



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



- **Course Level:** First-Year Level
- **Course Name:** Theoretical Biology/2 hours
- **Course Name:** Practical Biology/2 hours
- **Semester:** First
- **Unit:**3

**Course Objectives**

**Upon completion of this course, the student should be familiarized with:**

1. To provide students with important knowledge about Introduction to the nature of life, including the diversity of microbial and animal life; the nature of heredity; evolution; and principles of Biology. Intended for life science majors.
2. To make students understand the chemical, molecular, and cellular basis of life; form and function of microbial, and animal life. Intended for life science majors.
3. To make students understand the Introduction to the principles of transmission and molecular genetics of animals, and bacteria. Recombination, structure and replication of DNA, gene expression, cloning, quantitative and population genetics

**Course Contents**

<b>Course Content</b>		
<b>week</b>	<b>Topics</b>	<b>Hours</b>
	<b>Theoretical Subject</b>	
1 and 2	Introduction and definition of term	2
3 and 4	Origin of life	2
3	The cell: The cells structure composition and function	4
4	Taxonomy of the kingdom	2
5	Phylum : protozoa	4
6 and 7	Phylum: Platyhelminthes	4
9	Phylum: Nematelminthes	4
10	Phylum: Arthropoda	4
11	Phylum: Chordata	4
<b>Total</b>		<b>30</b>

**Course Contents**

<b>Course Content</b>		
<b>week</b>	<b>Topics</b>	<b>Hours</b>
	<b>Practical Subject</b>	
1	The microscope	2
2 and 3	The cell	4
4	Protozoa :Mastigophora	2
5	Protozoa : Sarcodena	2
6	Protozoa :Ciliphora	2
7	Protozoa : Sporozoa	2
8	Nematoda: Ascaris	2



Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



9	Nematoda: Ancylostoma	2
10	Trematoda: Fasciola	2
11	Trematoda: Schistosoma	2
12	Cestoda: Taenia	2
13	Mosquitoes	2
14 and 15	Phylum: Chordata, disseating	4
Total		<b>30</b>

**Mode of Assessment**

Assessment	Score	Period
First Exam	10	10-11 <sup>th</sup> weeks
Second Exam	10	10-11 <sup>th</sup> weeks
Practical Exam	10	10-11 <sup>th</sup> weeks
Assignment, Projects, Quizzes, Tutorial	10	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , and 7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> , 10 <sup>th</sup> , 11 <sup>th</sup> .
Final Exam	60	After the 16 <sup>th</sup> .

**Textbooks and Recommended References**

1. Campbell Biology (9th Edition) : by Jane B. Reece (Author), Lisa A. Urry (Author), Michael L. Cain (Author), Steven A. Wasserman (Author), Peter V. Minorsky (Author), Robert B. Jackson (Author)
2. Campbell Biology: Concepts & Connections: Jane B. Reece , Martha R. Taylor , Eric J. Simon , Jean L.Dickey, Kelly A. Hogan



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



- **Course Level:** First-Year Level
- **Course Name:** Theoretical Biology/2 hours
- **Course Name:** Practical Biology/2 hours
- **Semester:** Second
- **Unit:** 3

**Course Objectives**

**Upon completion of this course, the student should be familiarized with:**

4. To provide students with important knowledge about Introduction to the nature of life, including the diversity of microbial and animal life; the nature of heredity; evolution; and principles of Biology. Intended for life science majors.
5. To make students understand the chemical, molecular, and cellular basis of life; form and function of microbial, and animal life. Intended for life science majors.
6. To make students understand the Introduction to the principles of transmission and molecular genetics of animals, and bacteria. Recombination, structure and replication of DNA, gene expression, cloning, quantitative and population genetics

**Course Contents**

<b>Course Content</b>		
<b>week</b>	<b>Topics</b>	<b>Hours</b>
	<b>Theoretical Subject</b>	
1	Living organism	2
2	Comparison between Prokaryote and Eukaryote cells	2
3 and 4	Mitosis: Replication of Eukaryote cells	4
5 and 6	Meiosis :Reduction division and Gametogenesis	4
7	Types of living tissues	2
8	Stem cells	2
9	Blood composition and function	2
10	General characteristic of Bacteria	2
11	General characteristic of virus	2
12	Introduction to molecular Biology	2
13	Nucleic acid types and functions	2
14	Gene and chromosomes	2
15	Gene engineering	2
Total		30



Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



**Course Contents**

Course Content		
week	Topics	Hours
	<b>Practical Subject</b>	
1	Prokaryote and Eukaryote cells	2
2	Mitosis	2
3 and 4	Bacterial staining	4
4-7	Types of tissues	8
8 and 9	Blood film	4
10-15	How to use laboratory equipment's (Balance, water bath ,pH meter ,centrifuge ,incubator,etc...)	10
Total		30

**Mode of Assessment**

Assessment	Score	Period
First Exam	10	10-11 <sup>th</sup> weeks
Second Exam	10	10-11 <sup>th</sup> weeks
Practical Exam	10	10-11 <sup>th</sup> weeks
Assignment, Projects, Quizzes, Tutorial	10	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , and 7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> , 10 <sup>th</sup> , 11 <sup>th</sup> .
Final Exam	60	After the 16 <sup>th</sup> .

