

Beni Suef University Faculty of Veterinary Medicine Department of Surgery, anesthesiology and Radiology

Program Specification for Master Degree 2017-2018

A-Basic information:

1- Program title: PhD degree in Surgery, Anesthesiology and Radiology

2- Program type: *Single*

3- Department offering program: Surgery, anesthesiology and Radiology

4-Academic year: 2017-2018

5-Approval date of Department Council:

6-Approval date of Faculty Council:

7-External evaluator: Prof. Dr. Samy Farghali Ismaiel

B-Professional information:

1- Overall aims of the program:

- 1. Provide graduates the opportunity to develop communication skills.
- 2. Use efficiently the most recent and advanced techniques and improve the skills of scientific researches
- 3. Collect, manage and analyze the scientific data in veterinary surgery, anesthesiology and radiology practice.
- 4. Write the dissertation, scientific papers and applies for scientific projects.
- 5. Provide skills of writing dissertations and scientific papers Consider continuous, self-learning and experience transfer
- 6. Allow graduates to develop practical research project.
- 7. Develop the ability of graduate to engage critically with scientific literature and to critically review and present their own research data.

2- Intended learning outcomes of course (ILOs):

a- Knowledge and understanding:

On successful completion of this program the graduate should be able to:

- a.1. Recognize most newest and advanced treatment of different surgical affections
- a.2. Outline the advanced principles in dealing with surgical affections like laparoscope
- a.3. Record the newest and safer anesthetic regimes and modern method of application of anesthetic techniques
- a.4. Acquire the principles of modern method of radiology like computed tomography, MRI and thermography

b- Intellectual skills:

On successful completion of PhD program the graduate should be able to:

- b1- Identify, conceptualize and define research problems, questions and their resolutions
- b2- critically evaluate their own research data and develop new approach to solve their research questions
- b3- develop creative approaches to solve technical problems in surgery or issues associate with running and researches project.
- b4- identify, summarize and evaluate prior researches finding in a special area of surgery
- b5 Making career decisions in the contexts of different professional surgical problems
- b6- Design a scientific research plan

c- Professional and practical skills:

On successful completion of this program the graduate should be able to:

- c1- Apply the principles of good experimental design and analysis to their own research project .
- c2- Select and perform relevant statistical analysis on data obtained for their own research .
- c3- Use the newest technology in practical portion
- c4- Perform surgical operation and being decision maker.

On successful completion of this program the graduate should be able to:

- d.1 Demonstrate information retrieval and library skills
- d.2 Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects
- d.3. present research finding in oral and written from using arrange of appropriate software (e.g., power point, word, excel and data base).
- d.4. use all types of communications skills

3- Academic standers:

- * The faculty mission, vision and strategic objective are confirmed to the academic standard. The learning outcomes are inline with the department and the faculty mission.
- * Postgraduates NARS (March 2009) Master degree chapter issued by national authority for quality assurance and accreditation of education (NAQAAE) and Veterinary medicine post graduate academic standards (ARS) for the faculty of veterinary medicine, Beni-Suef University, Beni-Suef, Egypt are selected to confirm the appropriateness of the academic standards.

4- Program Structure and Contents

A-Program duration: At least two academic years from the approval of registration by the Faculty Council and maximum four years. The faculty council has the right to give the applicant another period not exceed two years according to the supervisor request

The first year for preliminary courses study, while the second year for researches and preparation of the Master Thesis.

B- Program structure: Hours/ week:

Basic course:-

Theoretical 4 Practical 7 Total 11

Subsidiary courses:-

Theoretical 4-8 Practical 6-8 Total 10-16

C- Program courses:

Preliminary courses

C 1	C (2)	Hours	/week	Academic	G 4	
Code	Course title	theoritical	practical	year	Semester	
	Selected (3-5) courses depending on the thesis title from the various Faculty PhD courses	5-6	6-9	Preliminary year	36 weeks	

D- Courses contents See master courses specification

5- Program Admission Requirements

- a- According to the Faculty of Veterinary Medicine, Beni-Suef University Bylaws for Post Graduate Programs, applicants should have BVSc., from an Egyptian University or equivalent degree from any approved university, with at least general grade (Good) and (Very Good) in the specialized subject.
- b- Also if the student has postgraduate diploma in one specialization of total (3 hours) at least with general grade (Good) and (Very good) in the specialized subject.
- c- According to Beni-Suef University requirements, all applicants for postgraduate studies should fulfill preliminary courses on the following subjects:
- I- English language (Toefl or equivalent degree)
- 2- Computer skills (ICDL) or equivalent computer course.
- d- Admission to the program is open during March and September annually after at least one year from the BVSc degree.

6. Regulations for Progression and Program Completion

After finishing the preliminary courses, the graduate student will be eligible to sit for the examination according to the following roles:

No. of course	Allowed time for	Deg	gree
teaching hours/ week	written exam.	Theoretical	Practical and oral exam
≥ 3 hours	3 hours	50	50
≤3 hours	2 hours	25	25

- It is mandatory to pass all the courses each chance except biostatic (212)
- -The passing mark in each exam is $\geq 60\%$.
- -The faculty council has the right to deprive the applicant from entering the exams if his attendance courses is less than 75%.

Qualification grades:

Excellent	≥ 90
Very good	≥80
Good	≥70
Pass	≥60
Failed	45 to less than 60 weak
Failed	Less than 45 Very weak
	•

- -After passing, the graduate starts research for Master Thesis at the beginning of the second year.
- -The candidate will receive his degree after evaluating and approving the thesis by a committee according to University regulations.

-The applicant should publish at least two scientific papers from the thesis in local or international journals

7-Graduate student assessment

A: Assessment Tools

According the Faculty of Veterinary Medicine, Beni-Suef University Bylaws for Post Graduate, students should be assessed at the end of preliminary year and the thesis should be evaluated and approved by a committee according to University regulations.

