## cademic Program Description Form for Bolonia program

**University Name**: Al-Qadisiyah University

**Faculty/Institute**: College of Veterinary Medicine

**Scientific Department**

**Academic or Professional Program Name**: .. **Bachelor veterinary medicine and surgery**

**Final Certificate Name**:

**Academic Bologna process**

**Description Preparation Date**: 2026

**File Completion Date**: 1/8/2026

**Signature**:

**Head of Department Name**:

**Date**:

**Signature**:

**Scientific Associate Name**:
prof.Dr. Alaa AbdulAzz Abed

**Date**:

**The file is checked by:**

**Department of Quality Assurance and University Performance**

**Director of the Quality Assurance and University Performance Department**:

**Date**:

**Signature**:

**Approval of the Dean**



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# Republic of Iraq – Ministry of Higher Education and Scientific Research

# University of Al-Qadisiyah / College of Veterinary Medicine

# Program Curriculum (2024–2025)

Bachelor’s Degree in Veterinary Medicine and Surgery

Five years (Ten semesters) – 300 ECTS credits – 1 ECTS = 25 hours

## Semester 1

| No. | Module Code | Module Name | Language | Lect. (hr/w) | Lab (hr/w) | Pr. (hr/w) | Exam (hr/sem) | SWL (hr/sem) | Total (hr) | ECTS | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | QU01 | English Language | English | 2 | 3 | | | 33 / 17 | 50 | 2.00 | B |
| 2 | QU02 | Democracy and Human Rights | Arabic | 2 | 3 | | | 33 / 17 | 50 | 2.00 | B |
| 3 | VET101 | General Biology | English | 3 | 2 | 3 | | 78 / 122 | 200 | 8.00 | B |
| 4 | VET102 | Skeleton Anatomy | English | 3 | 3 | 3 | | 93 / 107 | 200 | 8.00 | C |
| 5 | VET103 | Animal Management | English | 3 | 2 | 3 | | 78 / 97 | 175 | 7.00 | C |
| 6 | VET104 | Biorisk Management | English | 2 | 3 | | | 33 / 42 | 75 | 3.00 | C |
| | Total | | | 15 | | 7 | | 348 / 402 | 750 | 30.00 | |

# Semester 2

| No. | Module Code | Module Name | Language | Lect. (hr/w) | Lab (hr/w) | Pr. (hr/w) | Exam (hr/sem) | SWL (hr/sem) | Total (hr) | ECTS | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | QU06 | Arabic Language | Arabic | 2 | 3 | | | 33 / 17 | 50 | 2.00 | B |
| 2 | QU04 | Computer | English | 2 | 2 | 3 | | 63 / 12 | 75 | 3.00 | B |
| 3 | VET105 | General Chemistry | English | 2 | 2 | 3 | | 63 / 87 | 150 | 6.00 | B |
| 4 | VET106 | Muscular Anatomy | English | 3 | 3 | 3 | | 93 / 132 | 225 | 9.00 | C |
| 5 | VET107 | Animal Husbandry | English | 2 | 3 | | | 33 / 92 | 125 | 5.00 | C |
| 6 | VET108 | Poultry Management | English | 1 | 2 | 3 | | 48 / 77 | 125 | 5.00 | C |
| | Total | | | 12 | | 9 | | 333 / 417 | 750 | 30.00 | |

# Semester 3

| No. | Module Code | Module Name | Language | Lect. (hr/w) | Lab (hr/w) | Pr. (hr/w) | Exam (hr/sem) | SWL (hr/sem) | Total (hr) | ECTS | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | QU08 | Ba’ath Regime Crimes | English | 2 | 3 | | | 33 / 17 | 50 | 2.00 | B |
| 2 | VET201 | Visceral Anatomy | English | 2 | 3 | 3 | | 78 / 72 | 150 | 6.00 | C |
| 3 | VET202 | Basic Histology | English | 2 | 2 | 3 | | 63 / 62 | 125 | 5.00 | C |
| 4 | VET203 | General Physiology | English | 3 | 2 | 3 | | 78 / 72 | 150 | 6.00 | C |
| 5 | VET204 | Basic Biochemistry | English | 2 | 2 | 3 | | 63 / 62 | 125 | 5.00 | C |
| 6 | VET205 | Animal Nutrition | English | 2 | 2 | 3 | | 63 / 12 | 75 | 3.00 | C |
| 7 | QU24 | Computer 2 | English | 2 | 2 | 3 | | 63 / 12 | 75 | 3.00 | B |
| | Total | | | 15 | | 13 | | 441 / 309 | 750 | 30.00 | |

# Semester 4

| No. | Module Code | Module Name | Language | Lect. (hr/w) | Lab (hr/w) | Pr. (hr/w) | Exam (hr/sem) | SWL (hr/sem) | Total (hr) | ECTS | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | VET206 | Neural and Vascular Anatomy | English | 2 | 3 | 3 | | 78 / 72 | 150 | 6.00 | C |
| 2 | VET207 | Biochemistry | English | 2 | 2 | 3 | | 63 / 62 | 125 | 5.00 | C |
| 3 | VET208 | Systemic Histology and Embryology | English | 2 | 3 | 3 | | 78 / 72 | 150 | 6.00 | C |
| 4 | VET209 | Systemic Physiology | English | 3 | 2 | 3 | | 78 / 72 | 150 | 6.00 | C |
| 5 | VET210 | Applied Statistics | English | 1 | 2 | 3 | | 48 / 27 | 75 | 3.00 | C |
| 6 | QU26 | Arabic Language | Arabic | 2 | 2 | 3 | | 33 / 17 | 50 | 2.00 | B |
| 7 | QU21 | English Language | English | 2 | 2 | 3 | | 33 / 17 | 50 | 2.00 | B |
| | Total | | | 15 | | 11 | | 411 / 339 | 750 | 30.00 | |

# Semester 5

| No. | Module Code | Module Name | Language | Lect. (hr/w) | Lab (hr/w) | Pr. (hr/w) | Exam (hr/sem) | SWL (hr/sem) | Total (hr) | ECTS | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | VET301 | Helminthology | English | 2 | 2 | 3 | | 63 / 62 | 125 | 5.00 | C |
| 2 | VET302 | General Pharmacology | English | 2 | 2 | 3 | | 63 / 62 | 125 | 5.00 | C |
| 3 | VET303 | Veterinary Virology | English | 2 | 2 | 3 | | 63 / 62 | 125 | 5.00 | C |
| 4 | VET304 | General Microbiology | English | 2 | 2 | 3 | | 63 / 62 | 125 | 5.00 | C |
| 5 | VET305 | General Pathology | English | 2 | 2 | 3 | | 63 / 62 | 125 | 5.00 | C |
| 6 | VET306 | Veterinary Immunology | English | 2 | 2 | 3 | | 63 / 12 | 75 | 3.00 | C |
| 7 | VET307 | Genetics | English | 2 | 3 | | | 33 / 17 | 50 | 2.00 | C |
| | Total | | | 14 | | 12 | | 411 / 339 | 750 | 30.00 | |

# Semester 6

| No. | Module Code | Module Name | Language | Lect. (hr/w) | Lab (hr/w) | Pr. (hr/w) | Exam (hr/sem) | SWL (hr/sem) | Total (hr) | ECTS | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | VET308 | Protozoa and Arthropods | English | 2 | 2 | 3 | | 63 / 62 | 125 | 5.00 | C |
| 2 | VET309 | Clinical Pharmacology and Toxicology | English | 2 | 3 | 3 | | 78 / 72 | 150 | 6.00 | C |
| 3 | VET310 | Systematic Bacteriology and Mycology | English | 2 | 2 | 2 | | 63 / 62 | 125 | 5.00 | C |
| 4 | VET311 | Systemic Veterinary Pathology | English | 3 | 2 | 3 | | 78 / 72 | 150 | 6.00 | C |
| 5 | VET312 | Clinical Pathology | English | 3 | 2 | 3 | | 78 / 72 | 150 | 6.00 | C |
| 6 | VET313 | Animal Physical Examination | English | 2 | 3 | | | 33 / 17 | 50 | 2.00 | C |
| | Total | | | 13 | | 10 | 2 | 393 / 357 | 750 | 30.00 | |

# Bologna Process / Student Workload Terminology

SSWL: Structured Student Workload
USSWL: Unstructured Student Workload
SWL: Student Workload
CL: Class Lecture
Pr: Practical
Tut: Tutorial
Semn: Seminar
Core learning activity; Elective learning activity; Structured SWL support or related learning activity; Basic learning activities.

Note: The source document states that the student should complete 9 weeks of Summer Veterinary Rotation Clinic to fulfil the requirements of the Bachelor’s degree.

Module Types: B – Basic; C – Core. The source also lists S, E and other activity/type codes in its legend.

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Genetic** | | | **Module Delivery** | |
| **Module Type** | | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | | | | | |
| **ECTS Credits** | | | | | |
| **SWL (hr/sem)** | | | | | |
| **Module Level** | 2 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Public health | | **College** | Veterinary medicine | |
| **Module Leader** | Kadhim Hassan abbas | | **e-mail** | Kadhim.abbas@qu.edu.iq | |
| **Module Leader's Acad. Title** | Assist. professor | | **Module Leader's Qualification** | Master | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | /8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1- Teaching live map DNA and RNA.<br>2- Teaching how protein make.<br>3- Teaching genetic diseases.<br>4- Teaching who traits transmission. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1- Traits transmission from parents to offspring<br>2- DNA and RNA role in live.<br>3- Selection of animals. |
| **Indicative Contents**<br>المحتويات الإرشادية | Attention in selection traits to receive traits which pointed to high production |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Paying attention to the methods of selection to avoided bad traits and genetic diseases |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Genetics history and its theories |
| **Week 2** | The cell and chromosome behavior |
| **Week 3** | Mendelian inheritance and its modification |
| **Week 4** | Genetics and statistics in pedigree analysis |
| **Week 5** | Genes interaction |
| **Week 6** | Multiple alleles and pseudoalleles |
| **Week 7** | Sex determination and inheritance related to sex |
| **Week 8** | Terminology of horses |
| **Week 9** | Linkage, crossing over and genetic map |
| **Week 10** | Chromosomal mutations |
| **Week 11** | The chemical and engineering basis of heredity |
| **Week 12** | Gene frequency and factors affecting it |
| **Week 13** | Resemblance between relatives |
| **Week 14** | Selection |
| **Week 15** | Methods of matting |
| **Week 16** | Exam |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | **علم الوراثة والتطبيق في تربية الحيوانات** | Yes |
| **Recommended Texts** | | |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **General Pharmacology** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☐ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET302 | | | | |
| **ECTS Credits** | 5 | | | | |
| **SWL (hr/sem)** | **125** | | | | |
| **Module Level** | 3 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Physiology, Biochemistry and Pharmacology | | **College** | Veterinary Medicine | |
| **Module Leader** | Wisam Hassian Salman | | **e-mail** | Wisam.salman@qu.edu.iq | |
| **Module Leader's Acad. Title** | Assist. Professor | | **Module Leader's Qualification** | Ph.D. | |
| **Module Tutor** | Jinan Abd-alameer Sabeeh | | **e-mail** | Jinan.Sabeeh@qu.edu.iq | |
| **Peer Reviewer Name** | Name | | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | 8/8/2024 | | **Version Number** | 1.0 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. The course deals with the basic concept of pharmacology as pharmacodynamics & pharmacokinetics.<br>2. Graduating students familiar with the basics of pharmacology.<br>3. They have experience in prescribing the drug and knowing its side effects And drug interactions.<br>4. Able to supervise pharmacies and veterinary clinics. |

| | |
|---|---|
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1. Familiarity with the basics of pharmacology.<br>2. Studying the functions of the body's organs and the mechanism of action of various medications on them.<br>3. The student's scientific knowledge of how to calculate doses and prescribe medication accurately.<br>4. Skill in dealing with animals and methods of administering medications to them.<br>5. Knowing the interactions between medications, the side effects of each medication, and how to deal with them. |
| **Indicative Contents**<br>المحتويات الإرشادية | Indicative content includes the following:<br><u>Part A – General principles of pharmacology</u><br>• Pharmacodynamics.<br>• Pharmacokinetic.<br>[SSWL= 6 hrs]<br><br><u>Part B –drugs effects on the nervous system</u><br>• Drugs acting on autonomic and somatic nervous system.<br>• Drugs acting on central nervous system.<br>[SSWL=10 hrs]<br><br><u>Part C – drugs effects on:</u><br>• Gastrointestinal function.<br>• Cardiovascular system & blood.<br>• Renal function &fluid electrolyte balance.<br>• Respiratory system.<br>[SSWL=14 hrs]<br><br>Total hrs = 30 |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Encouraging the student's commitment to attendance and active participation in lectures and taking daily, semester and final theoretical and practical exams.<br>Using educational and technological means, and the modern method in teaching the subject and referring to practical training examples. Discussion is used in lectures as an effective means of delivering the study material to students and keeping up with the latest methods, approaches and modern trends in the teaching process. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | General principles of pharmacology |
| **Week 2** | Pharmacodynamics |
| **Week 3** | Pharmacokinetics |
| **Week 4** | Drugs acting on the autonomic nervous system (sympathetic) |
| **Week 5** | Drugs acting on the autonomic nervous system (parasympathetic) |
| **Week 6** | Drugs acting on central nervous system (Neurotransmitters, Sedatives & Tranquilizers) |
| **Week 7** | Drugs acting on central nervous system (Anticonvulsant, Narcotic analgesics & CNS stimulants) |
| **Week 8** | Drugs acting on central nervous system (Inhalation, Injectable & local anesthetics) |
| **Week 9** | Drugs acting on gastrointestinal function. |
| **Week 10** | Drugs acting on the cardiovascular system (Digitalis, Positive Inotropes & Vasodilators) |
| **Week 11** | Drugs acting on the cardiovascular system (Antiarrhythmic Agents) |
| **Week 12** | Drug acting on Blood & Blood Elements (Anticoagulant , Antiplatelet & Hemostatic Drugs) |
| **Week 13** | Drugs affecting renal function & fluid electrolyte balance<br>( Principles of Acid-Base Balance :Fluid & Electrolyte Therapy , Blood Substitutes) |
| **Week 14** | Drugs acting affecting renal function & fluid electrolyte balance (Diuretics &Renal Pharmacology) |
| **Week 15** | Drugs affecting the respiratory system |
| **Week 16** | **Preparatory week before the final Exam** |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |

| | |
|---|---|
| **Week 1** | General principles and definition |
| **Week 2** | Drug form |
| **Week 3** | Metrology |
| **Week 4** | Dose calculation and dilution |
| **Week 5** | Lab animal technique, handling ,different dosing and sampling |
| **Week 6** | Effect ionization on absorption |
| **Week 7** | Analysis of alanine |
| **Week 8** | Effect of rout of administration on rate of absorption |
| **Week 9** | Effect of autonomic drugs on eye |
| **Week 10** | Effect of ketamine and xylazine |
| **Week 11** | Neuro-behavior test |
| **Week 12** | Diuretics |
| **Week 13** | Review & seminars |
| **Week 14** | Review & seminars |
| **Week 15** | Review & seminars |

## Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | Veterinary Pharmacology & Therapeutic. By Jim E, Riviere and Mark G.Papich. 10 edition, 2018. | Yes |
| **Recommended Texts** | Saunders Handbook of Veterinary Drugs, Small and Large Animals,4 edition, 21016. | Yes |
| **Websites** | https://www.wiley.com/en-us/Veterinary+Pharmacology+and+Therapeutics%2C+10th+Edition-p-9781118855881 | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Veterinary Virology | | | **Module Delivery** | |
| **Module Type** | C | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET303 | | | | |
| **ECTS Credits** | 5 | | | | |
| **SWL (hr/sem)** | 125 | | | | |
| **Module Level** | 3 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Microbiology and parasitology | | **College** | Veterinary medicine | |
| **Module Leader** | Shujon Hassan Jadaan | | **e-mail** | Shujon.jadaan @qu.edu.iq | |
| **Module Leader's Acad. Title** | Lecture | | **Module Leader's Qualification** | PHD | |
| **Module Tutor** | Zeen Fouad Saleh | | **e-mail** | Zeen .saleh@ qu.edu.iq | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | 11\8\2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1- Essential of Veterinary Virology covers the concise view of general virology concept and description of family of viruses producing important diseases in livestock and poultry.<br>2- To deepen and broaden students' understanding of the fundamental virology the methods by which virus transmitted to animals and how this effected on human healthy as well as country economic.<br>3- How to deal with virology samples in laboratory. |
| **Module Learning Outcomes** | 1-Preparing students with high knowledge of the dangerous Zoonosis virus all means of protection and how to deal with it<br>2-prepare the graduate students with full Knowledge about research skills for |

| | |
|---|---|
| مخرجات التعلم للمادة الدراسية | professional careers in virology.<br>3-adequate Knowledge how diagnosis and treated animals and policy of vaccination animals |
| **Indicative Contents**<br>المحتويات الإرشادية | 1-Reflects content related points that learner might make but is not an exhaustive list.<br>2-The subject specific content that students may have provided in response to the question. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1-Explanation of scientific subjects through theoretical lectures.<br>2- Training of students for practical applications in laboratories.<br>3-Student prepares scientific related reports. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | **introduction to virology** |
| **Week 2** | **properties of animals virus** |
| **Week 3** | **viral classification** |
| **Week 4** | **replication of virus** |
| **Week 5** | **antiviral drugs** |
| **Week 6** | **viral genetic** |
| **Week 7** | **oncogenic virus** |
| **Week 8** | **Paramyxoviridae,** |
| **Week 9** | **Orthomyxoviridae** |
| **Week 10** | **Picornaviridae، caliciviridea** |
| **Week 11** | **Rhabdoviridae** |
| **Week 12** | **Bunyviridea, Togaviruses** |
| **Week 13** | **arterviridiae, Flaviviridea** |
| **Week 14** | **Herpesviridae and poxviridea** |
| **Week 15** | **Parvoviridea, Circoviridea, Adenoviridae, Papillomaviruses.** |
| **Week 16** | **Exam** |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Overview about diagnostic methods in virology |
| **Week 2** | Collection and preservation of viral specimens |
| **Week 3** | Electron microscopy |
| **Week 4** | Cultivation of virus in lab. animals |
| **Week 5** | Cultivation of virus in cell culture |
| **Week 6** | Sample preparation for virus isolation |
| **Week 7** | Hemagglutination test. |
| **Week 8** | Hemagglutination inhabitation test. |
| **Week 9** | neutralization technique |
| **Week 10** | immunofluorescence test: titration techniques (plague assay and endpoint) |
| **Week 11** | PCR |
| **Week 12** | |
| **Week 13** | |
| **Week 14** | |
| **Week 15** | |
| **Week 16** | Exam |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Vet.Microbiology | Yes |
| **Recommended Texts** | Review of veterinary Microbiology 2nd edition | |
| **Websites** | (scientific<br>journals, reports...)Electronic References, Websites | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **General Pathology** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET305** | | | | |
| **ECTS Credits** | **5** | | | | |
| **SWL (hr/sem)** | **125** | | | | |
| **Module Level** | 3 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Pathology and Poultry Diseases | | **College** | Veterinary medicine | |
| **Module Leader** | Khalil Gazar Chelab | | **e-mail** | Khalil.Chelab@qu.edu.iq | |
| **Module Leader's Acad. Title** | Prof. | | **Module Leader's Qualification** | PhD | |
| **Module Tutor** | Atiaf Ghanim Rhayf | | **e-mail** | Atiaf.Rhayf@qu.edu.iq | |
| **Peer Reviewer Name** | Hala Abbas Naji | | **e-mail** | Hala.Naji@qu.edu.iq | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. Areas of study include cellular adaptation of injury, necrosis, inflammation, wound healing and tumors. It forms the basis for the application of this knowledge to diagnose diseases in animals.<br>2. Adaptation to injury There are many external and internal stimuli that induce or exacerbate disease-related processes, including trauma, infection, poisoning, lack of blood flow, autoimmunity, inherited or acquired genetic damage, or development errors |

| | |
|---|---|
| | 3. Necrosis is the irreversible destruction of cells as a result of severe injury under a situation in which the cell is unable to activate the metabolic pathways necessary to survive or regulated decomposition.<br>4. Repair of tissues as seen in wound healing is raised by inflammation. The process may proceed even before the decay of the precipited injury, by forming granular tissue. The healing process involves the proliferation of connective tissue cells, cells that form blood vessels as a result of hormonal growth signals.<br>5. Inflammation is a particularly complex and important reaction to tissue injury, and is especially important in the fight against infection. Acute infection is an undefined general response caused by tissue cells themselves, as well as specialized cells in the primary immune system and mechanisms previously developed for adaptive immunity.<br>6. Tumor formation, or "new growth," is the multiplication of cells independently of any physiological process. The most common examples of tumors are benign tumors and cancers. Tumors are caused by genetic changes that cause cells to activate genetic programs incorrectly. Dysplasia is an early indicator of the process of tumor formation in tissues, characterized by persistently poorly variability forms of immature cells. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1. Understanding the mechanisms of changes that take place during the disease at the cellular level.<br>2. Study of pathogens.<br>3. Diagnosis of diseases.<br>4. Clarify the means of the body's response to damage and repair at the cellular level.<br>5. Understanding in-kind pathological phenomena such as transformation, mutation, atrophy, hypertrophy and inflammation. 6. Scientific research. |
| **Indicative Contents**<br>المحتويات الإرشادية | General pathology is a fundamental discipline within medical and biological sciences that focuses on the mechanisms of disease. The contents typically covered in a general pathology course or textbook provide an in-depth understanding of how diseases develop, progress, and affect the body. Here's an outline of the indicative contents of general pathology:<br>1. Introduc8on to Pathology.<br>2. Cell Injury and Cell Death.<br>3. Inflammation.<br>4. Tissue Repair and Regeneration.<br>5. Hemodynamic Disorders.<br>6. Immunopathology.<br>7. Neoplasia.<br>8. Genetic Disorders.<br>9. Environmental and Nutritional Pathology. |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم |
| --- |
| 1. Theoretical lectures.<br>2. Discussions and dialogues.<br>3. Clinical cases and comparative studies.<br>4. Presentations and educational videos.<br>5. Laboratories and practical training.<br>6. Field visits and research projects.<br>7. Active learning and collaborative learning. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction to pathology. |
| **Week 2** | Mechanisms and Morphology of Cellular Injury, Adaptation. |
| **Week 3** | Mechanisms and Morphology of Cellular Death. |
| **Week 4** | Disturbance of Pigmentation (Jaundice/ Types and causes and formation of hemosiderin, melanin, and calcification/ types and causes)**.** |
| **Week 5** | Inflammation (definition, causes, types of inflammatory cells, types of inflammation)**.** |
| **Week 6** | Inflammation (definition, causes, types of inflammatory cells, types of inflammation)**.** |
| **Week 7** | Healing and repair (Regeneration, Repair, Growth Factors, complications, bone healing). |
| **Week 8** | Disturbance of Circulation (Congestion and hemorrhage/ types and causes, thrombus and emboli: types and causes). |
| **Week 9** | Disturbance of Circulation (infarction, embolism edema / types and causes and shock)**.** |
| **Week 10** | Diseases of Immunity (hyper sensitivity and immune tolerance, immune deficiency and Autoimmune diseases). |
| **Week 11** | Neoplasia and Tumor Biology (definition/ theories of origin, classification) |
| **Week 12** | Neoplasia and Tumor Biology (differentiation between benign and malignant tumors/ histological characters of tumors/ method of transmission, diagnosis. |
| **Week 13** | Genetic Disorders (Types of Genetic Disorder: Single-gene, chromosomal, multifactorial, Mechanisms of Genetic Diseases: Mutations, epigenetic changes, Molecular Basis of Genetic Diseases: Gene function, expression, and regulation. |
| **Week 14** | Environmental and Nutritional Pathology (Environmental Factors: Chemical agents, physical agents, radiation). |
| **Week 15** | Nutritional Disorders: Malnutrition, obesity, vitamin deficiencies, metabolic syndrome**.** |
| **Week 16** | **Exam** |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction to pathology |
| **Week 2** | Mechanisms and Morphology of Cellular Injury, Adaptation. |
| **Week 3** | Mechanisms and Morphology of Cellular Death. |
| **Week 4** | Disturbance of Pigmentation (Jaundice/ Types and causes and formation of hemosiderin, melanin, and calcification/ types and causes) |
| **Week 5** | Inflammation (definition, causes, types of inflammatory cells, types of inflammation) |
| **Week 6** | Inflammation (definition, causes, types of inflammatory cells, types of inflammation) |
| **Week 7** | Healing and repair (Regeneration, Repair, Growth Factors, complications, bone healing) |
| **Week 8** | Disturbance of Circulation (Congestion and hemorrhage/ types and causes, thrombus and emboli: types and causes) |
| **Week 9** | Disturbance of Circulation (infarction, embolism, edema / types and causes and shock) |
| **Week 10** | Diseases of Immunity (hypersensitivity and immune tolerance, immune deficiency and Autoimmune diseases) |
| **Week 11** | Neoplasia and Tumor Biology (definition/ theories of origin, classification) |
| **Week 12** | Neoplasia and Tumor Biology (differentiation between benign and malignant tumors/ histological characters of tumors/ method of transmission, diagnosis) |
| **Week 13** | Genetic Disorders (Types of Genetic Disorders): Single-gene, chromosomal, multifactorial, Mechanisms of Genetic Diseases: Mutations, epigenetic changes, Molecular Basis of Genetic Diseases: Gene function, expression, and regulation |
| **Week 14** | Environmental and Nutritional Pathology: (Environmental Factors: Chemical agents, physical agents, radiation). |
| **Week 15** | Nutritional Disorders: Malnutrition, obesity, vitamin deficiencies, metabolic syndrome). |
| **Week 16** | **Exam** |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Helminthology** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET301** | | | | |
| **ECTS Credits** | **5** | | | | |
| **SWL (hr/sem)** | **125** | | | | |
| **Module Level** | | 3 | **Semester of Delivery** | | 1 |
| **Administering Department** | | Veterinary Microbiology and Parasitology | **College** | Veterinary medicine | |
| **Module Leader** | Noor Idan Jarad | | **e-mail** | Noor.jarad@qu.edu.iq | |
| **Module Leader's Acad. Title** | | Assist Prof. | **Module Leader's Qualification** | | PhD |
| **Module Tutor** | Moneer Abd-Al Ameer | | **e-mail** | monyerr.abd@qu.edu.iq | |
| **Peer Reviewer Name** | | Noaman Naji A'aiz | **e-mail** | noaman.aaiz@qu.edu.iq | |
| **Scientific Committee Approval Date** | | 11/8/2024 | **Version Number** | | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1.Explanation of scientific subjects through theoretical lectures.<br>2. Training of students for practical applications in laboratories.<br>3.Student prepare a scientific related reports.<br>4. Introducing students to the most important veterinary parasites and their life cycle medical important, ways of transmission and morbidity and treatment.<br>5. Developing the skills of students in the diagnosis of parasites and accurate diagnos each parasite.<br>6. Introduce students to modern diagnostic methods. |
| **Module Learning Outcomes** | 1.The student is introduced to parasitology, the most important types of veterinary parasites, zoonotic parasites between humans and animals, their life cycle, methods |

