Damanhour University
Faculty of Veterinary Medicine
Department of Anatomy and Embryology

University: Damanhour **Faculty**: Veterinary Medicine
Department: Anatomy and Embryology

General Anatomy and Embryology Course Specifications (2020/2021)

Program(s) on which the course is given: BVSc
Department offering the program: ---
Department offering the course: Anatomy and Embryology
Major or Minor element of programs: Major
Academic year /Level: 2nd Year 1st Semester
Date of specification approval:

A. BASIC INFORMATION

Title: General Anatomy and Embryology **Code**: 2AANA
Hours:
Lectures 3 hrs/week **Practical** 3 hrs/week **Total** 90 hrs (15 Weeks)

B. PROFESSIONAL INFORMATION

1. Overall aims of the course:
This course provides the ground knowledge and ability to:

- Recognize the structure complements of animal body; namely the growth anatomical features of the nervous and cardiovascular system of domestic animals as well as the basic fish anatomy
- Basic knowledge about the growth anatomical features of nervous system and cardiovascular system of the domestic animals
- Provides students the ability to compare each organ and / or. Structures of the domestic animals.

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 skeletal and muscular component of the head, neck and trunk
- **a2** Understand the typical structures of the central nervous system, peripheral nervous system and autonomic nervous system
- **a3** Understand the typical structure of the cardiovascular system

b. Intellectual Skills: The student should be able to

- **b1** The ability to analyze the diversity of knowledge in the term of growth anatomical characteristics of each organ and/or structure
- **b2** The ability to distinguish with evidence and confidence characteristic features of each organ

and / or structures in each animal class.

b3 Relate structure-functions relation of those organs system components.

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

c1 Recognize the anatomical techniques suitable for preserving each organ and / or structure.

c2 Identify and compare the organs in different domestic animal

c3 Distinguish between the normal an abnormal organ and / or 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 by working in independent projects.

3. Contents:

Lecture

Topic	No. of hours	Lectures	Practical
▪ Nervous system- gross anatomical features of the brain	2	2	0
▪ Nervous system- gross anatomical features of the brain	2	2	0
▪ Anatomy of the cranial nerves	2	2	0
▪ Anatomy of the spinal cord, meninges and cerebrospinal fluid	2	2	0
▪ Anatomy of the peripheral nerves	2	2	0
▪ Sympathetic and parasympathetic parts of autonomic nervous system	2	2	0
▪ Review and discussion of student independent semester work	2	2	0
▪ General and comparative anatomy of heart	2	2	0
▪ Branches of the thoracic aorta and pulmonary circulation	2	2	0
▪ Arterial supply and venous drainage of the head and neck	2	2	0
▪ Collateral branches of the abdominal aorta	2	2	0
▪ Arterial supply of pelvic organs and tributaries of caudal vena cava	2	2	0
▪ Fish anatomy classification, external anatomy and skeleton of fish	2	2	0
▪ Fish splanchonology	2	2	0
▪ Guidance of students for final written, oral and practical examinations	2	2	0
Total	**30**	**30**	**0**

Practical

Topic	No. of hours	Lectures	Practical
Guiding student (how to dissect?)	3	0	3
Muscle groups of the superficial thorax, ventral neck and extrinsic of thoracic limb - student independent dissection	3	0	3
Muscle groups of the intrinsic of thoracic limb (scapular and	3	0	3

brachium) - student independent dissection			
Muscle groups of the intrinsic of thoracic limb (Antibrachium and Manus) - student independent dissection	3	0	3
Thoracic limb, Proximal and Distal vessels and Nerves- student independent dissection	3	0	3
Pelvic limb: Rump, hip and thigh muscles - student independent dissection	3	0	3
Muscle groups the caudal and cranial crus and hip and stifle joints - student independent dissection	3	0	3
Review and training on practical examination	3	0	3
Gross anatomy of brain, spinal cord and meninges	3	0	3
Course and branches of cranial and peripheral nerves	3	0	3
General and comparative features of the heart	3	0	3
Arterial and venous drainage of the head and neck	3	0	3
Arterial and venous drainage of the trunk	3	0	3
Dissection of fish	3	0	3
Preparation for the final practical examination	3	0	3
Total	**45**	**0**	**45**

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 bones.
- 4.3.d Group discussion.

4.4 Computer courseware for independent study can bee accessed at the education center beside recently developed web courseware

Method for disabled students: (no special arrangements are available now, however those student can consult our stuff 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 (in each semester):

	Exam	**Week**
Assessment 1	Written Mid-term	8th
Assessment 2	Written Final-term	15th
Assessment 3	Practical Final-term	15th
Assessment 4	Oral Final-term	15th

Weighing of assessments (in each semester):

	Exam	1st Semester (%)	Total (%)
Assessment 1	Written Mid-term	10	10
Assessment 2	Home and laboratory periodical	10	10
Assessment 3	Written Final-term	50	50
Assessment 4	Practical Final-term	15	15
Assessment 5	Oral Final-term	15	15
	Total	**100**	**100**

6. List of References:

6.1. Course Notes:

- Lecture notes (printed): anatomy of domestic animal I. by Prof. DR Ashraf Elsharby (2007)

6.2. Essential Books:

- Getty R., Sisson and Grosman (1975) the anatomy of domestic animals 5th edition W.B Saunders, Philadelphia (volume 1&2)

6.3. Recommended Books:

- Dyce, M.K., Sack, W.O.(2002) Wensing, C.j.G. Textbook of Veterinary Anatomy W. B. Saunders C., Philadelphia

6.4. Periodicals, websites, ….. etc

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: Prof. Dr. Ashraf Elsharaby