1-Preliminary year

Assessments methods for each course	practical exam	Oral exam	Written exam
Time of Assessments	By the end of the	By the end of	By the end of the year
	year	the year	By the end of the year
Marks	25	25	50

2-Master Thesis:

All master-degree students should prepare a thesis in Surgery, Anesthesiology and Radiology. The department council must approve the protocol (plan) of the

Assessments methods	Matrix alignment of the measured ILOs
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research. The thesis is supervised by one or more staff members and may include other specialties according to the nature of the research. The thesis should be evaluated and approved by a committee according to University regulations. The applicant should publish at least one scientific paper from the thesis in local or international journals

B- Matrix alignment of the measured ILOs

	K&U (a)	I.S (b)	P&P. S (c)	G&T. S (d)
written exam	a3, a4	b3	c1,c2,c4	d2
Practical exam	n a1		c1,c2,c3	d1,d2
Oral exam	a1,a2	b1,b3	c2	

Course coordinator

Head of the Department

Dr. Mohammed Zaki

PhD Program Specification Matrix (Program Courses with ILOS)

Program ILOs		courses
Knowledge and understanding	a1	,166, 167,168, 169
	a2	,166, 167 ,169
	a3	168
	a4	,166, 167 , 168,169
Intellectual skills	b1	, 166,thesis
	b2	thesis
	b3	thesis
	b4	, 114,115,116,118,119
	В5	thesis
	В6	,166, 167 ,169
Professional and practical skills	c1	, thesis
	c2	thesis

	c3	166, 167 , 168,169
	c4	thesis,166, 167, 168,169
General and transferable skills	d1	
		thesis,166, 167, 168,169
	d2	
		166, 167 , 168,169
	d3	thesis,166, 167, 168,169
	D4	thesis

Program aims – ILOS Matrix for the PhD Degree مصفوفة اهداف البرنامج مع مخرجات التعلم المستهدفة

	Program aims		Program aims
		a- Provide the students with a	b-Boast the students'
		profound cutting-edge education	knowledge and skills to b
Program ILOS		in the field of veterinary	efficient and productive
		medicine to serve their	members in the field of
		community by solving problems	veterinary medicine
	al- Recognize most newest and		
	advanced treatment of different	V	
	surgical affections		
ng	a2- Outline the advanced		
ndi	principles in dealing with surgical	_	
sta	affections like laparoscope	V	
ıder	arrearies sine superescope		
Knowledge and understanding	a3- Record the newest and safer		
anc	anesthetic regimes and modern		
1ge	method of application of	V	
лес	anesthetic techniques		
MOU	a4- Acquire the principles of		
\frac{\frac}}}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac}}}}}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac}}}}}}}}}{\frac}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}			
	modern method of radiology like	V	
	computed tomography, MRI and		
	thermography .		
	b1- Identify, conceptualize and	V	√
kills	define research problems,		
al sl	questions and their resolutions		
Intellectual skills	b2- critically evaluate their own		√
lle	research data and develop new		
Inte	approach to solve their research		
	questions		

	Program aims		Program aims		
Program ILOS		a- Provide the students with a profound cutting-edge education in the field of veterinary medicine to serve their community by solving problems	b-Boast the students' knowledge and skills to efficient and productive members in the field of veterinary medicine		
	b3- develop creative approaches to solve technical problems in surgery or issues associate with running and researches project.		٧		
	b4- identify, summarize and evaluate prior researches finding in a special area of surgery		٧		
	b5 Making career decisions in the contexts of different professional surgical problems				
	b6- Design a scientific research plan				
nal skills	c1- Apply the principles of good experimental design and analysis to their own research project.		٧		
ctical and professional skills	c2- Select and perform relevant statistical analysis on data obtained for their own research.				
ical anc	c3- Use the newest technology in practical portion		٧		
Practi	C4- Perform surgical operation and being decision maker		٧		
General and	d1- Demonstrate information retrieval and library skills.				
transferab le skills	d2- Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects				
	d3- Using the research finding in		٧		

	Program aims		Program aims
		a- Provide the students with a	b-Boast the students'
		profound cutting-edge education	knowledge and skills to b
Program ILOS		in the field of veterinary	efficient and productive
		medicine to serve their	members in the field of
	oral and written from using arrange of appropriate software e.g., power point, word, excel and data base). use all types of communications	community by solving problems	veterinary medicine
	oral and written from using		
	arrange of appropriate software (
	e.g., power point , word , excel		
	•		V
	, ·		'
	skills		

Academic standers					edge a tandi			Intellectual skills						Professional and practical skills					Ge	General and transferable skills					
Program ILOs																									
		a1	a2	a 3	a 4	a5	a6	b1	b 2	b 3	b4	b 5	b6	c1	c2	c3	c4	c5	с6	d1	d2	d3	d4	d5	
Knowledge and	a1	V																							
understanding	a2		$\sqrt{}$																						
	a3			1		,																			
Intellectual	a4					√					V													+	
skills	b2								1		V													+	
SKIIIS	b3								<u> </u>				V											+	
	b4											V	,											†	
	B5									$\sqrt{}$															
	B6							$\sqrt{}$																	
Professional	c1															√,								₩	
and practical skills	<u>c2</u>														,	√								+-	
SKIIIS	c3													1	√									+	
General and	d1													V									1	1	
transferable																							1		
skills	d2																					$\sqrt{}$			
	d3																				$\sqrt{}$				
	D4																						1	+	



1-Basic information

Course Code:	Ph-162		
Course title :	General surgery		
Program title:	PhD degree In Veterinary Medical Sciences (Surgery)		
Contact hours/ week	Lecture: 2 h / week Practical: 3 h / week		
Approval Date			

2-Professional information

Overall aims of course:

This course aims to:

- 1. Obtaining the academic background and practical experience about General surgery.
- 2. Introducing the academic background and practical experience about basic principles of surgical interferences and treatment.

3- Intended learning outcomes of course (ILOs)

A- Knowledge and understanding:

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

- a.1. Recognize causes, and diagnosis of surgical affections
- a.2. Outline the basic principles in dealing with surgical affections
- a.3. Recall the basic principles of anesthetic techniques and materials.
- a.4. Describe the relationship between the used anesthetic techniques and materials and surgical interferences.

B-Intellectual skills

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

- b.1. Discriminate and analysis of clinical and laboratory findings to reach the accurate diagnosis.
- b.2. Interpret and predict the prognosis and segullae of general surgical affections.
- b.3. Score of suitability of using defined Surgical techniques.
- b.4. identify areas where further researches necessary and be aware of any which would be beyond current ethical codes.

