REPUBLIC OF YEMEN
SANA'A UNIVERSITY
Faculty Of Veterinary Medicine
Veterinary Medicine Program

Course Specification of Obstetrics and Artificial Insemination

I. Course Identification and General Information:							
1	**Course Title:**	Obstetrics and Artificial Insemination					
2	**Course Number & Code:**	SR486					
3	**Credit hours:**	**C.H**				**Total**	
		Theoretical	**Practical**	**Training**	**Seminar**		
		2	1			3	
4	**Study level/ semester at which this course is offered:**	Fourth Year - Second Semester					
5	**Pre –requisite (if any):**	SR485					
6	**Co –requisite (if any):**	None					
7	**Program (s) in which the course is offered:**	Bachelor Veterinary Medicine					
8	**Language of teaching the course:**	English					
9	**Location of teaching the course:**	Faculty of Veterinary Medicine - building and laboratories					
10	**Prepared by:**	Dr. kamal Alsamawi					
11	**Date of approval:**						

II. Course description:

This course divided by two parts, the first part: Artificial insemination provides students with basic information to understand the fundamental principles of Artificial insemination associated with male reproductive system: (Primary sex organs, secondary sex organs, Accessory sex organs), semen chemical composition, factors influencing semen quantity and quality, semen collection and evaluation, the gametes inside the female genitalia, animal fertility and infertility and measuring of the reproductive efficiency in males and female. This course provides students of learning modern techniques for Semen collection methods, semen dilution and storage and Embryo transfer.

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Dr. kamal Alsamawi	Dr. Abdulraqeb Alshami	Ass. Prof. Dr. Abdu Alraoof Al-Shawkany	Ass. Prof. Dr. Huda Al-Emad

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The second part: Obstetrics provides students with basic information to understand fundamental principles of Obstetrics and Gynecology associated with the female reproductive system, hormonal control of reproduction, Principles of hormonal therapy in farm animal, hormonal therapy for farm animal, reproductive activates of farm animals, Fetal conditions, late pregnancy and intrapartum events, Postpartum complications and Reproductive gynecology. This course provides students of learning modern techniques such as fetal biochemical screening, Ultrasound Screening of pregnancy diagnosis and Invasive and Non-Invasive Prenatal Diagnosis.

III. Intended learning outcomes (ILOs) of the course:

(A) Knowledge and Understanding:

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: Knowledge and Understanding.

Program Intended Learning Outcomes (Sub-PILOs) in: Knowledge and Understanding		Course Intended Learning Outcomes (CILOs) in: Knowledge and Understanding	
After completing this program, students will be able to:		**After completing this course, students will be able to:**	
A1-	Demonstrate a sound knowledge and understanding of concepts and principles of general culture, basic science, and that support veterinary medicine.	**a1-**	Demonstrate the proper knowledge and understanding of concepts and principles of Obstetrics and Artificial insemination.
A3-	Identifies various causes of animal diseases, animal epidemics and how they can be diagnosed; including common and life-threatening diseases of animals, poultry and fish.	**a2-**	Identifies various causes of Gynaecology, animal infertility and measuring of the reproductive efficiency in males and females.

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of Learning Outcomes of Knowledge and Understanding to Teaching and Assessment Methods:

Course Intended Learning Outcomes (CILOs) in Knowledge and Understanding	Teaching strategies/methods to be used	Methods of assessment
After completing this course, students will be able to:	-Lectures using board, data	- Written exam

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a1-	Demonstrate the proper knowledge and understanding of concepts and principles of Obstetrics and Artificial insemination.	shows and multimedia aids. - brainstorm. - discussion. -Self-learning by preparing essay and presentations (computer and faculty library) -Practical training (Clinical demonstrations, practice of skills, and discussions). (a) Field visits (farms and villages) (b) General experimental animal teaching (c) Clinical and small group sessions (d) Outpatient clinic	- Practical exam - Oral exam - Quizzes - Report assignments - Discussion
a2-	Identifies various causes of Gynaecology, animal infertility and measuring of the reproductive efficiency in males and females.		

