

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

<b>Course Information</b>	
<b>Course Title</b>	<b>ARTIFICIAL INSEMINATION</b>
<b>Course Number</b>	AP 426
<b>Prerequisites</b>	AP 423
<b>Course Website</b>	
<b>Instructor</b>	Dr. Mustafa Beni-Domi
<b>Office Location</b>	M1 L3
<b>Office Phone</b>	7201000 Ext. 22221
<b>Office Hours</b>	8-9 am
<b>E-mail</b>	<a href="mailto:huseinmq@just.edu.jo">huseinmq@just.edu.jo</a>
<b>Teaching Assistant</b>	
<b>Course Description</b>	

<b>Text Book</b>	
<b>Title</b>	American Breeders Service. A. I. Management Manual.
<b>Author(s)</b>	
<b>Publisher</b>	
<b>Year</b>	1991
<b>Edition</b>	3rd edition
<b>Book Website</b>	
<b>References</b>	<ol style="list-style-type: none"> <li>1. Salamon's Artificial Insemination of Sheep and Goats. 1987. Butterworths, Evan G. and Maxwell WMC.</li> <li>2. Applied Animal Reproduction. 1997. 4th edition, part 3. Chapters 13-17. Bearden HJ and Fuquay JW.</li> <li>3. Supplemental handouts may be given accordingly.</li> </ol>

<b>Assessment Policy</b>		
<b>Assessment Type</b>	<b>Expected Due Date</b>	<b>Weight</b>
<b>First Exam</b>		20
<b>Second Exam</b>		20
<b>Final Exam (written practical and/or oral)</b>		40
<b>Lab reports and notebook</b>		20

<b>Course Objectives</b>	<b>Weights</b>
To learn the latest developments and methods that control estrus and ovulation in cattle and sheep.	
To develop the necessary skills required for improving the method of freezing of sheep and cattle semen. Provide students with the opportunity to learn recent developments in techniques of artificial insemination in sheep and cattle.	

<b>Teaching &amp; Learning Methods</b>

<b>Learning Outcomes:</b> Upon successful completion of this course, students will be able to
Develop the technical skills necessary to implement a successful Artificial Insemination program on their farm or ranch.
Come out familiar with the basic principles and practices in the control of estrus and ovulation, handling and evaluation of semen quality, recent development in techniques of artificial insemination in cattle and sheep and how to prepare males and females for an artificial insemination program.
Learn methods of semen collection, dilution, cooling and freezing.

<b>Useful Resources</b>

<b>Course Content</b>		
<b>Week</b>	<b>Topics</b>	<b>Chapter in Text (handouts)</b>
1	Introduction and history of artificial insemination	
1	Advantages and disadvantages of artificial insemination	
2	Anatomy of the male reproductive tract	
2	Physiology of reproduction in the male	
2	Semen and its characteristics	
3	Anatomy of the female reproductive tract	
3	Physiology of reproduction in the female	
4	Preparation of female for insemination	
4	Preparation of teaser males	
5	Selection and preparation of male for artificial insemination	
6-7	Collection of semen	
8-9	Handling and evaluation of semen	
10-12	Dilution of semen	
13	Short-term (Liquid) storage of semen	

14	Long-term (frozen) storage of semen	
14	Insemination	
15	Management of female following insemination	
16	Factors influencing fertility after artificial insemination	

<b>Additional Notes</b>	
<b>Assignments</b>	
<b>Exams</b>	
<b>Cheating</b>	
<b>Attendance</b>	Students must attend class regularly (attendance is mandatory). Normally only one excused absence from lab will be tolerated.
<b>Workload</b>	
<b>Graded Exams</b>	
<b>Participation</b>	Students must participate in all practical demonstrations and class discussions.
<b>Laboratory</b>	<b>Points will be removed for disruptive behavior.</b> Lab coats for lab work and barn clothes for labs at the farms are strongly recommended.
<b>Projects</b>	