C- Professional and practical skills

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

- c.1. Assess experience in clinical and laboratory diagnosis of surgical affections
- c.2. Perform different surgical techniques.
- c.3. using the new technology in practical portion.
- c.4.follow up the treated cases and control of postoperative complications.

D- General and transferable skills

- d.1 Demonstrate information retrieval and library skills
- d.2 Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects



- d.3. present research finding in oral and written from using arrange of appropriate software (
- e.g., power point, word, excel and data base).
- d.4. use all types of communications skills.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
	- Inflammation	20	8	12
	- Necrosis, ulcers and gangrene	15	6	9
sek)	- Burns and scalds	15	6	9
(Lec. 2h./week, Pract. 3h./week)	- Abscess	20	8	12
nct. 3	- Sinus and fistula	20	8	12
, Pra	- Cyst and tumors	20	8	12
week	- Bone affections	20	8	12
. 2h./	- Joint affections	20	8	12
(Lec	-Tendons and tendon sheath affections	15	6	9
	- Muscle affections ,Affections of bursa Nerve and blood vessels affections	15	6	9

5-Teaching and learning methods

- 5.1- Lectures (brain storm, discussion) using board, data shows
- 5.2- Self learning by preparing essays and presentations (computer researches and library)
- 5.3- Practical application of advanced surgical technique (models, samples of tissues and data show).
- 5.4- Self learning by preparing essays and presentations (computer researches and library)

7-Student assessment

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods				
Method	K&U	K&U I.S		G.S	
Final Exam	a1- a2- a3-	b1- b2- b3-	c1- c2- c3- c4	d1- d2	
Practical Exam	a1- a2- a3	b1- b2- b3-	c1- c2- c3- c4		
Oral Exam	a1- a2- a3-	b1- b2- b3-	c1,c3	d1-d2-d3- d4	



7.2. Assessment schedules

Method	Week(s)
Writing exam	December
Practical exam	December
Oral exam	December

7.3. Weight of assessments

Assessment	Weight of assessment
Writing exam	50%
Practical exam	25%
Oral exam	25%
total	100%

8- List	of	references

8.1. Notes and books

-Veterinary surgery. D.Knech. R.AIIen. 1987

8.2. Essential books:

-Farm Animal Surgery. Susane Fubini. 1987

8.3. Recommended texts

- Atlas of general small animal surgery.
- Complications in small animal surgery.
- Caywood. Lipowitz.
- Alan.J. lipowitz
2015

8.4. Journals, Websitesetc

Journals: Veterinary surgery, Veterinary Clinics of North America.

Websites:

WWW.Science direct WWW. Pubmed.com

WWW.Scholar google.com

WWW.welly interscience

Program coordinator
Name: Dr. Mohamed Zaki Fathy
Signature...... Date

Head of the Department Name: Prof.Dr. Gamal Abdel Nasser Signature...... Date



	Topics	week	Intended learning outcomes of course (ILOs)			rse (ILOs)
	General Surgery		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	- Inflammation	- 1 st w- 4 th w	1,2,3	1,2,3	1,2,4	1,2,3
2	- Necrosis, ulcers and gangrene	- 5 th w- 7 th w	1,2,3	1,3	1,2, 4	1,2,3,4
3	- Burns and scalds	- 8 th w- 10 th w	1,2	1,2,3	1,2,3	1,2,4
4	- Abscess	- 11 th w- 14 th w	1,2	1,2,3	1, 3	1,2,3
5	- Sinus and fistula	- 15 st w- 18 th w	1,2,3	1,2,3	1,2,4	1,2,3
6	- Cyst and tumors	- 19 th w- 22 th w	1,3	1,4	1,3,4	1,2,4
7	- Bone affections	- 23 th w- 26 th w	1,2	1,2,3	1,2,3	1, 3,4
8	- Joint affections	- 27 th w- 30 th w	1,2,3	1,2,3	1,2,4	1,2,3
9	-Tendons and tendon sheath affections	- 31 th w-33 th w	1,2	1,2,3	1,2,3	1,2,3
10	- Muscle affections ,Affections of bursa Nerve and blood vessels affections	- 34 th w- 36 th w	2,3	1,3,4	2,4	1,3,4



1-Basic information

Course Code:	Ph-163		
Course title :	Special surgery		
Program title:	PhD degree In Veterinary Medical Sciences (Surgery)		
Contact hours/ week	Lecture: 2 h / week Practical: 3 h / week		
Approval Date			

2-Professional information

Overall aims of course:

This course aims to:

- 1. Understanding the academic background and practical experience about Special surgery.
- 2. Have the academic background and practical experience about basic principles of surgical interferences and treatment of surgical affections of different body systems.

3- Intended learning outcomes of course (ILOs)

A- Knowledge and understanding:

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

- a.1. Recognize causes, and diagnosis of surgical affections of different body systems.
- a.2. Outline the basic principles in dealing with surgical affections
- a.3. Recall the basic principles of anesthetic techniques and materials.
- a.4. Describe the relationship between the used anesthetic techniques and materials and surgical interferences according to the surgical field.

B-Intellectual skills

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

- b.1. Discriminate and analysis of clinical and laboratory findings to reach the accurate diagnosis.
- b.2. Interpret and predict the prognosis and sequllae of surgical affections.
- b.3. Score of suitability of using defined Surgical techniques.
- b.4. identify areas where further researches necessary and be aware of any which would be beyond current ethical codes.

C- Professional and practical skills

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

- c.1. Assess experience in clinical and laboratory diagnosis of surgical affections
- c.2. Perform different surgical techniques.
- c.3. using the new technology in practical portion.
- c.4. follow up the treated cases and control of postoperative complications.

