



Beni-Suef University  
Faculty of Veterinary Medicine

## Course specification

### 1-Basic information

<b>Course Code:</b>	THR5168
<b>Course title :</b>	Endoscopy and Sonography in Theriogenology
<b>Academic year:</b>	5 <sup>th</sup> academic year
<b>Program title:</b>	Bachelor of Veterinary Medical Sciences
<b>Contact hours/ week</b>	Practical one hr/week
<b>Approval Date</b>	

### 2-Professional information

#### **Overall aims of course:**

The reproductive endoscopy and ultrasonography course in animals is designed for the third year veterinary students with no basic skills in ultrasonography, flexible and rigid endoscopy. The objectives of this course are to provide students a basic knowledge of ultrasound image formation and practical information to perform routine reproductive ultrasonographic and endoscopic examination.

### 3- Intended learning outcomes of course (ILOs)

#### **a-Knowledge and understanding:**

By the end of this course the student should be able to:

- a1- Recognize the models and types of Endoscopic and ultrasonographic tools.
- a2- describe, the procedure of endoscopic and ultrasonographic application.
- a3- Describe the use of ultrasonography and endoscopy in reproductive examination.
- a4- Recall the endoscopic and ultrasonic characteristics of pathological conditions of the animal genital organs.
- a5- Acquire and optimize ultrasonographic images
- a6- Perform early pregnancy diagnosis by means of transrectal realtime ultrasound.
- a7- Recognize the normal appearance of major genital organs through ultrasonographic and endoscopic examinations

#### **b-Intellectual skills**

By the end of this course the student should be able to:

- b1- Investigate the different causes of male infertility problems
- b2- Interpret efficiency of diagnosis and prevention of male reproductive disorders.
- b3- Score incidence of different male reproductive disorders.
- b4- Differentiate different cause of abortions.
- b5- Sound apply a real-time ultrasonic scanning in sheep, goats and cattle.
- b6- Recognize different tissues according to their echogenicity
- b7- Recognize common ultrasonographic and endoscopic artifacts and understand their significance
- b8- Perform an ultrasonographic and endoscopic examination by finding and recognizing the reproductive structures.

#### **C- Professional and practical skills**

By the end of this course the student should be able to:

- c1- Select, handle and care of rigid endoscopes and associated equipment.
- c2- Clean and proper storage of the multipurpose Endoscope
- c3- Able to obtain a laparoscopic organ biopsy.
- c4- Successfully perform laparoscopic ovariectomy/ovariohysterectomy
- c5- Achieve a laparoscopic cryptorchidectomy and Foreign body removal



Beni-Suef University  
Faculty of Veterinary Medicine

### Course specification

- c6- The diagnosis of pregnancy and pseudo pregnancy, and the determination of fetal numbers of goats by means of real-time ultrasound scanning.
- c7- Prescribe endoscopic and ultrasonographic examinations depending on clinical suspicion and expected findings

#### **d- General and transferable skills**

By the end of studying the course, the student should be able to:

- d1- Use information technology & information resources.
- d2-. Practice continuous self learning & self evaluation.
- d3- Work in group.
- d4-. Communicate with dairy specialists.
- d5- Participate in private business.

#### **4-Topics and contents**

Topic	Week	Hours	Pract
○ Basic general knowledge about different models of Ultrasonic.	1 <sup>st</sup>	1	1
○ Basic general knowledge about different models of Endoscopes.	2 <sup>nd</sup>	1	1
○ Instrument handling from how to set up the endoscope to cleaning.	3 <sup>rd</sup>	1	1
○ Indications and limitations of application of ultrasonography and endoscopy.	4 <sup>th</sup>	1	1
○ Complications of using endoscopy	5 <sup>th</sup>		
○ Procedures and technique of application of endoscopy and US	6 <sup>th</sup>	1	1
○ Practical training	7 <sup>th</sup>	1	1
○ Cleaning and storage.	8 <sup>th</sup>	1	1
○ Therapeutic endoscopic interventions	9 <sup>th</sup>	1	1
○ Practical training	10 <sup>th</sup>	1	1
○ Presentation and discussion of sample cases.	11 <sup>th</sup>	1	1
○ Practical training	12 <sup>th</sup>	1	1
	13 <sup>th</sup>	1	1
		1	1
<b>Total</b>	<b>13</b>	<b>13</b>	<b>13</b>

#### **5-Teaching and learning methods**

- 5.1- Lectures (brain storming, discussion) using board and PowerPoint data show.
- 5.2- Self learning by preparing essays and presentations (computer researches and faculty library)
- 5.3- Practical (models, slaughter house materials of male genital organs).