| | |
|---|---|
| مخرجات التعلم للمادة الدراسية | of transmission, pathogenesis, and treatment.<br>2. The student acquires the skills of diagnostic methods for parasites and accurate diagnosis of each parasite<br>3.The student acquires the skills of modern diagnostic methods for parasites B3-The student acquires skills in treating and controlling parasitic diseases |
| **Indicative Contents**<br>المحتويات الإرشادية | 1-The learner provides assistance to classmates in class and engages in teamwork.<br>2- The student strives to maintain mutual respect between himself and his classmates, as we educational staff at the college.<br>3- The student is familiar with the ethics of the profession and the relationship with educato conscientious.<br>4. Writing abilities—enhancing students' capacity to write scientific reports to ai veterinary degrees. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1- The student knows the basic methods of sampling and population and how to take samples from the animal community<br>2- Enabling the student to know the importance of the parasite and how to display characteristics relevant to animal research and veterinary experiments<br>3- Enabling the student to know how to treatment the animal infected with parasite.<br>4 - The student will acquire the skills of using control programs of parasite disease<br>5 - The student acquires skills in diagnosis of different parasites with modern methods<br>6. The learner practices volunteer work with full awareness and understanding |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction & Definitions of Terms<br>Effects of parasites on their hosts |
| **Week 2** | Phylum: Platyhelminthes /<br>Families Anoplocephalidae |
| **Week 3** | Taeniidae, |
| **Week 4** | Davaineidae, Dipylidiidae, |
| **Week 5** | Hymenolepdidae , Dphillobothriidae |
| **Week 6** | Trematoda introduction |
| **Week 7** | Fasciolidae, Dicrocoelidae |

| | |
|---|---|
| **Week 8** | Paramhhistomatidae and Schistosomatdae |
| **Week 9** | Phylum nematode introduction |
| **Week 10** | Ascardidae Oxyuridae, |
| **Week 11** | Hetrakidae, Subuluridae |
| **Week 12** | Rhabditidae Strongyloididae |
| **Week 13** | Ancylostomatidae,<br>Trichostrongylidae |
| **Week 14** | Dictyocaulidae ·<br>Metastrongyloidae |
| **Week 15** | Trichinellidae, Spiruridae, Trichuridae, Fillariidae |
| **Week 16** | **Exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Lab 1: Introduction to parasite diagnosis |
| **Week 2** | Lab 2: Moniezia expansa, (Mature seg,scolex)<br>M.bendeni, Avitellina (mature and gravid)<br>Thysaniezia, (mature and gravid |
| **Week 3** | Lab 3: Raillietina (mature and gravid)<br>R.tetragona scolex, R.echinobothrida(scolex), cesticillus(scolex), Dipylidium caninum |
| **Week 4** | Lab 4: Echinococcus granulosus<br>+protoscolex of Hydatid cyst+Mesocestoides lineatus<br>(mature and gravid), Spirometra (mature) |
| **Week 5** | Lab 5: Fasciola hepatica, Life cycle, Fasciola gigantica<br>Dicrocoelium dendriticum, |
| **Week 6** | Lab 6: Metagonimus yokcagawi<br>Paramphistomatidae(3 genuses) |
| **Week 7** | Lab 7: Metagonimus yokcagawi<br>Paramphistomatidae(3 genuses) |
| **Week 8** | Lab 8: Schistoma (male,female) In copulation,eggs<br>of S.mansoni,eggs, S.japonicum+cercaria |
| **Week 9** | Lab 9:Parascaris equorum+<br>Toxocara canis +Oxyuris equi |
| **Week 10** | Lab 10: Ascaridia galli +Hetrakis gallinarum +Subulura brumptii |
| **Week 11** | Lab 11: Strongylidae copulatory bursa, Strongylus vulgaris+S. equines |

| | |
|---|---|
| **Week 12** | Lab 12:Ancylostoma caninum, Bunostomum sp |
| **Week 13** | Lab 13:Haemonchus contortus, (male and female), Ostertagia(3 sp)<br>Dictyocalus filarial(male) |
| **Week 14** | Lab 14: Habronema (male,female), Thelazia, Setaria digiata(female) |
| **Week 15** | Lab 15: Trichinella spiralis(larval stage), Trichuris trichura |
| **Week 16** | **Exam** |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Parasitology for Veterinarians 10th ed.<br>Main references (sources) | Yes |
| **Recommended Texts** | Foundations of Parasitology 9th ed. 2013 | No |
| **Websites** | Centers for Disease Control and Prevention (cdc.gov)<br>https://www.cdc.gov/ | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | General Microbiology | | | **Module Delivery** | |
| **Module Type** | C | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET304 | | | | |
| **ECTS Credits** | 5 | | | | |
| **SWL (hr/sem)** | 125 | | | | |
| **Module Level** | | 3 | **Semester of Delivery** | | 1 |
| **Administering Department** | | Veterinary Microbiology | **College** | Veterinary medicine | |
| **Module Leader** | Azhar Abdulsada Neamah | | **e-mail** | azhar.neamah@qu.edu.iq | |
| **Module Leader's Acad. Title** | | Assist.Prof | **Module Leader's Qualification** | | MSC |
| **Module Tutor** | Jameela Radi Esmaeel | | **e-mail** | Jameela.Esmaeel@qu.edu.iq | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | | 15/8/2024 | **Version Number** | | 1 |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | • The Microbiology module provides a practical introduction to the classification of microorganisms, their importance in various environments, and their impact on the environment, animals and human health.<br>• General basic knowledge on laboratory equipment and requirements for bacterial isolation.<br>• Provide the knowledge on bacterial virulence factors. |

| | |
|---|---|
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | After completion of this course students are expected to be able to:<br>• Describe basic cell structure and its function.<br>• Define the evolution of prokaryotic cells, its diversity.<br>• Describe the essential concepts of microbial metabolisms and its metabolic diversity<br>• Define the mutation and horizontal gene transfer and its effect to diversity of microorganisms.<br>• Define the general characteristics of viruses related to their unique structures and genomes.<br>• Describe the method for controlling microbial Growth<br>• Demonstrate working and communication attitude effectively in team |
| **Indicative Contents**<br>المحتويات الإرشادية | Indicative content includes the following.<br>- Description and integration the structure of bacteria and fungi<br>- microbial Genetics.<br>- Basic methods used in bacterial diagnosis<br>- How Bacteriology relates to different diseases in human and animals. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | • Teaching the students using interactive teaching environment.<br>• Envolve the students in the lecture and implement online and in class Quizzes.<br>• Empowers the student to apply general microbiology in real life aspects.<br>• Training of students for practical applications in laboratories. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction and History of Microbiology |
| **Week 2** | Bacterial cell Structure and Function |
| **Week 3** | Bacterial Classification |

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| **Week 4** | Bacterial Nutrition and Growth |
| **Week 5** | Sterilization and Disinfection |
| **Week 6** | Antibiotics and Chemotherapeutic Agents |
| **Week 7** | Bacterial Genetics |
| **Week 8** | Bacterial Virulence |
| **Week 9** | Normal Flora and Probiotics |
| **Week 10** | Mid Term Exam |
| **Week 11** | Rickettsia and Chlamydia |
| **Week 12** | Mycoplasma |
| **Week 13** | General Mycology |
| **Week 14** | General virology |
| **Week 15** | Exam |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | General Laboratory Instructions |
| **Week 2** | Microscopes |
| **Week 3** | Sterilization and Disinfection |
| **Week 4** | Culture Media for Bacterial Growth |
| **Week 5** | Bacterial Nutrition and Growth |
| **Week 6** | Colony morphology |
| **Week 7** | Pure culture techniques |
| **Week 8** | Bacterial Motility |
| **Week 9** | Bacterial Morphology |
| **Week 10** | Bacterial Staining Techniques |
| **Week 11** | Bacterial Count |
| **Week 12** | Antibiotics Tests |
| **Week 13** | Biochemical Tests |
| **Week 14** | Mycology |
| **Week 15** | Exam |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | 1. Black, J. 2017. Microbiology: Principles and Applications, 11th ed. John Wiley.. | |
| **Recommended Texts** | BK Markey et al (2023) .Clinical Veterinary Microbiology, 2nd edition | |
| **Websites** | https://em100.edaptivedocs.net/GetDoc.aspx?doc=CLSI%20M23S3%20ED1:2023&scope=user | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Veterinary immunology | | | **Module Delivery** | |
| **Module Type** | C | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET306 | | | | |
| **ECTS Credits** | 5 | | | | |
| **SWL (hr/sem)** | 125 | | | | |
| **Module Level** | | 3 | **Semester of Delivery** | | 1 |
| **Administering Department** | | Veterinary microbiology | **College** | Veterinary medicine | |
| **Module Leader** | Jenan Nadhim Sadeq | | **e-mail** | Jinan.sadeq@qu.edu.iq | |
| **Module Leader's Acad. Title** | | | **Module Leader's Qualification** | | |
| **Module Tutor** | Hayder.Najei ayiz | | **e-mail** | Hayder.ayiz@qu.edu.iq | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | | 15-8-2024 | **Version Number** | | 1 |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | The objective of the course is to help you understand:<br>1-Conceptualize how the innate and adaptive immune responses coordinate to fight invading pathogens.<br>2-Determine what immunomodulatory strategies can be used to enhance immune responses or to suppress unwanted immune responses such as might be required in hypersensitivity reactions, transplantations or autoimmune diseases |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1. .Have a sound knowledge of the characteristics and roles of the cells and tissues which comprise the immune system.<br>2. Have a thorough command of the basic principles of immunology and how an immune response is activated and controlled.<br>3. Be able to illustrate and understand some useful applications of the principles of immunology. |

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| | 4. Have learned the basis of a number of laboratory techniques used in immunology. |
| **Indicative Contents**<br>المحتويات الإرشادية | Indicative content includes:<br>• Theme 1 – Cells and Tissue of the immune system (myeloid and lymphoid lineages, bone marrow, thymus, spleen, lymph nodes, mucosal associated lymphoid tissue, lymphatics and cellular movement).<br>• Theme 2 – The innate immune response (non-specific external surface protection, innate immune cell recognition of foreign material, phagocytosis, inflammation and complement).<br>• Theme 3 – Antigens and antigen receptors (antigens, immunogens, antibodies, T and B cell receptors, MHC class I and II, antigen presentation).<br>• Theme 4 – The adaptive immune response: dynamics of the immune response (activation/costimulation/differentiation of T cells, cytokines, germinal centres, class switching, somatic hypermutation/affinity maturation).<br>• Theme 5 – The adpative immune response: tolerance, hypersensitivity and mucosal immunity (central and peripheral tolerance mechanisms, type I/II/III/IV and V hypersensitivity, mucosal structure and functions, secretory IgA).<br>• Practical session on enzyme-linked immunosorbent assays (ELISAs) and Flow Cytometry. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1. To review the role of immune cells in protection from different types of pathogens<br>2. To discuss the types of cells involved in immune responses<br>3. To describe the nature of specificity in adaptive immune responses<br>4. To understand the role of lymphocyte recirculation in immune responses<br>5. To know the humeral and cellular components of the innate immune response.<br>6. To recognize the mechanisms of action of the components of the innate immune response |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| **Week** | **Material Covered** |
| **Week 1** | Principle of immunity and immune |
| **Week 2-3** | Immunoglobulin: Structure, variation, Function and synthesis |
| **Week 4-5** | Immunology of T and B cells |
| **Week 6** | Complement: Nature, Function and pathways |

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|---|---|
| **Week 7** | Cell mediated immunity, antigen recognition by T cells |
| **Week 8** | Immunological tolerance |
| **Week 9-10** | Hypersensitivity, Mechanism |
| **Week 11** | Auto-immunity |
| **Week 12** | Transplantation |
| **Week 13** | Principle of immune genetics |
| **Week 14** | Immuno-anaphylaxis reaction |
| **Week 15** | Immunity of infection |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| **Week** | **Material Covered** |
| **Week 1** | Lab 1: Introduction to immunology labs |
| **Week 2** | Lab 2: Lab animals |
| **Week 3-4** | Lab 3-4: Preservation of antigens and antibodies |
| **Week 5** | Lab 5: Separation of immunoglobulin |
| **Week 6** | Lab 6: Complement test |
| **Week 7** | Lab 7: Precipitation test |
| **Week 8** | Lab 8:Agglutination test |
| **Week 9** | Lab 9: Neutralization test |
| **Week 10-11** | Lab 10-11: Separation of lymphocytes from blood and lymph nodes |
| **Week 12** | Lab 12: Preparation of antigens |
| **Week 13** | Lab 13: Leukocytes |
| **Week 14** | Lab 14: Phagocytosis |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | **by Markey .B. Clinical Veterinary Microbiology, 2nd Edition , Leonard Finola, Archambault Marie, Cullinane Ann, Maguire D** | Yes |
| **Recommended Texts** | | |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Genetic** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET307** | | | | |
| **ECTS Credits** | 2 | | | | |
| **SWL (hr/sem)** | 50 | | | | |
| **Module Level** | 2 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Public health | | **College** | Veterinary medicine | |
| **Module Leader** | Kadhim Hassan abbas | | **e-mail** | Kadhim.abbas@qu.edu.iq | |
| **Module Leader's Acad. Title** | Assist. professor | | **Module Leader's Qualification** | Master | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | /8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 5- Teaching live map DNA and RNA.<br>6- Teaching how protein make.<br>7- Teaching genetic diseases.<br>8- Teaching who traits transmission. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 4- Traits transmission from parents to offspring<br>5- DNA and RNA role in live.<br>6- Selection of animals. |
| **Indicative Contents**<br>المحتويات الإرشادية | Attention in selection traits to receive traits which pointed to high production |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Paying attention to the methods of selection to avoided bad traits and genetic diseases |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Genetics history and its theories |
| **Week 2** | The cell and chromosome behavior |
| **Week 3** | Mendelian inheritance and its modification |
| **Week 4** | Genetics and statistics in pedigree analysis |
| **Week 5** | Genes interaction |
| **Week 6** | Multiple alleles and pseudoalleles |
| **Week 7** | Sex determination and inheritance related to sex |
| **Week 8** | Terminology of horses |
| **Week 9** | Linkage, crossing over and genetic map |
| **Week 10** | Chromosomal mutations |
| **Week 11** | The chemical and engineering basis of heredity |
| **Week 12** | Gene frequency and factors affecting it |
| **Week 13** | Resemblance between relatives |
| **Week 14** | Selection |
| **Week 15** | Methods of matting |
| **Week 16** | Exam |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | **علم الوراثة والتطبيق في تربية الحيوانات** | Yes |
| **Recommended Texts** | | |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Clinical pathology**<br>التشخيصات المرضية | | | **Module Delivery** | |
| **Module Type** | C | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET311** | | | | |
| **ECTS Credits** | 6 | | | | |
| **SWL (hr/sem)** | 150 | | | | |
| **Module Level** | **3** | | **Semester of Delivery** | 2 | |
| **Administering Department** | Internal and preventive medicine | | **College** | Veterinary medicine | |
| **Module Leader** | Ghassan Khudiar esmaeel | | **e-mail** | Ghassan.esmaeel@qu.edu.iq | |
| **Module Leader's Acad. Title** | Assist Professor | | **Module Leader's Qualification** | Ph.D | |
| **Module Tutor** | Mohammed Al-Saadi | | **e-mail** | Mohammed.alsaadi@qu.edu.iq | |
| **Peer Reviewer Name** | Amjed Talib | | **e-mail** | Amjed.talibqu.edu.iq | |
| **Scientific Committee Approval Date** | 20/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1- How to collect sample from appropriate site of infected animal<br>2- Learning the outline and strategies for the accurate diagnosis.<br>3- Tracking that changes that occur in animal body in health and disease.<br>4- Learn how to differentiate between disease through the clinical pathological changes |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1- Learn how to detecting of water electrolyte imbalance<br>2- Learn how to test the function and detecting of the disturbance of glands<br>3- learn how to diagnosis of parasite<br>4- Learn how to measure and interpret the results Rumen fluid.<br>5- learn how to diagnosis of bacteria<br>6- how to examine milk<br>7- how to make antibacterial sensitivity test<br>8- learn outline of clinical immunology<br>9- learn to differentiated between exudate and transudate |
| **Indicative Contents** | Week 1and 2<br>Detecting of water electrolyte imbalance |

| | |
|---|---|
| المحتويات الإرشادية | Week 3,4<br>Test the function and detecting of the disturbance of glands<br>Week 5,6,7,8<br>Diagnosis of parasite<br>Week 9:<br>Measure and interpret the results Rumen fluid<br>Week 10& 11<br>Diagnosis of bacteria<br>Week 11:<br>Milk examination<br>Week 12:<br>Antimicrobial sensitivity test<br>Week 13 ,14<br>Clinical immunology<br>Week 15<br>Transudate and exudate |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | In theoretical part of the module we will explain the principle of clinical pathology including hematology, clinical microbiology, clinical biochemistry then we will have divided students in too small group and performed the actual test on clinical samples. |

**Delivery Plan (Weekly Syllabus)**

المنهاج الاسبوعي النظري

| | **Material Covered** |
|---|---|
| **Week 1** | Introduction |
| **Week 2** | Terms |
| **Week 3** | Endocrinology |
| **Week 4** | Clinical parasitology |
| **Week 5** | Clinical parasitology |
| **Week 6** | Hematology |
| **Week 7** | Hematology |
| **Week 8** | Rumen fluid examination |
| **Week 9** | Clinical microbiology |
| **Week 10** | Clinical microbiology |
| **Week 11** | Exam |

| | |
|---|---|
| **Week 12** | Milk examination |
| **Week 13** | Antimicrobial sensitivity test |
| **Week 14** | Clinical immunology |
| **Week 15** | **Cancer diagnosis** |
| **Week 16** | **eaxam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Fecal examination |
| **Week 2** | Fecal examination |
| **Week 3** | Fecal examination |
| **Week 4** | Skin scraping examination |
| **Week 5** | Clinical microbiology |
| **Week 6** | Clinical microbiology |
| **Week 7** | Milk Examination( physical and chemical ) |
| **Week 8** | Milk Examination ( Bacterial ) |
| **Week 9** | Antimicrobial sensitivity test |
| **Week 10** | Rumen fluid examination |
| **Week 11** | Serological test |
| **Week 12** | Serological test |
| **Week 13** | Tests of detection of toxic substances. |
| **Week 14** | Tests of detection of toxic substances. |
| **Week 15** | Revision ( over - all ). |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Textbook of clinical pathology | Yes |
| **Recommended Texts** | - | - |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Clinical Pharmacology and Toxicology** | | | **Module Delivery** | |
| **Module Type** | **Core** | | | ☒ **Theory**<br>☐ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET308 | | | | |
| **ECTS Credits** | **6** | | | | |
| **SWL (hr/sem)** | **150** | | | | |
| **Module Level** | 3 | | **Semester of Delivery** | 2 | |
| **Administering Department** | Physiology, Biochemistry and Pharmacology | | **College** | Veterinary Medicine | |
| **Module Leader** | Wisam Hassian Salman | | **e-mail** | Wisam.salman@qu.edu.iq | |
| **Module Leader's Acad. Title** | Asist. Professor | | **Module Leader's Qualification** | Ph.D. | |
| **Module Tutor** | Ishtar Adnan Alethari | | **e-mail** | ishtar.alethari@qu.edu.iq | |
| **Peer Reviewer Name** | Name | | **e-mail** | E-mail | |
| **Scientific Committee Approval Date** | 8/8/2024 | | **Version Number** | 1.0 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 5. The course deals with graduating students who possess knowledge of medications intended for treating various medical conditions.<br>6. The students knowing the |

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|---|---|
| | 7. They have the experience to write the medical prescription in a scientific and accurate manner, relying on the basics they have been trained on in the practical classes.<br>8. They have Scientific basis for writing a prescription for the treatment of toxic cases.<br>9. Graduating students familiar with the basics of toxicology.<br>10. Able to supervise pharmacies and veterinary clinics. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1. Familiarity with the basics of pharmacotherapy.<br>2. Studying the functions of the body's organs and the mechanism of action of various medications on them.<br>٣. The student knows how to prescribe the appropriate doses for each medical condition, the side effects of each drug and drug interactions between them.<br>4. Students' ability to write the appropriate medical prescription with all its parts based on the laboratory and practical applications.<br>5. Skill in dealing with animals and methods of administering medications to them.<br>6. Knowing about the nature and source of drugs.<br>٧. Knowledge of how to prepare pharmaceutical preparations in the clinic or veterinary pharmacy and how to describe their preparation in the medical prescription.<br>8. Familiarity with Concepts and terminology of toxicology, Toxicokinetics and Toxicodynemics.<br>٩. The students have an experience in diagnosing poisoning cases and prescribing appropriate antidotes for each .<br>١٠. Students have sufficient experience to know the safety of medicines through calculation $ED_{50}$,$LD_{50}$ & TI. |
| **Indicative Contents**<br>المحتويات الإرشادية | Indicative content includes the following:<br><u>Part A – Antimicrobial drugs:</u><br>• Antibacterial drugs<br>• Antifungal drugs<br>• Antiviral drugs<br>[SSWL= 9 hrs]<br><br><u>Part B –Chemotherapy of parasitic diseases:</u><br>• Antinematodal drugs<br>• Anticestodal drugs<br>• Antiprotozoan drugs<br>[SSWL=6 hrs]<br><br><u>Part C- Dermatopharmacology:</u><br>• <u>Ectoparasiticides</u><br>• <u>Antiseptics</u><br>• <u>Disinfectants</u> |

| | |
|---|---|
| | [SSWL=3 Hrs]<br><br>Part D-:<br>• Endocrine pharmacology<br>• Autocoids and anti-inflammatory<br>• Growth promotors<br>• Nanotherapy<br>[SSWL=9 Hrs]<br><br>Part E– Toxicology:<br>• Concepts and terminology of toxicology, Toxicokinetics and toxicodynemics<br>• Diagnostic aspects of toxicology , Antidotes and general treatment of poisoning<br>• Diagnostic aspects of toxicology, Antidotes and general treatment of poison<br>• House hold & industrial products, biotoxins and mycotoxin<br>• Toxic plant , Eviromental polluation with toxicant<br>• Pharmaceuticals poisoning<br>[SSWL=18 hrs]<br><br>**Total hrs = 45 hrs** |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Encouraging the student's commitment to attendance and active participation in lectures and taking daily, semester and final theoretical and practical exams.<br>Using educational and technological means, and the modern method in teaching the subject and referring to practical training examples. Discussion is used in lectures as an effective means of delivering the study material to students and keeping up with the latest methods, approaches and modern trends in the teaching process. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Antibacterial drugs |

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|---|---|
| **Week 2** | Antifungal drugs |
| **Week 3** | Antiviral drugs |
| **Week 4** | Chemotherapy of parasitic diseases (antinematodal, anticestodal and antiprotozoal drugs) |
| **Week 5** | Dermatopharmacology, Ectoparasiticides , Antiseptics and Disinfectants. |
| **Week 6** | Endocrine pharmacology |
| **Week 7** | Autacoids and Anti-inflammatory |
| **Week 8** | Growth promoters |
| **Week 9** | Nanotherapy |
| **Week 10** | Concepts and terminology of toxicology |
| **Week 11** | Toxicokinetics and toxicodynemics |
| **Week 12** | Diagnostic aspects of toxicology , Antidotes and general treatment of poisoning |
| **Week 13** | Diagnostic aspects of toxicology , Antidotes and general treatment of poisoning |
| **Week 14** | House hold & industrial products, biotoxins & mycotoxin |
| **Week 15** | Toxic plant , Environmental pollution with toxicant |
| **Week 16** | **Preparatory week before the final Exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Nature and source of drugs |
| **Week 2** | Writing of prescription |
| **Week 3** | Pharmaceutical preparation for farm animals and poultry |
| **Week 4** | Despising of drugs lotion and solution |
| **Week 5** | Despising of drugs ointment and cream |
| **Week 6** | Despising of drug antacid and lanimante |

| | |
|---|---|
| **Week 7** | Analgesic drugs |
| **Week 8** | Dose response relationships ($LD_{50}$, $LD_{50}$ ,TI) |
| **Week 9** | Sensitivity test and antibiotics |
| **Week 10** | Organophosphate poisoning in rats and mice |
| **Week 11** | Determination of blood cholinesterase activity |
| **Week 12** | Treatment of nitrite poisoning in mice |
| **Week 13** | Aspirin toxicity (comparison with acetaminophen) |
| **Week 14** | Review & seminars |
| **Week 15** | Review & seminars |
| **Week 16** | **Preparatory week before the final Exam** |

