



COURSE SPECIFICATION

(2016 / 2017)

1 - Basic Information:

Code number

Course title: General surgery ,Anaesthesiology and Radiology (A&B)

Academic Year: 4th year of B. V. Sc. Programme

Total teaching hours: 120 hrs

- Lectures: 60 hrs

- Practical (Clinical/small group sessions): 60 hrs

2- OVERALL AIMS OF THE COURSE:

At the end of this course, students should gain the basic concepts and the essential practical skills in the field of anesthesia, diagnostic imaging and general surgery.

3- INTENDED LEARNING OUTCOMES (I. L. Os.):

3-A: KNOWLEDGE and UNDERSTANDING:

By the end of the course, students should be able to:

- A1.** Define the types of anesthesia.
- A2.** Recognize the different regimes of anesthesia related to each animal species.
- A3.** List the doses and the route of administration of each drug in different species.
- A4.** Identify the progress of anesthetic stages.
- A5.** Record the complication of each anesthetic drug.
- A6.** Outline the components of the X-rays apparatus.
- A7.** Describe the components of the ultrasound unit.
- A8.** Name the precaution for taking an X-ray image.
- A9.** Explain the artifacts of X-ray and ultrasound images.
- A10.** Define the Inflammation and its treatment.
- A11.** Summarize the differences between different external swellings.



A12. Review the different types of wounds and hemorrhage.

A13. Classify the types of fracture and fracture management.

A14. Discuss the affections of skin, tendon, joints, muscles and nerves.

3-B: INTELLECTUAL SKILLS:

By the end of the course, students should be able to:

- B1. Select the most suitable anesthetic regime for each animal species.
- B2. Differentiate between different general anesthetics.
- B3. Analyze an X-ray and/ or ultrasonographic images.
- B4. Manage the artifact of both X-ray and ultrasonographic images.
- B5. Identify wounds, hemorrhage, fractures, tendon and joint affections.
- B6. Illustrate the different types of external swellings.
- B7. Figure out the correct diagnosis and recommended treatment of each surgical affection.

3- C: PRACTICAL AND PROFESSIONAL SKILLS:

By the end of the course, students should be able to:

- C1. Apply the anesthetic regime for each animal species.
- C2. Carry out local, regional analgesia and general anesthesia.
- C3. Operating an X-ray machine and ultrasound unit and developing X-rays films.
- C4. Perform different types of Suture patterns.
- C5. Prepare of surgical room, surgical instruments and patients.
- C6. Apply bandage to the animal effectively.
- C7. Handle a case of fracture.

3- D: GENERAL AND TRANSFERABLE SKILLS:

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

- D1. Improve the communication skills with colleagues and teachers.
- D2. Design a poster.
- D3. Manage time efficiently.



4- COURSE CONTENTS:

4.A:- First semester topics :-

Topic	No. of hours	
	Lectures	Practical
Introduction to Anesthesia	2	-
Pre-anesthetic medication	4	-
local analgesia	4	-
perineural injection (head, limbs, trunk)	4	-
Spinal analgesia	4	-
Injectable General anesthesia	4	-
Inhalant General anesthesia	2	-
Introduction to Radiology	2	-
Radiographic imaging and Contrast media	2	-
Ultrasonography (physics – sonographic anatomy of some internal organs- interpretation – artifacts)	2	-
Practical		
Injection in different animals (IM, IV and S/C)	-	2
Praenesthetic medications	-	2
A- Local analgesia	-	4
B- Regionl analgesia	-	6
a- Pre neural injection techniques	-	
b- Epidural analgesia techniques in different animal species.	-	4
Formulation of anesthetic regimes for different animal species	-	4
Identify and deal with the	-	4
1- X-Rays machine and accessories		
2- Dark room equipments		
Identify and deal with the	-	2
1- Processing of an X-rays film		
2- Identification of the radiograph.		
3- radiographic interpretation		
4- Radiographic contrast procedures		
Ultrasonography	-	2
Total hours /semester	30	30
Total hours / course	60	



4.B:- Second semester topics:

Topic	No. of hours	
	Lectures	Practical
Inflammation	2	-
Abscess, sinus, fistula and cyst	2	-
Wounds	6	-
Hemorrhage and haemostasis	2	-
Ulcer, necrosis, gangrene and phlegmone	2	-
Affections of Bursae	2	-
Affections of the tendons and tendon sheath	2	-
Affections of joint	2	-
Affections of bone	6	-
Affections of muscles and nerves	2	-
Affections of the skin	2	-
Practical		
Aseptic preparation for patient, surgical team, surgical room and surgical instruments.	-	4
Instrumentation	-	4
Suture materials (Types)	-	4
Suture patterns (Types)	-	12
Bandage	-	6
Total hours /semester	30	30
Total hours / course	60	

5- TEACHING & LEARNING METHODS:

***Lectures**

- (using data show, white board, overhead projector and brain storming)

***Practical and small group sessions:**

- 1: Practical training.
- (Practical demonstrations, practice of skills, and discussions)

*** Site visits**

- (a) Outpatients clinic in faculty hospital.
- (b) Field visits.