(B) Intellectual Skills:

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: Intellectual skills

Program Intended Learning Outcomes (Sub-PILOs) in Intellectual skills		**Course Intended Learning Outcomes (CILOs) of Intellectual Skills**	
After completing this program, students will be able to:		**After completing this course, students will be able to:**	
B1-	Competently practices analytical and critical thinking skills in studying and assessing health problems and reading the results of animal medical examinations and in related sciences.	**b1-**	Competently practices analytical and critical thinking skills in studying and assessing Obstetrics and animal infertility, and reading the results of Obstetrics examinations and animal infertility.
B2-	Predicts an appropriate medical diagnosis for the most common disease states through analysis of clinical story data and the results of medical examinations of sick animals.	**b2-**	Predicts an appropriate medical diagnosis for the Gynaecology disease states and animal infertility through analysis of clinical story data and the results of medical examinations of sick animals.

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of Learning Outcomes of Intellectual Skills to Teaching Methods and Assessment Methods:			
Course Intended Learning Outcomes (CILOs) in Intellectual Skills.		**Teaching strategies/methods to be used**	**Methods of assessment**
After completing this course, students will be able to:		-Lectures using board, data shows and multimedia aids. - brainstorm. - discussion. -Self-learning by preparing essay and presentations (computer and faculty library) -Practical training (Clinical demonstrations, practice of skills, and discussions). (a) Field visits (farms and villages) (b) General experimental animal teaching (c) Clinical and small group sessions (d) Outpatient clinic	- Written exam - Practical exam - Oral exam - Quizzes - Report assignments - Discussion
b1-	Competently practices analytical and critical thinking skills in studying and assessing Obstetrics and animal infertility, and reading the results of Obstetrics examinations and animal infertility.		
b2-	Predicts an appropriate medical diagnosis for the Gynaecology disease states and animal infertility through analysis of clinical story data and the results of medical examinations of sick animals.		

(C) Professional and Practical Skills:

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: Professional and Practical Skills			
Program Intended Learning Outcomes (Sub-PILOs) in Professional and Practical Skills		**Course Intended Learning Outcomes (CILOs) in Professional and Practical Skills**	
After completing this program, students will be able to:		**After completing this course, students will be able to:**	
C2-	Practicing practical, diagnostic, clinical and research skills, including the collection of samples in various fields of veterinary medicine and related sciences, in a safe and effective manner, taking into account the	**c1-**	Practicing practical skills for the collection of semen for evaluation and measuring of the reproductive efficiency in males, practicing practical skills of pregnancy diagnostic methods and practicing clinical and research skills of

	ethics of the profession.		Obstetrics and Gynaecology, in a safe and effective manner, taking into account the ethics of the profession.
C3-	Reads the results of laboratory investigations and diagnostic scans and writes reports and prescriptions for all common cases in a proper way.	**c2-**	Reads the hematological results and hormonal results of laboratory investigations for Gynaecology and animal infertility cases.

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of Learning Outcomes of Professional and Practical Skills to Teaching and Assessment Methods:

Course Intended Learning Outcomes (CILOs) in Professional and Practical Skills		Teaching strategies/methods to be used	Methods of assessment
After completing this course, students will be able to:		-Lectures using board, data shows and multimedia aids. - brainstorm. - discussion. -Self-learning by preparing essay and presentations (computer and faculty library) -Practical training (Clinical demonstrations, practice of skills, and discussions). (a) Field visits (farms and villages) (b) General experimental animal teaching (c) Clinical and small group sessions (d) Outpatient clinic	- Written exam - Practical exam - Oral exam - Quizzes - Report assignments - Discussion
c1-	Practicing practical skills for the collection of semen for evaluation and measuring of the reproductive efficiency in males, practicing practical skills of pregnancy diagnostic methods and practicing clinical and research skills of Obstetrics and Gynaecology, in a safe and effective manner, taking into account the ethics of the profession.		
c2-	Reads the hematological results and hormonal results of laboratory investigations for Gynaecology and animal infertility cases.		