**Textbooks and Recommended References**

1. Campbell Biology (9th Edition) : by Jane B. Reece (Author), Lisa A. Urry (Author), Michael L. Cain (Author), Steven A. Wasserman (Author), Peter V. Minorsky (Author), Robert B. Jackson (Author)
2. Campbell Biology: Concepts & Connections: Jane B. Reece , Martha R. Taylor , Eric J. Simon , Jean L.Dickey, Kelly A. Hogan



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



- **Course Level:** First Year Level
- **Course Name:** Theoretical Anatomy/2 hours
- **Course Name:** Practical Anatomy/3hours
- **Semester:** First
- **Unit:** 4

**Course Objectives**

**Upon completion of this course, the student should be familiarized with:**

This course will introduce the students to basic anatomical concepts including anatomic terminologies and directional terms. The course focuses on comparative gross anatomy of the bones, muscles, skin and other organs in different animals .

**Course Contents**

Course Content		
week	Topics	Hours
	<b>Theoretical Subject</b>	
1	Introduction anatomy and methods of study ,topographic terms	2
2	General osteology skeleton , structure of bones , development and growth of chemical and physical properties of bone the vertebral column, rib ,sternum , bone of thoracic limb ,bone of pelvic limb	5
3	Mycology Types of muscles with structure ,sheep of skeletal muscles, action of skeletal muscle	5
4	General syndesmology (arthrology) Fibrous joint, cartilaginous joints , synovial joint , joint of thoracic	6
5	Common integument, foot of the horse hoof , stay apparatus of the thoracic limb	6
6	Endocrine gland Pituitary gland (hypophysis),thyroid gland,parathyroid gland, adrenal gland ,pineal body	5
Total		30

**Course Contents**

Course Content		
week	Topics	Hours
	<b>Practical Subject</b>	
1 and 2	Bone of thoracic limb and joint , scapula of horse and comparative anatomy .	6
3	Humerus and comparative anatomy .	3
4	Radius and ulna with comparison	3
5 and 6	Carpal bones in horse and metacarpal and phalanges bones .	6
7	Ribs and sternum in horse	3
8 and 9	Thoracic , lumber vertebrae and sacrum limb in horse	6
10	Bone of thoracic limb and joint .	3
11 and 12	Humerus and comparative anatomy .	6



Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



12 and 13	Carpal bones in horse and metacarpal and phalanges .	6
14	exam	3
Total		45

**Mode of Assessment**

Assessment	Score	Period
First Exam	10	10-11 <sup>th</sup> weeks
Second Exam	10	10-11 <sup>th</sup> weeks
Practical Exam	10	10-11 <sup>th</sup> weeks
Assignment, Projects, Quizzes, Tutorial	10	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , and 7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> , 10 <sup>th</sup> , 11 <sup>th</sup> .
Final Exam	60	After the 16 <sup>th</sup> .

**Textbooks and Recommended References**

- 1.Veterinary anatomy by Dyce-Wensing 2010
- 2.Anatomy of domestic animals by R-Getty



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



- **Course Level:** First Year Level
- **Course Name:** Theoretical Anatomy/2 hours
- **Course Name:** Practical Anatomy/3 hours
- **Semester:** Second
- **Unit:** 4

**Course Objectives**

**Upon completion of this course, the student should be familiarized with:**

This course will introduce the students to basic anatomical concepts including anatomic terminologies and directional terms. The course focuses on comparative gross anatomy of the viscera and other organs in different animals

**Course Contents**

<b>Course Content</b>		
<b>week</b>	<b>Topics</b>	<b>Hours</b>
	<b>Theoretical Subject</b>	
1	Cardiovascular system ( heart and blood vessels )	2
2	Urinary system Parts of the urinary system and its connection with genital system , shape of kidney ,classification of kidneys ,location ,blood supply, ureter urinary bladder	4
3	Male genital system Development ,testis ,structure, blood and nerve supply epididymis ducts deferens, the spermatic cord ,tunica vaginalis,	4
4	Female genital system Development , ovary types position in domestic animals, uterine tube ,uterus, vagina, vestibule female uretha ,sub urethral	4
5	Mammary gland Development , types, location, indomestic animals , glandular	4
Total		30

**Course Contents**

<b>Course Content</b>		
<b>week</b>	<b>Topics</b>	<b>Hours</b>
	<b>Practical Subject</b>	
1	Muscles of gridle of the sheep	3
2	The lateral surface of shoulder muscles and arm in sheep	3
3	Dissection of intrinsic muscles of shoulder and arm	3
4	Muscles of forearm and manus (extensor and flexor )	3
5	Flexor and extensor muscles of the pelvic limb in sheep	3
6	Flexor and extensor muscles of the pelvic limb in sheep	3
7	Muscle of the hip and thigh in sheep	3
8	Muscle of the hip and thigh in horse	3
9	Arteries and sacrolumb plexuses and nerve of thoracic limb	3
10	Arteries and sacrolumb plexuses and nerve of pelvic limb	3



Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



11	Inguinal region and mammary gland in sheep	3
12	Circulatory system: pericardium and the heart, chambers of the heart and the major vessels of the heart.	3
13	Urinary system	3
14	Male and female reproductive system in sheep	3
15	Female and female reproductive system in sheep	3
Total		30

**Mode of Assessment**

Assessment	Score	Period
First Exam	10	10-11 <sup>th</sup> weeks
Second Exam	10	10-11 <sup>th</sup> weeks
Practical Exam	10	10-11 <sup>th</sup> weeks
Assignment, Projects, Quizzes, Tutorial	10	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , and 7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> , 10 <sup>th</sup> , 11 <sup>th</sup> .
Final Exam	60	After the 16 <sup>th</sup> .

**Textbooks and Recommended References**

1. Veterinary anatomy by Dyce-Wensing 2010
2. Anatomy of domestic animals by R-Getty





**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



- **Course Level:** First-Year Level
- **Course Name:** Theoretical Animal Management/2 hours
- **Course Name:** Practical Animal Management/2 hours
- **Semester:** First
- **Unit:** 3

**Course Objectives**

**Upon completion of this course, students will be able to:**

1. Critically evaluate the theories and methods of animal behavior and/or welfare research.
2. Assess and evaluate the welfare of various animal species used in livestock production, research, zoos, as companions, or other situations.
3. Compare and contrast the various philosophical views concerning our duties toward animals.
4. Evaluate current issues involving animals in society and formulate a justifiable argument based on objective and critical evaluation of both the philosophical views and scientific data.

**Course Contents**

Week	Topics	Hours
	<b>Theoretical Subject</b>	
1	Animal wealth in Iraq and its importance.	2
2	Factors limiting animal production in tropics e.g. Iraq.	2
3	Domestication of different animals.	2
4	Duties of the veterinarian.	2
5	Some kinds of records for farm animals.	2
6, 7, 8, 9, and 10	Horses Classes of horses. Breeds of horses. Identification and description of horses. Terminology of horses. Breeding of horses: age of puberty, sexual maturity, signs of oestrous, signs of pregnancy, diagnosis of pregnancy, signs of birth, care of new – born animals, system of weaning, care and management of pregnant mare, care and management of the stallion (stud). Origin of the horses from animal kingdom. Feeding and watering	10
11, 12, 13, 14 and 15	Cattle Classes of cattle( cows and water- buffaloes) Breeds of cattle. Identification and description of cattle and water buffaloes. Terminology of cattle. Origin of cattle and water buffaloes from animal kingdom. Breeding of cattle (age of puberty , sexual maturity , signs of oestrous, signs of pregnancy, diagnosis of pregnancy , signs of birth, calving (parturition) , care of new – born calf, systems of weaning, care of dams , care of bull (stud), milking process. Growth rate of cattle Twinning in cattle.	10
<b>Total</b>		<b>30</b>



Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



**Course Contents**

Week	Topics	Hours
	<b>Practical Subject</b>	
1 and 2	External features of animal.	4
3,4,5,6 and7	Methods of approaching , restraint and casting of horses	8
8,9,10 and 11	Methods of approaching , restraint and casting of cattle, camel leading	8
12,13,14 and15	Methods of approaching , restraint and casting of sheep for different purposes	8
16	Exam	2
Total		30

**Mode of Assessment**

Assessment	Score	Period
First Exam	10	10-11 <sup>th</sup> weeks
Second Exam	10	10-11 <sup>th</sup> weeks
Practical Exam	10	10-11 <sup>th</sup> weeks
Assignment, Projects, Quizzes, Tutorial	10	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , and 7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> , 10 <sup>th</sup> , 11 <sup>th</sup> .
Final Exam	60	After the 16 <sup>th</sup> .

**Textbooks And Recommended References**

- AL-Wahab,R. and Bryant,M.J. Animal production.
- Anonymous, Sheep Breeding Management. U.K.
- Col,H.H. and Ronning,M. Animal Agriculture.
- Miller,W.C. practical Animal Husbandry.

نسخ دمحم ضاّر , نزارملا روضخ دلو , مرفل ادبع دومحم مرفل ادبع , نأوحلا قرا دا



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



- **Course Level:** First-Year Level
- **Course Name:** Theoretical Animal Management/2 hours
- **Course Name:** Practical Animal Management/2 hours
- **Semester:** Second
- **Unit:** 3

**Course Objectives**

**Upon completion of this course, students will be able to:**

5. Critically evaluate the theories and methods of animal behavior and/or welfare research.
6. Assess and evaluate the welfare of various animal species used in livestock production, research, zoos, as companions, or other situations.
7. Compare and contrast the various philosophical views concerning our duties toward animals.
8. Evaluate current issues involving animals in society and formulate a justifiable argument based on objective and critical evaluation of both the philosophical views and scientific data.