* Self learning

- Computer researches and faculty library visits to prepare essays and presentations.
 - Library researches.
 - Internet researches.
 - Discussion in the researches.
 - Preparation of posters
 - Preparation of scientific reports.

6. METHODS FOR STUDENTS With limited capabilities:-

- No disabled students until now, but if present the methods are:
 - Activation of office hours.
 - Discussion with them during practical session.

7. STUDENT ASSESSMENT:

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	I.S	P&P.S	G.S
Student activities and periodical examination	A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14	B2, B3, B5, B6, B7	-	D1, D2, D3
Practical exam	-	-	C1-C7	D1
Oral exam	A1, A2, A4, A5, A7, A8, A9, A11, A12, A13	B1, B2, B5, B7	-	-
Final-Term exam	A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14	B1, B2, B5, B6, B7	-	D3



7.2-Assessment schedules/semester:

Assessments methods	Time of Assessments
Student activities	Along the semester
periodical examination	8 th Week
Practical exam	15 th Week
Final-Term exam (written exam)	16 th Week
Oral exam	16 th Week

7.3-Weight of assessments:

Assessments	1 st term	2 nd term	Total marks
Student activities and periodical examination	5	5	10
Written examination	25	25	50
Practical examination	10	10	20
Oral examination	10	10	20
Total	50	50	100

8. LEARNING AND REFERENCE MATERIALS:

8-1: BASIC MATERIALS:

- Notes on Veterinary Anesthesia and Diagnostic imaging.
- Practical notes on Veterinary Anesthesia and Diagnostic imaging.

8-2: Recmended books:

- Veterinary Emergency and Critical Care Procedures Timothy B. Hackett, Elisa M. Mazzaferro (2006).
- Lumb & Jones' Veterinary Anesthesia and Analgesia (William J. Tranquilli, John C. Thurmon, Kurt A. Grimm, 2007).
- Small animal regional anesthesia and analgesia. (Luis Compoy) Wiley-Black Well. 2013
- Textbook of Veterinary Diagnostic Radiology (Donald E. Thrall, 2002)

8.3: web sites and jouranlsand so on

- WWW.PubMed.com
- Intrnational of veterinary information services (IVIS)
- www.Vet.net.com
- Journal of veterinary anesthesia and analgesia



Topic	No. of hours /week		Total hours /semester	Hours for lect.	Hours for pract.	ILOs			
	Lect.	Pract.				K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
1 st Term									
Introduction to Anesthesia	2	-	2	2	-	A1,A2,A3	-		D1,D2,D3
Pre-anesthetic medication	2	-	4	4	-	A1,A2,A3,A4,A5	B1,B2		D1,D2,D3
local analgesia	2	-	4	4	-	A1,A2,A3	-		D1,D2,D3
perineural injection	2	-	4	4	-	A1,A2,A3	B1		D1,D2,D3
Spinal analgesia	2	-	4	4	-	A1,A2,A3	B1		D1,D2,D3
Injectable General anesthesia	2	-	4	4	-	A4,A5	B1		D1,D2,D3
Inhalant General anesthesia	2	-	2	2	-	A4,A5	B1		D1,D2,D3
Introduction to Radiology	2	-	2	2	-	A6	B3,B4		D1,D2,D3
Radiographic imaging and Contrast media	2	-	2	2	-	A8,A9	B3,B4		D1,D2,D3
Ultrasonography (physics – sonographic anatomy of some internal organs- interpretation – artifacts)	2	-	2	2	-	A7	B3,B4		D1,D2,D3
Injection in different animals (IM, IV and S/C)	-	2	2	-	2	-	-		D1,D2,D3
A- Local analgesia	-	2	4	-	4	-	-	C1,C2	D1,D2,D3
B-Regional analgesia a- Pre neural injection	-	3	6	-	6	-	-	C1,C2	D1,D2,D3