## Learning and Teaching Resources

مصادر التعلم والتدريس

| | **Text** | **Available in the Library?** |
|---|---|---|
| **Required Texts** | Riviere, J. E., & Papich, M. G. (2018). Veterinary pharmacology and therapeutics (Tenth edition). Wiley Blackwell | Yes |
| **Recommended Texts** | Gupta, R. C. (2018). Veterinary toxicology : basic and clinical principles (Third edition). Academic Press, an imprint of Elsevier | Yes |
| **Websites** | https://www.wiley.com/en-us/Veterinary+Pharmacology+and+Therapeutics%2C+10th+Edition-p-9781118855881 | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Systemic Veterinary Pathology** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET315** | | | | |
| **ECTS Credits** | **6** | | | | |
| **SWL (hr/sem)** | **150** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 2 | |
| **Administering Department** | Pathology and Poultry Diseases | | **College** | Veterinary medicine | |
| **Module Leader** | Khalil Gazar Chelab | | **e-mail** | Khalil.Chelab@qu.edu.iq | |
| **Module Leader's Acad. Title** | Prof. | | **Module Leader's Qualification** | PhD | |
| **Module Tutor** | Atiaf Ghanim Rhayf | | **e-mail** | Atiaf.Rhayf@qu.edu.iq | |
| **Peer Reviewer Name** | Hala Abbas Naji | | **e-mail** | Hala.Naji@qu.edu.iq | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | Preparing students at an advanced and specialized scientific level with the ability to understand systemic diseases in detail to prepare them for more specialized advanced stages in the field of diagnosing diseases and understanding the working .mechanism of veterinary animals |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1. Understanding the mechanisms of changes that take place during the disease at the cellular level.<br>2. Study of pathogens.<br>3. Diagnosis of diseases. |

| | |
|---|---|
| | 4. Clarify the means of the body's response to damage and repair at the cellular level.<br>5. Understanding in-kind pathological phenomena such as transformation, mutation, atrophy, hypertrophy and inflammation. 6. Scientific research. |
| **Indicative Contents**<br>المحتويات الإرشادية | Veterinary systemic pathology involves the study of diseases affec.ng various organ systems in animals. It combines clinical pathology and histopathology to understand the mechanisms, progression, and effects of diseases at a systemic level. Below are indica.ve contents typically covered in a veterinary systemic pathology course or textbook:<br>1. Pathology of the Cardiovascular System.<br>2. Pathology of the Respiratory System.<br>3. Pathology of the Gastrointestinal System.<br>4. Pathology of the Urinary System.<br>5. Pathology of the Endocrine System.<br>6. Pathology of the Hematopoietic and Lymphatic Systems.<br>7. Pathology of the Nervous System.<br>8. Pathology of the Musculoskeletal System.<br>9. Pathology of the Integumentary System.<br>10.Pathology of the Reproduc.ve System.<br>11.Pathology of the Special Senses.<br>These contents provide a comprehensive overview of the various organ systems and the pathological processes affec.ng them, which are essen.al for diagnosing and understanding diseases in veterinary practice. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم |
|---|
| Lectures: Explain the pathogenesis and pathological changes in different body systems.<br>Case-Based Learning: Discuss clinical cases and relate symptoms to pathological findings.<br>Practical Sessions: Examine gross lesions and histopathological slides.<br>Microscopy: Identify cellular and tissue changes under the microscope.<br>Problem-Based Learning: Develop diagnostic and analytical skills through veterinary cases.<br>Group Discussions: Encourage collaboration and scientific reasoning.<br>Visual Learning: Use images, diagrams, and videos of pathological lesions.<br>Laboratory Demonstrations: Demonstrate necropsy techniques and tissue sampling.<br>Self-Directed Learning: Encourage reading textbooks and scientific articles.<br>Assessment and Feedback: Evaluate knowledge through quizzes, practical exams, and case reports. |
| |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | **Diseases of Respiratory system** - Upper respiratory tract diseases (rhinitis, sinusitis) - Lower respiratory tract diseases (bronchitis, pneumonia). |
| **Week 2** | Lung pathology (emphysema, fibrosis, neoplasia) - Pleural diseases (pleuritis, pleural effusion). |
| **Week 3** | **Diseases of Cardiovascular system** - Diseases of the heart (myocardial infarction, cardiomyopathies) - Vascular pathology (arteriosclerosis, thrombosis) - Congenital heart defects - Inflammatory diseases (endocarditis, myocarditis) - Heart failure |
| **Week 4** | **Diseases of haemopoetic and lymphatic tissues** - Bone marrow pathology (anemia, leukemia) - Lymphoid organs (lymphadenitis, lymphoma, splenomegaly) - Blood disorders (coagulopathies, hemolytic anemia) |
| **Week 5** | **Diseases of digestive system** - Oral cavity diseases (development anomalies, stomatitis, neoplasia) Week |
| **Week 6** | **Diseases of digestive system** - Esophageal and gastric diseases (esophagitis, gastritis, ulcers) - Small and large intes.ne diseases (enteritis, colitis, tumors) |
| **Week 7** | **Diseases of digestive system** - Hepatobiliary pathology (hepatitis, cirrhosis, cholangitis) - Pancreatic diseases (pancreatitis, neoplasms) |
| **Week 8** | **Disease of urinary system** - Glomerular diseases (glomerulonephritis, amyloidosis) - Tubular and interstitial diseases (pyelonephritis, interstitial nephritis) - Renal failure (acute and chronic) - Urinary tract infections - Urolithiasis |
| **Week 9** | **Disease of Male genital system** - Male reproduc.ve system diseases (orchitis, prostatitis, testicular tumors) |
| **Week 10** | **Disease of Female genital system** - Female reproduc.ve system diseases (endometritis, ovarian tumors, mastitis) - Pregnancy-related pathology (abortion, dystocia) - Reproduc.ve neoplasms |
| **Week 11** | **Diseases of Muscol Skeletal system** - Bone diseases (osteomyelitis, osteoporosis, fractures) - Joint diseases (arthritis, degenera.ve joint disease) - Muscle pathology (myositis, muscular dystrophy) - Tumors of bone and muscle |
| **Week 12** | **Diseases of Nervous system** - Central nervous system diseases (encephalitis, meningitis, tumors) - Peripheral nervous system disorders (neuropathy, myopathy) - Neurodegenera.ve diseases - Trauma and its effects on the nervous system |
| **Week 13** | **Disease of Endocrine** - Pituitary gland pathology (hyperpituitarism, hypopituitarism) - Thyroid and parathyroid disorders (hyperthyroidism, hypothyroidism) - Adrenal gland pathology (Cushing's disease, Addison's disease) - Pancreatic endocrine disorders (diabetes mellitus, insulinoma) |

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|---|---|
| **Week 14** | **Diseases of skin and accessory** - Skin diseases (dermatitis, alopecia, neoplasms) - Diseases of adnexal structures (sebaceous glands, sweat glands) - Cutaneous neoplasia - Autoimmune skin disorders |
| **Week 15** | **Diseases of eye and special organ -** Ocular diseases (conjunctivitis, uveitis, cataracts) - Ear diseases (otitis externa, interna, media, tumors) - Nasal cavity and sinus disorders. |
| **Week 16** | **Exam** |

## Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

| | **Material Covered** |
|---|---|
| **Week 1** | Diseases of Respiratory system/ Upper respiratory tract. |
| **Week 2** | Diseases of Lung and Pleura. |
| **Week 3** | Diseases of Cardiovascular system. |
| **Week 4** | Diseases of haemopoetic and lymphatic tissues |
| **Week 5** | Diseases of digestive system. |
| **Week 6** | Diseases of digestive system. |
| **Week 7** | Diseases of digestive system. |
| **Week 8** | Diseases of urinary system |
| **Week 9** | Diseases of Male genital system |
| **Week 10** | Diseases of Female genital system |
| **Week 11** | Diseases of Muscol Skeletal system |
| **Week 12** | Diseases of Nervous system. |
| **Week 13** | Diseases of Endocrine |
| **Week 14** | Diseases of skin and accessory |
| **Week 15** | Diseases of eye and special organ |
| **Week 16** | **Exam** |

## Learning and Teaching Resources

مصادر التعلم والتدريس

| | **Text** | **Available in the Library?** |
|---|---|---|
| **Required Texts** | | yes |
| **Recommended Texts** | | yes |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Animal physical examination<br>**الفحص البدني للحيوان** | | | **Module Delivery** | |
| **Module Type** | C | | | ☐ **Theory**<br>☒ **Lecture**<br>☐ **Lab**<br>☐ **Tutorial**<br>☒ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET312 | | | | |
| **ECTS Credits** | 2 | | | | |
| **SWL (hr/sem)** | 50 | | | | |
| **Module Level** | 3 | | **Semester of Delivery** | 2 | |
| **Administering Department** | Internal and preventive medicine | | **College** | Veterinary medicine | |
| **Module Leader** | Yahia ismail khudhair | | **e-mail** | Yahia.khudiar@qu.edu.iq | |
| **Module Leader's Acad. Title** | Professor | | **Module Leader's Qualification** | PhD | |
| **Module Tutor** | Raeda Nema Khadim | | **e-mail** | vet21.post12@qu.edu.iq | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | 16\8\2024 | | **Version Number** | ١ | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1- Teaching students the basics of clinical examination of animals<br>2- Teaching students how to deal with medical cases and examine them in general and in private |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | Training students on how to examine, get used to, and deal with animals, in addition to how to deal with animal keepers |
| **Indicative Contents**<br>المحتويات الإرشادية | 1. **Signalment**: Gather basic information (species, breed, age, sex, and reproductive status).<br>2. **History**: Collect medical and behavioral history from the owner. |

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| | 3. **General Appearance**: Assess the overall condition (body condition score, coat, behavior, etc.).<br>4. **Vital Signs**: Measure temperature, pulse, respiration rates, and check mucous membrane color.<br>5. **Cardiovascular Exam**: Listen to heart sounds and check pulse quality.<br>6. **Respiratory Exam**: Auscultate lungs and observe breathing effort.<br>7. **Gastrointestinal Exam**: Palpate the abdomen and assess bowel sounds.<br>8. **Musculoskeletal Exam**: Evaluate mobility and joint condition.<br>9. **Skin Assessment**: Check for lesions, parasites, and coat condition.<br>10. **Neurological Exam**: Test reflexes and coordination.<br>11. **Reproductive Exam**: Assess external reproductive organs if necessary.<br>12. **Urinary System Exam**: Palpate the bladder and assess urination. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Learning with field training on conducting clinical examinations on various animals, in addition to field examinations for the purpose of arriving at an accurate diagnosis of pathological cases, in addition to training the student on how to deal with breeders and asking appropriate questions for the purpose of collecting information and linking it with the results of the clinical examination and the surrounding conditions in order to diagnose the disease condition of an animal. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | How to exam animals |
| **Week 2** | How to deal with breeders |
| **Week 3** | How to deal with breeders |
| **Week 4** | Examination of temperature of large animals |

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|---|---|
| **Week 5** | Examination of temperature of pet animals |
| **Week 6** | Examination of mucus membrane and mouth of animals |
| **Week 7** | Examination of pulse and heart in large animals |
| **Week 8** | Examination of pulse and heart in pet animals |
| **Week 9** | Exam |
| **Week 10** | Examination of lymph nodes |
| **Week 11** | Examination of respiration |
| **Week 12** | Examination of respiration |
| **Week 13** | Examination of rumen |
| **Week 14** | Examination of appetite and general attitude |
| **Week 15** | Revision |

## Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | Large animal internal medicine, textbook of the diseases of cattle, horses, sheep, pigs and goats | Yes |
| **Recommended Texts** | A textbook of preventive medicine, Clinical Examination of Farm Animals | yes |
| **Websites** | Research gate, google scholar | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Systematic Bacteriology and Mycology | | | **Module Delivery** | |
| **Module Type** | C | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET309 | | | | |
| **ECTS Credits** | 5 | | | | |
| **SWL (hr/sem)** | 125 | | | | |
| **Module Level** | | 3 | **Semester of Delivery** | | 2 |
| **Administering Department** | | Veterinary Microbiology | **College** | Veterinary medicine | |
| **Module Leader** | Azhar Abdulsada Neamah | | **e-mail** | azhar.neamah@qu.edu.iq | |
| **Module Leader's Acad. Title** | | Assist.Prof | **Module Leader's Qualification** | | MSC |
| **Module Tutor** | Jameela Radi Esmaeel | | **e-mail** | Jameela.Esmaeel@qu.edu.iq | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | | 15/8/2024 | **Version Number** | | 1 |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | • The Microbiology module provides a practical introduction to the classification of microorganisms, their importance in various environments, and their impact on the environment, animals and human health.<br>• General basic knowledge on laboratory equipment and requirements for bacterial isolation.<br>• Provide the knowledge on bacterial virulence factors. |

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|---|---|
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | After completion of this course students are expected to be able to:<br>• Describe basic cell structure and its function.<br>• Define the evolution of prokaryotic cells, its diversity.<br>• Describe the essential concepts of microbial metabolisms and its metabolic diversity<br>• Define the mutation and horizontal gene transfer and its effect to diversity of microorganisms.<br>• Define the general characteristics of viruses related to their unique structures and genomes.<br>• Describe the method for controlling microbial Growth<br>• Demonstrate working and communication attitude effectively in team |
| **Indicative Contents**<br>المحتويات الإرشادية | Indicative content includes the following.<br>- Description and integration the structure of bacteria and fungi<br>- microbial Genetics.<br>- Basic methods used in bacterial diagnosis<br>- How Bacteriology relates to different diseases in human and animals. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | • Teaching the students using interactive teaching environment.<br>• Envolve the students in the lecture and implement online and in class Quizzes.<br>• Empowers the student to apply general microbiology in real life aspects.<br>• Training of students for practical applications in laboratories. |

**Delivery Plan (Weekly Syllabus)**

المنهاج الاسبوعي النظري

| | **Material Covered** |
|---|---|
| **Week 1** | Staphylococcus |
| **Week 2** | Streptococcus |
| **Week 3** | Corynebacterium, Listeria |

| | |
|---|---|
| **Week 4** | Bacillus |
| **Week 5** | Clostridium |
| **Week 6** | Actinomyces and Nocardia |
| **Week 7** | Actionbacillus, Pasteurella |
| **Week 8** | Haemophillus, Moraxella and Bordetella |
| **Week 9** | Pseudomonas (Burkholderia) |
| **Week 10** | Spharophorus, Enterobacteriaceae |
| **Week 11** | Brucella |
| **Week 12** | Leptospira, Campylobacter |
| **Week 13** | Mycobacterium |
| **Week 14** | Mycology |
| **Week 15** | Exam |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Staphylococcus |
| **Week 2** | Streptococcus |
| **Week 3** | Corynebacterium |
| **Week 4** | Rhodococcus, Listeria |
| **Week 5** | Bacillus |
| **Week 6** | Clostridium and Anaerobic Condition |
| **Week 7** | Mycobacterium |
| **Week 8** | Pasteurella |
| **Week 9** | Pseudomonas (Burkholderia) |
| **Week 10** | Leptospira |
| **Week 11** | Brucella |
| **Week 12** | Enterobacteriaceae1 |
| **Week 13** | Enterobacteriaceae2 |
| **Week 14** | Fungi Morphology |
| **Week 15** | Exam |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | 1. Black, J. 2017. Microbiology: Principles and Applications, 11th ed. John Wiley.. | |
| **Recommended Texts** | BK Markey et al (2023) .Clinical Veterinary Microbiology, 2nd edition | |
| **Websites** | https://em100.edaptivedocs.net/GetDoc.aspx?doc=CLSI%20M23S3%20ED1:2023&scope=user | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Protozoa and Arthropod | | | **Module Delivery** | |
| **Module Type** | C | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET307 | | | | |
| **ECTS Credits** | 5 | | | | |
| **SWL (hr/sem)** | 125 | | | | |
| **Module Level** | | 3 | **Semester of Delivery** | | 2 |
| **Administering Department** | | Veterinary Microbiology | **College** | Veterinary medicine | |
| **Module Leader** | Noor Idan Jarad | | **e-mail** | Noor.jarad@qu.edu.iq | |
| **Module Leader's Acad. Title** | | Assist Prof. | **Module Leader's Qualification** | | Ph.D |
| **Module Tutor** | Moneer Abd-Al Ameer | | **e-mail** | monyerr.abd@qu.edu.iq | |
| **Peer Reviewer Name** | | Noaman Naji A'aiz | **e-mail** | noaman.aaiz@qu.edu.iq : | |
| **Scientific Committee Approval Date** | | 15-8-2024 | **Version Number** | | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1.Explanation of scientific subjects through theoretical lectures.<br>2. Training of students for practical applications in laboratories.<br>3.Student prepare a scientific related reports.<br>4. Introducing students to the most important veterinary parasites and their life cycle medical important, ways of transmission and morbidity and treatment.<br>5. Developing the skills of students in the diagnosis of parasites and accurate diagnos each parasite. |

| | |
|---|---|
| | 6. Introduce students to modern diagnostic methods. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1.The student is introduced to parasitology, the most important types of veterinary parasites, zoonotic parasites between humans and animals, their life cycle, methods of transmission, pathogenesis, and treatment.<br>2. The student acquires the skills of diagnostic methods for parasites and accurate diagnosis of each parasite<br>3.The student acquires the skills of modern diagnostic methods for parasites B3-The student acquires skills in treating and controlling parasitic diseases |
| **Indicative Contents**<br>المحتويات الإرشادية | 1.The learner provides assistance to classmates in class and engages in teamwork.<br>2- The student strives to maintain mutual respect between himself and his classmates, as we educational staff at the college.<br>3- The student is familiar with the ethics of the profession and the relationship with educato conscientious.<br>4. Writing abilities—enhancing students' capacity to write scientific reports to ai veterinary degrees. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1- The student knows the basic methods of sampling and population and how to take samples from the animal community<br>2- Enabling the student to know the importance of the parasite and how to display characteristics relevant to animal research and veterinary experiments<br>3- Enabling the student to know how to treatment the animal infected with parasite.<br>4 - The student will acquire the skills of using control programs of parasite disease<br>5 - The student acquires skills in diagnosis of different parasites with modern methods<br>6. The learner practices volunteer work with full awareness and understanding |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |

| | |
|---|---|
| **Week 1** | Phylum: Protozoa introduction |
| **Week 2** | Trypanosomatidae |
| **Week 3** | Trichomonadae |
| **Week 4** | Monocercomonadidae |
| **Week 5** | Eimeriidae |
| **Week 6** | Sarcocystidae |
| **Week 7** | Plasmodiidae |
| **Week 8** | Cryptoseoridiidae |
| **Week 9** | Babesiidae,<br>Theileriidae. |
| **Week 10** | Phylum: Arthropoda introduction |
| **Week 11** | Ioxdidae,Argasidae |
| **Week 12** | Sarcoptidae, Psoroptidae, Tabanidae |
| **Week 13** | Culicidae, Psychodidae,,Simuliidae, Oestridae |
| **Week 14** | Anthomyidae, Cimicidae, Haematopinida |
| **Week 15** | Ischnocera, Amblycera |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Trypanosoma brucei, T.equiperdium, T.evansi<br>T.cruzi, Leishmania (Amastigete), |
| **Week 2** | *Trichomonas vaginalis*<br>Entamoeba histolytica(trophozoite) |
| **Week 3** | Eimeria (life cycle), |
| **Week 4** | Sarcocystis, Toxoplasma gondii |
| **Week 5** | Cryptosporidium |
| **Week 6** | Plasmodium gallinaceum, |
| **Week 7** | Babesia:B.canis,B.motasi |
| **Week 8** | Theileria, Anaplasma |
| **Week 9** | Hard ticks, Hyalomma, Rhipicephalus, Boophilus and larva |
| **Week 10** | Soft tick( Argas persicus) |
| **Week 11** | Demodex folliculorum, Dermanyssus gallinae |
| **Week 12** | Psorptes, Sarcoptes |
| **Week 13** | Menacanthus straminus, Haematopinus suis<br>Ctenocephalides canis, Xenopsylla cheopis, Cimex lectularis |

| | |
|---|---|
| **Week 14** | Anopheles,Culex, (male,female) pupa and larva, Simulium adult, Larva |
| **Week 15** | Oesteridae, Oestrus ovis, Hypoderma bovis, Gastrophilus Intestinalis |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Parasitology for Veterinarians 10th ed.<br>Main references (sources) | Yes |
| **Recommended Texts** | Foundations of Parasitology 9th ed. 2013 | No |
| **Websites** | Centers for Disease Control and Prevention (cdc.gov)<br>https://www.cdc.gov/ | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Skeleton Anatomy** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET102** | | | | |
| **ECTS Credits** | **8** | | | | |
| **SWL (hr/sem)** | **200** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Anatomy &histology | | **College** | Veterinary medicine | |
| **Module Leader** | Sameer Ahamed | | **e-mail** | Sameer.abidalredah@qu.edu.iq | |
| **Module Leader's Acad. Title** | professor | | **Module Leader's Qualification** | PHD | |
| **Module Tutor** | Hassaneen Al-sharoot | | **e-mail** | Hassaneen.sharoot@qu.edu.iq | |
| **Peer Reviewer Name** | Abdulrazzaq baqer | | **e-mail** | Abdulrazzaq.alrabei@qu/edu.iq | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. Develop manual dissection skills and understand dissection methods through Applying techniques.<br><br>2. Understand the locations of organs in the animal body.<br><br>3. Explain the internal and external structure of organs inside the body. |

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|---|---|
| | 4. Anatomical comparison of organs between different animals.<br><br>5. Understand the importance of the skeleton in supporting the body and giving the external shape to animals. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | Important: Write at least 6 learning outcomes, preferably equal to the number of study weeks.<br>1. Identify the anatomical levels and some related anatomical terms<br>2. List the different terms associated with practical and theoretical anatomy.<br>3. Study the types of bones of the forelimb.<br>4. Discuss the scapula and humerus.<br>5. Describe the radius and ulna and the joint formed between them.<br>6. Explain the bones of the hand.<br>7. Identify the types of bones of the hand (carpal bones, metacarpal bones and finger bones).<br>8. Explain the joints of the forelimb.<br>9. Explain the bones of the pelvis.<br>10. Explain the bones of the thigh area.<br>11. Clarify the relationship between the bones of the tibia and fibula.<br>12- Explain the bones of the tarsal foot<br>13- Explain the bones of the metatarsal foot<br>14- Describe the bones of the finger<br>15- Explain the joints of the hindlimb |
| **Indicative Contents**<br><br>المحتويات الإرشادية | Week 1<br>Learn about the anatomical levels and some important anatomical terms in addition to defining anatomy, its types and teaching methods (3 hour)<br>Week 2<br>Definition of the skeletal structure and types of digestive structures (3 hour)<br>Week 3<br>Study the scapula and humerus (3 hour)<br>Week 4 |

| | |
|---|---|
| | Explain the radius and ulna (3 hour)<br>Week 5<br>Describe the wrist bones of the hand<br>Week 6<br>Explain the metatarsal and finger bones (3 hour)<br>Week 7<br>Explain the joints of the forelimb (3 hour)<br>Week 8<br>Study the pelvic bones (3 hour)<br>Week 9<br>Study the thigh area anatomically 3 hour)<br>Week 10<br>Explain the tibia and fibula bones (3 hour)<br>Week 11<br>Dissect the Achilles joint and identify its bones (3 hour)<br>Week 12<br>Study the metatarsal bone (3 hour)<br>Week 13<br>Study the finger Foot (3 hour)<br>Week 14<br>Anatomy of the foot (3 hour)<br>Week 15<br>Anatomical description of the joints of the hind leg (3 hour) |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | The main strategy that will be followed in delivering this unit is to stimulate students' participation in dissection, while at the same time developing and enriching their skills in handling dissection instruments. This will be done |