**Course Contents**

<b><u>Course Contents</u></b>		
<b>Week</b>	<b>Topics</b>	<b>Hours</b>
	<b>Theoretical Subject</b>	
1, 2, 3, 4 and 5	<b>Sheep and Goats</b> Types and breeds of sheep and goats. Identification and description of sheep. Terminology of sheep. Origin of sheep and goats from animal kingdom. Breeding of sheep (age of puberty , sexual maturity , signs of oestrous, signs of pregnancy, diagnosis of pregnancy, lambing and kidding, (parturition), care of the dam and newborn , adoption or fostering on orphan lamb, suckling and weaning , care of rams , breeding seasons, application of hormones, effect of artificial light. Feeding and managing type of feed in pregnancy and parturition, feeding of lambs and their fattening problems of feeding. Grazing management. Milking production and udder. Wool and mohair. Livestock building and equipment (disinfection, construction, ventilation standards).	10
6 and 7	<b>Camels</b> Types and breeds of camels. Origin of camel from animal kingdom. General characters. Breeding camels: (age of puberty, sexual maturity, signs of estrous, signs of pregnancy, diagnosis of pregnancy, suckling, weaning and care of the young camel). Feeding and watering of camels.	4
8 and 9	<b>Farm animal health and diseases</b> Signs of health in animals (pulse rate, respiration rate, body temperature, condition of the skin appetite, defecation, urination, animal postures,	4



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



	routes of drug administration. Diseases of animals (cattle, sheep, horses), hygienic methods of disposal of dead animals.	
10 and 11	Sanitation foot bath. Transportation of animals. Bedding (litter) and its importance for farm animals. Behavior of farm animals.	4
12 and 13	Examinations for soundness Examination of horses. Examination of cattle. Examination of sheep. Examination of camels.	4
14 and 15	Dentition How to age horses. How to age cattle. How to age sheep. How to age camels.	4
Total		30

**Course Contents**

Week	Topics	Hours
	<b>Practical Subject</b>	
1 ,2and 3	Bad vices of horses and cow	6
4,5,6 and 7	Mouth ages for different animals, signs of heath: pulse and respiration, body temperature mucous membranes condition	8
8,9 and 10	Care of farm animals, grooming, washing, heating, clipping, drying of wet horses	6
11 and 12	Sheep dipping	4
13 and 14	Shoeing of horses	4
15	Exam	2
Total		30

**Mode of Assessment**

Assessment	Score	Period
First Exam	10	10-11 <sup>th</sup> weeks
Second Exam	10	10-11 <sup>th</sup> weeks
Practical Exam	10	10-11 <sup>th</sup> weeks
Assignment, Projects, Quizzes, Tutorial	10	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , and 7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> , 10 <sup>th</sup> , 11 <sup>th</sup> .
Final Exam	60	After the 16 <sup>th</sup> .

**Textbooks And Recommended References**

- AL-Wahab,R. and Bryant,M.J. Animal production.
- Anonymous, Sheep Breeding Management. U.K.
- Col,H.H. and Ronning,M. Animal Agriculture.
- Miller,W.C. practical Animal Husbandry.
- نسج دمحم ضائر , نزارملا ررضخ دلو , م ركل ادبع دومحم م ركل ادبع , ن اوجلا قرا دا



Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



- **Course Level:** First-Year Level
- **Course Name:** Theoretical General Chemistry/2hours
- **Course Name:** Practical General Chemistry/2hours
- **Semester:** First
- **Unit:** 3

**Course Objectives**

**Upon completion of this course, the student should be familiarized with:**

- 1.To provide students with important knowledge about the content, principles and methods of chemistry; Develop an appreciation for the relevance of chemistry in our daily lives; Improve analytical and problem-solving skills; Learn and improve experimental skills and methods.
- 2.To make students understand the solving stoichiometry problems involving solids, liquids, gases and solutions. Balance chemical equations, classify reactions, identify and analyze the role of the chemicals involved in chemical reactions.
- 3.To make students familiar with manipulate thermochemical equations and calculate the amount of energy involved in chemical reactions. Predict physical and chemical properties of elements based on electronic structure and location in the Periodic Table
- 4.Students will be trained on how they deal with Predict physical and chemical properties of compounds based on chemical bonding, geometry and intermolecular interactions.
- 5.To make students familiarized with Predict the behavior of gases while undergoing changes in volume, pressure, temperature and quantity.