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Topic	No. of hours /week		Total hours /semester	Hours for lect.	Hours for pract.	ILOs			
	Lect.	Pract.				K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
Identify and deal with the 1- ultrasound unit	-	2	2	-	2	-	3,4	C3	D1,D2,D3
Total			60	30	30				
Introduction to Anesthesia	2	-	2	2	-	A1,A2,A3	-		D1,D2,D3
Pre-anesthetic medication	2	-	4	4	-	A1,A2,A3,A4,A5	B1,B2		D1,D2,D3
local analgesia	2	-	4	4	-	A1,A2,A3	-		D1,D2,D3
perineural injection	2	-	4	4	-	A1,A2,A3	B1		D1,D2,D3
Spinal analgesia	2	-	4	4	-	A1,A2,A3	B1		D1,D2,D3
Injectable General anesthesia	2	-	4	4	-	A4,A5	B1		D1,D2,D3
Inhalant General anesthesia	2	-	2	2	-	A4,A5	B1		D1,D2,D3
Introduction to Radiology	2	-	2	2	-	A6	B3,B4		D1,D2,D3
Radiographic imaging and Contrast media	2	-	2	2	-	A8,A9	B3,B4		D1,D2,D3
Ultrasonography (physics – sonographic anatomy of some internal organs- interpretation – artifacts)	2	-	2	2	-	A7	B3,B4		D1,D2,D3
Injection in different animals (IM, IV and S/C)	-	2	2	-	2	-	-		D1,D2,D3
A- Local analgesia	-	2	4	-	4	-	-	C1,C2	D1,D2,D3



Topic	No. of hours /week		Total hours /semester	Hours for lect.	Hours for pract.	ILOs			
	Lect.	Pract.				K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
B_Regional analgesia									
a- Pre neural injection techniques.	-	3	6	-	6	-	-	C1,C2	D1,D2,D3
b- Epidural analgesia techniques in different animal species.	-	2	4	-	4	-	-	C1,C2	D1,D2,D3
Pre anesthetics	-	2	4	-	4	-	-	C1	D1,D2,D3
Formulate suitable anesthetic regimes for some different animal species (dogs – equine) Operate the anesthetic machine	-	2	4	-	4	-	-	C1,C2	D1,D2,D3
Identify and deal with the 1- X-Rays machine and accessories 2- Dark room equipments	-	2	4	-	4	-	-	C3	D1,D2,D3
Identify and deal with the 3- Processing of an X-rays film 4- Identification of the radiograph. 5- radiographic interpretation 6- Radiographic contrast	-	2	4	-	4	-	4	C3	D1,D2,D3



Topic	No. of hours /week		Total hours /semester	Hours for lect.	Hours for pract.	ILOs			
	Lect.	Pract.				K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
procedures									
Identify and deal with the 1- ultrasound unit	-	2	2	-	2	-	3,4	C3	D1,D2,D3
Total			60	30	30				
Inflammation	2	-	2	2	-	A10	-	-	D1,D2,D3
Abscess, sinus, fistula and cyst	2	-	2	2	-	A11	B6,7	-	D1,D2,D3
Wounds	2	-	6	6	-	A12	B5,7	-	D1,D2,D3
Hemorrhage and haemostasis	2	-	2	2	-	A12	B5,7	-	D1,D2,D3
Ulcer, necrosis, gangrene and phlegmone	2	-	2	2	-	A14	B7	-	D1,D2,D3
Affections of Bursae	2	-	2	2	-	A11	B6,7	-	D1,D2,D3
Affections of the tendons and tendon sheath	2	-	2	2	-	A14	B5,7	-	D1,D2,D3
Affections of joint	2	-	2	2	-	A14	B5,7	-	D1,D2,D3
Affections of bone	2	-	6	6	-	A13	B5,7	-	D1,D2,D3
Affections of muscles and nerves	2	-	2	2	-	A14	B7	-	D1,D2,D3
Affections of the skin	2	-	2	2	-	A14	B7	-	D1,D2,D3
Instrumentation	-	3	6	-	4	-	-	C5	D1,D2,D3
Preoperative technique	-	3	3	-	3	-	-	C5	D1,D2,D3
Suture materials	-	3	3	-	3	-	-	C4	D1,D2,D3
Suture patterns	-	3	8	-	8	-	-	C4	D1,D2,D3
Fractures types and management	-	3	8	-	8	-	B3,B5	C7	D1,D2,D3
Bandage	-	3	9	-	4	-	7	C6	D1,D2,D3
Total			60	30	30				



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