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| | through classroom, interactive lessons, as well as by conducting simple experiments that include sampling activities that interest students. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | Material Covered |
| **Week 1** | Introduction Skeleton: Introduction, Methods of study, topographical and descriptive terms. |
| **Week 2** | General osteology: Skeleton, bones; types, structures, development, chemical and physical properties. |
| **Week 3** | The vertebral column, ribs, sternum, bones of thoracic and pelvic limbs |
| **Week 4** | General syndesmology (Arthrology): Joints, classifications, structures of synovial joint and Fibrous joint and cartilaginous joint. |
| **Week 5** | The joints of thoracic limb, |
| **Week 6** | The joints of pelvic limb. |
| **Week 7** | Common integument: Foot of horse, hoof, claw, stay apparatus (thoracic and pelvic limb). |
| **Week 8** | Myology: Types of muscles, structures and action. |
| **Week 9** | Accessory structures associated with skeletal muscles, nerves and vessels supply. |
| **Week 10** | Muscles of the limbs. |
| **Week 11** | Muscles of the thoracic and abdomen. |
| **Week 12** | Muscles of the head and neck. |
| **Week 13** | Endocrine glands: Pituitary gland and hypothalamus. |
| **Week 14** | Pineal body, thyroid gland. |
| **Week 15** | Parathyroid gland and adrenal gland. |
| **Week 16** | Exam |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Lab / introduction of Anatomy and anatomical plane |
| **Week 2** | Lab/ scapula and humorous |
| **Week 3** | Lab/ radia and ulna |
| **Week 4** | Carpal bones |
| **Week 5** | Metacarpal bones |
| **Week 6** | Digit of forelimb |
| **Week 7** | Pelvic bones |
| **Week 8** | Femur and patella |
| **Week 9** | Tibia and fibula |
| **Week 10** | Tarsal bones |
| **Week 11** | Meta tarsal |
| **Week 12** | Digits of hind limb |
| **Week 13** | skull |
| **Week 14** | ribs |
| **Week 15** | Vertebra column |
| **Week 16** | Exam |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |

| | | |
|---|---|---|
| **Required Texts** | Bragulla, H., H. E. König and H.-G. Liebich (2007). Veterinary Anatomy of Domestic Mammals Textbook of veterinary anatomy | Yes |
| **Recommended Texts** | The anatomy of the domestic animal | Yes |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **General Biology** | | | **Module Delivery** | |
| **Module Type** | **B** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET101** | | | | |
| **ECTS Credits** | **8** | | | | |
| **SWL (hr/sem)** | **200** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Microbiology | | **College** | Veterinary medicine | |
| **Module Leader** | Azhar Chafat Karawan | | **e-mail** | Azhar.karawan@qu.edu.iq | |
| **Module Leader's Acad. Title** | Professor | | **Module Leader's Qualification** | Ph.D. | |
| **Module Tutor** | Khilood Hamdan Fahed | | **e-mail** | Khilod.hamdan@qu.edu.iq | |
| **Peer Reviewer Name** | Alyaa abdulhussein alsaedi | | **e-mail** | Alyaa.alsaedi@qu.edu.iq | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1-Explain the General information of laboratory and the structue of microscop<br>2- Introduction definitions of terms and Origin of life.<br>3-Explain the Kingdoms of living world.<br>4-study the Structure of cell & functions and Theory of cell.<br>5-Understand the Molecular Biology and Nucleic acid types and functions ,Genes and chromosomes .<br>6-study the general characters of virus ,bacteria ,fungi ,yeast and protozoa. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1-List the groups of micro-organisms.<br>2-Define the cell and there structure and the functions of each part.<br>3-Identify the origin of life.<br>4-Discuss the kingdoms of living world.<br>5-Define the Genetic engineering Nucleic acid types.<br>6-List Laboratory equipments (Balance, water bath, ph meter, centrifuge, incubator). |
| **dicative Contents**<br>المحتويات الإرشادية | Week 1<br>Introduction definitions of terms<br>Week 2<br>Characteristics of living organisms<br>Week 3<br>Taxonomy and Synopsis of animal phyla<br>Week 4<br>Kingdom: Monera (Prokaryotic)<br>Week 5<br>Kingdom:Protista(Eukaryotic)<br>Week 6,7,8,9,10<br>Kingdom : Animalia,Subphylum Invertebrates<br>Week 11,12,13,14,15<br>Subphylum: Vertebrata (Chordata) |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module is encourage the students by using the microscope and the Laboratory equipments (Balance, water bath, ph meter, centrifuge, incubator) .and expanding their critical thinking skills.this will be done through classroom . |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | Material Covered |
| Week 1 | Introduction and definitions of terms |
| Week 2 | Origin of life |
| Week 3 | Characteristics of living organisms |
| Week 4 | Kingdoms of living world |
| Week 5 | Kingdom: Monera(prokaryotic) |
| Week 6 | Kingdom: Protista(Eukaryotic) |
| Week 7 | Phylum: Sarcomastigophora |
| Week 8 | Subphylum:Vertebrata(Chordata)<br>Class :Amphibia(frog) |
| Week 9 | Living organisms |
| Week 10 | Comparison between Prokaryotic and Eukaryotic cells |
| Week 11 | Mitosis and Meiosis |
| Week 12 | Types of living tissues |
| Week 13 | General characters of bacteria and viruses |
| Week 14 | Nucleic acid types and functions |
| Week 15 | Genes and Chromosomes |
| Week 16 | Preparatory week before the final Exam |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Laboratory Equipments |
| **Week 2** | The Microscope |

| | |
|---|---|
| **Week 3** | The Cell: Structure of cell & function |
| **Week 4** | KingdomMonera/ Prokaryote/Bacteria |
| **Week 5** | Kingdom Protista/ Eukaryote ( unicellular )/ Mastigophora |
| **Week 6** | Kingdom Protista / Eukaryote( unicellular )/ Sarcodena , Ciliophora ,Sporozoa |
| **Week 7** | Kingdom Animalia ( multicellular ) Invertebrates / Coelenterata / *Hydra* |
| **Week 8** | Kingdom Animalia ( multicellular ) Invertebrates Nematoda/Ascaris , Ancylostoma |
| **Week 9** | Kingdom Animalia ( multicellular ) Invertebrates Trematoda/Fasciola,Schistosoma |
| **Week 10** | Kingdom Animalia ( multicellular ) Invertebrates Cestoda/Taenia |
| **Week 11** | Kingdom Animalia / vertebrates / Frog , Fish |
| **Week 12** | Cell Division: Binary Fission, Mitosis and Meiosis |
| **Week 13** | Types of tissues |
| **Week 14** | Bacterial staining |
| **Week 15** | Preparatory week before the final Exam |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | **General biology ,2021** | Yes |
| **Recommended Texts** | Concepts of Biology | No |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | |
|---|---|---|
| **Module Title** | **Biorisk Management** | **Module Delivery** |
| **Module Type** | **C** | **☒ Theory** |

| | | | | | |
|---|---|---|---|---|---|
| **Module Code** | **VET104** | | | ☒ **Lecture**<br>☐ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **ECTS Credits** | **3** | | | | |
| **SWL (hr/sem)** | **75** | | | | |
| **Module Level** | | 1 | **Semester of Delivery** | | 1 |
| **Administering Department** | | Microbiology | **College** | Veterinary medicine | |
| **Module Leader** | Alyaa abdulhussein alsaedi | | **e-mail** | Alyaa.alsaedi@qu.edu.iq | |
| **Module Leader's Acad. Title** | | Assist.lacturar | **Module Leader's Qualification** | | MCS |
| **Module Tutor** | Alaa Abd-Alkadum Jawad | | **e-mail** | Alaa.Jawad@qu.edu.iq | |
| **Peer Reviewer Name** | | Sabrin Nouri Digman | **e-mail** | Sabreen.noori@qu.edu.iq | |
| **Scientific Committee Approval Date** | | 11/8/2024 | **Version Number** | | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | The module objectives are :<br>1-study the most important Biological materials in the environment.<br>2- Understand the Standard Microbiology Techniques and Safety .<br>3-Explain Decontamination and waste disposal .<br>4-Protecting workers from the risk of exposure to biological materials .<br>5-Directing and educating workers on how to dispose pf biological waste<br>6-Identifing the risk in case of biological safety and identifying the threat in case of biosecurity . |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1- List the groups of biological risk<br>2- Define Biological Materials.<br>3- Learn how to Working with potentially infected animals.<br>4- Discuss First aid and emergency response in the Laboratories.<br>5- Standard Microbiology Techniques and Safety. |
| **Indicative Contents**<br>المحتويات الإرشادية | The Indicative contents :<br>1-week 1, week 2 ,week 3,week 4<br>Introduction:the Biological Materials , Personal protective equipment .<br>2-week 5,week 6,week 7 week 8, week 9<br>Risks groups and Biosafety Levels , Standard Microbiology Techniques and Safety, Collections ,handling and transport of diagnostic speciments .<br>3- week 10, week 11 ,week 12, week 13 ,week 14<br>Working with potentially infected animals , Preparedness and response to Chemical ,Biological accidents. |

| | |
|---|---|
| | |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module is encourage the students by using the microscope and the Laboratory equipment and expanding their critical thinking skills.this will be done through classroom. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| **Week** | **Material Covered** |
| **Week 1** | **Introduction: Definitions & Concepts Risk, Hazard, Biorisk, Biosafety, and Biosecurity.** |
| **Week 2** | **Biological Materials ( Bacteria, Viruses, Fungi, Parasites,**<br>**Prions, Zoonotic pathogens, Toxins).** |
| **Week 3** | **Personal protective equipment (PPE).**<br>**Types of PPE, Route of exposure to pathogens.** |
| **Week 4** | **Laboratory safety symbols and hazard signs.** |
| **Week 5** | **Risks groups and Biosafety Levels.** |
| **Week 6** | **Biosafety cabinet classes :Design, Operation, ,use and misuse.** |
| **Week 7** | **Standard Microbiology Techniques and Safety.** |
| **Week 8** | **Safe use of ( pipettes ,centrifuge , homogenizers , shakers , blenders , and sonicators ,ampoules containing infectious materials) .** |
| **Week 9** | **Collection , handling and transport of diagnostic specimens.** |
| **Week 10** | **Decontamination and waste disposal.** |
| **Week 11** | **Working with potentially infected animals.**<br>**General considerations.** |
| **Week 12** | **Hazardous chemicals (Routes of exposure, storage of chemicals, general rules regarding chemical incompatibilities.** |
| **Week 13** | **Toxic effects of chemicals, Explosive chemicals, Chemical spills , Compressed and liquefied gases ).** |
| **Week 14** | **Preparedness and response to Chemical, Biological accidents:** |

| | |
|---|---|
| | **- In the Laboratories.**<br>**- In the field.** |
| **Week 15** | **First aid and emergency response in the Laboratories.** |
| **Week 16** | **Preparatory week before the final Exam** |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | | **Yes** |
| **Recommended Texts** | **The biological laboratory risk management handbook**<br>**WHO-Biosafety-Manual** | **No** |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية/ اللغة الانكليزية

| **Module Information**<br>معلومات المادة الدراسية | | |
|---|---|---|
| **Module Title** | **اللغة الانكليزية** | **Module Delivery** |
| **Module Type** | B | ☒ **Theory**<br>☒ **Lecture**<br>☐ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** |
| **Module Code** | QU01 | |
| **ECTS Credits** | 2 | |
| **SWL (hr/sem)** | 50 | |

| | | | | | |
|---|---|---|---|---|---|
| **Module Level** | | 1 | **Semester of Delivery** | | 1 |
| **Administering Department** | | Physiology and pharm. | **College** | Veterinary medicine | |
| **Module Leader** | Ashtar Adnan Mohammed | | **e-mail** | ishtar.alethari@qu.edu.iq | |
| **Module Leader's Acad. Title** | | Assist. Prof | **Module Leader's Qualification** | | PHD |
| **Module Tutor** | Ashtar Adnan Mohammed | | **e-mail** | ishtar.alethari@qu.edu.iq | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | | 11/8/2024 | **Version Number** | | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. Introducing students to correct reading and writing in English.<br>2. Teaching students about the basic rules and grammars in English.<br>3. Promote students' success in the language levels of veterinary medicine by fostering the development of English skills. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1. The knowledge, skills, values and ethics that a student must possess upon graduation from a particular course or educational program.<br>2. Enabling students to gain knowledge of the principles of speech and sentences and the types they consist of.<br>3. Enabling students to acquire knowledge of the correct pronunciation of English vocabulary, especially scientific vocabulary.<br>3. Students acquire the ability to speak correctly and in accordance with the principles of the language.<br>4. Students acquire the ability to pronounce letters correctly in line with the principles of language and vocabulary.<br>5. Students acquire the skill of writing sentences correctly and with the fewest possible mistakes. |

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|---|---|
| **Indicative Contents**<br>المحتويات الإرشادية | 1. Tenses: which include description of all the tenses that used in English which help in writing and speaking such as; present, past simple tense and future tense, present and past continuous.<br>2. The fundamental concepts reading, listening and writing.<br>3. Vocabulary, including jobs, adjectives, verbs and nouns, opposite adjectives, personal information.<br>4. Skills work which focus on different subjects help in speaking and listening such as life, family, internet, food, countries, time, and lifestyle questionnaire.<br>5. The course explores the fundamental concepts and mechanisms behind every day English which is related to social expression, directions, everyday problems, making conversation, emails and prepositions of time |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1. Use of audio, visual and video presentation tools to engage students<br>2. Establish a conversation connected to daily life.<br>3. Motivate students to be passionate about their abilities to listen and speak. Students are more likely to be enthusiastic about potential career paths, as many consider them at the university level.<br>4. Asking intriguing questions at the beginning of the lecture stimulates students' curiosity and enthusiasm for the English language. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Grammar (am, are, is, my, your) / vocabulary (how are you, what is this in English, numbers [1-10], plurals) / skills work (speaking and practicing conversations) / everyday English (good morning, goodbye, goodnight, see you later, what a lovely day) |

| | |
|---|---|
| **Week 2** | Grammar (he, she, they, his, her and questions) / vocabulary (countries, adjectives and nouns) / skills work (reading and speaking, where are they from) / everyday English (numbers [11-30] ) |
| **Week 3** | Grammar (negatives [questions and short answers] ) / vocabulary (jobs and personal information) / skills work (reading and listening and interview with students and role-play) / everyday English (social expressions [I'm sorry, excuse me…] ) |
| **Week 4** | Grammar (possessive adjectives, has, have, adjectives and noun) / vocabulary (the family and describing a friend) / skills work (reading, writing and listening) / everyday English (the alphabet, on the phone and saying email addresses) |
| **Week 5** | Grammar (present simple, "a" and "an", adjectives and noun) / vocabulary (sport, drink, food, adjectives, verbs, languages and nationalities) / skills work (listening, speaking and role-play) / everyday English (how much numbers [1-100] and prices) |
| **Week 6** | Grammar (present simple, questions and negatives, adverbs of frequency) / vocabulary (the time, verbs, nouns and words that go together) / skills work (speaking [lifestyle questionnaire] ) / everyday English (days of the week and prepositions of time) |
| **Week 7** | Grammar (question words, pronouns, this and that) / vocabulary (adjectives, opposite adjectives and places) / skills work (reading, writing and role-play) / everyday English (can I?) |
| **Week 8** | Grammar (there is, there are, prepositions) / vocabulary (rooms and furniture, in and out of town) / skills work (reading and vocabulary, listening and writing) / everyday English (directions) |
| **Week 9** | Grammar (was, where, past simple and irregular verbs) / vocabulary (saying years, people and jobs, irregular verbs [have, do, go]) / skills work (listening and speaking, reading and speaking) / everyday English (what's your birthday?, months and ordinal numbers) |
| **Week 10** | Grammar (past simple, regular and irregular verbs, questions, negatives, ago) / vocabulary (weekend activities, time expression, sports and leisure, seasons) / skills work (speaking, listening and speaking, speaking and writing) / everyday English (making conversation, going sight-seeing) |

| | |
|---|---|
| **Week 11** | Grammar (can, cant, adverbs, request and offers) / vocabulary (verbs and nouns, adjectives and nouns, opposite adjectives) / skills work (reading and listening) / everyday English (everyday problems) |
| **Week 12** | Grammar (I'd like, "some" and "any", "like" and "would like") / vocabulary (shopping food in a restaurant role-play ) / skills work (listening, reading and speaking) / everyday English (role-play signs all around) |
| **Week 13** | Grammar (present continuous, present simple) / vocabulary (colors, clothes, opposite verbs) / skills work (reading and listening) / everyday English (what's the matter?) |
| **Week 14** | Grammar (future plan, revision) / vocabulary (transport, revision) / skills work (reading and speaking, a mini autobiography) / everyday English (social expressions) |
| **Week 15** | Grammar (future tense, adverbs, adjectives) / vocabulary (university, signs) / skills work (listening, reading and speaking) / everyday English (argument and discussion) |
| **Week 16** | **Exam** |

## Learning and Teaching Resources

مصادر التعلم والتدريس

| | **Text** | **Available in the Library?** |
|---|---|---|
| **Required Texts** | John and Liz Soars. New Headway Plus. Oxford University press. Digital edition. | yes |
| **Recommended Texts** | Juan Gmo. Moya Montaña. BASIC ENGLISH GRAMMAR STRUCTURES AND VOCABULARY. Santiago, enero de 2006 | yes |
| **Websites** | file:///C:/Users/hsimoham/Downloads/Documents/curso-ingles.pdf | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **الديمقراطية وحقوق الأنسان** | | | **Module Delivery** | |
| **Module Type** | **B** | | | ☒ **Theory**<br>☒ **Lecture**<br>☐ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **QU02** | | | | |
| **ECTS Credits** | **2** | | | | |
| **SWL (hr/sem)** | **50** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Anatomy &histology | | **College** | Veterinary medicine | |
| **Module Leader** | محمد عبد جري | | **e-mail** | Sameer.abidalredah@qu.edu.iq | |
| **Module Leader's Acad. Title** | مدرس | | **Module Leader's Qualification** | PHD | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | ١- قدرة الناشط على معرفة أبعاد حقوق الإنسان لنزاع ما، وعلاقتها به.<br>٢- تعبير لإدراكهم واهتمامهم بدورهم في حماية أو تعزيز هذه الحقوق.<br>٣- تقييم انتقادي للردود المحتملة التي يمكن تقديمها.<br>٤- محاولة لتحديد أو إيجاد ردود جديدة.<br>٥-تكوين رأي في صدد الخيار الأكثر ملاءمة.<br>٦- تعبير عن الثقة وإدراك للمسؤولية والتأثير في كل من القرار ومفعوله. |
| **Module Learning Outcomes** | أ-الاهداف المعرفية<br>أ١- استفادة الطلبة من معرفة انواع الحقوق ومجال تطبيقها.<br>أ٢- توضيح المراحل التاريخية لحقوق الانسان ومدى تطورها. |

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|---|---|
| مخرجات التعلم للمادة الدراسية | أ٣- معرفة مفهوم الحريات والديمقراطية بشكل الصحيح.<br>أ٤- تزويد الطالب بالقيم الاخلاقية التي يتطلب الالتزام بها وتوضيح اهم الحقوق والواجبات المناطة للفرد.<br>أ٥- التعرف على حقوق الفرد العراقي وواجباته |
| **Indicative Contents**<br>المحتويات الإرشادية | ب- الأهداف المهاراتية الخاصة بالمقرر<br>١- التعريف بتاريخ حقوق الانسان ومراحل التطور.<br>٢- نشر الثقافة وتغذية الطالب من الجانب الاسلامي .<br>٣- كيفية الحفاظ على المجتمع والوطن من خلال تعزيز حب البلد لهم .<br>٤- التعرف على اهم الحقوق الممنوحة لهم وفق الاعراف والقوانين الدولية.<br>٥- تعزيز المواطنة لدى الطالب . |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | وهو يقدّم مشورة عملية للمدرّسين وغيرهم من المعلمين الذين يريدون إذكاء الوعي **بحقوق** الإنسان والعمل من أجلها في صفوف تلاميذ مرحلتي التعليم الأساسي والثانوي، بما في ذلك تقديم اقتراحات لاستحداث أنشطة تعلّم في هذا المجال. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | **مفهوم حقوق الإنسان وخصائصها** |
| **Week 2** | الشخصية القانونية للإنسان |
| **Week 3** | حقوق الإنسان في الحضارات القديمة والدين الاسلامي |
| **Week 4** | خصائص الشخصية القانونية |
| **Week 5** | مفهوم الاهلية |
| **Week 6** | الموطن |
| **Week 7** | - حقوق الانسان في العصور الوسطى - حقوق الانسان في العصر الراهن |
| **Week 8** | -حقوق الانسان في الشرائع السماوية- |
| **Week 9** | اهم حقوق الانسان التي نصت عليها الشرائع (القران والسنة) والحكومات والمنظمات |

| | |
|---|---|
| **Week 10** | حقوق الانسان في الاسلام<br>الامام علي بن ابي طالب بين الانسان وواجباته |
| **Week 11** | رسالة الامام السجاد (ع) في حقوق الانسان |
| **Week 12** | |
| **Week 13** | المنظمات غير الحكومية ودورها في الدفاع عن حقوق الانسان |
| **Week 14** | الحقوق والحريات في الدستور العراقي لعام ٢٠٠٥ |
| **Week 15** | الاعلان العالمي لحقوق وحريات الانسان |
| **Week 16** | الامتحان |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | حقوق الانسان والديمقراطية الاستاذ علي عبودي نعمة | Yes |
| **Recommended Texts** | - حياة الامام زين العابدين (عليه السلام) دراسة وتحليل العلامة السيد باقر شريف القرشي.<br>الاستاذ علي محمد دخيل | yes |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Animal Management** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET103** | | | | |
| **ECTS Credits** | **7** | | | | |
| **SWL (hr/sem)** | **175** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Public health | | **College** | Veterinary medicine | |
| **Module Leader** | Kadhem Hassan abbas | | **e-mail** | Kadhem abbas@qu.edu.iq | |
| **Module Leader's Acad. Title** | Assist professor | | **Module Leader's Qualification** | Master | |
| **Module Tutor** | Mohammed Mahdi Yassin | | **e-mail** | Mohammed Yassin@qu.edu.iq | |
| **Peer Reviewer Name** | Mohamed Abdel Abbas Malaghi | | **e-mail** | Mohamed Malaghi@qu.edu.iq | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. Developing and understanding the principles of field animal management from a veterinary perspective in a way that supports the practical side of the profession<br>2. The ability to manage the animal field in the healthiest ways<br>3. Ability to deal with different animals |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1. Explanation of scientific subjects through theoretical lectures.<br>2. Training of students for practical applications in laboratories.<br>**3.** Student prepare a scientific related reports. |

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| **Indicative Contents**<br>المحتويات الإرشادية | This course provides a description and specification of farm animals of all types and the different methods of raising them for productive purposes [SSWL= 1 hour]<br>Psychological and behavioral characteristics of horses and their care and care of foals (young) [SSWL= 4 hours]<br>Productive characteristics of cattle and their behavior and care of their newborns [SSWL= 6 hours]<br>Characteristics of raising goats and their behavior and care [SSWL= 2 hours]<br>Characteristics of raising sheep and their behavior and care [SSWL= 2 hours]<br>Characteristics of raising buffaloes and their behavior and care [SSWL= 2 hours]<br>Characteristics of raising camels and their behavior and care [SSWL= 3 hours]<br>Methods of reproduction in different animals will be discussed and ways to maximize the benefit from reproduction and proper health management for them [SSWL= 4 hours]<br>The course will also discuss one of the important aspects of wild animals and ways to preserve them as one of the components of environmental balance [SSWL= 4 hours]<br><br>Total hrs = 90 = (Time table 3 hr x 15 weeks)- theoretical<br>Total hrs = 30 = (Time table 2 hr x 15 weeks)- practical |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, Paying attention to the methods of approaching the animal, treating it and cleaning it with extreme caution and knowing the potential risks in order to increase the animal wealth, dealing with different animals and knowing the basic rules for their management, As well as using devices and tools that assist in controlling animals. This will be achieved through classroom and practical lessons that will help students understand and apply. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | **Description and identification of farm animals** |
| **Week 2** | **Equine behavior** |
| **Week 3** | **Equine and foal care** |
| **Week 4** | **Calf and cattle management** |
| **Week 5** | **Cattle production** |