(D) General / Transferable Skills:

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: General and

Transferable skills			
Program Intended Learning Outcomes (PILOs) in General / Transferable skills		**Course Intended Learning Outcomes (CILOs) in General / Transferable skills**	
After completing this program, students will be able to:		**After completing this course, students will be able to:**	
D1-	Communicates effectively with Professional colleagues and animal owners and expresses his ideas clearly and objectively.	**d1-**	Communicate effectively with logistic and working teams and scientifically discuss in scientific manner in scientific discussions and meetings.
D4-	Works in normal conditions, crises and epidemics, alone and effectively within a medical team.	**d2-**	Demonstrate appropriate professional attitudes and behaviors in different practice situations.

Teaching And Assessment Methods For Achieving Learning Outcomes:

Alignment of Learning Outcomes of General and Transferable skills to Teaching and Assessment Methods:

Course Intended Learning Outcomes (CILOs) in General and Transferable Skills		Teaching strategies/methods to be used	Methods of assessment
After completing this course, students will be able to:		-Lectures using board, data shows and multimedia aids. - brainstorm. - discussion. -Self-learning by preparing essay and presentations (computer and faculty library) -Practical training (Clinical demonstrations, practice of skills, and discussions). (a) Field visits (farms and villages) (b) General experimental animal teaching (c) Clinical and small group sessions (d) Outpatient clinic	- Written exam - Practical exam - Oral exam - Quizzes - Report assignments - Discussion
d1-	Communicate effectively with logistic and working teams and scientifically discuss in scientific manner in scientific discussions and meetings.		
d2-	Demonstrate appropriate professional attitudes and behaviors in different practice situations.		

IV. Course Content:

1 – Course Topics/Items:

a – Theoretical Aspect

Order	Topic List / Units	CILOs (symbols)	Sub-topic List	Number of weeks	Contact hours
1	Introduction of Artificial Insemination	a1, a2, b1, d1, d2,	- Artificial Insemination history - Advantages and Disadvantages of Artificial Insemination Cattel and buffalo, Sheep and goats, Horses, Poultry, Deer and Camel	1	2
2	Male reproductive system and Reproductive activates of farm animals	a1, a2, b1, d1, d2,	- Male reproductive system - Sexual puberty - Sexual maturity - Sexual behavior - Factors affecting puberty and sexual maturity - Sexual stimulation and sexual preparation	2	4
3	Hormonal control of reproduction	a1, a2, b1, b2, c1, c2, d1, d2	- Secretory glands - Nero-Endocrine glands - Endocrine glands - Hormones regulating reproduction	1	2
4	Semen composition	a1, a2, b1, b2, c1, c2, d1, d2	- Sperm chemical composition - Seminal plasma chemical composition - Male reproductive efficiency assessment by semen chemical analysis	1	2

			- Semen components, physical and metabolic status		
5	Growth and Development of AI Technology	a1, a2, b1, b2, c1, c2, d1, d2	- Natural mating - Collection and processing of semen - Storage and cryopreservation of semen - Insemination procedures - Semen evaluation - Do-it-yourself insemination (DIY-AI) - Measuring effectiveness of Artificial insemination - Semen-sexing technology - Future developments in AI technology.	1	2
6	Embryo Transfer	a1, a2, b1, b2, c1, c2, d1, d2	- Advantages of Embryo Transfer - Growth and Development of Embryo Transfer - Practical Application of Embryo Transfer - Future Developments	2	4
7	Female reproductive system and Reproductive activates of farm animals	a1, a2, b1, b2, c1, c2, d1, d2	- Female reproductive system Reproductive Cycles - Estrous cycle - Sexual maturity and physical maturity - Ovulation and corpus luteum formation - Fertilization	2	4
8	Pregnancy physiology	a1, a2, b1, b2, c1, c2, d1, d2	- Preparation of pregnancy - Pregnancy - Early embryonic stage	2	4