Head of Department: Prof. Dr. Ashraf Elsharaby

Date:

Damanhour University
Faculty of Veterinary Medicine
Department of Anatomy and Embryology

University: Damanhour **Faculty**: Veterinary Medicine
Department: Anatomy and Embryology

General Anatomy and Embryology Course Specifications (2016-2017)

Program(s) on which the course is given: BVSc
Department offering the program: ---
Department offering the course: Anatomy and Embryology
Major or Minor element of programs: Major
Academic year /Level: 2nd Year 2nd Semester
Date of specification approval:

A. BASIC INFORMATION

Title: General Anatomy and Embryology **Code**: 2BANA
Hours:
Lectures 2 hrs/week **Practical** 3 hrs/week **Total** 75 hrs (15 Weeks)

B. PROFESSIONAL INFORMATION

1. Overall aims of the course:
This course provides the ground knowledge and ability to:

- The basic background about the origin and development of the mammalian organism from a single cell to a fully mature adult form
- Basic knowledge about the general embryology and special embryology
- Basic knowledge about congenital anomalies and morphological defects that are present at birth
- Basic knowledge about some selective topics about developmental biology
- Recognize the structure complements of animal body; namely the growth anatomical features of the organs forming the male genital and female genital system
- Recognize the basic anatomy of avian

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 and explain the complexity of anatomy of mammals and birds
a2 Understand the origin, development, maturation and structure of gametes
a3 Understand cleavage, gastrulation, fetal membranes and placentation
a4 Understanding the differentiation and development of different body organs
a5 understanding congenital anomalies, stem cells, cloning and chimera and its important

in gynecology and obstetrics

a6 understanding the growth structures of their selected area

a7 Understand the typical structure of the genital organs of the domestic animals

a8 Understand the basic anatomy of avian

b. Intellectual Skills: The student should be able to

b1 The ability to analyze the diversity of knowledge in the term of growth anatomical characteristics of each organ and/or structure

b2 The ability to distinguish with evidence and confidence characteristic features of each organ and / or structures in each animal class

b3 Relate structure-functions relation of those organs system components

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

c1 Recognize the anatomical techniques suitable for preserving each organ and / or structure.

c2 Identify and compare the organs in different domestic animal

c3 identify and compare the organs in different avian species and in different fish species

c4 Distinguish between the normal an abnormal organ and / or 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 by working in independent projects.

3. Contents:

Lecture			
Topic	**No. of hours**	**Lectures**	**Practical**
Introduction of developmental biology, Gametogenesis and Fertilization	2	2	0
Cleavage, Implantation, Gastrulation and derivatives of germ layers	2	2	0
Fetal membranes, placentation and Defects of events and locations in embryo development	2	2	0
Development of nervous system and eye	2	2	0
Development of upper digestive system	2	2	0
Development of lower digestive system & of respiratory system	2	2	0
Development of urinary system, gonads and genital duct system	2	2	0
Common anomalies of the domestic animals and Selective topics of developmental biology (stem cells, cloning and chimera)	2	2	0
Comparative anatomy of ovaries, uterus, vagina and female urethra	2	2	0
Comparative anatomy of testis, epididymis	2	2	0
Comparative anatomy of the accessory genital gland, spermatic cord scrotum, prepuce and penis	2	2	0
Basic anatomy of avian skin and skeleton	2	2	0
Basic anatomy of avian digestive system	2	2	0
Basic anatomy of avian respiratory and urogenital systems	2	2	0

Guidance of students for final written, oral and practical examinations	2	2	0
Total	**30**	**30**	**0**

Practical

Topic	No. of hours	Lectures	Practical
Independent animal dissection: epaxial and hypoaxial muscle of neck, thorax and abdominal muscles	3	0	3
Independent animal dissection: vessels and nerves of neck	3	0	3
Independent animal dissection: thoracic wall and cavity, heart and autonomic nerves	3	0	3
Independent animal dissection: abdominal wall and inguinal structures, abdominal and peritoneal cavities and viscera, nerves and vessels	3	0	3
Independent animal dissection: pelvic diaphragm and viscera, abdominal and pelvic vessels and nerves	3	0	3
Independent animal dissection: superficial structures of head, oral cavity and pharynx	3	0	3
Independent animal dissection: larynx, muscles of jaw, tongue and hyoid bones	3	0	3
Independent animal dissection: superficial nerves, head arteries and cervical structures	3	0	3
Review and training on practical examination	3	0	3
Collection of embryos and fetuses and gross dissection of fetuses	3	0	3
Revision of some slides and multimedia of embryology	3	0	3
General and comparative features of the female genital organ	3	0	3
General and comparative features of testis and epididymis accessory genital gland, scrotum, prepuce and penis	3	0	3
Basic anatomy of avian	3	0	3
Individual student discussion and examination	3	0	3
Total	**45**	**0**	**45**

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Weighing of assessments (in each semester):

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Assessment 2	Home and laboratory periodical	10	10
Assessment 3	Written Final-term	50	50
Assessment 4	Practical Final-term	15	15
Assessment 5	Oral Final-term	15	15
	Total	**100**	**100**

6. List of References:

6.1. Course Notes:

Lecture notes (printed): anatomy of domestic animal I. by

Principles of developmental biology. by Prof. DR Ashraf El Sharaby and DR Ahmed Saber (2009)

6.2. Essential Books:

Latshaw W.K Veterinary Developmental Anatomy. A clinically oriented approach. B.C Decker INC (1987).

6.3. Recommended Books:

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6.4. Periodicals, websites, ….. etc

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