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| **Week 6** | **Cattle behavior** |
| **Week 7** | **Goat management** |
| **Week 8** | **Sheep management** |
| **Week 9** | **Buffaloes management** |
| **Week 10** | **Camel management** |
| **Week 11** | **Buffaloes and camel behavior** |
| **Week 12** | **Management of Animal reproduction 1** |
| **Week 13** | **Management of Animal reproduction 2** |
| **Week 14** | **Wild animals 1** |
| **Week 15** | **Wild animals 2** |
| **Week 16** | **Preparatory week before the final Exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | **Lab 1: External parts of Cattle** |
| **Week 2** | **Lab 2: External parts Equine** |
| **Week 3** | **Lab 3: Control and restrains of cattle** |
| **Week 4** | **Lab 4: Control and restrain of equine** |
| **Week 5** | **Lab 5: Age estimation in equine** |
| **Week 6** | **Lab 6: Age estimation in cows, sheep and goat** |
| **Week 7** | **Lab 7: Methods casting** |
| **Week 8** | **Lab 8: Signs of health** |
| **Week 9** | **Lab 9: Drug administration** |
| **Week 10** | **Lab 10: Milking** |
| **Week 11** | **Lab 11: Body score condition** |
| **Week 12** | **Lab 12: Animal Grooming** |
| **Week 13** | **Lab 13: Animal housing** |
| **Week 14** | **Lab 14: Animal examination** |
| **Week 15** | **Lab 15: Farm practices** |
| **Week 16** | **Exam** |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Animal Husbandry Regained / The Place of Farm Animals in Sustainable Agriculture | Yes |
| **Recommended Texts** | Animal management - Domestic animal behavior and welfare | yes |
| **Websites** | https://www.routledge.com/Animal-Husbandry-Regained-The-Place-of-Farm-Animals-in-Sustainable-Agriculture/Webster/p/book/9781849714211 | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Muscular Anatomy** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET106** | | | | |
| **ECTS Credits** | **9** | | | | |
| **SWL (hr/sem)** | **225** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 2 | |
| **Administering Department** | Anatomy &histology | | **College** | Veterinary medicine | |
| **Module Leader** | Sameer Ahamed | | **e-mail** | Sameer.abidalredah@qu.edu.iq | |
| **Module Leader's Acad. Title** | professor | | **Module Leader's Qualification** | PHD | |
| **Module Tutor** | Hassaneen Al-sharoot | | **e-mail** | Hassaneen.sharoot@qu.edu.iq | |
| **Peer Reviewer Name** | Abdulrazzaq baqer | | **e-mail** | Abdulrazzaq.alrabei@qu/edu.iq | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. Develop manual dissection skills and understand dissection methods through Applying techniques.<br><br>2. Understand the locations of organs in the animal body.<br><br>3. Explain the internal and external structure of organs inside the body.<br><br>4. Anatomical comparison of organs between different animals.<br><br>5. Understand the importance of the skeleton in supporting the body and giving the external shape to animals. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | Important: Write at least 6 learning outcomes, preferably equal to the number of study weeks.<br>1. Identify the types of muscles and some related anatomical terms<br>2. List the different terms associated with practical and theoretical anatomy.<br>3. Study the types of muscles of the forelimb.<br>4. Study the types of muscles of the hind limb<br>5. Describe the male genital system.<br>6. Study the female genital system<br>7. Identify the urinary system |
| **Indicative Contents**<br>المحتويات الإرشادية | Week 1<br>Learn about the types of muscles and some important anatomical terms in addition to defining anatomy, its types and teaching methods (3 hour)<br>Week 2<br>Definition of the skeletal muscles and relationship between this muscles and skeleton (3 hour)<br>Week 3<br>Study the scapula and humerus muscles (3 hour)<br>Week 4<br>Explain the radius and ulna muscles (3 hour)<br>Week 5<br>Describe the hind limb muscles<br>Week 6<br>Explain pelvic regions muscles (3 hour)<br>Week 7<br>Explain the tibia and fibula muscles (3 hour)<br>Week 8<br>Study the male genital system (3 hour)<br>Week 9<br>Study the female genital system( 3 hour)<br>Week 10<br>Explain the urinary system (3 hour) |

| | |
|---|---|
| | Week 11<br>Relationship between urogenital system<br>Week 12<br>Study the different male genital system between horse , ox and dog (3 hour)<br>Week 13<br>Study the different female genital system between horse , ox and dog (3 hour)<br>Week 14<br>Anatomy of the urinary system in chattels, horse, sheep and dog(3 hour)<br>Week 15<br>Anatomical description of the eye and ear (3 hour) |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | The main strategy that will be followed in delivering this unit is to stimulate students' participation in dissection, while at the same time developing and enriching their skills in handling dissection instruments. This will be done through classroom, interactive lessons, as well as by conducting simple experiments that include sampling activities that interest students. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction |
| **Week 2** | Anatomy of male genital system (scrotum testes, epididymis) |
| **Week 3** | Anatomy of male genital system rete testis, seminiferous tubules and vas deference) |
| **Week 4** | Anatomy of male genital system (scrotum, spermatic cord and penis) |
| **Week 5** | Anatomy of types of penis |
| **Week 6** | Anatomy of sex accessory gland of males |
| **Week 7** | Anatomy of female genital system (ovary, oviduct) |
| **Week 8** | Compare the ovary between females animals |
| **Week 9** | Anatomy of female genital system (uterus) |
| **Week 10** | Compare the uterus between females animals |
| **Week 11** | Anatomy of external organ of female genital system |

| | |
|---|---|
| **Week 12** | Anatomy of urinary system ( kidney and ureter) |
| **Week 13** | Anatomy of urinary system (compare between the animal) |
| **Week 14** | Anatomy of eyes |
| **Week 15** | Anatomy of ear |
| **Week 16** | **Exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Lab / introduction of Anatomy of muscles |
| **Week 2** | Lab/ muscles of forelimb |
| **Week 3** | Lab/ muscles of hind limb |
| **Week 4** | Male genital system |
| **Week 5** | Compare testes between males of the animals . |
| **Week 6** | Composition of the spermatic cord |
| **Week 7** | Types of penis |
| **Week 8** | Female genital system |
| **Week 9** | Ovary and uterus |
| **Week 10** | Anatomy of the urinary system |
| **Week 11** | Kidney |
| **Week 12** | Ureter and urinary bladder |
| **Week 13** | eye |
| **Week 14** | Muscles of eye |
| **Week 15** | ear |
| **Week 16** | **Exam** |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Bragulla, H., H. E. König and H.-G. Liebich (2007). Veterinary Anatomy of Domestic Mammals Textbook of veterinary anatomy | Yes |

| | | |
|---|---|---|
| **Recommended Texts** | the anatomy of the domestic animal | yes |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Poultry Management** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET108** | | | | |
| **ECTS Credits** | **5** | | | | |
| **SWL (hr/sem)** | **125** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | ٢ | |
| **Administering Department** | Public health | | **College** | Veterinary medicine | |
| **Module Leader** | Hifa jumaa hassan | | **e-mail** | Hifa.hassan@qu.edu.iq | |
| **Module Leader's Acad. Title** | professor | | **Module Leader's Qualification** | Ph.D | |
| **Module Tutor** | AAMER RASSAM ALI | | **e-mail** | aamer.ALI@qu.edu.iq | |
| **Peer Reviewer Name** | Mohamed Abdel Abbas Malaghi | | **e-mail** | Mohamed Malaghi@qu.edu.iq | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1- Teaching how to deal with poultry .<br>2- Developing and growing the poultry sector and its importance in improving the health and economic situation |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1- Teaching how to deal with poultry chickens ,ducks gees<br>2- Animal treatment, developing and care |
| **Indicative Contents**<br>المحتويات الإرشادية | Week 1<br>Poultry science and industry development - terminology – classification of poultry.2<br>Week2<br>Poultry breeding and strains Differences – chromosomal Studies – traits inheritance.<br>Week3<br>Internal systems of a chicken.<br>Week4<br>Artificial hatching and hatcheries - egg storage – disinfection and fumigation.<br>Week5<br>Rearing baby chicks – preparation of houses – hygien measurements required tools.<br>Week 6,7,8,9,10<br>Factors affecting egg production And feed efficiency indices.<br>Nutrition and rations formulation.<br>Design of poultry houses.<br>Vaccination methods – some Diseases due to faulty management.<br>Week 11,12,13,14,15<br>Phenotypic parts of chickens<br>Solving problems related to some inherited traits<br>Anatomy of birds<br>Demonstration of hatcheries<br>Demonstration of poultry houses and equipment<br>Solving related problems<br>Calculation of feed Components ratios<br>Studying common management faults and corrections<br>Demonstration of possible cases<br>Possible visit to broiler Slaughtering house or a video show |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Paying attention to the methods of approaching the animal, treating it and cleaning it with extreme caution and knowing the potential risks in order to increase the animal wealth |

## Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

| | **Material Covered** |
|---|---|
| **Week 1** | Poultry Industry in Iraq and Terminology |
| **Week 2** | Poultry Health Management |
| **Week 3** | Biology of the chickens |
| **Week 4** | Egg structure and Hygiene; Factors affecting egg production |
| **Week 5** | Artificial Hatching and Hatcheries |
| **Week 6** | Poultry houses Design |
| **Week 7** | Nutrition and Rations Formation |
| **Week 8** | Chick brooding |
| **Week 9** | Management of Breeder, Broiler and Layer chickens |
| **Week 10** | Poultry managements in hot climate ` |
| **Week 11** | Management of Ostrich, turkey, duck and geese |
| **Week 12** | Biosecurity in poultry industry |
| **Week 13** | Vaccination Management |
| **Week 14** | Poultry waste management |
| **Week 15** | Introduction to poultry management diseases |
| **Week 16** | **Preparatory week before the final Exam** |

## Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

| | Material Covered |
|---|---|
| **Week 1** | Lab 1: Classification of poultry |
| **Week 2** | Lab 2: Phenotypes of poultry |
| **Week 3** | Lab 3: Egg Storage – Disinfection and Fumigation |
| **Week 4** | Lab 4: Sexing and sex-linked traits |
| **Week 5** | Lab 5: Poultry Equipment's |
| **Week 6** | Lab 6: Feeding formulation and Calculations of feed components in rations |
| **Week 7** | Lab 7: Anatomy of avian digestive system |
| **Week 8** | Lab 8: Anatomy of avian respiratory system |
| **Week 9** | Lab 9: Anatomy of avian immune system Introduction to immunology |
| **Week 10** | Lab 10: Anatomy of avian circulatory system , reproductive system and urinary system |
| **Week 11** | Lab 11: Disinfection of poultry Houses and Hatcheries |
| **Week 12** | Lab 12: Vaccination programs |
| **Week 13** | Lab 13: Lighting and Systems for poultry |
| **Week 14** | Lab 14: Ventilation Systems for poultry |
| **Week 15** | Lab 15: Visiting of poultry farm |
| **Week 16** | Exam |

## Learning and Teaching Resources
مصادر التعلم والتدريس

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | Poultry Science / Poultry Nutrition and Management | Yes |
| **Recommended Texts** | Poultry Health - A Guide for Professionals | yes |
| **Websites** | https://www.routledge.com/Animal-Husbandry-Regained-The-Place-of-Farm-Animals-in-Sustainable-Agriculture/Webster/p/book/9781849714211 | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **اللغة العربية** | | | **Module Delivery** | |
| **Module Type** | **B** | | | ☒ **Theory**<br>☒ **Lecture**<br>☐ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **QU06** | | | | |
| **ECTS Credits** | **2** | | | | |
| **SWL (hr/sem)** | **50** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 2 | |
| **Administering Department** | Anatomy &histology | | **College** | Veterinary medicine | |
| **Module Leader** | منى نعمة | | **e-mail** | Sameer.abidalredah@qu.edu.iq | |
| **Module Leader's Acad. Title** | مدرس | | **Module Leader's Qualification** | MSc | |
| **Module Tutor** | | | **e-mail** | | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | ١. أن ينشأ الطالب على حب اللّغة العربيّة لغة القرآن الكريم. التعرّف على مواطن الجمال في اللّغة العربيّة وآدابها، وأن يكتسب الطالب القدرة على دراسة فروع اللّغة العربيّة.<br>٢. تعريف الطالب بألفاظ اللّغة العربيّة الصحيحة وتراكيبها وأساليبها السليمة بطريقة مشوقة وجذابة.<br>٣. أن يستغل الطالب وقت فراغه بالقراءة والإطلاع والرجوع إلى المكتبة .<br>٤. تمكين الطالب من القراءة الصحيحة، وأن يكتسب القدرة على استعمال اللغة استعمالاً صحيحاً في الاتّصال مع الآخرين؛ كالسرعة وجودة الإلقاء وحسن التعبير، وتعويده حسن الاستماع لما يسمع مما ييسّر له أموره ويعينه على قضاء |

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| | حوائجه. تنمية الذوق الأدبي لدى الطالب حتى يدرك النواحي الجمالية في أساليب الكلام ومعانيه وصوره.<br>٥. تعويد الطالب التعبيرات السليمة الواضحة عن أفكاره وما يقع تحت حواسه نطقاً وكتابة وحسن استخدام علامات الترقيم. تنمية قدرة ومهارة الطالب الإملائية والخطية بحيث يستطيع الكتابة الصحيحة من جميع النواحي.<br>٦. إيقاظ وعي الطالب لإدراك شرف الكلمة وتوجيهه؛ للمحافظة على طهارتها ونقائها حتى لا تستعمل إلا في الخير. مساعدة الطالب على فهم التراكيب المعقدة والأساليب الغامضة وتمكين الطالب من التفكير بدقّة والبحث العقلي الدقيق.<br>٧. العمل على النهوض باللغة العربية والعمل على نشرها قدر المستطاع. تعويد الطلاب على قواعد الحديث واحترام الرأي الآخر وكذلك التغلب على عامل الخجل. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | يتوقع من الطالب بعد انتهائه من متطلبات تخصص (اللغة العربية وآدابها) تحقيق مخرجات التعلم الآتية:<br><br>مخرجات المعرفة العامة:<br><br>١. التعرف إلى مستويات نظام اللغة العربية.<br>٢. معرفة القواعد النحوية والصرفية.<br>٣. وصف المناهج النقدية والظواهر الأدبية.<br>٤. التعريف بأبرز المصنفات اللغوية والأدبية.<br><br>المهارات الذهنية (الإدراكية):<br><br>١. تحديد المشكلات اللغوية والأدبية لدى الدارسين.<br>٢. القراءة المعاصرة للنصوص اللغوية والأدبية.<br>٣. تحليل النصوص وشرحها.<br>٤. الربط بين النص ومحيطه الخارجي.<br><br>المهارات العملية أو المهنية:<br><br>١. قراءة النصوص الأدبية وكتابتها وفق المعايير النحوية والصرفية.<br>٢. تقطيع الشعر العربي وفقًا للبحور الشعرية في علم العروض.<br>٣. تدقيق النصوص الأدبية وتصويب الأخطاء الواردة فيها.<br>٤. الكتابة الإبداعية التي تعبر عن الذات وقضايا المجتمع.<br>٥. التعبير الشفوي وفن الإلقاء في الميدان المهني والمناسبات العامة.<br>٦. توظيف أدوات البحث العلمي في كتابة الأبحاث العلمية.<br>٧. استخدام المعاجم اللغوية. |

| | |
|---|---|
| | مهارات الاتصال، وتقنية المعلومات:<br><br>١. الاتصال والتواصل مع الآخرين.<br>٢. تعزيز المحتوى العربي على الشبكة العنكبوتية.<br>٣. التعلم الإلكتروني واستخدام الحاسوب في التعليم.<br>٤. تعزيز الثقة بالنفس والجرأة والفصاحة.<br>٥. المنافسة والتميز في سوق العمل.<br><br>الاتجاهات والقيم والبعد الأخلاقي:<br><br>١. الالتزام بأخلاقيات المهنة.<br>٢. المحافظة على القيم الروحية والاجتماعية.<br>٣. الأمانة والإخلاص في تأدية العمل.<br>٤. المحافظة على أسرار العمل.<br>٥. تنمية ثقافة الاستماع وأدب الحوار.<br>٦. الحفاظ على الهوية القومية والدينية. |
| **Indicative Contents**<br>المحتويات الإرشادية | ١. ممارسة الكتابة والكلام باللغة العربية الفصيحة.<br>٢. كتابة المقالات الأدبية بلغة سليمة.<br>٣. تنويع مصادر التعلم ووسائل التقويم.<br>٤. مواجهة المشاكل التي تواجهه في مهنته وحلها.<br>٥. التكيف مع وظائف بديلة عن الوظيفة التي يقتضيها التخصص. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | وهو يقدّم مشورة عملية للمدرّسين وغيرهم من المعلمين الذين يريدون إذكاء الوعي **باللغة العربية** والعمل من أجلها في صفوف تلاميذ مرحلتي التعليم الأساسي والثانوي، بما في ذلك تقديم اقتراحات لاستحداث أنشطة تعلّم في هذا المجال. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | (مقدمة عن اللغة العربية |
| **Week 2** | قواعد النحو |

| | |
|---|---|
| **Week 3** | النكرة والمعرفة |
| **Week 4** | اقسام الافعال |
| **Week 5** | البناء والاعراب |
| **Week 6** | المبتدأ والخبر |
| **Week 7** | الفاعل |
| **Week 8** | نائب الفاعل |
| **Week 9** | الفرق بين الضاد والظاء |
| **Week 10** | كتابة التاء المفتوحة والمربوطة |
| **Week 11** | قواعد كتابة الهمزة |
| **Week 12** | علامات الترقيم |
| **Week 13** | نص ادبي |
| **Week 14** | نص قراني |
| **Week 15** | قواعد كتابة الهمزة |
| **Week 16** | **الامتحان** |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | لمصادر الحديثة الرئيسية -القرآن الكريم- .شرح ابن عقيل- .الوجيز في اللغة العربية- .قواعد اللغة العربية )النحو والصرف الميسر- ) | Yes |
| **Recommended Texts** | الوجيز في اللغة العربية لغير المتخصصين. | yes |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | |
|---|---|---|
| **Module Title** | General Chemistry **الكيمياء العامة** | **Module Delivery** |

| | | | | | |
|---|---|---|---|---|---|
| **Module Type** | **B** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET105** | | | | |
| **ECTS Credits** | **6** | | | | |
| **SWL (hr/sem)** | **150** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 2 | |
| **Administering Department** | Physiology and pharm. | | **College** | Veterinary medicine | |
| **Module Leader** | Jinan Abd-alameer Sabeeh | | **e-mail** | Jinan.Sabeeh@qu.edu.iq | |
| **Module Leader's Acad. Title** | Prof. | | **Module Leader's Qualification** | MSC | |
| **Module Tutor** | Dhama Kadim | | **e-mail** | Dhama.Kadim@qu.edu.iq | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. We will introduce students to basic laboratory techniques, which include equipment and procedures like heating, evaporation, and weighing.<br><br>2. Teaching students about the fundamental aspects of chemistry<br><br>3. Promote the success of students in the upper scientific levels of veterinary medicine associated with chemistry by fostering the development of scientific skills.<br><br>4. Safety is the primary concern in any laboratory, particularly in chemistry. The student will acquire the ability to implement safe laboratory procedures.<br>5. Acquaint students with the fundamental principles of organic chemistry |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1. Acquire knowledge of the basic principles governing atoms and chemical bonding.<br>2. Gain an understanding of the basic principles of chemical hybridization.<br>3. The student will be familiar with the fundamental concepts of buffer solutions, acids, and bases.<br>٤. The student will utilize chemistry's basic principles to effectively prepare and accurately calculate future pharmacological and physiological solutions.<br>٥. Using titration data to determine the molar concentration of an acid or base solution.<br>٦. Learn the fundamental principles of analytic chemistry, which is an essential component in veterinary school courses. |

| | |
|---|---|
| | ٧. Acquire a comprehensive understanding of the fundamental concepts of organic chemistry, which serve as an important component in veterinary school curricula. |
| **Indicative Contents**<br>المحتويات الإرشادية | 6. Nuclear Properties: Nuclei's electric charge, atomic, and mass numbers. It also covers isotopes, which are elemental forms with variable neutron counts. Nuclear attributes include quantum numbers, which characterize electron energy and dispersion. It also covers hybridization, which mixes atomic orbitals to generate new hybrid orbitals, and atomic and molecular orbitals, which describe electron probability distributions in atoms and molecules.<br>7. The fundamental concepts of analytical chemistry include adhering to good laboratory practices and ensuring health and safety.<br>8. Key Competencies Laboratory skills include liquid handling with pipettes and spectrophotometry.<br>9. Volumetric analysis: Provide a comprehensive overview of the science of volumetric analysis, including the terminology and classifications used in this field. Review the basic concepts of solute interaction, as well as the volumetric analysis equations and computations.<br>10. Organic chemistry's cornerstone concepts for computing atomic and electronic structures of molecules, stability, reactivity, and other molecular characteristics<br>11. The course explores the fundamental concepts and mechanisms behind the reactions of alkenes, alkynes, and aromatic compounds. It also emphasizes the ability to illustrate the mechanics of these reactions.<br>12. Classes of organic compounds: Enhance the student's understanding of a wider range of organic compounds and enhance their ability to recognize alcohol structures, aldehydes, ketones, carboxylic acids, and amides as chemical entities.<br>13. Understanding the properties of organic compounds: We will introduce students to the fundamental principles of organic chemistry by focusing on the molecular structures, properties, and chemical reactivity of a variety of compounds, including alcohol, aldehydes, ketones, carboxylic acids, and amides.<br>14. Classify several organic reactions, such as substitution, elimination, and addition, and illustrate the process of breaking and forming chemical bonds.<br>15. Writing abilities—enhancing students' capacity to write scientific reports to aid them in their pursuit of advanced veterinary degrees. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1. Conducting captivating chemical experiments to engage students<br>2. Establish a connection between chemistry and daily life. |

| | |
|---|---|
| | 3. Motivate students to be passionate about their chemistry abilities. Students are more likely to be enthusiastic about potential career paths, as many consider them at the university level.<br>4. To facilitate comprehension, we emphasize functional categories. One of the most critical components of organic molecules is their functional group. The functional groups are the reactive components of the molecules, which are the pieces that change chemical reactions. This requires significant emphasis. For instance, students must see how an alcohol's carbon chain connects to an O and then an H.<br><br>5. Asking intriguing questions at the beginning of a general chemistry lecture stimulates students' curiosity and enthusiasm for chemistry. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | **Atom and Types of bonds** |
| **Week 2** | **Preparation of solutions, molarity and molality** |
| **Week 3** | **Aldehydes and ketones, Alcohols, carboxylic acids, amines and amides** |
| **Week 4** | **Classification and Functions of Carbohydrates** |
| **Week 5** | **Monosaccharides and Disaccharides** |
| **Week 6** | **Derivatives of Monosaccharides** |
| **Week 7** | **Polysaccharides** |
| **Week 8** | **Classification and Functions of Lipids** |
| **Week 9** | **Fatty Acids** |
| **Week 10** | **Lipoproteins** |
| **Week 11** | **General Nature of Amino Acids and Classification of Amino Acids** |
| **Week 12** | **Modified or Nonstandard Amino Acids** |
| **Week 13** | **Properties of Amino Acids and Biologically Important Peptides** |
| **Week 14** | **Definition, Classification of Proteins** |
| **Week 15** | **Functions and properties of proteins** |
| **Week 16** | **Preparatory week before the final Exam** |
| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
| | **Material Covered** |
| **Week 1** | **General Instruction** |

| | |
|---|---|
| **Week 2** | **Preparation of solutions : solid substances** |
| **Week 3** | **Preparation of solutions : liquid substances** |
| **Week 4** | **Saponification** |
| **Week 5** | **Preparation of aspirin** |
| **Week 6** | **Qualitative analysis of carbohydrates: general test of carbohydrates** |
| **Week 7** | **Reducing properties of sugars** |
| **Week 8** | **Polysaccharide tests** |
| **Week 9** | **Qualitative analysis of proteins** |
| **Week 10** | **Specific color reactions of amino acids** |
| **Week 11** | **Emulsification** |
| **Week 12** | **Qualitative analysis of lipids** |
| **Week 13** | **Tests for fatty acids** |
| **Week 14** | **Tests for cholesterol** |
| **Week 15** | **Acid number** |
| **Week 16** | **Preparatory week before the final Exam** |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | **General, Organic, and Biochemistry. 9th Edition (2022) Katherine Denniston et al., McGraw Hill / Medical Publisher.** | **Yes** |
| | **Biochemistry by Pankaja Naik (Author), 6th edition (2022), Jaypee Brothers Medical Publishers Pvt Ltd.** | **Yes** |
| **Recommended Texts** | **Harper's Illustrated Biochemistry, 32nd Edition (2023)**<br>**by Peter J. Kennelly (Author), Kathleen M. Botham (Author), Owen McGuinness (Author). McGraw Hill / Medical Publisher.** | **Yes** |
| **Websites** | **https://themedicalbiochemistrypage.org/** | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Animal Husbandry** | | | **Module Delivery** | |
| **Module Type** | **C** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **VET 107** | | | | |
| **ECTS Credits** | 5 | | | | |
| **SWL (hr/sem)** | ١٢٥ | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 2 | |
| **Administering Department** | Public health | | **College** | Veterinary medicine | |
| **Module Leader** | Kadhem Hassan abbas | | **e-mail** | Kadhem abbas@qu.edu.iq | |
| **Module Leader's Acad. Title** | Assist professor | | **Module Leader's Qualification** | Master | |
| **Module Tutor** | Mohammed Mahdi Yassin | | **e-mail** | Mohammed Yassin@qu.edu.iq | |
| **Peer Reviewer Name** | Mohamed Abdel Abbas Malaghi | | **e-mail** | Mohamed Malaghi@qu.edu.iq | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 4. Developing and understanding the principles of field Pet Animal Care from a veterinary perspective in a way that supports the practical side of the profession<br>5. The ability to manage the Pet Animal Care field in the healthiest ways<br>6. Ability to deal with different Pet Animal. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 4. Explanation of scientific subjects through theoretical lectures.<br>5. Applications of pet animal care in laboratories.<br>**6.** Student prepare a scientific related reports with pet animal care |
| **Indicative Contents**<br>المحتويات الإرشادية | This course provides an English language tool for assessing animal behavior in interaction with humans and pets. The psychological and behavioral characteristics of various types of pets are presented. The course will include the advantages of raising |