			- Fetal stage - Fetal sex determination - Placenta and some placenta phenomena - Physiological changes during pregnancy - Fetal movement - Troublesome of Pregnancy - Factors affecting gestation period - Conceptus anomalies - Phenomena associated Fetal death		
9	Pregnancy diagnosis	a1, a2, b1, b2, c1, c2, d1, d2	- Biological methods - Surgical methods - Hormonal methods - Clinical methods	2	4
Number of Weeks /and Units Per Semester				**14**	**28**

b- Training Aspect:

Order	Training Tasks	CILOs (symbols)	Number of weeks	Contact hours
1	Introduction to the Obstetrics Laboratory	a1, a2	1	1
2	Male reproductive system components	a1, a2, b1, b2, c1, c2, d1, d2	1	1
3	Collection and processing of semen Storage and cryopreservation of semen	a1, a2, b1, b2, c1, c2, d1, d2	3	3
4	Semen evaluation Do-it-yourself insemination (DIY-AI)	a1, a2, b1, b2, c1, c2, d1, d2	2	2
5	Artificial insemination	a1, a2, b1, b2, c1, c2, d1, d2	2	2
6	Female reproductive system components	a1, a2, b1, b2, c1, c2, d1, d2	1	1

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7	Pregnancy diagnosis methods	a1, a2, b1, b2, c1, c2, d1, d2	2	2
8	Practical Application of Embryo Transfer	a1, a2, b1, b2, c1, c2, d1, d2	2	2
Number of Weeks /and Units Per Semester			**14**	**14**

V. Teaching strategies of the course:

- Lectures using board, data shows and multimedia aids.
- Self-learning by preparing essay and presentations (computer and faculty library)
- Brainstorm
- Discussion
- Cooperative learning
- Practical training (Clinical demonstrations, practice of skills, and discussions).

  (a) Field visits (farms and villages)

  (b) General experimental animal teaching

  (c) Clinical and small group sessions

  (d) Outpatient clinic
- Tutorial classes (small group teaching)

3-Assessment Methods:

-Written exam
-Practical exam
-Oral exam
-Quizzes
- Report assignments
- Discussion

Grading Scale:
Grades are awarded on a scale from A to F, where A is the best grade (90-100) and F is a fail (<50).

VI. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes (CILOs symbols)
1	**Participation, quizzes and assignments**	**2-14**	**10**	**10%**	a1, a2, b1, b2
2	**Mid-Term Exam**	**8**	**10**	**10%**	a1, a2, b1, b2, c1, c2, d1, d2
3	**Mid-Term Practical Exam**	**8**	**10**	**10%**	a1, a2, b1, b2, c1, c2, d1, d2
4	**Final Practical Exam**	**13**	**10**	**10%**	a1, a2, b1, b2, c1, c2, d1, d2
5	**Oral Exam**	**13**	**5**	**5%**	a1, a2, b1, b2, c1, c2, d1, d2
	Final Exam	**16**	**55**	**55%**	a1, a2, b1, b2, c1, c2, d1, d2
	Total		**100**	**100%**	

VII. Students' Support:

Office Hours/week	Other Procedures (if any)

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. Sunday -Tuesday from 8:00 a.m. - 2 p.m.	Student can contact me by visit my office or via email or social media.

VIII. Learning Resource (MLA style or APA style)S:

1- Required Textbook(s) (maximum two)

- Milad Manafi, (2011). Artificial Insemination in Farm Animals, USA.
- Stephen J. Roberts, (1986). Veterinary Obstetrics and Genital Diseases, 3rd Edition, USA.

2- Recommended Readings and Reference Materials

- Ian R. Gordon, (2004). Reproductive Technologies in farm animal, CABI Publishing, USA.