D- General and transferable skills

- d.1 Demonstrate information retrieval and library skills
- d.2 Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects



- d.3. present research finding in oral and written from using arrange of appropriate software (
- e.g., power point, word, excel and data base).
- d.4. use all types of communications skills.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
	- Teeth affections	20	8	12
3h./week)	- Digestive system affections	30	12	18
	- Urinary system affections	25	10	15
ract.	- Genital system affections	25	10	15
2h./week, Pract.	- Hernia and abdominal muscles affections	25	10	15
	- Back and tail affections	15	6	9
(Lec.	- Udder and t eat affections	20	8	12
	- horn affections	20	8	12

5-Teaching and learning methods

- 5.1- Lectures (brain storm, discussion) using board, data shows
- 5.2- Self learning by preparing essays and presentations (computer researches and library)
- 5.3- Practical application of advanced surgical technique (models, samples of tissues and data show).
- 5.4- Self learning by preparing essays and presentations (computer researches and library)

7-Student assessment

7.1. Assessments methods:

Mathad	Matrix alignment of the measured ILOs/ Assessments methods			
Method	K&U	K&U I.S		G.S
Final Exam	a1- a2- a3-	b1- b2- b3-	c1- c2- c3- c4	d1- d2
Practical Exam	a1- a2- a3	b1- b2- b3-	c1- c2- c3- c4	
Oral Exam	a1- a2- a3-	b1- b2- b3-	c1,c3	d1-d2-d3- d4



7.2. Assessment schedules

Method	Week(s)
Writing exam	December
Practical exam	December
Oral exam	December

7.3. Weight of assessments

Assessment	Weight of assessment
Writing exam	50%
Practical exam	25%
Oral exam	25%
total	100%

8- List	8- List of references					
8.1. Notes and books						
-Veterinary surgery.	D.Knech. R.AIIen.	1987				
8.2. Essential books:						
-Farm Animal Surgery.	Susane Fubini.	1987				
8.3. Recommended texts						
- Atlas of general small animal surgery.	Caywood. Lipowitz.	1989				

Alan.J. lipowitz

- Complications in small animal surgery. 8.4. Journals, Websitesetc

Journals: Veterinary surgery, Veterinary Clinics of North America.

Websites:

WWW.Science direct WWW. Pubmed.com WWW.Scholar google.com WWW.welly interscience

> **Program coordinator** Name: Dr. Mohamed Zaki Fathy Signature...... Date

Head of the Department Name: Prof.Dr. Gamal Abdel Nasser Signature...... Date

2015



	Topics	week	Intended learning outcomes of course (ILOs)			
	Special Surgery		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	- Teeth affections	- 1 st w- 4 th w	1,2,3	1,2,3	1,2,4	1,2,3
2	- Digestive system affections	- 5 th w- 10 th w	1,2,3	1,3	1,2,4	1,2,4
3	- Urinary system affections	- 11 th w- 15 th w	1,2	1,2,3	1,2,3	1,2,4
4	- Genital system affections	- 16 th w- 20 th w	1,2	1,2,3	1, 3	1,2,3,4
5	- Hernia and abdominal muscles affections	- 21 st w- 25 th w	1,2,3	1,2,3	1,2,4	1,2,3
6	- Back and tail affections	- 26 th w- 28 th w	1,3	1,4	1,3,4	1,2,4
7	- Udder and t eat affections	- 29 th w- 32 th w	1,2	1,2,3	1,2,3	1,2,3,4
8	- horn affections	- 33 th w- 36 th w	1,2,3	1,2,3	1,2,4	1,2,3



1-Basic information

Course Code:	Ph-164		
Course title :	Surgery of eye, ear, nose and throat		
Program title:	PhD degree In Veterinary Medical Sciences (Surgery)		
Contact hours/ week	Lecture: 2 h / week Practical: 2 h / week		
Approval Date			

2-Professional information

Overall aims of course:

This course aims to:

- 1. Have practical experience about ophthalmic surgery also, surgery of nose and ear.
- 2. Obtaining the academic background and practical experience about basic principles of surgical interferences and treatment.

3- Intended learning outcomes of course (ILOs)

A- Knowledge and understanding:

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

- a.1. Recognize causes, and diagnosis of surgical affections of ear, nose and throat.
- a.2. Outline the basic principles in dealing with surgical affections and anatomy of the eye
- a.3. Recall the basic diagnostic procedure of ocular diseases.
- a.4. Describe the relationship between the used anesthetic techniques and materials and surgical interferences in different eye affection.

B-Intellectual skills

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

- b.1. Discriminate and analysis of clinical and laboratory findings to reach the accurate diagnosis.
- b.2. Interpret and predict the prognosis and sequllae of general surgical affections.
- b.3. Score of suitability of using defined Surgical techniques.
- b.4. identify areas where further researches necessary and be aware of any which would be beyond current ethical codes.

C- Professional and practical skills

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

- c.1. Assess experience in clinical and laboratory diagnosis of surgical affections
- c.2. Perform different surgical techniques.
- c.3. using the new technology in practical portion.
- c.4.follow up the treated cases and control of postoperative complications.

D- General and transferable skills

- d.1 Demonstrate information retrieval and library skills
- d.2 Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects

- d.3. present research finding in oral and written from using arrange of appropriate software (
- e.g., power point, word, excel and data base).
- d.4. use all types of communications skills.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
ic. eek, ct.	- veterinary ophthalmology	40	20	20
Le v	- Ear affections	28	14	14
2h. 2h. 2h. 2h. 2h. 2h.	- Nose and throat affections	36	18	18

5-Teaching and learning methods

- 5.1- Lectures (brain storm, discussion) using board, data shows
- 5.2- Self learning by preparing essays and presentations (computer researches and library)
- 5.3- Practical application of advanced surgical technique (models, samples of tissues and data show).
- 5.4- Self learning by preparing essays and presentations (computer researches and library)

7-Student assessment

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods				
Method	K&U I.S		P&P.S	G.S	
Final Exam	a1- a2- a3-	b1- b2- b3-	c1- c2- c3- c4	d1- d2	
Practical Exam	a1- a2- a3	b1- b2- b3-	c1- c2- c3- c4		
Oral Exam	a1- a2- a3-	b1- b2- b3-	c1,c3	d1-d2-d3- d4	

7.2. Assessment schedules

Method	Week(s)
Writing exam	December
Practical exam	December
Oral exam	December



7.3. Weight of assessments

Assessment	Weight of assessment
Writing exam	50%
Practical exam	25%
Oral exam	25%
total	100%

8- List of references					
8.1. Notes and books					
-Veterinary surgery.	D.Knech. R.AIIen.	1987			
8.2. Essential books:					
-Textbook of veterinary ophthalmology.	Gellatt, B.	1987			
8.3. Recommended texts					
- Atlas of general small animal surgery.	Caywood. Lipowitz.	1989			
- Complications in small animal surgery.	Alan.J. lipowitz	2015			
8.4. Journals, Websitesetc					
Iournals Veterinary surgery Veterinary	Tlinics of North America				

<u>Journals:</u> Veterinary surgery, Veterinary Clinics of North America.