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| | pets, principles of health management, diseases that may affect them, and diseases that may be transmitted to humans, as it will address aspects of their causes and prevention. In this course, students will be taught the importance and benefits of raising pets [SSWL= 6 hours].<br>Also, how to deal with animals and ways to restrain, restrain and control them, along with the methods and means that help in their reproduction. We will focus in these aspects on cats and dogs [SSWL= 6 hours]<br>As for the other aspect, it will address the methods of feeding them (dogs, cats and birds), housing them and estimating their ages [SSWL= 6 hours]<br>Students will also be taught the best methods of vaccination [SSWL= 2 hours]<br>Knowing the behaviors and methods of communicating with pets of all kinds [SSWL= 2 hours]<br>The course will also address the management aspects of some laboratory animals such as guinea pigs and rabbits [SSWL= 6 hours]<br>Finally, general care methods for pet birds [SSWL= 5 hours].<br>Total hrs = 30 = (Time table 2 hr x 15 weeks) |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, dealing with different pet animal to deal with it the basic rules for their health care and management, As well as using devices and tools that assist in controlling animals. This will be achieved through classroom and lessons that will help students understand and apply it in the labor market. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | **History and Breeds** |
| **Week 2** | **Animal health of pet animal** |
| **Week 3** | **Animal health of pet birds** |
| **Week 4** | **Animal Handling and methods of restrain** |
| **Week 5** | **Management of Reproduction in Dogs** |
| **Week 6** | **Management of Reproduction in Cats** |
| **Week 7** | **Pet feeding** |
| **Week 8** | **Pet bird feeding** |
| **Week 9** | **Housing** |
| **Week 10** | **Age estimation** |

| | |
|---|---|
| **Week 11** | **Vaccination** |
| **Week 12** | **Pet Communication and Behavior** |
| **Week 13** | **Guinea pig management** |
| **Week 14** | **Rabbits pet animals** |
| **Week 15** | **Pet bird general care** |
| **Week 16** | **Preparatory week before the final Exam** |

| **Learning and Teaching Resources**<br>**مصادر التعلم والتدريس** | | |
|---|---|---|
| | Text | **Available in the Library?** |
| **Required Texts** | Small Animal Care and Management 4th Edition | Yes |
| **Recommended Texts** | Veterinary Guide for Animal Owners: Caring for Cats, Dogs, Chickens, Sheep, Cattle, Rabbits and More, 2nd Edition | yes |
| **Websites** | https://www.audible.com/cat/Home-Garden/Pets-Animal-Care-Audiobooks/18573724011 | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | | | |
|---|---|---|---|---|
| **Module Title** | **Computer** | | **Module Delivery** | |
| **Module Type** | **B** | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | **QU04** | | | |
| **ECTS Credits** | **3** | | | |
| **SWL (hr/sem)** | **75** | | | |
| **Module Level** | 1 | **Semester of Delivery** | 2 | |
| **Administering Department** | Public health | **College** | Veterinary medicine | |

| | | | |
|---|---|---|---|
| **Module Leader** | Salman hamza Hussein | **e-mail** | Salman.Hussein @qu.edu.iq |
| **Module Leader's Acad. Title** | Assist professor | **Module Leader's Qualification** | Ph.D |
| **Module Tutor** | | **e-mail** | |
| **Peer Reviewer Name** | | **e-mail** | |
| **Scientific Committee Approval Date** | 11/8/2024 | **Version Number** | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 3- Teaching computer science and keeping up with the latest developments in computer science<br>4- Teaching computer maintenance methods. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 3- Preparing students who have the ability to work on the computer<br>4- Enabling students to learn about different computer programs |
| **Indicative Contents**<br>المحتويات الإرشادية | Theoretical<br>Week 1<br>Week2<br>Computer Lab. Visit – demonstration of computer parts<br>Week3,4,5<br>Computer science terminology – GWBASIC programming<br>Week 4,5,6,7,8<br>Operating systems (MS-DOS and WINDOWS)<br>Week 9,10,11,12,13,14,15<br>Microsoft office programs (Word, PowerPoint, and Excel).<br>Practical<br>Computer Lab. Visit – demonstration of computer parts **10**<br>Computer science terminology – GWBASIC programming **10**<br>Operating systems (MS-DOS and WINDOWS) **20**<br>Microsoft office programs (Word, PowerPoint, and Excel). |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم |
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|---|---|
| **Strategies** | Qualifying students to learn various Microsoft programs and the ability to work on the computer |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Computer Lab. Visit – demonstration of computer parts |
| **Week 2** | Computer Lab. Visit – demonstration of computer parts |
| **Week 3** | Computer science terminology – GWBASIC programming |
| **Week 4** | Computer science terminology – GWBASIC programming |
| **Week 5** | Computer science terminology – GWBASIC programming |
| **Week 6** | Computer science terminology – GWBASIC programming |
| **Week 7** | Operating systems (MS-DOS and WINDOWS) |
| **Week 8** | Operating systems (MS-DOS and WINDOWS) |
| **Week 9** | Operating systems (MS-DOS and WINDOWS) |
| **Week 10** | Operating systems (MS-DOS and WINDOWS) |
| **Week 11** | Operating systems (MS-DOS and WINDOWS) |
| **Week 12** | Microsoft office programs (Word, PowerPoint, and Excel). |
| **Week 13** | Microsoft office programs (Word, PowerPoint, and Excel). |
| **Week 14** | Microsoft office programs (Word, PowerPoint, and Excel). |
| **Week 15** | Microsoft office programs (Word, PowerPoint, and Excel). |
| **Week 16** | **Exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Computer Lab. Visit – demonstration of computer parts |
| **Week 2** | Computer Lab. Visit – demonstration of computer parts |
| **Week 3** | Computer Lab. Visit – demonstration of computer parts |
| **Week 4** | Computer science terminology |
| **Week 5** | Computer science terminology – GWBASIC programming |
| **Week 6** | Operating systems MS-DOS |

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|---|---|
| **Week 7** | Microsoft office programs |
| **Week 8** | Word |
| **Week 9** | PowerPoint |
| **Week 10** | Excel |
| **Week 11** | GWBASIC programming |
| **Week 12** | Computer science terminology – GWBASIC programming |
| **Week 13** | WINDOWS |
| **Week 14** | Access |
| **Week 15** | Access |
| **Week 16** | **Exam** |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | The Computer Science Book: A complete introduction to computer science in one book Kindle Edition<br>by Thomas Johnson | No |
| **Recommended Texts** | | |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Computer** | | | **Module Delivery** | |
| **Module Type** | **B** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | | | | | |
| **ECTS Credits** | **3** | | | | |
| **SWL (hr/sem)** | **75** | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 2 | |
| **Administering Department** | Public health | | **College** | Veterinary medicine | |
| **Module Leader** | Salman hamza Hussein | | **e-mail** | Salman.Hussein @qu.edu.iq | |
| **Module Leader's Acad. Title** | Assist professor | | **Module Leader's Qualification** | Ph.D | |
| **Module Tutor** | Ban Abdul Kadhim Abdul Ali | | **e-mail** | Ban.Abdul Ali @qu.edu.iq | |
| **Peer Reviewer Name** | Alia Hussein Mohammed Ali | | **e-mail** | Alia.Mohammed @qu.edu.iq | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1- Teaching computer science and keeping up with the latest developments in computer science<br>2- Teaching computer maintenance methods. |

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|---|---|
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1- Preparing students who have the ability to work on the computer<br>2- Enabling students to learn about different computer programs |
| **Indicative Contents**<br>المحتويات الإرشادية | أولاً: الشبكات ((Computer Networks<br><br>١. مقدمة في الشبكات<br><br>• تعريف الشبكة الحاسوبية<br>• أهمية الشبكات في الحياة اليومية والعمل<br>• تصنيفات الشبكات ((LAN, WAN, MAN, PAN<br><br>٢. مكونات الشبكة<br><br>٣. التطبيقات العملية.<br><br>ثانياً: الذكاء الاصطناعي ((Artificial Intelligence<br><br>١. مقدمة في الذكاء الاصطناعي<br><br>• تعريف الذكاء الاصطناعي<br>• الفرق بين الذكاء الاصطناعي والذكاء البشري<br>• مجالات تطبيقه<br><br>٣. تقنيات الذكاء الاصطناعي<br><br>٤. تطبيقات الذكاء الاصطناعي<br><br>٥. التحديات والأخلاقيات |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Qualifying students to learn various Microsoft programs and the ability to work on the computer |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | **Security and networking:** What is a network? Types of networks. |
| **Week 2** | **Security and networking:** Basic network components. Network Security Basics. |

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| **Week 3** | **Security and networking:** Understanding network threats. Network Troubleshooting. |
| **Week 4** | **E-Commerce:** Concepts of Electronic banking: ATM and debit card services, Phone banking. |
| **Week 5** | **E-Commerce:** Concepts of Electronic banking: SMS banking, electronic alert, Mobile banking. |
| **Week 6** | **Computer Troubleshooting:** Identifying and solving common hardware and software problems that computer users encounter. |
| **Week 7** | **Computer Troubleshooting:** Basic troubleshooting techniques and tools for diagnosing and resolving issues. |
| **Week 8** | **Introduction to AI:** Definition of AI. History of AI. |
| **Week 9** | **Introduction to AI:** AI Techniques and Approaches, Challenges and Ethical Considerations. |
| **Week 10** | **AI in our Dailey Lives:** AI in smartphones and virtual assistants like Siri or Google Assistant. |
| **Week 11** | **Applications of AI:** Education, healthcare and Finance. |
| **Week 12** | **Applications of AI:** Transportation, Marketing and Advertising. |
| **Week 13** | **AI and Society:** (How AI affects social, AI and international relations, AI and the future of humanity). |
| **Week 14** | **Ethical challenges in AI:** (AI ethics, privacy and surveillance, the impact of AI on the job market). |
| **Week 15** | **The future of AI:** (Future trends in AI, recent research and emerging technologies). |
| **Week 16** | **Exam** |

## Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي العملي

| | **Material Covered** |
|---|---|
| **Week 1** | **Security and networking:** What is a network? Types of networks. |
| **Week 2** | **Security and networking:** Basic network components. Network Security Basics. |
| **Week 3** | **Security and networking:** Understanding network threats. Network Troubleshooting. |
| **Week 4** | **E-Commerce:** Concepts of Electronic banking: ATM and debit card services, Phone banking. |
| **Week 5** | **E-Commerce:** Concepts of Electronic banking: SMS banking, electronic alert, Mobile banking. |
| **Week 6** | **Computer Troubleshooting:** Identifying and solving common hardware and software problems that computer users encounter. |
| **Week 7** | **Computer Troubleshooting:** Basic troubleshooting techniques and tools for diagnosing and resolving issues. |
| **Week 8** | **Introduction to AI:** Definition of AI. History of AI. |
| **Week 9** | **Introduction to AI:** AI Techniques and Approaches, Challenges and Ethical Considerations. |

| | |
|---|---|
| **Week 10** | **AI in our Dailey Lives:** AI in smartphones and virtual assistants like Siri or Google Assistant. |
| **Week 11** | **Applications of AI:** Education, healthcare and Finance. |
| **Week 12** | **Applications of AI:** Transportation, Marketing and Advertising. |
| **Week 13** | **AI and Society:** (How AI affects social, AI and international relations, AI and the future of humanity). |
| **Week 14** | **Ethical challenges in AI:** (AI ethics, privacy and surveillance, the impact of AI on the job market). |
| **Week 15** | **The future of AI:** (Future trends in AI, recent research and emerging technologies). |
| **Week 16** | **Exam** |

## Learning and Teaching Resources
مصادر التعلم والتدريس

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | اساسيات الحاسوب ، ٢٠١٦. الخضر علي الخضر | |
| **Recommended Texts** | مدخل الى عالم الذكاء الاصطناعي ، ٢٠٠٥. الدكتور عادل عبد النور | |
| **Websites** | ---------- | |

## Module Information
معلومات المادة الدراسية

| | | | |
|---|---|---|---|
| **Module Title** | Basic Biochemistry | **Module Delivery** | |
| **Module Type** | C | ☒**Theory**<br>☒**Lecture**<br>☒**Lab**<br>☐**Tutorial**<br>☐**Practical**<br>☐**Seminar** | |
| **Module Code** | VET204 | | |
| **ECTS Credits** | 5 | | |
| **SWL (hr/sem)** | 125 | | |
| **Module Level** | 2 | **Semester of Delivery** | 1 |
| **Administering Department** | Physiology and pharm. | **College** | Veterinary medicine |
| **Module Leader** | Miaad Jabbar Sahib | **e-mail** | miaad.Sahib@qu.edu.iq |
| **Module Leader's Acad. Title** | Assist. Prof. | **Module Leader's Qualification** | PhD |
| **Module Tutor** | Dhama Kadim | **e-mail** | Dhama.Kadim@qu.edu.iq |
| **Peer Reviewer Name** | | **e-mail** | |

| | | | |
|---|---|---|---|
| **Scientific Committee Approval Date** | 8/8/2024 | **Version Number** | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. We will introduce students to basic laboratory techniques for determination of different body fluids and blood chemical components.<br><br>2. Teaching students about the fundamental aspects of biochemistry.<br><br>3. Promote the success of students in the upper scientific levels of veterinary medicine associated with chemistry by fostering the development of scientific skills.<br><br>4. Safety is the primary concern in any laboratory, particularly in chemistry.<br>The student will acquire the ability to implement safe laboratory procedures.<br><br>5. Identify energy rich dietary constituents, cellular sites of energy generation.<br><br>6. Understand mechanism of cellular ATP formation and utilization.<br><br>7. Understand ways of regulation of cellular energy metabolism.<br><br>8. Understand the mechanism and effect of poisons on cellular energy. generation. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1. Acquire knowledge of the basic principles about biomolecules, in addition to learn their biochemical importance according to their chemical structure.<br><br>2. Gain an understanding of the basic principles of energy synthesis and the major bioenergetics. |

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| | 3. The student will be familiar with the fundamental concepts of glucose metabolism to produce energy in aerobic and an aerobic conditions, and to learn the most important glucose transporters at the cellular levels and which of these receptors is insulin dependent glucose uptake .<br><br>٤.Learn the fundamental principles of analytic chemistry, which is an essential component in veterinary school courses.<br><br>5. Acquire a comprehensive understanding of the fundamental concepts of amino acids and proteins, which serve as an important source for energy and their relation to nitrogen balance. |
| **Indicative Contents**<br><br>المحتويات الإرشادية | 1. Understanding the properties of biomolecules: We will introduce students to the fundamental principles of different component of the body according to their chemistry by focusing on the molecular structures, properties, and chemical reactivity of a variety of compounds, including: carbohydrates, proteins, lipids and nucleic acids.<br><br>2. The fundamental concepts of energy production inside the body and the major bioenergetics, in addition to learn how to calculate the amount of energy as ATP.<br><br>3. Key Competencies laboratory skills include liquid handling and using of spectrophotometer.<br><br>4. The course explores the fundamental concepts and mechanisms behind the role of enzymes in acceleration of chemical reactions. It also emphasizes the ability to illustrate the mechanics of these reactions.<br><br>5.Identify the main actions of hormones: Enhance the student's understanding of a wider range of pharmacological uses of these hormones, especially in treatment of hormonal disturbances cases.<br><br>6. Writing abilities—enhancing students' capacity to write scientific reports to aid them in their pursuit of advanced veterinary degrees. |

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1. Conducting captivating chemical experiments to engage students<br><br>2. Establish a connection between biochemistry and daily life.<br><br>3. Motivate students to be passionate about their biochemistry abilities. Students are more likely to be enthusiastic about potential career paths, as many consider them at the university level.<br><br>4. Asking intriguing questions at the beginning of a general biochemistry lecture stimulates students' curiosity and enthusiasm for biochemistry. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Cell biochemistry: Introduction, objectives of biochemistry, biomolecules, water. |
| **Week 2** | Cell biochemistry: Subcellular organelles and their biochemical importance. |
| **Week 3** | Carbohydrate Metabolism: Chemistry of carbohydrates, function of carbohydrates. |
| **Week 4** | Carbohydrate Metabolism : Digestion and absorption of carbohydrates. |
| **Week 5** | Carbohydrate Metabolism : Aerobic glycolysis, an aerobic glycolysis, fermentation. |
| **Week 6** | Carbohydrate Metabolism: Gluconeogenesis, Pentose phosphate pathway. |
| **Week 7** | Carbohydrate Metabolism: Glycogen metabolism, glycogenolysis, glycogenesis. |
| **Week 8** | Hormones: Introduction, mechanism of action of hormones. |
| **Week 9** | Hormones: Signal transduction of hormones. |

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| **Week 10** | Integrative metabolism bioenergetics: Introduction , Formation and utilization of ATP, Kreb's cycle, Function and regulation of kreb's cycle. |
| **Week 11** | Integrative Metabolism Bioenergetics: Electron transport system and oxidative phosphorylation. |
| **Week 12** | Amino acids and Proteins: Classification of amino acids , properties of amino acids, proteins, classifications of proteins , structures of proteins. |
| **Week 13** | Amino acids and Proteins: Denaturaion of proteins , Digestion and absorption of proteins . Amino acid catabolism , Nitrogen balance, excretion and the urea cycle. |
| **Week 14** | Enzymes: Principles and classifications of enzymes , mechanism action of enzymes. |
| **Week 15** | Enzymes: Enzyme Inhibition, regulation of enzyme activity. |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | General instruction of laboratory equipment. |
| **Week 2** | Carbohydrates test |
| **Week 3** | General qualitative test |
| **Week 4** | Unknown of carbohydrates |
| **Week 5** | glycogens |
| **Week 6** | Proteins : Fibrous proteins |
| **Week 7** | Separation of albumin and globin by precipitation |
| **Week 8** | Glycoprotein |
| **Week 9** | Phosphoprotein : Enzymes |
| **Week 10** | Amylolytic activity of amylase |
| **Week 11** | Effect of pH on amylase activity. |
| **Week 12** | Effect of temperature on amylase activity |
| **Week 13** | Urine: Physical properties of urine |
| **Week 14** | Normal and abnormal constituents of urine |

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|---|---|
| **Week 15** | Unknown of urine |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Vasudevan D.M. et al. (2023). Textbook of biochemistry for medical students. 10th edition. Jaypee brothers medical publishers (P) LTD. | yes |
| **Recommended Texts** | Murray, R. K. et al. (2015). Harpers illustrated biochemistry.. McGraw Hill Lange. | yes |
| **Websites** | https://awesomechem.wordpress.com/wp-content/uploads/2016/10/harpers-illustrated-biochemistry-28th-ed-robert-k-murray-et-al-mcgraw-hill-2009.pdf | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Visceral Anatomy | | | **Module Delivery** | |
| **Module Type** | core | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET201 | | | | |
| **ECTS Credits** | 5 | | | | |
| **SWL (hr/sem)** | 78 | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Anatomy &histology | | **College** | Veterinary medicine | |
| **Module Leader** | Fatimah swadi | | **e-mail** | fatimah.zghair@qu.edu.iq | |

| | | | |
|---|---|---|---|
| **Module Leader's Acad. Title** | Assit.professor | **Module Leader's Qualification** | PHD |
| **Module Tutor** | Maha abd al hadi &Saffia Karim | **e-mail** | Maha.alabdula@qu.edu.iq<br>Saffia.alumare@qu.edu.iq |
| **Peer Reviewer Name** | Raad kahat | **e-mail** | Raaded123@gmail.com |
| **Scientific Committee Approval Date** | 1/6/2025 | **Version Number** | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | The general objective of teaching basic sciences in the anatomy department is to provide important scientific knowledge that includes knowledge of the structural composition of the body at the level of systems, organs and cells.<br><br>Knowledge of scientific methods for studying anatomy and modern molecular methods.<br><br>Raising the ability of students to link anatomical facts with clinical applications using radiography, ultrasound, magnetic resonance imaging and histological slides.<br><br>Applying professional and ethical education for students to deal with animal cadavers. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | A- Knowledge<br><br>A-1 The student knows the basic methods of studying veterinary anatomy.<br><br>A-2 Enabling the student to explain and describe the body organs using modern methods.<br><br>A-3 Enabling the student to apply the tissue sectioning technique and the tissue immunology technique.<br><br>A-4 The student analyzes the main structures that make up the body systems, especially the systems that affect animal productivity.<br><br>A-5 The student can express his opinion on the quality of animals in private fields and farms.<br><br>A-6 The student can plan various animal production projects.<br><br>B- Skill<br>B1 - The student acquires anatomy skills.<br><br>B2 - The student acquires the skills of analyzing and comparing the |

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| | structures of different animal bodies.<br>B3 - The student acquires the necessary skills to select good qualities for farm animals<br>C- Values:<br>C-1 The learner provides assistance to his friends in the class and group work<br>C-2 The learner practices volunteer work with full awareness and understanding<br>C-3 The student tries to maintain mutual respect between him and his classmates in the class, as well as mutual respect with the educational family in the college<br>C-4 The student can become familiar with the ethics of the profession and the relationship with the breeders, and the motivation is moral and emotional. |
| **Indicative Contents**<br>المحتويات الإرشادية | |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | The main strategy that will be followed in delivering this unit is to stimulate students' participation in dissection, while at the same time developing and enriching their skills in handling dissection instruments. This will be done through classroom, interactive lessons, as well as by conducting simple experiments that include sampling activities that interest students. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | DIGESTIVE SYSTEM<br>General description of the digestive system and its embryological development. |
| **Week 2** | Mouth cavity and its content like the tongue and hard palate and soft palate with its muscles and cheeks and lips |
| **Week 3** | blood and nerve supply of the tongue |
| **Week 4** | Salivary glands, pharynx and its layers and muscles and openings. |
| **Week 5** | The hyoid apparatus (bones and muscles ). Muscles of mastication |
| **Week 6** | Course and relationship of esophagus and its structures. Classification of stomach, |
| **Week 7** | parts of the intestine, duodenum, jejunum, ileum |
| **Week 8** | The caecum and its variations in farm animals. Colon and its variations in farm animals, rectum, anus |

| | |
|---|---|
| **Week 9** | Accessory glands like the liver and its ligaments and lobation, gallbladder and the variations in farm animals. Pancreas and its variations. Peritoneum its reflexation in the abdominal cavity to fix the abdominal organs |
| **Week 10** | RESPIRATORY SYSTEM<br>Introduction |
| **Week 11** | nose, nasal cavity, nasopharynx |
| **Week 12** | paranasal sinuses |
| **Week 13** | larynx, trachea |
| **Week 14** | , lungs |
| **Week 15** | thoracic cavity, pleura. |
| **Week 16** | **exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | General description of the skull. |
| **Week 2** | Cranial cavity, nasal cavity, hyoid bone, mandible |
| **Week 3** | Skull comparative, paranasal sinuses. |
| **Week 4** | Cervical vertebrae comparative. |
| **Week 5** | Superficial dissection of face region (muscles, nerves, arteries, veins). |
| **Week 6** | Deep dissection of face region (muscles, nerves, arteries, veins, parotido auricular region, buccal region, mental region). |
| **Week 7** | Dissection of oral cavity with its contents (compassion), muscles of hyoid bone, muscles and papillae of tongue |
| **Week 8** | Dissection of pharynx (divisions, muscles, openings, muscles of soft palate, muscles of mastication) |
| **Week 9** | Dissection of nasal cavity with its contents (comparison), larynx (laryngeal cartilages, laryngeal cavities, laryngeal muscles), blood and nerve supply to the larynx |
| **Week 10** | Stomach in different animal |
| **Week 11** | Small and large intestine |
| **Week 12** | cranium |
| **Week 13** | nose, nasal cavity, nasopharynx<br>paranasal sinuses |
| **Week 14** | larynx, trachea |

| | |
|---|---|
| | , lungs |
| **Week 15** | thoracic cavity, pleura. |
| **Week 16** | exam |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Bragulla, H., H. E. König and H.-G. Liebich (2007). Veterinary Anatomy of Domestic Mammals Textbook of veterinary anatomy | Yes |
| **Recommended Texts** | the anatomy of the domestic animal | yes |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | | | |
|---|---|---|---|---|
| **Module Title** | جرائم نضام البعث في العراق | | **Module Delivery** | |
| **Module Type** | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | Qu08 | | | |
| **ECTS Credits** | 2 | | | |
| **SWL (hr/sem)** | 33 | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 1 |
| **Administering Department** | Anatomy &histology | | **College** | Veterinary medicine |
| **Module Leader** | محمد عبد جري | | **e-mail** | Mohamd.jree@qu.edu.iq |
| | استاذ مساعد | | **Module Leader's Qualification** | PHD |
| **Module Tutor** | | | **e-mail** | |

| | | | |
|---|---|---|---|
| **Peer Reviewer Name** | | **e-mail** | |
| **Scientific Committee Approval Date** | 1/6/2025 | **Version Number** | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | ١- تمكين الطالب من التعرف على القوانين المحلية والدولية وخصوصا التي تتعامل مع قضايا حقوق الانسان والانتهاكات المرتكبة ضدها، ورفع مستوى الثقافة القانونية لديه التي تجعله يتبناها لرفض تلك الانتهاكات سواء داخل نظام الدولة الذي ينتمي إليه أو خارجه.<br>٢-تمكين الطالب من التعرف على انواع الجرائم التي ترتكب داخل الدولة والتمييز ما بينها وبين الجرائم ضد الإنسانية من خلال التعرف على صفاتها واسسها والقوانين التي تنطبق عليهم<br>٣- لتعريف قوانين المحكمة الجنائية الدولية ضد الإنسانية، وقوانين المحكمة الجنائية العراقية العليا عام ٢٠٠٥، الموثقة الانتهاكات نظام حزب البعث للإنسانية خلال فترة الحكم. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | أ-الاهداف المعرفية<br>الشرح<br>• العصف الذهني<br>• الحوار والنقاش<br>• اختبار سريع |
| **Indicative Contents**<br>المحتويات الإرشادية | ب- الأهداف المهاراتية الخاصة بالمقرر |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | ان الجرائم الشنيعة التي اقترفها نظام البعث في العراق لا تكاد تحصى كثرة ولو ان اقلام الباحثين تعقبتها سنوات طويلة بالتوثيق والتحليل والدراسة لما أتتِ على حقيقة ما جرى في بلدنا الجريح من مآسٍ وويلاتُ ونكبات قام بها نظام البعث الجائر؛ لأنهاَّاتسعت لتشمل مفاصل الحياة كافة فطالتَ الحجرَ والمدر والبشر،ُ وستبقى هذه الجرائم وصمة عارُ وعلامةُخزي في جبين مرتكبيها مابقى الدهر تلاحقهم دماء الأبرياء،ُ وآلام الضحايا، ولعنة الأهوار التي حرموها من مائها على مضض، وانكسار الجبال التي جردوها من شموخها بقسوة، وأنين النخيل والبساتين، حين أطفأ خضرتهاُ وتقض مضاجعهم دموع الأرامل والأيتام،ُ وصرخاتُ المعذبين، وأطيافً الأطفال الذين ماتوا جوعا في ربوع بلد الرافدين حتى تشخص جرائمهم هذه دليل ادانة في محكمة العدل الإلهية يوم القيامة عندماُتظهر كتبهم كل صغيرة وكبيرة منها تسوقهم إلى جهنم زمراً. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | تعريف مفهوم علم الجرائم |
| **Week 2** | انتهاكات الحقوق والحريات |
| **Week 3** | نبذه وصفية عن الأنظمة السياسية في العراق |
| **Week 4** | انتهاكات النظام البعثي للحقوق والحريات العامة |
| **Week 5** | اثر سلوكيات نظام البعث على المجتمع |
| **Week 6** | اثر المرحلة الانتقاليه في محاربة الفساد |
| **Week 7** | الميدان النفسي والميدان الاجتماعي والثقافة والاعلام وعسكرة المجتمع |
| **Week 8** | اثر القمع والحروب على المجتمع |
| **Week 9** | استعمال الأسلحة المحرمة دوليا والتلوث البيئي |
| **Week 10** | سياسة الأرض المحروقة |
| **Week 11** | تجفيف الاهوار والهجرة القسرية |
| **Week 12** | تدمير البيئة الزراعية والحيوانية |
| **Week 13** | المقابر الجماعية وقصف دور العبادة |
| **Week 14** | اثر سلوكيات النظام البعثي وتسلطه على المجتمع |
| **Week 15** | الامتحان |
| **Week 16** | المراجعة |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | كتاب: جرائم نظام البعث في العراق، )العراق، وزارة التعليم العالي والبحث العلمي، ٢٠٢٣ • )د. غسان كريم المجذاب وأمجد زين العابدين طعمة، حقوق االنسان والديمقراطية، ٢٠١٨. •زوينة الوليد، جريمة االبادة الجماعية على ضوء االجتهاد القضائي للمحكمة الجنائية الدولية لرواندا ، رسالة ماجستير غير منشورة، )جامعة الجزائر، كلية الحقوق، بن عكنون، ٢٠١٣ • .)دستور العراق لعام. | Yes |
| **Recommended Texts** | United Nations Universal Declaration of Human Rights 1948, • https://www.supremecourt.geقانون المحكمة الجنائية العراقية العليا | yes |

