



**d. General and Transferable Skills:**

- d1** The ability to use simple word and IT skills (i.e., data processing, software, internet, and multimedia) and the library to find information
- d2** The ability to be self-motivated learners and responsive to feedback
- d3** Working in team (i.e., sharing presentations and discussions and solving problem).
- d4** Enhancement of research capability through working in independent projects.

**3. Contents:**

<b>Lectures</b>			
<b>Topic</b>	<b>No. of hours</b>	<b>Lectures</b>	<b>Practical</b>
▪ Introduction to the cytology and cell membrane	2	2	0
▪ Membranous organelles	2	2	0
▪ Non-membranous organelles	2	2	0
▪ Cytoskeleton and inclusions	2	2	0
▪ Protein synthesis and cell division	2	2	0
▪ Epithelial membranes	2	2	0
▪ Glandular epithelium	2	2	0
▪ Surface modifications of epithelium	2	2	0
▪ Connective tissues fibers	2	2	0
▪ Connective tissue ground substances	2	2	0
▪ Types of connective proper	2	2	0
▪ Types of connective tissue cells	2	2	0
▪ Supportive connective tissue; cartilage	2	2	0
▪ Supportive connective tissue; bone	2	2	0
▪ Blood	2	2	0
<b>Total</b>	<b>30</b>	<b>30</b>	<b>0</b>

<b>Practical</b>			
<b>Topic</b>	<b>No. of hours</b>	<b>Lectures</b>	<b>Practical</b>
▪ Histological technique I	2	0	2
▪ Histological technique II	2	0	2
▪ Membranous organelles	2	0	2
▪ Non-membranous organelles	2	0	2
▪ Cytoskeleton and inclusions	2	0	2
▪ Epithelial membranes	2	0	2
▪ Glandular epithelium	2	0	2
▪ Surface modifications of epithelium	2	0	2
▪ Connective tissues fibers	2	0	2
▪ Types of connective proper I	2	0	2
▪ Types of connective proper II	2	0	2
▪ Types of connective tissue cells	2	0	2
▪ Supportive connective tissue; cartilage	2	0	2
▪ Supportive connective tissue; bone	2	0	2
▪ Blood	2	0	2
<b>Total</b>	<b>30</b>	<b>0</b>	<b>30</b>

#### 4. Teaching and Learning Methods:

- 4.1 Lectures
- 4.2 Practical (tutor presentation followed by students' small group sessions).
- 4.3 Independent (Laboratory and home assignments supervised by tutor):
  - 4.3.a Writing reports/assignments.
  - 4.3.b Preparation of colored posters and slide presentations.
  - 4.3.c Preparation of slides.
  - 4.3.d Group discussion.
- 4.4 **Computer Courseware:** For independent student can be accessed at the education centre: CLIVE standalone programs and any other recently developed web-based courseware.

**Method for disabled students:** No special arrangements are available now; however those students can consult our staff for help.

#### 5. Student Assessment Methods:

Exam		
5.1	Written Mid-term	To assess knowledge and understanding.
5.2	Written Final-term	To assess knowledge and understanding
5.3	Practical Final-term	To assess professional and practical skills.
5.4	Oral Final-term	To assess intellectual skills, understanding of topics and ways of thinking in resolving problems

#### Assessment Schedule

	Exam	Week
Assessment 1	Written Mid-term	6 <sup>th</sup>
Assessment 2	Written Final-term	15 <sup>th</sup>
Assessment 3	Practical Final-term	15 <sup>th</sup>
Assessment 4	Oral Final-term	15 <sup>th</sup>

#### Weighing of assessments (in each semester):

	Exam	1 <sup>st</sup> semester (%)	Total (%)
Assessment 1	Written Mid-term	5	5
Assessment 2	Home and laboratory periodical	5	5
Assessment 3	Written Final-term	25	25
Assessment 4	Practical Final-term	5	5
Assessment 5	Oral Final-term	10	10
	<b>Total</b>	<b>50</b>	<b>50</b>

#### 6. List of References:

##### 6.1. Course Notes:

- Lecture notes (printed): Basic Veterinary Histology

##### 6.2. Essential Books:

- Dellman and Eurell, (1998) Textbook of Veterinary Histology, 5th Edition. Lippincott, Williams & Wilkins

##### 6.3. Recommended Books:

- Bloom, W. and D. W. Fawcett (1994): Textbook of Histology; 12th Ed. W. B. Saunders C., Philadelphia

##### 6.4. Periodicals, websites, etc

<http://www.histology.to/links.html>

## **7. Facilities Required for Teaching and Learning**

- **For Lecture:** A large hall equipped with white board, data show and computer.
- **For Laboratory sessions:** dissection hall with bones, formalized animals cadavers, dissection materials, anatomical models, colored posters, charts, atlases, handouts and pamphlets.
- **For small group discussions (75 students):** Convenient hall equipped with white board, computer and video projector.
- **Digital library,** Internet and networking connections for easy access of online course materials and the recommended websites by our staff.