Websites:

WWW.Science direct WWW. Pubmed.com WWW.Scholar google.com WWW.welly interscience



	Topics	week	Intended learning outcomes of course (ILOs)			
	Surgery of eye, ear, nose and		K and U	I.S (b)	P. P.S. (c)	G.T.S (d)
	throat		(a)	1.5 (b)	1.1.5.(c)	3.1.5 (u)
1	- veterinary ophthalmology	- 1 st w- 20 th w	1,2,3	1,2,3	1,2,4	1,2,3
2	- Ear and horn affections	- 21 th w- 30 th w	1,2,3	1,3	1,2,3,4	1,2,3,4
3	- Nose and throat affections	- 31 th w- 36 th w	1,2	1,2,3	1,2,3	1,2,3,4



1-Basic information

Course Code:	Ph-165		
Course title :	Surgery of digestive system		
Program title:	PhD degree In Veterinary Medical Sciences (Surgery)		
Contact hours/ week	Lecture: 2 h / week	Practical: 2 h / week	
Approval Date			

2-Professional information

Overall aims of course:

This course aims to:

- 1. Understanding the academic background and practical experience about digestive system surgery.
- 2. Training the academic background and practical experience about basic principles of surgical interferences and treatment of digestive system surgical affections.

3- Intended learning outcomes of course (ILOs)

A- Knowledge and understanding:

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

- a.1. Recognize causes, and diagnosis of surgical affections of digestive.
- a.2. Outline the basic principles in dealing with mastication biomechanics and tongue anatomy
- a.3. Recall the basic principles of anesthetic techniques and materials.
- a.4. Recognize The surgical anatomical features of compound stomach.

B-Intellectual skills

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

- b.1. Discriminate and analysis of clinical and laboratory findings to reach the accurate diagnosis.
- b.2. Interpret and predict the prognosis and segullae of surgical affections.
- b.3. Score of suitability of using defined Surgical techniques.
- b.4. identify areas where further researches necessary and be aware of any which would be beyond current ethical codes.

C- Professional and practical skills

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

- c.1. Assess experience in clinical and laboratory diagnosis of surgical affections
- c.2. Perform different surgical techniques.
- c.3. using the new technology in practical portion.
- c.4. follow up the treated cases and control of postoperative complications.

D- General and transferable skills

- d.1 Demonstrate information retrieval and library skills
- d.2 Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects

- d.3. present research finding in oral and written from using arrange of appropriate software (
- e.g., power point, word, excel and data base).
- d.4. use all types of communications skills.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
ic. eek, ct.	Teeth affections	20	10	10
Le 'Ya 'Ya	Digestive system affections	88	44	44
2h.,	abdominal wall affections	36	18	18

5-Teaching and learning methods

- 5.1- Lectures (brain storm, discussion) using board, data shows
- 5.2- Self learning by preparing essays and presentations (computer researches and library)
- 5.3- Practical application of advanced surgical technique (models, samples of tissues and data show).
- 5.4- Self learning by preparing essays and presentations (computer researches and library)

7-Student assessment

7.1. Assessments methods:

Mothod	Matrix alignment of the measured ILOs/ Assessments methods				
Method	K&U	I.S	P&P.S	G.S	
Final Exam	a1- a2- a3-	b1- b2- b3-	c1- c2- c3- c4	d1- d2	
Practical Exam	a1- a2- a3	b1- b2- b3-	c1- c2- c3- c4		
Oral Exam	a1- a2- a3-	b1- b2- b3-	c1,c3	d1-d2-d3- d4	

7.2. Assessment schedules

Method	Week(s)
Writing exam	December
Practical exam	December
Oral exam	December

7.3. Weight of assessments



Assessment	Weight of assessment	
Writing exam	50%	
Practical exam	25%	
Oral exam	25%	
total	100%	

8- List of references				
8.1. Notes and books				
- Ruminant Surgery.	R.P.S.Tyagi	1987		
8.2. Essential books:				
-Farm Animal Surgery.	Susane Fubini.	1987		
8.3. Recommended texts				
- Atlas of general small animal surgery.	Caywood. Lipowitz.	1989		
- Complications in small animal surgery.	Alan.J. lipowitz	2015		
8.4. Journals, Websitesetc				
Journals: Veterinary surgery, Veterinary C	Clinics of North America.			

Websites:

WWW.Science direct WWW. Pubmed.com WWW.Scholar google.com WWW.welly interscience

> **Program coordinator Head of the Department** Name: Dr. Mohamed Zaki Fathy Name: Prof.Dr. Gamal Abdel Nasser Signature...... Date Signature..... Date



	Topics	week	Intended learning outcomes of course (ILOs)			rse (ILOs)
	Surgery of digestive system		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	Teeth affections	- 1 st w- 5 th w	1,2,3	1,2,3	1,2,4	1,2,3
2	Tongue affections	- 6 th w- 27 th w	1,2,3	1,3	1,2,3,4	1,2,3,4
3	Salivary glands affections	- 28 ^h w- 36 th w	1,2	1,2,3	1,2,3	1,2,3,4



1-Basic information

Course Code:	Ph-166		
Course title :	Equine Lameness and Claw affections		
Program title:	PhD degree In Veterinary Medical Sciences (Surgery)		
Contact hours/ week	Lecture: 2 h / week Practical: 2 h / week		
Approval Date			

2-Professional information

Overall aims of course:

This course aims to:

- 1. Gain the practical experience about Equine Lameness and Claw affections.
- 2. Introducing the academic background and practical experience about basic principles of surgical interferences and treatment limbs, hoof and claw affections.