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|---|---|---|
| | رقم )١٠( لسنة ٢٠٠٥، https://menarights.org/sites/default/files/2016-11/IRQ_Supreme%20Criminal%20Court%20Act_2005_AR_0.pdf<br>• تقرير: تشريع منظمة االمم المتحدة في فصلها الرابع/ الجرائم ضد االنسانية، ٢٠١٧، https://legal.un.org/ilc/reports/2017/arabic/chp4.pdf | |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | **Animal Nutrition** | | | **Module Delivery** | |
| **Module Type** | | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | | | | | |
| **ECTS Credits** | | | | | |
| **SWL (hr/sem)** | | | | | |
| **Module Level** | ٢ | | **Semester of Delivery** | 2 | |
| **Administering Department** | Public health | | **College** | Veterinary medicine | |
| **Module Leader** | Zahira.Abduljabbar Abdulameer | | **e-mail** | Zahira.Abduljabbar@qu.edu.iq | |
| **Module Leader's Acad. Title** | Assist professor | | **Module Leader's Qualification** | Master | |
| **Module Tutor** | Esraa Tahir Muslim | | **e-mail** | esraa.tahir@qu.edu.iq | |
| **Peer Reviewer Name** | Shaimaa Abass Sabeh | | **e-mail** | Shaimaa.sabeh@qu.edu.iq | |
| **Scientific Committee Approval Date** | 11/8/2024 | | **Version Number** | 1 | |

| **Module Aims, Learning Outcomes and Indicative Contents** |
|---|

| أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | To develop an understanding of the principle of nutrition and their application to meeting the nutrient requirements of livestock and other animal species. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1- To develop an understanding of the principle of nutrition and their application to meeting the nutrient requirements of livestock and other animal species.<br>2- To understand how can prepare balance feed stuff of animals and know the nutritional disorder. |
| **Indicative Contents**<br>المحتويات الإرشادية | 1 week<br>Orientation and general information<br>Development of nutritional science, Animal nutrition: It's Role in Modern Agriculture and society, Definition of terms, Composition of animal feed, Composition of the Animal body.<br>2 week<br>Water and its function<br>Properties and function of water, Absorption, distribution and turnover of water, Sources of water supply, Sources of water loss, Water requirement, Water restriction, Water Quality, Water regulation.<br>3 week<br>Carbohydrate metabolism<br>Chemical forms and dietary sources, carbohydrate metabolism, Importance of glucose, Sources of blood glucose, Glycogen breakdown, Glucose anabolism, Glucose Utilization<br>4 week<br>Lipid and volatile fatty acid<br>Classification of lipid, Structures and function of lipid, Lipid Anabolism, Lipid synthesis (lipogenesis), Lipid catabolism.<br>Sources of Volatile fatty acids, Ruminal production and absorption, Postabsorptive Metabolism, Post-hepatic tissues metabolism, metabolism In ruminant tissue |

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|---|---|
| | 5 week<br>Proteins and nucleic acid metabolism<br>Biological Functions and Properties, Composition and Structure, Structural classification, General properties of amino acids, Essential and nonessential amino acids, amino acid composition and protein quality, protein metabolism, Protein synthesis, Protein synthesis versus degradation animal responses to protein nutrition, Practical considerations.<br>6 ,7 week<br>Energy metabolism<br>Energy terminology, Methods of measuring heat production, important concept in energy metabolism, Efficiency of energy utilization<br>8 week<br>Vitamins Functions and Properties, Composition and Structure, Structural classification, General properties important and deficiency.<br>9 week<br>minerals Functions and Properties, Composition and Structure, Structural classification, General properties important and deficiency.<br>10 week<br>Evaluation of feed stuff prameters : digestibility ,energy partition ,protein tests<br>11 week<br>Nutritional requirements of farm animals( maintenance and productional requirements)<br>12 week<br>Nutritional requirements of poultry maintenance and productional requirements)<br>13 week<br>Poultry nutrition in hot weather<br>14 week<br>Nutritional disorder<br>15 week<br>Feed additives |

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| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | he study of learning and teaching strategies in animal nutrition is a fascinating area of research that has provided valuable insights into how animals acquire, process, and transmit information related to their feeding behaviors and dietary needs. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Orientation and general information<br>Development of nutritional science, Animal nutrition: It's Role in Modern Agriculture and society, Definition of terms, Composition of animal feed, Composition of the Animal body. |
| **Week 2** | Water and its function<br>Properties and function of water, Absorption, distribution and turnover of water, Sources of water supply, Sources of water loss, Water requirement, Water restriction, Water Quality, Water regulation. |
| **Week 3** | Carbohydrate metabolism<br>Chemical forms and dietary sources, carbohydrate metabolism, Importance of glucose, Sources of blood glucose, Glycogen breakdown, Glucose anabolism, Glucose Utilization |
| **Week 4** | Lipid and volatile fatty acid<br>Classification of lipid, Structures and function of lipid, Lipid Anabolism, Lipid synthesis (lipogenesis), Lipid catabolism. |

| | |
|---|---|
| | Sources of Volatile fatty acids, Ruminal production and absorption, Post absorptive Metabolism, Post-hepatic tissues metabolism, metabolism In<br>ruminant tissue. |
| **Week 5** | 5 week<br>Proteins and nucleic acid metabolism<br>Biological Functions and Properties, Composition and Structure, Structural<br>classification, General properties of amino acids, Essential and<br>nonessential amino acids, amino acid composition and protein quality,<br>protein metabolism, Protein synthesis, Protein synthesis versus<br>degradation animal responses to protein nutrition, Practical<br>considerations. |
| **Week 6** | Energy metabolism<br>Energy terminology, Methods of measuring heat production, important<br>concept in energy metabolism, Efficiency of energy utilization. |
| **Week 7** | Energy metabolism<br>Energy terminology, Methods of measuring heat production, important<br>concept in energy metabolism, Efficiency of energy utilization |
| **Week 8** | Vitamins Functions and Properties, Composition and Structure, Structural<br>classification, General properties important and deficiency |
| **Week 9** | minerals Functions and Properties, Composition and Structure, Structural<br>classification, General properties important and deficiency |
| **Week 10** | Evaluation of feed stuff prameters : digestibility ,energy partition ,protein tests |
| **Week 11** | Bedding (litter) and its importance for farm animals.<br>▪ Behavior of farm animals. |
| **Week 12** | Nutritional requirements of farm animals( maintenance and productional requirements |
| **Week 13** | Poultry nutrition in hot weather |
| **Week 14** | Nutritional disorder |
| **Week 15** | Feed additives |

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|---|---|
| **Week 16** | Exam |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Using the nutrition laboratory |
| **Week 2** | Feedstuff approximate analysis |
| **Week 3** | How take sample for analysis |
| **Week 4** | Moisture determination in feedstuff green roughage,, milk, meat and egg |
| **Week 5** | determination of ash |
| **Week 6** | determination of silo |
| **Week 7** | Preparing standard solution |
| **Week 8** | determination of crude protein |
| **Week 9** | determination of crude fiber |
| **Week 10** | determination of ether extract |
| **Week 11** | determination of NFE BY calculated method |
| **Week 12** | determination of gross energy by calculated method |
| **Week 13** | Determination of energy by bomb calorimetry |
| **Week 14** | Digestive trials |
| **Week 15** | Making standard ration for farm animals |
| **Week 16** | Exam |

| Learning and Teaching Resources<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |

| | | |
|---|---|---|
| **Required Texts** | - Animal nutrition/ 2002by Peter McDonald and Richard Alan Edwards<br><br>2- Basic Animal nutrition and feeding/1998-2005 by Wilson G. Pond and David B. Church | Yes |
| **Recommended Texts** | | |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Basic histology | | | **Module Delivery** | |
| **Module Type** | core | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET202 | | | | |
| **ECTS Credits** | ٤ | | | | |
| **SWL (hr/sem)** | ٦٣ | | | | |
| **Module Level** | 1 | | **Semester of Delivery** | 1 | |
| **Administering Department** | Anatomy &histology | | **College** | Veterinary medicine | |
| **Module Leader** | Nabeel Abid Murad almammorri | | **e-mail** | nabeel.almammori@qu.edu.iq | |
| **Module Leader's Acad. Title** | Assit.professor | | **Module Leader's Qualification** | PHD | |
| **Module Tutor** | Eman fasial &Hazem Karim | | **e-mail** | Eman.fasial@qu.edu.iq<br>Hazem.almhanna@qu.edu.iq | |
| **Peer Reviewer Name** | Eman ibrahim | | **e-mail** | Eman.alhacham@qu.edu.iq | |

| | | | |
|---|---|---|---|
| **Scientific Committee Approval Date** | 1/6/2025 | **Version Number** | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. Identify the tissue structure of different body parts in general and in different animals.<br>-2. Make a comparison of the tissue structure of all body parts between different animals and humans.<br>-3. Introduce the student to the different parts of the microscope and teach him how to use it.<br>-4. The student learns how to examine different tissue sections and differentiate them from each other.<br>-5. Develop the student's ability to diagnose normal tissue sections in order to differentiate them in the next stage from pathological tissue sections.<br>-6. Study the types of blood cells as one of the types of connective tissues to benefit from them in knowing the natural components of blood.<br>-7. Teach the student how to take samples of body parts and treat them histologically and make tissue sections. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | A- Cognitive objectives<br>A-1 The student will learn about the tissue structure of the different organs of the body.<br><br>A-2 The student will learn about the tissue structure of the organs of the body in different types of animals.<br><br>A-3 The student will learn about the natural structure of each organ of the body.<br>A-4 The student will learn how to differentiate each organ from other organs in the body.<br>A-5 The student will learn how to take samples and treat them histologically.<br>A-6 The student will learn how to make tissue sections.<br>B- Course skill objectives.<br>B1 - Preparing the student properly to have a solid foundation in the specialization of histology, which is considered the basis<br>of many other sciences.<br><br>B2 - The student's skill in using the light microscope.<br><br>B3 - The student's skill in examining tissue sections.<br><br>B-4 The student's skill in diagnosing and describing natural tissue sections.<br><br>B-5 The student's skill in differentiating between different tissue sections |

| Indicative Contents<br>المحتويات الإرشادية | |
|---|---|

| Learning and Teaching Strategies<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Histologists examine tissue samples removed from a living body; By cutting these tissues into very thin, almost transparent slices using a special cutting tool known as a microtome, these thin sections may be stained with different dyes to increase the contrast between their different cellular components, so that they can be more easily identified using an optical or light microscope. Scientists can also use electron microscopy to reveal details of the organization of living tissues that are beyond the resolving power of light microscopes. Tissues can also be kept alive after being removed from the body by placing them in a suitable culture medium. This method is useful for culturing and examining certain types of cells as they continue to grow and differentiate. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | INTRODUCTION: Definition of histology and it's relation to other sciences, microscopic measurements, calculation of magnification, basic histological techniques. |
| **Week 2** | CYTOLOGY: Interphase nucleus, nuclear membrane, chromatin, duplication of chromatin, nucleolus, cytoplasmic organoids mitochondria |
| **Week 3** | , granular and smooth endoplasmic reticulum, ribosomes, Golgi apparatus, lysosomes, centrosomes, cell membrane |
| **Week 4** | BLOOD AND MYELOID TISSUE: Blood leukocyte:differential diagnosis, normal values in animals, erythrocytes: shape,structure and function, blood platelets: |
| **Week 6** | structure and function, myeloid tissue: general structure, erythropoesis, granulopoesis, structure and development of blood platelets |
| **Week 7** | NERVOUS TISSUE: Constituents of nervous tissue, neurons, Structure and classification, organoids of neurons, axons and dendrites, |
| **Week 8** | supporting cells in CNS and PNS, synapses, nerve fibers, cerebrospinal and autonomic ganglia |
| **Week 9** | CARTILAGE AND BONE: Cartilages, types and histological structure, bone, compact and spongy bone, structure and location, differences between bone and cartilages, intramembranous and endochondral ossification |
| **Week 10** | CARDIOVASCULAR SYSTEM: Blood vessels, types of arteries, types of veins, venules |

| | |
|---|---|
| **Week 11** | , types of capillaries, sinusoids, arteriovenous anastomosis, wall of the heart, cardiac valves, pulse conducting system. |
| **Week 12** | LYMPHATIC SYSTEM: Lymphatic vessels, lymphatic organs, tonsils, lymph nodes, hemolymph nodes, thymus, spleen: different theories of arteriovenous circulation |
| **Week 13** | , lymphatic nodules in other non lymphatic organs. |
| **Week 14** | RESPIRATORY SYSTEM: Nasal cavity, vestibular region, respiratory region, olfactory region, larynx, trachea, lung, bronchi, bronchioles, alveolar ducts, alveoli |
| **Week 15** | , interaleveolar septum, pleura. |
| **Week 16** | **exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | INTRODUCTION: Definition of histology and it's relation to other sciences, microscopic measurements, calculation of magnification, basic histological techniques. |
| **Week 2** | CYTOLOGY: Interphase nucleus, nuclear membrane, chromatin, duplication of chromatin, nucleolus, cytoplasmic organoids mitochondria |
| **Week 3** | , granular and smooth endoplasmic reticulum, ribosomes, Golgi apparatus, lysosomes, centrosomes, cell membrane |
| **Week 4** | BLOOD AND MYELOID TISSUE: Blood leukocyte:differential diagnosis, normal values in animals, erythrocytes: shape,structure and function, blood platelets: |
| **Week 5** | structure and function, myeloid tissue: general structure, erythropoesis, granulopoesis, structure and development of blood platelets |
| **Week 6** | NERVOUS TISSUE: Constituents of nervous tissue, neurons, Structure and classification, organoids of neurons, axons and dendrites, |
| **Week 7** | supporting cells in CNS and PNS, synapses, nerve fibers, cerebrospinal and autonomic ganglia |
| **Week 8** | CARTILAGE AND BONE: Cartilages, types and histological structure, bone, compact and spongy bone, structure and location, differences between bone and cartilages, intramembranous and endochondral ossification |
| **Week 9** | CARDIOVASCULAR SYSTEM: Blood vessels, types of arteries, types of veins, venules |
| **Week 10** | , types of capillaries, sinusoids, arteriovenous anastomosis, wall of the heart, cardiac valves, pulse conducting system. |
| **Week 11** | LYMPHATIC SYSTEM: Lymphatic vessels, lymphatic organs, tonsils, lymph nodes, hemolymph nodes, thymus, spleen: different theories of arteriovenous circulation |
| **Week 12** | , lymphatic nodules in other non lymphatic organs. |

| | |
|---|---|
| **Week 13** | RESPIRATORY SYSTEM: Nasal cavity, vestibular region, respiratory region, olfactory region, larynx, trachea, lung, bronchi, bronchioles, alveolar ducts, alveoli |
| **Week 14** | , interaleveolar septum, pleura. |
| **Week 15** | **exam** |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | jungari (2020). Veterinary histology of Domestic Mammals Textbook of veterinary histology | Yes |
| **Recommended Texts** | the histology of the domestic animal | yes |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | | | |
|---|---|---|---|---|
| **Module Title** | General Physiology | | **Module Delivery** | |
| **Module Type** | C | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET203 | | | |
| **ECTS Credits** | 6 | | | |
| **SWL (hr/sem)** | 150 | | | |
| **Module Level** | First | | **Semester of Delivery** | 2 |

| | | | |
|---|---|---|---|
| **Administering Department** | Physiology and pharm. | **College** | Veterinary medicine |
| **Module Leader** | Jabbar Abbas Ahmed | **e-mail** | Jabbar.ahmed@qu.edu.iq |
| **Module Leader's Acad. Title** | Prof. | **Module Leader's Qualification** | Ph.D |
| **Module Tutor** | Saadeya Ali Al-Gnami | **e-mail** | Saadeya.lefelef@qu.edu.iq |
| **Peer Reviewer Name** | | **e-mail** | |
| **Scientific Committee Approval Date** | 18/8/2024 | **Version Number** | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1. to provide a course of study in mammalian, principally human, systems physiology, building on knowledge of basic physiological principles established in the Part IA Physiology of Organisms course;<br>2. to expand on some areas touched on in 1A Physiology of Organisms and to introduce new and more complex physiological functions;<br>3. to develop further practical biological skills introduced in 1A Physiology of Organisms;<br>4. to prepare students for a number of Part II Natural Science courses, principally Physiology, Development & Neuroscience, but also Pharmacology, Pathology and Zoology, among others. |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1. have an enhanced knowledge and appreciation of mammalian physiology;<br>2. understand the functions of important physiological systems including the cardio-respiratory, renal, reproductive and metabolic systems;<br>3. understand how these separate systems interact to yield integrated physiological responses to challenges such as exercise, fasting and ascent to high altitude, and how they can sometimes fail;<br>4. be able to perform, analyses and report on experiments and observations in physiology;<br>5. be able to recognize and identify principal tissue structures. |

| | |
|---|---|
| **Indicative Contents**<br>المحتويات الإرشادية | **Structure and function of body systems**<br>Physiology of Endocrine system, Nervous system, Cardiovascular system, Respiratory system, Urinary system, Gastrointestinal, Immune system, Integumentary system, Skeletal system and Muscle Physiology<br><br>**Homeostasis**<br>Understand the inter-relationship between systems in the maintenance of homeostasis. Recall key homeostatic systems throughout the bodily systems and how their disruption can lead to disease |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Whether you're teaching in-person or online, there are a few tricks that every instructor can use to improve their courses. It's important to remember that almost every modern student uses technology frequently in their day-to-day life. Incorporating technology into your anatomy and physiology courses is an excellent method of keeping your students more engaged. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction to physiology, The cell and its function (Organization of the cell, membranous structures of the cell, cytoplasm and its organelles functional systems of the cell, |
| **Week 2** | Transport of substances through the cell membrane, radiation and metabolism of energy) |
| **Week 3** | nerve action potential, initiation of the action potential, special characteristics of signal transmission in nerve trunks, synapses, neurotransmitters and the neuromuscular junction |
| **Week 4** | Muscle (types of muscles and structures, General mechanism of muscle contraction, molecular mechanism of muscle contraction, molecular characteristics of the contractile filaments energetic of muscle contraction, characteristics of whole muscle contraction, mechanics of skeletal muscle contraction, rigor moris and physiology of cardiac muscle |
| **Week 5** | The autonomic nervous system (General organization of the autonomic nervous system, physiologic anatomy of the sympathetic nervous system, physiologic anatomy of the |

| | |
|---|---|
| | parasympathetic nervous system, chemical transmission at autonomic junctions, basic characteristics of sympathetic and parasympathetic function, receptors on the effector organs, effects of sympathetic and parasympathetic stimulation on specific organs ″Alarm ″ or ″Stress″ response of the sympathetic nervous system and system and control of the autonomic nervous system). |
| **Week 6** | Blood composition and physiology (formed elements, functions of the blood, erythrocytes, erythropoiesis, hemoglobin, reactions of hemoglobin, |
| **Week 7** | . white blood cells, chemotaxis |
| **Week 8** | platelets, plasma proteins, blood coagulation, blood groups, immunity.<br>Lymph: Composition and function. Cerebrospinal fluid: Composition and function |
| **Week 9** | Cardiovascular system (structure of the heart, and course of blood flow through the heart chambers and heart valves, cardiac cycle, heart sounds, the electrocardiogram cardiac output |
| **Week 10** | blood flow in vessels, blood pressure, capillary circulation, venous circulation, cardiovascular regulatory mechanisms, innervations of blood vessels, cardiac innervation, vasomotor center, baroreceptors and blood-brain barrier |
| **Week 11** | Respiration (functional structures, mechanics of pulmonary ventilation, partial pressure of gases in alveolar and blood, surfactant, surface tension, and collapse of the alveoli, pulmonary volumes, pulmonary capacities, |
| **Week 12** | alveolar ventilation, dead space and its effect on alveolar ventilation, functions of the respiratory. Passageways, mechanics of respiration, transport of gases in the blood and regulation of respiration |
| **Week 13** | Digestive system: salivary glands and saliva, structures of digestive system, gastric secretion, regulation of gastric secretion, |
| **Week 14** | exocrine portion of the pancreas, liver and biliary system, small intestine |
| **Week 15** | intestinal secretion, intestinal motility, large intestine, defecation, absorption, rumination, microbiology of the rumen. |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction to apparatus and instruments |
| **Week 2** | Fragility of red blood cell |
| **Week 3** | RBCs count |

| | |
|---|---|
| **Week 4** | WBC count |
| **Week 5** | Estimation of hemoglobin |
| **Week 6** | The simple muscle twitch |
| **Week 7** | The effect of temperature on muscle |
| **Week 8** | Effect of strength on muscle contraction |
| **Week 9** | Summation of two stimuli and tetanus |
| **Week 10** | Muscle fatigue |
| **Week 11** | Frog sciatic nerve and gastrocnemius |
| **Week 12** | Differential leukocyte count |
| **Week 13** | Lung volumes |
| **Week 14** | Measurement of pulmonary ventilation |
| **Week 15** | Estimation of packed cell volume. |

## Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | Ganong, W.F. (2011). Review of Medical Physiology. 20th Edition. Lange Medical Books/McGraw-Hill Medical Publishing Division. USA; p.543. | yes |
| **Recommended Texts** | Guyton,A.C. and Hall,J.E.(2011). Textbook of medical physiology. 11th Ed. Saunders Company | yes |
| **Websites** | https://books-library.website/c-Veterinary-medicine-download | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| Module Information<br>معلومات المادة الدراسية | | | | | |
|---|---|---|---|---|---|
| **Module Title** | Systemic Physiology | | | **Module Delivery** | |
| **Module Type** | C | | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET209 | | | | |
| **ECTS Credits** | 6 | | | | |
| **SWL (hr/sem)** | 150 | | | | |
| **Module Level** | second | | **Semester of Delivery** | 2 | |
| **Administering Department** | Physiology and pharm. | | **College** | Veterinary medicine | |
| **Module Leader** | Hayder alzamely | | **e-mail** | | |
| **Module Leader's Acad. Title** | Prof. | | **Module Leader's Qualification** | Ph.D | |
| **Module Tutor** | Saadeya Ali Al-Gnami | | **e-mail** | Saadeya.lefelef@qu.edu.iq | |
| **Peer Reviewer Name** | Hayder ghazi | | **e-mail** | | |
| **Scientific Committee Approval Date** | 18/8/2024 | | **Version Number** | 1 | |

| Module Aims, Learning Outcomes and Indicative Contents<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 1.To provide students with important knowledge about of the major physiological systems, and be able to associate anatomical areas with their specific function.<br>2.To make students understand the role of evolutionary processes (e.g. natural selection) in driving the organization of physiological systems. |