**Course Coordinator:** Dr. Mohamed Aref Elnasharty

**Head of Department:** Dr. Mohamed Aref Elnasharty

**Date:**



**University:** Damanhour  
**Department:** Histology and Cytology

**Faculty:** Veterinary Medicine

## **Histology and Cytology Course Specifications (2012 - 2013)**

**Program(s) on which the course is given:** BVSc  
**Department offering the program:** Histology and Cytology  
**Department offering the course:** Histology and Cytology  
**Major or Minor element of programs:** Major  
**Academic year /Level:** 1<sup>st</sup> Year 2<sup>nd</sup> Semester  
**Date of specification approval:**

### **A. BASIC INFORMATION**

**Title:** Histology and Cytology **Code:** 1BHIS  
**Hours:**  
**Lectures** 2 hrs/week **Practical** 2 hrs/week **Total** 60 hrs (15 Weeks)

### **B. PROFESSIONAL INFORMATION**

#### **1. Overall aims of the course:**

- To familiarize students with the basic information about the characteristics and functions of the nervous and muscular tissues as well as those of cardiovascular, immune, digestive, respiratory and urinary systems and compare between them.

#### **2. Intended Learning Outcomes (ILOs) of the Course:**

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

##### **a. Knowledge and Understanding:**

- a1** Understand the principle component of the nervous and muscular tissues as well as those of cardiovascular, immune, digestive, respiratory and urinary systems.
- a2** Understand the types of nervous and muscular tissues and their location in the animal body.
- a3** Understand the structure of each organ of each system and the functions of them.

##### **b. Intellectual Skills:** The student should be able to

- b1** The ability to analyze the diversity of knowledge in the term of structure of nervous and muscular tissues as well as those of cardiovascular, immune, digestive, respiratory and urinary systems.
- b2** The ability to distinguish, with evidence, how nervous and muscular tissues and the wall of each part of those systems appear under the microscope.
- b3** Relate functions of those tissues and organ system to their structures.

##### **c. Professional and Practical Skills:** The student will be qualified in

- c1** Recognize the histological techniques suitable for studying of the nervous and muscular tissues as well as those of cardiovascular, immune, digestive, respiratory and urinary organ systems.
- c2** When given a section of mammalian tissue under a microscope or a magnified picture of a tissue to identify the tissue, the cells that it contains and other visible structures of that tissue.
- c3** Distinguish between the normal an abnormal cellular or tissue structure.

**d. General and Transferable Skills:**

- d1** The ability to use simple word and IT skills (i.e., data processing, software, internet, and multimedia) and the library to find information
- d2** The ability to be self-motivated learners and responsive to feedback
- d3** Working in team (i.e., sharing presentations and discussions and solving problem).
- d4** Enhancement of research capability through working in independent projects.

**3. Contents:**

<b>Lectures</b>			
Topic	No. of hours	Lectures	Practical
▪ Nervous tissue	2	2	0
▪ Nervous system	2	2	0
▪ Muscular Tissue	2	2	0
▪ Immune system I	2	2	0
▪ Immune system II	2	2	0
▪ Cardiovascular system I	2	2	0
▪ Cardiovascular system II	2	2	0
▪ Digestive system I	2	2	0
▪ Digestive system II	2	2	0
▪ Digestive system III	2	2	0
▪ Digestive system IV	2	2	0
▪ Respiratory system I	2	2	0
▪ Respiratory system II	2	2	0
▪ Urinary system I	2	2	0
▪ Urinary system II	2	2	0
<b>Total</b>	<b>30</b>	<b>30</b>	<b>0</b>

<b>Practical</b>			
Topic	No. of hours	Lectures	Practical
▪ Nervous tissue	2	0	2
▪ Nervous system	2	0	2
▪ Muscular Tissue	2	0	2
▪ Immune system I	2	0	2
▪ Immune system II	2	0	2
▪ Cardiovascular system I	2	0	2
▪ Cardiovascular system II	2	0	2
▪ Digestive system I	2	0	2
▪ Digestive system II	2	0	2
▪ Digestive system III	2	0	2
▪ Digestive system IV	2	0	2
▪ Respiratory system I	2	0	2
▪ Respiratory system II	2	0	2
▪ Urinary system I	2	0	2
▪ Urinary system II	2	0	2
<b>Total</b>	<b>30</b>	<b>0</b>	<b>30</b>

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#### Weighing of assessments

	Exam	2 <sup>nd</sup> Semester (%)	Total (%)
Assessment 1	Written Mid-term	5	5
Assessment 2	Home and laboratory periodical	5	5
Assessment 3	Written Final-term	25	25
Assessment 4	Practical Final-term	5	5
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