3- Intended learning outcomes of course (ILOs)

A- Knowledge and understanding:

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

- a.1. Recognize causes, and diagnosis of musculoskeletal disorders.
- a.2. Define the biomechanics of musculoskeletal system and mal-conformations of equine limbs
- a.3. Recall and Explain the anatomy of hoof and claws.
- a.4. List the common surgical affections of the hoof and claws.

B-Intellectual skills

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

- b.1. Discriminate and analysis of clinical and laboratory findings to reach the accurate diagnosis.
- b.2. Interpret and predict the prognosis and sequllae of surgical affections.
- b.3. Score of suitability of using defined Surgical techniques.
- b.4. identify areas where further researches necessary and be aware of any which would be beyond current ethical codes.

C- Professional and practical skills

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

- c.1. Assess experience in clinical and laboratory diagnosis of surgical affections
- c.2. Perform different surgical techniques.
- c.3. using the new technology in practical portion.
- c.4. follow up the treated cases and control of postoperative complications.

D- General and transferable skills

- d.1 Demonstrate information retrieval and library skills
- d.2 Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects



- d.3. present research finding in oral and written from using arrange of appropriate software (
- e.g., power point, word, excel and data base).
- d.4. use all types of communications skills.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
Pract.	- Introduction to lameness and its diagnosis	16	8	8
	- Fore limb affections	44	22	22
2h./week, 2h./week)	- Hind limb affections	28	14	14
	- Hoof affections	40	20	20
(Lec.	- Claw affections	16	8	8

5-Teaching and learning methods

- 5.1- Lectures (brain storm, discussion) using board, data shows
- 5.2- Self learning by preparing essays and presentations (computer researches and library)
- 5.3- Practical application of advanced surgical technique (models, samples of tissues and data show).
- 5.4- Self learning by preparing essays and presentations (computer researches and library)

7-Student assessment

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
Method	K&U I.S		P&P.S	G.S
Final Exam	a1- a2- a3-	b1- b2- b3-	c1- c2- c3- c4	d1- d2
Practical Exam	a1- a2- a3	b1- b2- b3-	c1- c2- c3- c4	
Oral Exam	a1- a2- a3-	b1- b2- b3-	c1,c3	d1-d2-d3- d4



7.2. Assessment schedules

Method	Week(s)
Writing exam	December
Practical exam	December
Oral exam	December

7.3. Weight of assessments

Assessment	Weight of assessment
Writing exam	50%
Practical exam	25%
Oral exam	25%
total	100%

8.1. Notes and books

-Veterinary surgery. D.Knech. R.AIIen. 1987

8.2. Essential books:

-Farm Animal Surgery. Susane Fubini. 1987 -Equine lameness 5th Ed. Adams 2006

8.3. Recommended texts

Atlas of general large animal surgery.
Bovine surgery and lameness.
Caywood. Lipowitz.
Alan.J. lipowitz
2015

8.4. Journals, Websitesetc

Journals: Veterinary surgery, Veterinary Clinics of North America.

Websites:

WWW.Science direct WWW. Pubmed.com

WWW.Scholar google.com

WWW.welly interscience

Program coordinator
Name: Dr. Mohamed Zaki Fathy
Signature...... Date

Head of the Department Name: Prof.Dr. Gamal Abdel Nasser Signature...... Date



	Topics	week	Intended learning outcomes of course (ILOs			rse (ILOs)
	Equine Lameness and claw affections		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	- Introduction to lameness and its diagnosis	- 1 st w- 4 th w	1,2,3	1,2,3	1,2,4	1,2,3
2	- Fore limb affections	- 5 th w- 15 th w	1,2,3	1,3	1,2,3,4	1,2,3,4
3	- Hind limb affections	- 16 th w- 22 th w	1,2	1,2,3	1,2,3	1,2,3,4
4	- Hoof affections	- 23 th w- 32 th w	1,2	1,2,3	1, 3	1,2,3,4
5	- Claw affections	- 33 st w- 36 th w	1,2,3	1,2,3	1,2,4	1,2,3



1-Basic information

Course Code:	Ph-167		
Course title :	Experimental Surgery		
Program title:	PhD degree In Veterinary Medical Sciences (Surgery)		
Contact hours/ week	Lecture: 2 h / week Practical: 2 h / week		
Approval Date			

2-Professional information

Overall aims of course:

This course aims to:

- 1. Acquired the academic background and practical experience in the field of experimental surgery.
- 2. Have experience about experimental designs.

3- Intended learning outcomes of course (ILOs)

A- Knowledge and understanding:

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

- a.1. Recognize the strategy of animal selection and types of experimental animals
- a.2. Recognize the line of sampling
- a.3. List the common experimental surgical techniques.
- a.4. Recognize The animal euthanasia.

B-Intellectual skills

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

- b.1. Discriminate and analysis of clinical and laboratory findings to reach the accurate diagnosis.
- b.2. Interpret and predict the prognosis and sequllae of general surgical affections.
- b.3. Score of suitability of using defined Surgical techniques.
- b.4. identify areas where further researches necessary and be aware of any which would be beyond current ethical codes.

C- Professional and practical skills

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

- c.1. Assess experience in clinical and laboratory diagnosis of surgical affections
- c.2. Perform different surgical techniques.
- c.3. using the new technology in practical portion.
- c.4.follow up the treated cases and control of postoperative complications.

D- General and transferable skills

- d.1 Demonstrate information retrieval and library skills
- d.2 Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects
- d.3. present research finding in oral and written from using arrange of appropriate software (e.g., power point, word, excel and data base).

d.4. use all types of communications skills.