**Course Contents**

Course Content		
week	Topics	Hours
	<b>Theoretical Subject</b>	
1	Atoms and electronic structure:- Atomic and mass number, isotopes, quantum numbers and atomic orbitals, electronic configuration, periodic table, ionization energy, atomic radii, electronegativity, electron affinity.	3
2	Types of the chemical bonds:- Covalent, coordinate covalent bonds, hydrogen bonding, hybridization theory( $sp$ , $sp^2$ , $sp^3$ hybridization), atomic-, formula-, and molecular mass.	3
3	Acid base theory:- Definition of acids and bases, dissociation constant, pH value in different solutions(strong bases, weak acids or weak bases).	3
4	Volumetric analysis:- Titration of acids and bases, definition of titration, indicator, equivalent point, end point, standard solution, normal solution, molar solution. The equivalent weights in neutralization reactions, formula weight, calculation of the normality of concentrated acids. Buffer solution , biochemical buffers.	3
5	Organic chemistry:- Functional groups, alkanes and cycloalkanes (nomenclature, synthesis and reactions). Alkenes(nomenclature, synthesis and reactions). Chemical test of alkenes.	3
6	Alkynes and aromatic compounds:- Synthesis, reactions and chemical test of alkynes. Benzene(nomenclature and electrophilic substitution), reaction of the side chain of alkyl benzene.	3
7	Organichalides, ethers, alcohols and phenols:-Nomenclature, synthesis and	3



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



	reactions. Chemical test of alcohols.	
8	Aldehydes and ketones:-Nomenclature, synthesis and reactions, chemical test of aldehydes and aldehydes or ketones with CH <sub>3</sub> -group.	3
9	Carboxylic acids and carboxylic acid derivatives:- Nomenclature, synthesis and reactions of carboxylic acids and acid chlorides.	3
10	Antydrides, esters, and amides of carboxylic acids:- Nomenclature, synthesis and reactions. Amines, nomenclature, synthesis and reactions	3
Total		30

**Course Contents**

Course Content		
week	Topics	Hours
	<b>Practical Subject</b>	
1	Titration, practice on titration with water. Preparation of standard Na <sub>2</sub> CO <sub>3</sub> solution.	2
2	Standardization of HCl solution with standard solution of Na <sub>2</sub> CO <sub>3</sub> .	2
3	Analysis of a mixture of NaHCO <sub>3</sub> and Na <sub>2</sub> CO <sub>3</sub> .	2
4	Iodo metric titration:-Standardization of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> and determination of Cu in CuSO <sub>4</sub> solution.	2
5	Self-indicator titration:-Standardization of KMnO <sub>4</sub> solution, determination of Fe in Fe SO <sub>4</sub> solution.	2
6	Precipitation titration:- Determination of chloride by Mohr method.	2
7	Determination of the strength volume of H <sub>2</sub> O <sub>2</sub> solution.	2
8	Crystallization.	2
9	Determination of melting point.	2
Total		18

**Mode of Assessment**

Assessment	Score	Period
First Exam	10	10-11 <sup>th</sup> weeks
Second Exam	10	10-11 <sup>th</sup> weeks
Practical Exam	10	10-11 <sup>th</sup> weeks
Assignment, Projects, Quizzes, Tutorial	10	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , and 7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> , 10 <sup>th</sup> , 11 <sup>th</sup> .
Final Exam	60	After the 16 <sup>th</sup> .

**Textbooks and Recommended References**

- Mary Anna Thrall , Glade Weiser , Robin Allison , Terry W. Campbell,September 2012, ©2012, Wiley-Blackwell. Veterinary Hematology and Clinical Chemistry, 2nd Edition



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



- **Course Level:** First-Year Level
- **Course Name:** Theoretical Computer/1 hour
- **Course Name:** Practical Computer/2 hours
- **Semester:** First
- **Units:** 2

**Course Objectives**

**Upon completion of this course, the student should be familiarized with:**

1. To provide students with basic knowledge about computer.
2. Students will be develop skills to deal with modern technology.
3. Develop students' abilities and teach them to use a computer for the purpose of writing and printing of scientific researches and graduate researches.
4. To make students familiarized with Identification the components of a computer and its parts, and the most important characteristics of Computing and kinds.

**Course Contents**

Course Content		
week	Topics	Hours
	<b>Theoretical Subject</b>	
1	Computing Fundamentals: Recognizing computers ,How computers can be used?	1
2	Elements of personal computers	1
3	Looking at the system unit	1
4	Looking at memory	1
5	What are Input/Out devices	1
6	Looking at monitor, Using video cards	1
7	Using the keyboard, Using the mouse	1
8	Recognizing ports	1
9	What are storage systems	1
10	Working with CD drives, Working with hard disk drives	1
11	Using printers	1
12	What is a software program?	1
13	Looking at operating systems, Using windows XP.	1
14	Starting/shutting down the computer	1
15	Working with windows, Using the recycle bin	1
Total		15

**Course Contents**

Course Content		
week	Topics	Hours
	<b>Practical Subject</b>	
1	Computing Fundamentals: Recognizing computers ,How computers can be	2