#### **6-Teaching and learning methods for the students with disabilities**

Not Applicable

#### **7-Student assessment**



Beni-Suef University  
Faculty of Veterinary Medicine

## Course specification

### 7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	I.S	P&P.S	G.S
written Exam	a2, a3, a4 & a6	b1,b3,b5 &b7		
Practical Exam	a1,a2, a3 and a5	b2,b4,b5	c1, c2 & c4	
Oral Exam	a1-a7	b1-b8	c1-c7	d1-d8
Student Activities				d1 to d8

### 7.2. Assessment schedules/semester:

Method	Week(s)
Practical Exam	14 <sup>th</sup> & 15 <sup>th</sup>
written Exam	15 <sup>th</sup> to 18 <sup>th</sup>
Oral Exam	15 <sup>th</sup> to 18 <sup>th</sup>
Student activities	Along the semester

### 7.3. Weight of assessments/semester

Assessment	Weight of assessment
written Exam	50%
Practical Exam	20%
Oral Exam	20%
Student activities	10
total	100%

## 8- List of references

### 8.1. Notes and books

Assisted reproductive Technology in Farm Animals

### 8.2. Essential books:

IAN CORDON: CONTROLLED REPRODUCTION in Cattle and Buffaloes, First ed.  
ISBN0851YY 1149, OCAB International 1996.

### 8.3. Recommended texts

- Veterinary Andrology

### 8.4. Journals, Websites ....etc

#### Journals:

- Reproduction in domestic animals
- Andrologia
- International Journal of Andrology

#### Websites:

<http://vetrepropath.com/repro.html/> Veterinary Reproductive Pathology  
<https://www.theriogenology.org/> American College of Theriogenologists  
<https://www.zoetisus.com/reproduction/home.aspx>  
<https://www.therio.org/search/custom.asp?id=1107>

### Course Coordinators

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### Head of Department

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Beni-Suef University  
Faculty of Veterinary Medicine

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Topics	week	Intended learning outcomes of course (ILOs)			
		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
○ Basic general knowledge about different models of Ultrasonic.	1 <sup>st</sup>	a1 ,a2	b1-b6	c1-c7	d1-d5
○ Basic general knowledge about different models of Endoscopes.	2 <sup>nd</sup>	a2, a3	b2	c2 & c4	
○ Instrument handling from how to set up the endoscope to cleaning.	3 <sup>rd</sup>	a3, a4	b1, b2 & b3	c1,c5	d4 & d5
○ Indications and limitations of application of ultrasonic& endoscopy.	4 <sup>th</sup>	a5,a7	b5	c3, c7	d1 & d2
○ Complications of using endoscopy	5 <sup>th</sup>	a5	b4	c5, c7	d3 & d4
○ Procedures and technique of application of endoscopy and US	6 <sup>th</sup>	a6,a7	b5	c1-c7	d1-d5
○ Practical training	7 <sup>th</sup>	a1-a7	b1, b2	c1,c2,c3	d2
○ Cleaning and storage.	8 <sup>th</sup>			c4,c6	d3
○ Therapeutic endoscopic interventions	9 <sup>th</sup>			c5,c7	d5
○ Practical training	10 <sup>th</sup>	a1-a7	b1-b8		d4
○ Presentation and discussion of sample cases.	11 <sup>th</sup>	a3-a8	b1-b5	c1-c7	d1-d5
○ Practical training	12th & 13th	a1-a7	b3-b8	c4-c7	d1-d5