University of Sadat City
Faculty of Veterinary Medicine
Department of Cytology and histology

Cytology and Histology (special) **Course Specifications 2014/2015**	
1-Basic information	
Course Code:	212
Course title :	Cytology and Histology (special)
Academic year:	2nd year (1st semester)
Department	Cytology and Histology
Program title:	Bachelor of Veterinary Medical Sciences
Contact hours/week/semester:	**Lecture:** 2 hours/ week
	Practical: 2 hours/ week

2-Professional information

1- Overall aims of course
At the end of this course, the students must have basic knowledge and able to examine the microscopic and fine structure of all organs in different animals.

2- Intended learning outcomes of course (ILOs)
a-Knowledge and understanding
By the end of this course the student should be able to: **a.1.** Associate between histological organization and functions of different organs or regions of each system. **a.2.** List the species differences that exist in the histological structures of certain regions, organs and systems. **a.3.** Explain the changes in the histological structure of an organ under different/certain physiological conditions. **a.4.** Recognize the histological characteristics of different organs in male genital system. **a.5.** Clarify the morphological and histological characteristics of different organs in female genital system. **a.6.** Describe the histological characteristics of different components of integumentry system and their clinical importance. **a.7.** Identify the histological structure of special sense organs (ear/eye) and understand their basic functional mechanisms.

a.8. Define the histological characteristics of different organs and systems in birds.
a.9. Categorize the histological characteristics of different organs and systems in fish.
a.10. List the remarkable differences in the histological structure of relevant tissues, organs or systems in different animals.

b-Intellectual skills

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

b.1. Correlate the regional specific structural differences of an organ or system, in relevance to their functional potentials.
b.2. Detect the inter-species differences in the histological structure of an organ or a system in different mammalian species.
b.3. Explore the histological changes developed in an organ subjected to certain specific physiological conditions.
b.4. Correlates the functional activities of an organs or a systems and their histological characteristics
b.5. Differentiate between the histological characteristics of different organs and systems in fish and different animals and birds.
b.6. Interpret their structural-functional relationships in different animals.
b.7. Explain the clinical significance of studying of organs and systems in mammals, birds and fish, the problems might originate from the inconsistency with the normal structure.

c-Professional and practical skills

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

c.1. Use of microscope during inspection of histological sections.
c.2. Examine histological structures of different cells, tissues and organs under light microscope.
c.3. Determine the species depending on the examined tissue.
c.4. Relate between the structure and function of different cells, tissue and organs.

d-General and transferable skill

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

d.1. Develop computer and internet skills in editing and presentations.
d.2. Join with others effectively.
d.3. Import data and information from recent resources.
d.4. Write reports efficiently.

3-Topics and contents

First semester

Topic	No. of hours		
	lectures	practical	total
Lectures (30 hours):		-	
Male genital system:			
Testis and Excretory genital ducts	3		3
Accessory genital glands and penis	2	-	2
Female genital system:		-	
Ovary and oviduct	3	-	3
Uterus, placenta and external genitalia	2	-	2
Integumentary system:		-	
Skin and associated structure	2	-	2
Mammary glands	2	-	2
Sense organs:		-	
Eye	2	-	2
Ear	2	-	2
Avian Histology:		-	
Avian organs and Systems	6	-	6
Fish Histology:		--	
Fish organs and systems	6	-	6
Total		-	30
Practical Topics (30hours):			
Microscopic detection of male genital organs	-	5	5
Microscopic detection of female genital organs	-	5	5
Microscopic detection of skin and its derivatives	-	2	2
Microscopic exam. of mammary glands	-	2	2
Microscopic exam. of eye	-	2	2
Microscopic exam. of ear	-	2	2
Microscopic exam. of avian organs and systems	-	6	6
Microscopic exam. of fish organs and systems	-	6	6
Total			30

4- Teaching and learning methods

4.1. Lectures.

4.2. Practical.

4.3. Self-learning activities.

5-Student assessment

5.1.Assessments methods

1- Written examination	For assessment of knowledge, back calling and Intellectual skills
2- Practical examination	For assessment of practical and professional skill.
3- Oral examination	For assessment of knowledge and Intellectual skills
4- Student activities	For assessment of knowledge and general and transferable skills