**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



	used?	
2	Elements of personal computers	2
3	Looking at the system unit	2
4	Looking at memory	2
5	What are Input/Out devices	2
6	Looking at monitor, Using video cards	2
7	Using the keyboard, Using the mouse	2
8	Recognizing ports	2
9	What are storage systems	2
10	Working with CD drives, Working with hard disk drives	2
11	Using printers	2
12	What is a software program?	2
13	Looking at operating systems, Using windows XP.	2
14	Starting/shutting down the computer	2
15	Working with windows, Using the recycle bin	2
Total		30

**Mode of Assessment**

Assessment	score	period
First theoretical exam	10	10-11 <sup>th</sup> weeks
Second theoretical exam	10	10-11 <sup>th</sup> weeks
Practical exam	10	9 <sup>th</sup> - 12 <sup>th</sup> weeks
Assignment, short research, quizzes, participates, attend and signs	10	From 2 <sup>nd</sup> to 15 <sup>th</sup> weeks
Final exam	60	After the 16 <sup>th</sup> weeks

**Textbooks and Recommended References**

- Al- ja'bari B. 2012. Pioneers of computer. www.alrowadpub.com.
- Basic Knowledge of Computers. <http://wikieducator.org/Basic Knowledge of Computers>
- Computing fundamentals using Windows XP IC3 module A. learning solutions Inc. Canada. <http://www.ccilearning.com/data>.
- The essential guide to IC3 courseware 7605-1.2005.ccl learning solutions Inc. Canada.
- www.creativecommons.org.au. (2012). Introduction to computers, windows7 operating system.





Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



- **Course level:** First-Year Level
- **Course Name:** Theoretical Computer/1 hour
- **Course Name:** Practical Computer/2 hours
- **Semester:** Second
- **Unit:** 2

**Course Objectives**

**Upon completion of this course, the student should be familiarized with:**

1. To provide students with basic knowledge about computer.
2. Students will be develop skills to deal with modern technology.
3. Develop students' abilities and teach them to use a computer for the purpose of writing and printing
4. of scientific researches and graduate researches.
5. To make students familiarized with Identification the components of a computer and its parts, and the
6. most important characteristics of Computing and kinds.

**Course contents**

week	Topics	hours
	<b>Theoretical Subject</b>	
1	Common Elements	1
2	Starting word/ Excel /Power point	1
3	Exiting word/ Excel /Power point	1
4	Microsoft Office Word 2007	1
5	Using the Menus	1
6	Working with Files	1
7	Identifying Problems with Files	1
8	Resolving Possible Problems with Files	1
9	Printing Files	1
10	Using Microsoft Office	1
11	Working with Documents	1
12	Selecting Text	1
13	Checking the Spelling and Grammar	1
14	Understanding how Tables Work	1
15	Working with Text	1
Total		15



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



**Course contents**

<b>Course contents</b>		
<b>week</b>	<b>Topics</b>	<b>hours</b>
<b>Practical Subject</b>		
1	Common Elements	2
2	Starting word/ Excel /Power point	2
3	Exiting word/ Excel /Power point	2
4	Microsoft Office Word 2007	2
5	Using the Menus	2
6	Working with Files	2
7	Identifying Problems with Files	2
8	Resolving Possible Problems with Files	2
9	Printing Files	2
10	Using Microsoft Office	2
11	Working with Documents	2
12	Selecting Text	2
13	Checking the Spelling and Grammar	2
14	Understanding how Tables Work	2
15	Working with Text	2
Total		30

**Mode of Assessment**

<b>Assessment</b>	<b>Score</b>	<b>Period</b>
First Exam	10	10-11 <sup>th</sup> weeks
Second Exam	10	10-11 <sup>th</sup> weeks
Practical Exam	10	10-11 <sup>th</sup> weeks
Assignment, Projects, Quizzes, Tutorial	10	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , and 7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> , 10 <sup>th</sup> , 11 <sup>th</sup> .
Final Exam	60	After the 16 <sup>th</sup> .

**Textbooks and Recommended References**

- Al- ja'bari B. 2012. Pioneers of computer. www.alrowadpub.com.
- Basic Knowledge of Computers. <http://wikieducator.org/Basic Knowledge of Computers>
- Computing fundamentals using Windows XP IC3 module A. learning solutions Inc. Canada.
- <http://www.ccilearning.com/data>.
- The essential guide to IC3 courseware 7605-1.2005.ccl learning solutions Inc. Canada.
- [www.creativecommons.org.au](http://www.creativecommons.org.au). (2012). Introduction to computers, windows7 operating system.



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



- **Course Level:** First-Year Level
- **Course Name:** English language/1hour
- **Semester:** First
- **Unit:** 1

**Course Objectives**

**Upon completion of this course, the student should be familiarized with:**

7. Understanding English verb forms.
8. The classification of English verb tenses.
9. Determination of the most important tenses that used in academic writing.
10. The use of passive voice form in academic writing.
11. Understanding the use of articles and prepositions in academic writing.

