- Signature: -----

Dean: ----- Signature: -----