Method	**Matrix alignment of the measured ILOs/ Assessments methods**			
	K&U (a)	**I.S (b)**	**P&P.S (c)**	**G.S (d)**
Student activities and periodical exam exams	2, 5	1, 2,3,4,5,6,7	--	1,2,3,4
Practical exam	--	3,4	1, 2, 3, 4	-
Written exam	1,2, 3, 6, 9, 10	1, 2,3,4,5,6,7	--	-
Oral exam	4, 7, 8	3, 4,7	--	--

5.2-Assessment schedules/semester

Assessments methods	**Time of Assessments**
Student activities	Along the semester
periodical exams	8th Week
Practical exam	16th Week
Written exam	16th Week
Oral exam	16th Week

5.3-Weight of assessments

Assessment	Allocated Mark		
	1st term	2nd term	Total
Student activities and periodical exams	5	--	5
Practical exam	10	--	10
Written exam	25	--	25
Oral exam	10	--	10
	50	--	50

6- List of references

6.1. Departmental Notes

Vet. Histology (Part III) Compiled by Histology Staff Members.

6.2.Essential books

1. Text Book of Veterinary Histology, H. Dellman, Jo Ann Eurell , (1998)
2. Applied Veterinary Histology, 3ed William J. Banks DVM (1993).
3. The Principles and Practice of Electron Microscopy, Ian M. Watt (1997).
4. Essential Histology David H. Cormack, (2001).
5. Functional Histology Jeffrey B. Kerr (2009).
6. Junqueira's Basic Histology: Text & Atlas, 12e Anthony L. Mescher (2010).

6.4. Journals , Websites ……..etc

Journals:

- Anatomia Histologia Embryologia.
- Journal of Anatomy and Embryology.
- Journal of Molecular Histology.
- Tissue and Cell
- Tissue and Cell Research.
- Research in Veterinary Science.
- Veterinary Record.

Course coordinator: Prof. Dr. Amin Hassanin

Head of department: Prof. Dr. Saad Emara

Matrix alignment of course topics and ILOs (course 212 1st semester)

Topic	No. of hours /week		Total hours	Hours for lect.	Hours for pract.	ILOs				T&L. methods				
	Lect.	Pract.				K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)	Lect.	Pract.	Self & active leaning	Audio visual	Case study
Testes and excretory genital duct	2	-	2	3	-	1-4	1-4,7		1-4	+		+		
Accessory genital gland and penis	2	-	2	2	-	1-4	1-4,7		1-4	+		+		
Ovary and oviduct	2	-	2	3	-	1,2,3,5	1-4,7		1-4	+		+		
Uterus , placenta and external gentalia	2	-	2	2	-	1,2,3,5	1-4,7		1-4	+		+		
Skin and special structure	2		2	2		1,2,3,6	1-4,7		1-4	+		+		
Mammary gland	2	-	2	2	-	1,2,3,6	1-4,7		1-4	+		+		
eye	2	-	2	2	-	3,7	1-4,7		1-4	+		+		
ear	2	-	2	2	-	3,7	1-4,7		1-4	+		+		
Avian organ and system	2	-	2	6	-	8,10	5,6		1-4	+		+		
Fish organ and system	2	-	2	6	-	9,10			1-4	+		+		
Microscopic detection of male genital organ	-	2	2	2	5	-		1-4	1-4		+			

Microscopic detection of female genital organ	-	2	2	2	5	-		1-4	1-4		+			
Microscopic detection of skin and dervitaves	-	2	2	2	2	-		1-4	1-4		+			
Microscopic detection of mammary gland	-	2	2	2	2	-		1-4	1-4		+			
Microscopic detection of eye	-	2	2	-	2			1-4	1-4		+			
Microscopic examination of the ear	-	2	2	-	2			1-4	1-4		+			
Microscopic examination of the avian organ and system	-	2	2	-	6			1-4	1-4		+			
Microscopic examination of the fish organ and system	-	2	2	-	6			1-4	1-4		+			
Total			60	30	30									

Course coordinator: Dr. Amin Hassan

Head of department: Dr. Saad Emara