**Course Contents**

Course Content		
week	Topics	Hours
	<b>Theoretical Subject</b>	
1	Regular and irregular verbs This topic will focus on the difference between regular and irregular verbs and how their pasts and past participles are formed.	1
2 to 6	Tenses (Present simple, present continuous, present perfect, past simple, and future simple) These tenses are important in academic writing. Each tense will be taken separately.	5
7 to 9	Passive voice In this part, the student will learn how to convert active voice sentences to passive voice form. This is very important in academic writing.	3
10 and 11	Conditional sentences There are three types of conditional sentences, Type I, Type II, and type III.	2
12 and 13	Articles This will include (a, an, and the). The student will learn how to use these articles in academic writing.	2
14 and 15	Prepositions This will include (in, at, and on). These prepositions are used to indicate location and time.	2
Total		15



Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



- **Course Level:** First-Year Level
- **Course Name:** English language/1hour
- **Semester:** Second
- **Unit:** 1

**Course Objectives**

**Upon completion of this course, the student should be familiarized with:**

12. Understanding medical term formation
13. Understanding the majority of scientific terms that are important in the veterinary field.
14. Differentiation between British and American medical terms spelling.
15. Writing short essays using academic vocabulary.
16. Making scientific presentation which is important for the students to be confident when they speak in front of audiences.

**Course Contents**

Course Content		
week	Topics	Hours
	<b>Theoretical Subject</b>	
1	Introduction to veterinary medicine	1
2 and 3	Basic medical term formation	2
4	Understanding histology terms	1
5	Understanding immunology and microbiology terms	1
6	Understanding physiology terms	1
7	Understanding epidemiology terms	1
8 and 9	British and American medical terms	2
10 to 12	Academic writing	3
13 to 15	Scientific presentation	3
Total		15

**Mode of Assessment**

Assessment	Score	Period
First Exam	30	10-11 <sup>th</sup> weeks
Final Exam	70	After the 15 <sup>th</sup>

**Textbooks and Recommended References**

- Murphy Raymond. English grammar in use. Cambridge University Press 2009.
- Cambridge dictionary.org
- Cambridge English (www.cambridge english.org).
- Oxford English dictionary (www.oed.org).





Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



- **Course Level:** First-Year Level
- **Course Name:** حقوق الانسان /2 hours
- **Semester:** Second
- **Unit:** 2

**Course Objectives**

الهدف العام من تدريس مادة حقوق الانسان هو تعريف الطالب الجامعي بماهية حقوق الانسان من وجهات نظر عالمية وإنسانية وعلمية ودينية وبشكل موضوعي بعيداً عن التأثيرات السياسية والفكرية والمذهبية، اما الهدف الخاص هو السعي لإحداث تغيير في سلوك الطالب بما يتوافق مع الهدف العام من خلال توجيه انتباه الطالب الى المضامين الحقيقية لحقوق الانسان وأبعادها القانونية ودراسة الاعلانات والمواثيق الدولية.

**Course Contents**

week	Topics	Hours
	<b>الموضوع النظري</b>	
1	الجدور الحضارية للديمقراطية في العراق.	2
2	الديمقراطية والمدخل اليها.	2
3	اركان الديمقراطية وشروط النظام الديمقراطي.	2
4 and 5	مكونات او عناصر الديمقراطية.	4
6 and 7	الشروط العامة لنجاح النظام الديمقراطي, ونظم الانتخابات.	4
8	الاليات العامة للديمقراطية.	2
9	تقييم النظام الديمقراطي.	2
10 and 11	تطبيق النظام الديمقراطي في العراق, واهم المشكلات التي واجهت تجربة الديمقراطية في العراق.	4
12 and 13	الآراء الإسلامية في نظام الحكم الديمقراطي.	4
14	الحريات العامة وأنواعها.	2
15	الحريات في الاسلام.	2
Total		30

**Mode of Assessment**

Assessment	Score	Period
Theoretical Exam	20	1 <sup>st</sup> -10 <sup>th</sup> week
Assignment, Projects, Quizzes, Reports	10	1 <sup>st</sup> - 15 <sup>th</sup> week
Final Exam	70	After the 16 <sup>th</sup>



**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



- **Course Level:** First-Year Level
- **Course Name:** Theoretical Poultry Management/1 hour
- **Course Name:** Practical Poultry Management/2hours
- **Semester:** Second
- **Unit:** 2

**Course Objectives**

**Upon completion of this course, students will be able to:**

9. Critically evaluate the theories and methods of animal behavior and/or welfare research.
10. Assess and evaluate the welfare of various animal species used in livestock production, research, zoos, as companions, or other situations.
11. Compare and contrast the various philosophical views concerning our duties toward animals.
12. Evaluate current issues involving animals in society and formulate a justifiable argument based on objective and critical evaluation of both the philosophical views and scientific data.