4-Topics and contents

Course	Торіс	No. of hours	Lectures	Practical
ek)	- Types of experimental animals		6	6
2h./week)	- Strategy of animal selection for experimental surgery	16	8	8
Pract.	- Sampling	16	8	8
	- Animal control	16	8	8
2h./week,	- Animal euthanasia	16	8	8
	- Pathological sampling artifacts.	20	10	10
(Lec.	- Some experimental surgery technique	48	24	24

5-Teaching and learning methods

- 5.1- Lectures (brain storm, discussion) using board, data shows
- 5.2- Self learning by preparing essays and presentations (computer researches and library)
- 5.3- Practical application of advanced surgical technique (models, samples of tissues and data show).
- 5.4- Self learning by preparing essays and presentations (computer researches and library)

7-Student assessment

7.1. Assessments methods:

Mathad	Matrix alignment of the measured ILOs/ Assessments methods				
Method	K&U I.S		P&P.S	G.S	
Final Exam	a1- a2- a3-	b1- b2- b3-	c1- c2- c3- c4	d1- d2	
Practical Exam	a1- a2- a3	b1- b2- b3-	c1- c2- c3- c4		
Oral Exam	a1- a2- a3-	b1- b2- b3-	c1,c3	d1-d2-d3- d4	

7.2. Assessment schedules

Method	Week(s)
Writing exam	December
Practical exam	December
Oral exam	December



7.3. Weight of assessments

Assessment	Weight of assessment	
Writing exam	50%	
Practical exam	25%	
Oral exam	25%	
total	100%	

8- List of references					
8.1. Notes and books					
-Veterinary surgery.	D.Knech. R.AIIen.	1987			
8.2. Essential books:					
-Farm Animal Surgery.	Susane Fubini.	1987			
8.3. Recommended texts					
- Atlas of general small animal surgery.	Caywood. Lipowitz.	1989			
- Complications in small animal surgery.	Alan.J. lipowitz	2015			
8.4. Journals, Websitesetc					
Journals: Veterinary surgery, Veterinary O	Clinics of North America.				

Websites:

WWW.Science direct WWW. Pubmed.com WWW.Scholar google.com WWW.welly interscience

> **Program coordinator Head of the Department** Name: Dr. Mohamed Zaki Fathy Name: Prof.Dr. Gamal Abdel Nasser Signature...... Date Signature...... Date



	Topics	week	Intended learning outcomes of course (ILOs)			
	Experimental Surgery		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	-Types of experimental animals	- 1 st w- 3 th w	1,2,3	1,2,3	1,2,4	1,2,3
2	- Strategy of animal selection for experimental surgery	- 4 th w- 7 th w	1,2,3	1,3	1,2,3,4	1,2,3,4
3	- Sampling	- 8 th w- 11 th w	1,2	1,2,3	1,2,3	1,2,3,4
4	- Animal control	- 12 th w- 15 th w	1,2	1,2,3	1, 3	1,2,3,4
5	- Animal euthanasia	- 16 st w- 19 th w	1,2,3	1,2,3	1,2,4	1,2,3
6	-Pathological sampling artifacts.	- 20 th w- 24 th w	1,3	1,4	1,3,4	1,2,4
7	- Some experimental surgery techniques	- 25 th w- 36 th w	1,2	1,2,3	1,2,3	1,2,3,4



1-Basic information

Course Code:	Ph-168			
Course title :	Anesthesiology			
Program title:	PhD degree In Veterinary Medical Sciences (Surgery)			
Contact hours/ week	Lecture: 1 h / week	Practical: 1 h / week		
Approval Date				

2-Professional information

Overall aims of course:

This course aims to:

- 1. Acquired practical experience about Veterinary Anesthesiology.
- 2. Learning the practical experience aboutbasic principles of using different anesthetic regime.

3- Intended learning outcomes of course (ILOs)

A- Knowledge and understanding:

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

- a.1. Recognize types, and uses and indication of different anesthetics.
- a.2. Outline the basic principles in veterinary anesthesiology.
- a.3. Recall the basic principles of anesthetic techniques and their advantages and drawbacks.
- a.4. Describe the relationship between the used anesthetic techniques and materials and surgical interferences.

B-Intellectual skills

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

- b.1. Use of anesthesiology to reach the accurate diagnosis in case of musculoskeletal affections.
- b.2. Interpret and predict the prognosis and segullae of anesthetic overdose.
- b.3. Score of suitability of using defined anesthetic techniques.
- b.4. Identify areas where further researches necessary and be aware of any which would be beyond current ethical codes.

C- Professional and practical skills

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

- c.1. Assess experience in performing different anesthetic techniques.
- c.2. Selection of the appropriate anesthetic material.
- c.3. Using the new technology in practical portion.
- c.4.control of anesthetic over dosage.

D- General and transferable skills

- d.1 Demonstrate information retrieval and library skills
- d.2 Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects
- d.3. present research finding in oral and written from using arrange of appropriate software (e.g., power point, word, excel and data base).



d.4. use all types of communications skills.

4-Topics and contents

Course	Торіс	No. of hours	Lectures	Practical
ct.	- Introduction to veterinaryanesthesiology	6	3	3
, Pract	- Local analgesia	10	5	5
lh./week, 1h./week)	- Regional analgesia	14	7	7
1h./w	-pre anesthetic medication	18	9	9
Lec.	- General anesthesia	8	4	4
	- Intraoperative monitoring	16	8	8

5-Teaching and learning methods

- 5.1- Lectures (brain storm, discussion) using board, data shows
- 5.2- Self learning by preparing essays and presentations (computer researches and library)
- 5.3- Practical application of advanced surgical technique (models, samples of tissues and data show).
- 5.4- Self learning by preparing essays and presentations (computer researches and library)

7-Student assessment

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods				
Method	K&U	I.S	P&P.S	G.S	
Final Exam	a1- a2- a3-	b1- b2- b3-	c1- c2- c3- c4	d1- d2	
Practical Exam	a1- a2- a3	b1- b2- b3-	c1- c2- c3- c4		
Oral Exam	a1- a2- a3-	b1- b2- b3-	c1,c3	d1-d2-d3- d4	

7.2. Assessment schedules

Method	Week(s)
Writing exam	December
Practical exam	December
Oral exam	December

7.3. Weight of assessments

Assessment	Weight of assessment
Writing exam	50%
Practical exam	25%
Oral exam	25%
total	100%

8- List of references

8.1. Notes and books

- Wright's veterinary anesthesia & analgesia. L.W.Hall.1971

8.2. Essential books:

- Veterinary anesthesia. L.W.Hall.& K.W.Clarke 1983

8.3. Recommended texts

- Small animal anesthesia. Roger.C. Warren. 1983
- Lumb& Jones veterinary anesthesia.Lumb& Jones2015

8.4. Journals, Websitesetc

Journals: Veterinary anethesiology, Veterinary Clinics of North America.