3- Essential References

- Thomas P. Colville, DVM, MSc and Joanna M. Bassert, VMD, (2015). Clinical Anatomy and Physiology Veterinary Technicians, 3rd Edition.
- Kristin J. Holtgrew-Bohling, (2019). Large Animal Clinical Procedures for Veterinary Technicians, 4th Edition.

4- Electronic Materials and Web Sites *etc*.

Journal of Veterinary Internal Medicine

- (http://www.wiley.com/bw/journal.asp)
- American College of Veterinary Internal Medicine
- Internal Medicine www.criticalcarevets.com
- Internal Medicine www.animal-emergency.com
- Central Texas Veterinary Specialty Hospital - Internal Medicine
- IVIS Bookstore: Ruminant Medicine - International Veterinary
- Alberta Agriculture, Food and Rural Development
- https://www.oie.int/scientific-expertise/veterinary-products/diagnostic-tests/
- https://www.routledge.com/search?kw=Animal+Obstetrics
- https://vetbooks.ir/
- https://raf.bioscientifica.com/

5- Other Learning Material:

- https://www.routledge.com/search?kw=Obstetrics+

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X.	**Course Policies:**
1	**Class Attendance:** MANDATORY TO ATTEND ALL COURSE LECTURES
2	**Tardy:** Not allowed at all. Students must be in class 10 minutes prior to the beginning of lectures.
3	**Exam Attendance/Punctuality:** Attendance is mandatory; absence is accepted with valid excuse.
4	**Assignments & Projects:** All assignments and projects are to be submitted on their due date. Any assignment turned in after the due date will not be accepted without valid and reasonable excuse.
5	**Cheating:** Not tolerated and may lead to EXPELLING the student from the program
6	**Plagiarism:** Not tolerated AT ALL and may lead to EXPELLING the student from the program
7	**Other policies:** 1. All devices must be on silent or at least on vibration during lectures/labs. 2. Before any exam (written, practical, oral) student's identity will be checked (student's card, ID, passport). Without any of these documents, the student will not be allowed in the exam room. 3. Any of type/ form of cheating is not allowed no matter what. 4. Maintain silence during lectures and disturbance is not allowed.

Course Plan of Obstetrics and Artificial Insemination

X. - Information about Faculty Member Responsible for the Course:								
Name of Faculty Member		Office Hours						
Location & Telephone No.		SAT	SUN	MON	TUE	WED	THU
E-mail								

XI. Course Identification and General Information:						
1-	Course Title:	Obstetrics and Artificial Insemination				
2-	Course Number & Code:	SR486				
3-	Credit hours:	C.H				Total
		Th.	Seminar	Pr.	F. Tr.	
		2		1		3
4-	Study level/year at which this course is offered:	Fourth Year - Second Semester				
5-	Pre –requisite (if any):	SR485				
6-	Co –requisite (if any):	None				
7-	Program (s) in which the course is offered	Bachelor Veterinary Medicine				
8-	Language of teaching the course:	English language				
9-	System of Study:	Regular / Semesters				
10-	Mode of delivery:	Lectures and Practical				
11-	Location of teaching the course:	Faculty of Veterinary Medicine Building				

II. Course Description:

This course divided by two parts, the first part: Artificial insemination provides students with basic information to understand the fundamental principles of Artificial insemination associated with male reproductive system: (Primary sex organs, secondary sex organs, Accessory sex organs), semen chemical

composition, factors influencing semen quantity and quality, semen collection and evaluation, the gametes inside the female genitalia, animal fertility and infertility and measuring of the reproductive efficiency in males and female. This course provides students of learning modern techniques for Semen collection methods, semen dilution and storage and Embryo transfer.
The second part: Obstetrics provides students with basic information to understand fundamental principles of Obstetrics and Gynecology associated with the female reproductive system, hormonal control of reproduction, Principles of hormonal therapy in farm animal, hormonal therapy for farm animal, reproductive activates of farm animals, Fetal conditions, late pregnancy and intrapartum events, Postpartum complications and Reproductive gynecology. This course provides students of learning modern techniques such as fetal biochemical screening, Ultrasound Screening of pregnancy diagnosis and Invasive and Non-Invasive Prenatal Diagnosis.