**Course Contents**

Week	Topics	Hours
	<b>Theoretical Subject</b>	
1 and 2	Poultry science and industry development- terminology-classification of poultry	2
3 and 4	Poultry breeding and strains differences-chromosomal studies-traits inheritance	2
5 and 6	Internal systems of a chicken.	2
7 and 8	Artificial hatching and hatcheries-egg storage-disinfection and fumigation	2
9 and 10	Rearing baby chicks-preparation of houses –hygiene measurements required tools.	2
11	Factors affecting egg production and feed efficiency indices.	1
12	Nutrition and rations formulation.	1
13	Design of poultry houses.	1
14	Vaccination methods – some diseases due to faulty management.	1
15	Marketing and economic.	1
<b>Total</b>		<b>30</b>

**Course Contents**

Week	Topics	Hours
	<b>Practical Subject</b>	
1 and 2	Phenotypic parts of chicken	4
3	Solving problems related to some inherited traits	2
4 and 5	Anatomy of birds	4
6	Demonstration of hatcheries	2
7 and 8	Demonstration of poultry houses and equipment	4
9 and 10	Solving related problems	4
11	Calculation of feed component ratio	2
12	Studying common management faults and corrections	2
13	Demonstration of possible cases	2
14 and 15	Possible visit to broiler slaughter house or video show	4
<b>Total</b>		<b>30</b>



Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



**Mode of Assessment**

Assessment	Score	Period
First Exam	10	10-11 <sup>th</sup> weeks
Second Exam	10	10-11 <sup>th</sup> weeks
Practical Exam	10	10-11 <sup>th</sup> weeks
Assignment, Projects, Quizzes, Tutorial	10	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , and 7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> , 10 <sup>th</sup> , 11 <sup>th</sup> .
Final Exam	60	After the 16 <sup>th</sup> .

**Textbooks And Recommended References**

- 1-Abbote Laboratories (1968).The chicken in anatomical Tramsparencies , U.S.A.
- 2-Card,L.E and M.C.,Nesheim(1972).Poultry Production 11<sup>th</sup> Ed.Lea and Febiger, Philadelphia, U.S.A.
- 3-National Research council (1984).Nutrient Requirements of Domestic Animals,NO. 1, Nutrient
- 4.Requirements of poultry .8<sup>th</sup> Ed., National Academy of Science Washington D.C., U.S.A.
- 5.North, M.O.,(1984).Commercial Production Monoual.Third Edition .AVI Publishing Company, Inc. Westport, Connecticut.





**Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine**



- **Course Level:** First-Year Level
- **Course Name:** Theoretical Physical / 2 hours
- **Course Name:** Theoretical Physical/ 2 hours
- **Semester:** Second
- **Units:** 3

**Course Objectives**

**Upon completion of this course, the student should be familiarized with:**

An introduction to Physical machines and equipment for use in the veterinary setting. Students will gain knowledge of how to set up basic equipment, as well as run and troubleshoot any common problems. Various instrument identification; care and sterilization will also be covered here.

**Course Contents**

<b>Course Content</b>		
<b>week</b>	<b>Topics</b>	<b>Hours</b>
	<b>Theoretical Subject</b>	
1	Physics of the skeleton.	2
2	Heat and cold medicine.	2
3	Energy, work and power of body.	2
4	Pressure.	2
5	Physics of lung and breathing	2
6	Physics of cardiovascular system	2
7	Electricity with the body.	2
8	Sound in medicine.	2
9	Physic of the ear and hearing.	2
10	Light in medicine.	2
11	Physics of the eye and vision.	2
12	Physics of diagnostic X-ray.	2
13	Physics of nuclear medicine.	2
14	Physics of radiation medicine.	2
15	Pollution	2
<b>Total</b>		<b>30</b>

**Course Contents**

<b>Course Content</b>		
<b>week</b>	<b>Topics</b>	<b>Hours</b>
	<b>Practical Subject</b>	
1 and 2	Study on law of dynamics	4
3 and 4	Lights	4
5 and 6	Electrical	4
7 and 8	Conduction	4
9 and 10	Magnetic field.	4
11	Exam	
<b>Total</b>		<b>18</b>



Ministry of Higher education and Scientific Research  
Al-Qasim Green University  
College of Veterinary Medicine



**Mode of Assessment**

Assessment	Score	Period
First Exam	10	10-11 <sup>th</sup> weeks
Second Exam	10	10-11 <sup>th</sup> weeks
Practical Exam	10	10-11 <sup>th</sup> weeks
Assignment, Projects, Quizzes, Tutorial	10	2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , and 7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> , 10 <sup>th</sup> , 11 <sup>th</sup> .
Final Exam	60	After the 16 <sup>th</sup> .

**Textbooks and Recommended References**

- Philip Palin Dendy , By (author) Brian Heaton , Series edited by John G. Webster, Series edited by Slavik Tabakov , Series edited by E. Russell Ritenour , Series edited by Kwan-Hoong Ng. Physics for Diagnostic Radiology. Taylor & Francis Inc