Websites:

WWW.Science direct WWW. Pubmed.com WWW.Scholar google.com WWW.wellyinterscience



	Topics	week	Intended learning outcomes of course (ILOs			rse (ILOs)
	Anesthesiology		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	- Introduction to veterinary anesthesiology	- 1 st w- 3 th w	1,2,3	1,2,3	1,2,4	1,2,3
2	- Local analgesia	- 4 th w- 8 th w	1,2,3	1,3	1,2,3,4	1,2,3,4
3	- Regional analgesia	- 9 th w- 15 th w	1,2	1,2,3	1,2,3	1,2,3,4
4	- pre anesthetic medication	- 16 th w- 24 th w	1,2	1,2,3	1, 3	1,2,3,4
5	- General anesthesia	- 25 st w- 28 th w	1,2,3	1,2,3	1,2,4	1,2,3
6	- Intraoperative monitoring	- 29 th w- 36 th w	1,3	1,4	1,3,4	1,2,4



1-Basic information

Course Code:	Ph-169		
Course title :	Radiology		
Program title:	PhD degree In Veterinary Medical Sciences (Surgery)		
Contact hours/ week	Lecture: 2 h / week	Practical: 2 h / week	
Approval Date			

2-Professional information

Overall aims of course:

This course aims to:

- 1. Obtain the academic background and practical experience about Veterinary Radiology.
- 2. Learn the practical experience about basic principles of veterinary radiology and diagnostic imaging and its application in diagnosis of clinical cases.

3- Intended learning outcomes of course (ILOs)

A- Knowledge and understanding:

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

- a.1. Recognize causes and diagnosis of surgical affections using imaging modalities.
- a.2. Outline the basic principles in dealing with radiographic apparatuses
- a.3. Recall the basic principles of anesthetic techniques and materials helping taking image.
- a.4. Describe the relationship between the used anesthetic techniques and materials and surgical interferences.

B-Intellectual skills

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

- b.1. Discriminate and analysis of clinical and radiographic findings to reach the accurate diagnosis.
- b.2. Interpret and predict the prognosis and segullae of diagnosed surgical affections.
- b.3. Score of suitability of using defined imaging techniques.
- b.4. identify areas where further researches necessary and be aware of any which would be beyond current ethical codes.

C- Professional and practical skills

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

- c.1. Assess experience in clinical radiology and diagnosis of surgical affections
- c.2. Perform different radiographic techniques.
- c.3. using the new technology in practical portion.
- c.4. using of diagnostic imaging in follow up of the treated cases.

D- General and transferable skills

- d.1 Demonstrate information retrieval and library skills
- d.2 Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects

- d.3. present research finding in oral and written from using arrange of appropriate software (
- e.g., power point, word, excel and data base).
- d.4. use all types of communications skills.

4-Topics and contents

Course	Topic	No. of hours	Lectures	Practical
ن	- Introduction of radiology & Us.	16	8	8
Pract.	- Radiographic protection & Poisoning	44	22	22
(Lec. 2h./week, 2h./week)	- Radiology of Thoracic Trauma	28	14	14
	- Radiographic Features of Soft Tissue Injuries	20	10	10
	- Radiology of Musculoskeletal Trauma and Emergency Cases	16	8	8

5-Teaching and learning methods

- 5.1- Lectures (brain storm, discussion) using board, data shows
- 5.2- Self learning by preparing essays and presentations (computer researches and library)
- 5.3- Practical application of advanced surgical technique (models, samples of tissues and data show).
- 5.4- Self learning by preparing essays and presentations (computer researches and library)

7-Student assessment

7.1. Assessments methods:

Madhad	Matrix alignment of the measured ILOs/ Assessments methods				
Method	K&U	I.S	P&P.S	G.S	
Final Exam	a1- a2- a3	b1- b2- b3	c1- c2	d1- d2	
Practical Exam	a1- a2- a3	b1- b2- b3-	c1- c2- c3- c4		
Oral Exam	a1- a2- a3-	b1- b2- b3-	c1,c3	d1-d2-d3- d4	

7.2. Assessment schedules

Method	Week(s)		
Writing exam	December		
Practical exam	December		
Oral exam	December		



7.3. Weight of assessments

Assessment	Weight of assessment		
Writing exam	50%		
Practical exam	25%		
Oral exam	25%		
total 100%			

8- List of references				
8.1. Notes and books -Textbook of veterinary radiology (6 th Ed.)	D.Knech. R.AIIen.	2014		
8.2. Essential books:				
-Atlas of small animal ultrasonograph	Dominique Pennick.	2013		
8.3. Recommended textsAtlas of small animal CT&MRI.	Erick Wisner	2015		
8.4. Journals, Websitesetc				

Journals: Veterinary Radiology& ultrasonography, Veterinary Clinics of North America.

Websites:

WWW.Science direct WWW. Pubmed.com

WWW.Scholar google.com

WWW.welly interscience

Program coordinator Name: Dr. Mohamed Zaki Fathy Signature...... Date

Head of the Department Name: Prof.Dr. Gamal Abdel Nasser Signature...... Date



	Topics	week	Intended learning outcomes of course (ILOs)			
	Radiology		K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	- Introduction of radiology & us.	- 1 st w- 4 th w	1,2,3	1,2,3	1,2,4	1,2,3
2	- Radiographic protection & Poisoning	- 5 th w- 15 th w	1,2,3	1,3	1,2,3,4	1,2,3,4
3	- Radiology of Thoracic Trauma	- 16 th w- 22 th w	1,2	1,2,3	1,2,3	1,2,3,4
4	- Radiographic Features of Soft Tissue Injuries	- 23 th w- 32 th w	1,2	1,2,3	1, 3	1,2,3,4
5	- Radiology of musculoskeletal trauma and Emergency Cases	- 33 st w- 36 th w	1,2,3	1,2,3	1,2,4	1,2,3