II. Intended learning outcomes (ILOs) of the course:

After completing this course, students will be able to:

a1- Demonstrate the proper knowledge and understanding of concepts and principles of Obstetrics and Artificial insemination.

a2- Identifies various causes of Gynaecology, animal infertility and measuring of the reproductive efficiency in males and females.

b1- Competently practices analytical and critical thinking skills in studying and assessing Obstetrics and animal infertility, and reading the results of Obstetrics examinations and animal infertility.

b2- Predicts an appropriate medical diagnosis for the Gynaecology disease states and animal infertility through analysis of clinical story data and the results of medical examinations of sick animals.

b3- Design appropriate nursing and treatment care plans for Gynaecology and animal infertility and determine the prioritizing of therapeutic.

b4- Determine appropriate and effective treatment evaluates all medications used for Gynaecology and animal infertility.

c1- Practicing practical skills for the collection of semen for evaluation and measuring of the reproductive efficiency in males, practicing practical skills of pregnancy diagnostic methods and

practicing clinical and research skills of Obstetrics and Gynaecology, in a safe and effective manner, taking into account the ethics of the profession.

c2- Reads the hematological results and hormonal results of laboratory investigations for Gynaecology and animal infertility cases.

d1- Communicate effectively with logistic and working teams and scientifically discuss in scientific manner in scientific discussions and meetings.

d2- Demonstrate appropriate professional attitudes and behaviors in different practice situations.

V. Course Content:

A – Theoretical Aspect:

Order	Topics List	Week Due	Contact Hours
1	**Introduction of Artificial Insemination:** - Artificial Insemination History. - Advantages and Disadvantages of Artificial Insemination Cattel and buffalo, Sheep, goats, Horses, Poultry, Deer and Camel.	1	2
2	**Male reproductive system and Reproductive activates of farm animals:** - Male reproductive system Sexual puberty. - Sexual maturity. - Sexual behavior. - Factors affecting puberty and sexual maturity. - Sexual stimulation and sexual preparation	2,3	4
3	**Hormonal control of reproduction:** - Secretory glands. - Nero-Endocrine glands.	4	2

	- Endocrine glands. - Hormones regulating reproduction.		
4	**Semen composition:** - Sperm chemical composition. - Seminal plasma chemical composition. - Male reproductive efficiency assessment by semen chemical analysis. - Semen components, physical and metabolic status.	5	2
5	**Growth and Development of AI Technology:** - Natural mating. - Collection and processing of semen Storage and cryopreservation of semen. - Insemination procedures. - Semen evaluation. - Do-it-yourself insemination (DIY-AI). - Measuring effectiveness of Artificial insemination. - Semen-sexing technology. - Future developments in AI technology.	6, 7	4
6	**Mid-Term Exam**	8	2
8	**Embryo Transfer:** - Advantages of Embryo Transfer. - Growth and Development of Embryo Transfer. - Practical Application of Embryo Transfer. - Future Developments.	9,10	4
9	**Female reproductive system and Reproductive activates of farm animals** - Female reproductive system. - Reproductive Cycles. - Estrous cycle. - Sexual maturity and physical maturity. - Ovulation and corpus luteum formation. - Fertilization.	11,12	4

10	**Pregnancy physiology** - Preparation of pregnancy. - Pregnancy. - Early embryonic stage. - Fetal stage. - Fetal sex determination. - Placenta and some placenta phenomena. - Physiological changes during pregnancy. - Fetal movement. - Troublesome of Pregnancy. - Factors affecting gestation period. - Conceptus anomalies. - Phenomena associated Fetal death.	13,14	4
11	**Pregnancy diagnosis** - Biological methods. - Surgical methods. - Hormonal methods. - Clinical methods.	15	2
16	**Final Exam**	16	2
Number of Weeks /and Units Per Semester		**16**	**32**

b- Training Aspect:

Order	Training Tasks	Week Due	Contact hours
1	Introduction to the Obstetrics Laboratory	1	1
2	Male reproductive system components	2	1
3	Collection and processing of semen Storage and cryopreservation of semen	3,4,5	3
4	Semen evaluation Do-it-yourself insemination (DIY-AI)	6.7	2
5	**Mid-Term Exam**	8	1

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6	Artificial insemination	9,10	2
7	Female reproductive system components	11	1
8	Pregnancy diagnosis methods	12,13	2
9	Practical Application of Embryo Transfer	14,15	2
16	**Final Exam**	16	1
Number of Weeks /and Units Per Semester		**16**	**16**

V. Teaching strategies of the course:

- Lectures using board, data shows and multimedia aids.
- Self-learning by preparing essay and presentations (computer and faculty library)
- Brainstorm
- Discussion
- Cooperative learning
- Practical training (Clinical demonstrations, practice of skills, and discussions).

  (a) Field visits (farms and villages)

  (b) General experimental animal teaching

  (c) Clinical and small group sessions

  (d) Outpatient clinic

- Tutorial classes (small group teaching)

VI. Assessment Methods:

-Written exam
-Practical exam
-Oral exam
-Quizzes
- Report assignments
- Discussion.

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No.	Type of Assessment Tasks	Week Due	Mark	Proportion of Final Assessment
1	Participation, quizzes and assignments	2-14	10	10%
2	Mid-Term Exam	8	10	10%
3	Mid-Term Practical Exam	8	10	10%
4	Final Practical Exam	13	10	10%
5	Oral Exam	13	5	5%
6	Final Exam	16	55	55%
	Total		100	100%

II. Learning Resources:

1- Required Textbook(s) (maximum two).

- Milad Manafi, (2011). Artificial Insemination in Farm Animals, USA.
- Stephen J. Roberts, (1986). Veterinary Obstetrics and Genital Diseases, 3rd Edition, USA.

2- Essential References.

- Thomas P. Colville, DVM, MSc and Joanna M. Bassert, VMD, (2015). Clinical Anatomy and Physiology for Veterinary Technicians, 3rd Edition.
- Kristin J. Holtgrew-Bohling, (2019). Large Animal Clinical Procedures for Veterinary Technician 4th Edition.

3- Electronic Materials and Web Sites *etc*.

Journal of Veterinary Internal Medicine

- (http://www.wiley.com/bw/journal.asp)
- American College of Veterinary Internal Medicine
- Internal Medicine www.criticalcarevets.com
- Internal Medicine www.animal-emergency.com
- Central Texas Veterinary Specialty Hospital - Internal Medicine
- IVIS Bookstore: Ruminant Medicine - International Veterinary
- Alberta Agriculture, Food and Rural Development
- https://www.oie.int/scientific-expertise/veterinary-products/diagnostic-tests/

	• https://www.routledge.com/search?kw=Animal+Obstetrics • https://vetbooks.ir/ • https://raf.bioscientifica.com/

X.	**Course Policies:**
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3	**Exam Attendance/Punctuality:** Attendance is mandatory; absence is accepted with valid excuse.
4	**Assignments & Projects:** All assignments and projects are to be submitted on their due date. Any assignment turned in after the due date will not be accepted without valid and reasonable excuse.
5	**Cheating:** Not tolerated and may lead to EXPELLING the student from the program
6	**Plagiarism:** Not tolerated AT ALL and may lead to EXPELLING the student from the program
7	**Other policies:** 5. All devices must be on silent or at least on vibration during lectures/labs. 6. Before any exam (written, practical, oral) student's identity will be checked (student's card, ID, passport). Without any of these documents, the student will not be allowed in the exam room. 7. Any of type/ form of cheating is not allowed no matter what. 8. Maintain silence during lectures and disturbance is not allowed.

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