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|---|---|
| | 3.To make students familiar with physiological challenges animals face, how those challenges vary in relation to the animals' environment, and the processes by which animals deal with these challenges.<br><br>4.Students will be trained on how they deal with describe structural differences of major physiological systems that characterize different taxonomic groups of animals.<br><br>5.To make students familiarized with relate physiological processes, from the biochemical to the system level, to the function of the entire organism in its environment. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1. have an enhanced knowledge and appreciation of mammalian physiology;<br><br>2. understand the functions of important physiological systems including the cardio-respiratory, renal, reproductive and metabolic systems;<br><br>3. understand how these separate systems interact to yield integrated physiological responses to challenges such as exercise, fasting and ascent to high altitude, and how they can sometimes fail;<br><br>4. be able to perform, analyse and report on experiments and observations in physiology;<br><br>5. be able to recognise and identify principal tissue structures. |
| **Indicative Contents**<br>المحتويات الإرشادية | **Structure and function of body systems**<br>Physiology of Endocrine system, Nervous system, Cardiovascular system, Respiratory system, Urinary system, Gastrointestinal, Immune system, Integumentary system, Skeletal system and Muscle Physiology<br><br>**Homeostasis**<br>Understand the inter-relationship between systems in the maintenance of homeostasis. Recall key homeostatic systems throughout the bodily systems and how their disruption can lead to disease |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | Whether you're teaching in-person or online, there are a few tricks that every instructor can use to improve their courses. It's important to remember that almost every modern student uses technology frequently in their day-to-day life. Incorporating technology into your anatomy and physiology courses is an excellent method of keeping your students more engaged. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Central Nervous system: Brain, brain stem, medulla oblongata, |

| | |
|---|---|
| **Week 2** | reticular formation of the brain stem, thalamus, hypothalamus, temperature regulation, |
| **Week 3** | sensory system, motor system (spinal cord and reflexes), learning and memory and limbic system. |
| **Week 4** | Endocrine system: the relationship between nervous system and endocrine glands, hormones, types of hormones. |
| **Week 5** | mechanisms of hormone action, pituitary gland. |
| **Week 6** | thyroid gland, hormonal control of calcium metabolism |
| **Week 7** | parathyroid glands, adrenal gland. |
| **Week 8** | pancreatic hormones, prostaglandins, atrial natriuretic peptide, pineal gland and thymus gland |
| **Week 9** | Male and female reproductive system: structures, spermatogenesis, structure of mature spermatozoon, endocrine function of the testes and control of testicular function |
| **Week 10** | Structure of female reproductive system, types of follicles, estrous cycle, menstrual cycle, ovarian cycle, uterine cycle, vaginal cycle. |
| **Week 11** | puberty, ovarian hormones, abnormalities of ovarian functions. Pregnancy, placental hormones, parturition and lactation. |
| **Week 12** | Kidney: nephron structure and blood supply, plasma volume, total blood volume, glomerular filtration. |
| **Week 13** | factors affecting the GFR, tubular function, tubular secretion, water excretion, osmotic dieresis, diuretics. |
| **Week 14** | factors affecting sodium excretion, regulation of potassium excretion, functions of ureter and urinary bladder. |
| **Week 15** | Acid-base balance: Chemical buffer, regulation of CO2 concentration by the respiratory system, regulation of plasma HCO3- concentration by the kidney, fate of H+ in the urine and body fluids. |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Estimation of erythrocyte sedimentation. |
| **Week 2** | The Wintrobe erythrocyte indexes |
| **Week 3** | Blood groups |
| **Week 4** | Coagulation time |

| | |
|---|---|
| **Week 5** | Bleeding time |
| **Week 6** | Blood pressure |
| **Week 7** | Effect of exercise and gravity on blood pressure and venous pressure |
| **Week 8** | Urine examination |
| **Week 9** | Frogs heart(sequence of the heart beat and effect of acetylcholine on heart). |
| **Week 10** | Extrasystole and compensatory pause and Stannius ligatures |
| **Week 11** | Evaluation of seminal quality |
| **Week 12** | Estrous cycle of the rat |
| **Week 13** | Overiectomy in rat |
| **Week 14** | Concentration of spermatozoa |
| **Week 15** | Review |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Guyton and Hall(2011). Textbook of Medical Physiology | yes |
| **Recommended Texts** | McDonald,D.V.M.(2003). Veterinary endocrinology and reproduction, 2nd Ed. Lea and Febiger. Philadelphia | yes |
| **Websites** | https://books-library.website/c-Veterinary-medicine-download | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | |
|---|---|---|
| **Module Title** | Biostatistics | **Module Delivery** |
| **Module Type** | C | ☒ **Theory** |

| | | | | | |
|---|---|---|---|---|---|
| **Module Code** | **VET210** | | | ☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **ECTS Credits** | 3 | | | | |
| **SWL (hr/sem)** | 48 | | | | |
| **Module Level** | 2 | | **Semester of Delivery** | 2 | |
| **Administering Department** | Public health | | **College** | Veterinary medicine | |
| **Module Leader** | Kadhim Hassan abbas | | **e-mail** | Kadhim.abbas@qu.edu.iq | |
| **Module Leader's Acad. Title** | Assist. professor | | **Module Leader's Qualification** | Master | |
| **Module Tutor** | Israa abd alhassan | | **e-mail** | | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | /8/2024 | | **Version Number** | | |

## Module Aims, Learning Outcomes and Indicative Contents
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

| | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | 3- Teaching how to deal with different animals.<br>4- Methods of controlling different animals for examination, treatment or cleaning. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 3- Teaching how to deal with DATA from experiments.<br>4- Read and understanding Tables and figures in Thesis and paper researches.<br>5- Select the typical test for data analysis |
| **Indicative Contents**<br>المحتويات الإرشادية | Learning the students all research or thesis or hypothesis must be contain statistical analysis and if not analyzed not have scientific value. |

## Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

| | |
|---|---|
| **Strategies** | Paying attention to the methods of DATA and analysis with perfect test to increase the time and costs for experimental designee |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction to statistics and statistics symbols. |
| **Week 2** | Tabular and graphical presentation. |
| **Week 3** | Measures of central tendency. |
| **Week 4** | Measures of central tendency. |
| **Week 5** | Measures of dispersion or variation . |
| **Week 6** | Measures of dispersion or variation. |
| **Week 7** | Continuous probability distribution, normal distribution |
| **Week 8** | Elementary probability theory |
| **Week 9** | Tests of hypotheses |
| **Week 10** | Z-distribution. |
| **Week 11** | T- distribution. |
| **Week 12** | Chi- square distribution. |
| **Week 13** | F-distribution |
| **Week 14** | F-distribution |
| **Week 15** | Simple regression and correlation. |
| **Week 16** | Exam |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | Introduction to statistics and statistics symbols. |
| **Week 2** | Tabular and graphical presentation. |
| **Week 3** | Measures of central tendency. |
| **Week 4** | Measures of central tendency. |
| **Week 5** | Measures of dispersion or variation . |
| **Week 6** | Measures of dispersion or variation. |
| **Week 7** | Continuous probability distribution, normal distribution |
| **Week 8** | Elementary probability theory |
| **Week 9** | Tests of hypotheses |
| **Week 10** | Z-distribution. |
| **Week 11** | T- distribution. |

| | |
|---|---|
| **Week 12** | Chi- square distribution. |
| **Week 13** | F-distribution |
| **Week 14** | F-distribution |
| **Week 15** | Simple regression and correlation. |
| **Week 16** | Exam |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | **Medical statistics from A to Z** Guide for Clinicians and Medical Students Second Edition Guide for Clinicians and Medical Students Second Edition | Yes |
| **Recommended Texts** | | |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | |
|---|---|---|
| **Module Title** | Neural and vascular Anatomy | **Module Delivery** |
| **Module Type** | core | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** |
| **Module Code** | VET206 | |
| **ECTS Credits** | 6 | |
| **SWL (hr/sem)** | 78 | |

| | | | | | |
|---|---|---|---|---|---|
| **Module Level** | | 1 | **Semester of Delivery** | | 1 |
| **Administering Department** | | Anatomy &histology | **College** | Veterinary medicine | |
| **Module Leader** | Fatimah swadi | | **e-mail** | fatimah.zghair@qu.edu.iq | |
| **Module Leader's Acad. Title** | | Assit.professor | **Module Leader's Qualification** | | PHD |
| **Module Tutor** | Maha abd al hadi&Saffia Karim | | **e-mail** | Maha.alabdula@qu.edu.iq<br>Saffia.alumare@qu.edu.iq | |
| **Peer Reviewer Name** | | Raad kahat | **e-mail** | Raaded123@gmail.com | |
| **Scientific Committee Approval Date** | | 1/6/2025 | **Version Number** | | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | The general objective of teaching basic sciences in the anatomy department is to provide important scientific knowledge that includes knowledge of the structural composition of the body at the level of systems, organs and cells.<br><br>Knowledge of scientific methods for studying anatomy and modern molecular methods.<br><br>Raising the ability of students to link anatomical facts with clinical applications using radiography, ultrasound, magnetic resonance imaging and histological slides.<br><br>Applying professional and ethical education for students to deal with animal cadavers. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | A- Knowledge<br><br>A-1 The student knows the basic methods of studying veterinary anatomy.<br><br>A-2 Enabling the student to explain and describe the body organs using modern methods.<br><br>A-3 Enabling the student to apply the tissue sectioning technique and the tissue immunology technique.<br><br>A-4 The student analyzes the main structures that make up the body systems, especially the systems that affect animal productivity.<br><br>A-5 The student can express his opinion on the quality of animals in private fields and farms.<br><br>A-6 The student can plan various animal production projects. |

| | |
|---|---|
| | B- Skill<br>39<br>B1 - The student acquires anatomy skills.<br><br>B2 - The student acquires the skills of analyzing and comparing the structures of different animal bodies.<br>B3 - The student acquires the necessary skills to select good qualities for farm animals<br>C- Values:<br>C-1 The learner provides assistance to his friends in the class and group work<br>C-2 The learner practices volunteer work with full awareness and understanding<br>C-3 The student tries to maintain mutual respect between him and his classmates in the class, as well as mutual respect with the educational family in the college<br>C-4 The student can become familiar with the ethics of the profession and the relationship with the breeders, and the motivation is moral and emotional. |
| **Indicative Contents**<br>المحتويات الإرشادية | |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | The main strategy that will be followed in delivering this unit is to stimulate students' participation in dissection, while at the same time developing and enriching their skills in handling dissection instruments. This will be done through classroom, interactive lessons, as well as by conducting simple experiments that include sampling activities that interest students. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Lymphatic system<br>Introduction, lymph, lymph vascular system. lymphatic tissue,<br>lymph vessels, lymph capillaries, , |
| **Week 2** | lymphatic tissue structures |
| **Week 3** | solitary lymph nodules |

| | |
|---|---|
| **Week 4** | tonsils, lymph nodes |
| **Week 5** | lymphocenter,<br>hemal nodes, lymph trunks and ducts |
| **Week 6** | thymus, spleen . |
| **Week 7** | NERVOUS SYSTEM<br>Development of the brain. Central nervous system: brain, |
| **Week 8** | parts of the brain ( spinal cord, cranial nerves, spinal nerves) |
| **Week 9** | Autonomic nervous system |
| **Week 10** | sympathetic division, parasympathetic division |
| **Week 11** | Meninges, cerebrospinal fluid. |
| **Week 12** | PNS |
| **Week 13** | SENSE ORGANS The eye (tunics, parts, chambers, muscles), |
| **Week 14** | blood supply, nerve supply, lacrimal apparatus |
| **Week 15** | ear (divisions and cavities). |
| **Week 16** | **exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | The eye ( tunics, muscles, nerves, chambers) |
| **Week 2** | The brain, cranial and spinal meninges, parts of brain, cranial nerves |
| **Week 3** | Dissection of neck region ( lateral and ventral surfaces ) including chief veins, nerves, arteries, muscles, thyroid gland, lymph nodes, trachea, esophagus. |
| **Week 4** | Dissection of neck region (dorsal and lateral surfaces ) including chief muscles and nerves |
| **Week 5** | Dissection of thorax, thoracic fascia, muscles of thoracic wall, respiratory muscles, internal thoracic fascia, pleura, pulmonary ligament, thymus, lung comparative, trachea, bronchial tree |
| **Week 6** | Nerves in thoracic cavity (phrenic, vagus , sympathetic chain), pericardium ,cranial and caudal venae cavae, and venous azygous, longus colli m. and transversus thoracic muscle. |
| **Week 7** | Aortic arch, common brachiocephalic trunk with its branches, thoracic aorta with its branches. |
| **Week 8** | Viscera: stomach (comparative). |
| **Week 9** | Viscera: small intestine (comparative). |
| **Week 10** | Viscera: large intestine (comparative). |

| | |
|---|---|
| **Week 11** | Viscera: liver and its ligaments (comparative). |
| **Week 12** | Lymph centers in abdominal cavity, spleen. |
| **Week 13** | Diaphragm (parts, hiatuses). |
| **Week 14** | Abdominal aorta with its branches, distribution of autonomic nervous system in region behind diaphragm |
| **Week 15** | Terminal branches of abdominal aorta in pelvic cavity with autonomic nerves in it |
| **Week 16** | exam |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
|---|---|---|
| | **Text** | **Available in the Library?** |
| **Required Texts** | Bragulla, H., H. E. König and H.-G. Liebich (2007). Veterinary Anatomy of Domestic Mammals Textbook of veterinary anatomy | Yes |
| **Recommended Texts** | the anatomy of the domestic animal | yes |
| **Websites** | | |

# MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | |
|---|---|---|
| **Module Title** | Biochemistry | **Module Delivery** |
| **Module Type** | C | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** |
| **Module Code** | VET207 | |
| **ECTS Credits** | 5 | |
| **SWL (hr/sem)** | 125 | |

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| **Module Level** | | 2 | **Semester of Delivery** | | 2 |
| **Administering Department** | | Physiology and pharm. | **College** | Veterinary medicine | |
| **Module Leader** | Miaad Jabbar Sahib | | **e-mail** | miaad.Sahib@qu.edu.iq | |
| **Module Leader's Acad. Title** | | Assist. Prof. | **Module Leader's Qualification** | | PhD |
| **Module Tutor** | Dhama Kadim | | **e-mail** | Dhama.Kadim@qu.edu.iq | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | | 8/8/2024 | **Version Number** | | 1 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
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| **Module Objectives**<br>أهداف المادة الدراسية | 1. We will introduce students to basic laboratory techniques for determination of different body components such as: glucose, cholesterol, protein, lipoproteins , urea, uric acid ( mainly blood and urine) and determination of .<br><br>2. Teaching students about the fundamental aspects of nucleic acids (DNA and RNA) and the formation of protein and the genetic code.<br><br>3. Promote the success of students in the upper scientific levels of veterinary medicine associated with chemistry by fostering the development of scientific skills.<br><br>4. Safety is the primary concern in any laboratory, particularly in chemistry. The student will acquire the ability to implement safe laboratory procedures.<br><br>5. Identify fatty acids types, transport and metabolism, in addition to their role in energy generation.<br><br>6. Understand mechanism of action, chemistry, synthesis and metabolic role of various hormones .<br><br>8.To learn about the diseases associated with abnormal levels of hormones (underproduction and overproduction). |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | 1. Acquire knowledge of the basic principles about biomolecules, in addition to learn their biochemical importance according to their chemical structure.<br><br>2. Gain an understanding of the basic principles of energy synthesis and the major bioenergetics.<br><br>3. The student will be familiar with the fundamental concepts of protein synthesis and the correlated processes including replication of DNA, RNA synthesis, transcription and translation. |

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| | ٤.Learn the fundamental principles of analytic chemistry, which is an essential component in veterinary school courses.<br><br>5. Acquire a comprehensive understanding of the fundamental concepts of beta-oxidation and ketone bodies formation according to the feeding state and the physiological demands. |
| **Indicative Contents**<br>المحتويات الإرشادية | 1. Understanding the properties of biomolecules: We will introduce students to the fundamental principles of different component of the body according to their chemistry by focusing on the molecular structures, properties, and chemical reactivity of a variety of compounds, including: carbohydrates, proteins, lipids and nucleic acids .<br><br>2. The fundamental concepts of energy production inside the body and the major bioenergetics, in addition to learn how to calculate the amount of energy as ATP.<br><br>3. Key Competencies laboratory skills include liquid handling and using of spectrophotometer.<br><br>4. The course explores the fundamental concepts and mechanisms behind the role of enzymes in acceleration of chemical reactions. It also emphasizes the ability to illustrate the mechanics of these reactions.<br><br>5. Classes of enzyme inhibition: Enhance the student's understanding of a wider range of enzyme inhibition involving reversible and irreversible inhibition and enhance their ability to recognize between them.<br><br>6. Writing abilities—enhancing students' capacity to write scientific reports to aid them in their pursuit of advanced veterinary degrees. |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
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| **Strategies** | 1. Conducting captivating chemical experiments to engage students<br><br>2. Establish a connection between biochemistry and daily life.<br><br>3. Motivate students to be passionate about their biochemistry abilities. Students are more likely to be enthusiastic about potential career paths, as many consider them at the university level.<br><br>4. Asking intriguing questions at the beginning of a general biochemistry lecture stimulates students' curiosity and enthusiasm for biochemistry. |

| Delivery Plan (Weekly Syllabus)<br>المنهاج الاسبوعي النظري | |
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| | **Material Covered** |
| **Week 1** | Lipids: introduction, classification of lipids. |
| **Week 2** | Lipids: digestion of lipids, absorption of lipids. |
| **Week 3** | Lipids: metabolism of fatty acids. |
| **Week 4** | Lipids: β-oxidation of fatty acids. |
| **Week 5** | Lipids: biosynthesis of fatty acids. |
| **Week 6** | Lipids: cholesterol, lipoproteins. |
| **Week 7** | Hormones: definition, classification, biosynthesis and storage of hormones. |
| **Week 8** | Hormones: Transport and cellular receptors of hormones, chemical messengers of hormones. |
| **Week 9** | Nucleic acids: structure of nucleic acids. |
| **Week 10** | Nucleic acids: types of nucleic acids. |
| **Week 11** | Nucleic acids: replication of DNA. |
| **Week 12** | Nucleic acids: RNA synthesis. |
| **Week 13** | Nucleic acids: transcription. |
| **Week 14** | Nucleic acids: translation/protein synthesis. |
| **Week 15** | Nucleic acids: the genetic code. |

| Delivery Plan (Weekly Lab. Syllabus)<br>المنهاج الاسبوعي للمختبر | |
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| | **Material Covered** |
| **Week 1** | Photometric methods in biochemical analysis. |
| **Week 2** | Determination of serum total protein. |
| **Week 3** | Calibration curve of protein. |
| **Week 4** | Determination of serum amylase activity. |
| **Week 5** | Determination of serum inorganic phosphate. |
| **Week 6** | Determination of serum total calcium. |
| **Week 7** | Determination of serum bilirubin. |
| **Week 8** | Determination of serum creatinine. |
| **Week 9** | Determination of serum uric acid. |
| **Week 10** | Determination of serum cholesterol. |

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| **Week 11** | Enzymatic method for glucose estimation. |
| **Week 12** | Determination of serum total lipid. |
| **Week 13** | Determination of serum urea. |
| **Week 14** | DNA analysis. |
| **Week 15** | RNA analysis. |

| **Learning and Teaching Resources**<br>مصادر التعلم والتدريس | | |
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| | **Text** | **Available in the Library?** |
| **Required Texts** | Vasudevan D.M. et al. (2023). Textbook of biochemistry for medical students. 10th edition. Jaypee brothers' medical publishers (P) LTD. | yes |
| **Recommended Texts** | Murray, R. K. et al. (2015). Harpers illustrated biochemistry. McGraw Hill Lange. | yes |
| **Websites** | https://awesomechem.wordpress.com/wp-content/uploads/2016/10/harpers-illustrated-biochemistry-28th-ed-robert-k-murray-et-al-mcgraw-hill-2009.pdf | |

# نموذج وصف المادة الدراسية

| **Module Information**<br>معلومات المادة الدراسية | | | | |
|---|---|---|---|---|
| **Module Title** | systemic histology and embryology | | **Module Delivery** | |
| **Module Type** | core | | ☒ **Theory**<br>☒ **Lecture**<br>☒ **Lab**<br>☐ **Tutorial**<br>☐ **Practical**<br>☐ **Seminar** | |
| **Module Code** | VET208 | | | |
| **ECTS Credits** | 6 | | | |
| **SWL (hr/sem)** | 78 | | | |
| **Module Level** | 2 | **Semester of Delivery** | 2 | |
| **Administering Department** | Anatomy &histology | **College** | Veterinary medicine | |

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| **Module Leader** | Nabeel Abid Murad almammorri | **e-mail** | Nabeel.almammorri @qu.edu.iq |
| **Module Leader's Acad. Title** | Assit.professor | **Module Leader's Qualification** | PHD |
| **Module Tutor** | Eman fasial &Hazem Karim | **e-mail** | Eman.fasial@qu.edu.iq<br>hazem.almhannna@qu.edu.iq |
| **Peer Reviewer Name** | Eman ibrahim | **e-mail** | Eman.alhacham@qu.edu.iq |
| **Scientific Committee Approval Date** | 1/6/2025 | **Version Number** | 2 |

| **Module Aims, Learning Outcomes and Indicative Contents**<br>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية | |
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| **Module Objectives**<br>أهداف المادة الدراسية | 1. Identify the tissue structure of different body parts in general and in different animals.<br>-2. Make a comparison of the tissue structure of all body parts between different animals and humans.<br>-3. Introduce the student to the different parts of the microscope and teach him how to use it.<br>-4. The student learns how to examine different tissue sections and differentiate them from each other.<br>-5. Develop the student's ability to diagnose normal tissue sections in order to differentiate them in the next stage from pathological tissue sections.<br>-6. Study the types of blood cells as one of the types of connective tissues to benefit from them in knowing the natural components of blood.<br>-7. Teach the student how to take samples of body parts and treat them histologically and make tissue sections. |
| **Module Learning Outcomes**<br><br>مخرجات التعلم للمادة الدراسية | A- Cognitive objectives<br>A-1 The student will learn about the tissue structure of the different organs of the body.<br><br>A-2 The student will learn about the tissue structure of the organs of the body in different types of animals.<br><br>A-3 The student will learn about the natural structure of each organ of the body.<br>A-4 The student will learn how to differentiate each organ from other organs in the body.<br>A-5 The student will learn how to take samples and treat them histologically.<br>A-6 The student will learn how to make tissue sections.<br>B- Course skill objectives.<br>B1 - Preparing the student properly to have a solid foundation in the specialization of histology, which is considered the basis<br>of many other sciences. |

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| | B2 - The student's skill in using the light microscope.<br><br>B3 - The student's skill in examining tissue sections.<br><br>B-4 The student's skill in diagnosing and describing natural tissue sections.<br><br>B-5 The student's skill in differentiating between different tissue sections |
| **Indicative Contents**<br>المحتويات الإرشادية | |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
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| **Strategies** | Histologists examine tissue samples removed from a living body; By cutting these tissues into very thin, almost transparent slices using a special cutting tool known as a microtome, these thin sections may be stained with different dyes to increase the contrast between their different cellular components, so that they can be more easily identified using an optical or light microscope. Scientists can also use electron microscopy to reveal details of the organization of living tissues that are beyond the resolving power of light microscopes. Tissues can also be kept alive after being removed from the body by placing them in a suitable culture medium. This method is useful for culturing and examining certain types of cells as they continue to grow and differentiate. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
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| | **Material Covered** |
| **Week 1** | DIGESTIVE SYSTEM:<br>Oral cavity, lip, tongue, lingual papillae, esophagus, stomach, |
| **Week 2** | nonglandular stomach in ruminants: rumen, reticulum, omasum,<br>abomasums, glandular stomach, cardiac portion, fundic portion,<br>pyloric portion |
| **Week 3** | , small intestine: duodenum, jejunum, ileum,large<br>intestine, colon, recto anal junction, accessory glands, liver,<br>pancreas |
| **Week 4** | URINARY SYSTEM:<br>Unipyramidal kidney, multipyramidal kidney, general microscopic |

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| | structure, nephron, portions and function guxtaglomerular complex, portions and function, ureter, urinary bladder, urethra. |
| **Week 6** | ENDOCRINE SYSTEM:<br>Pituitary gland, embryonic origin, adenohypophysis and<br>endocrine cell types, neurohypophysis, hypothalamic portion, thyroid gland, structure and function, adrenal gland, structure and function, parathyroid gland, structure and function, endocrine cells in other organs |
| **Week 7** | MALE REPRODUCTIVE SYSTEM:<br>Histological structure of testis, seminiferous tubules, spermatozoa development, adult spermatozoa, interstitial cells,epididymis, ductus deferens, prostate gland, vesicular gland, bulbourethral gland. |
| **Week 8** | Female reproductive system:<br>Histological structure of ovary, ovarian follicle development,<br>ovulation, corpus luteum and function oviduct portions histological structure of uterus, cyclic changes in the endometrium, cervix, vagina, mammary gland and functional conditions |
| **Week 9** | SENSORY ORGANS:<br>Eye: histological structure: cornea, sclera, choroid, ciliary body,<br>iris, retina, eyelid. Ear: histological structure of internal ear:<br>osseous labyrinth, membranous labyrinth, cochlear duct, organ of<br>corti |
| **Week 10** | SKIN:<br>Epidermis, dermis, hair follicles, structure, classification,<br>arrangement, skin glands: sebaceous gland, sweat glands,<br>arrector pili muscle |
| **Week 11** | Introduction, oogenesis, Spermatogenesis<br>Fertilization, cleavage, Implantation<br>Trilaminar embryonic disc |
| **Week 12** | Placentation with classification<br>Development of cardiovascular system |
| **Week 13** | . Development of urogenital system<br>Development of body cavities |

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| **Week 14** | Development of digestive system<br>Development of respiratory system |
| **Week 15** | Development of nervous system. |
| **Week 16** | **exam** |

| **Delivery Plan (Weekly Lab. Syllabus)**<br>المنهاج الاسبوعي للمختبر | |
|---|---|
| | **Material Covered** |
| **Week 1** | DIGESTIVE SYSTEM:<br>Oral cavity, lip, tongue, lingual papillae, esophagus, stomach, |
| **Week 2** | nonglandular stomach in ruminants: rumen, reticulum, omasum,<br>abomasums, glandular stomach, cardiac portion, fundic portion,<br>pyloric portion |
| **Week 3** | , small intestine: duodenum, jejunum, ileum,large<br>intestine, colon, recto anal junction, accessory glands, liver,<br>pancreas |
| **Week 4** | URINARY SYSTEM:<br>Unipyramidal kidney, multipyramidal kidney, general microscopic<br>structure, nephron, portions and function |
| **Week 5** | guxtaglomerular<br>complex, portions and function, ureter, urinary bladder, urethra. |
| **Week 6** | ENDOCRINE SYSTEM:<br>Pituitary gland, embryonic origin, adenohypophysis and<br>endocrine cell types, neurohypophysis, hypothalamic portion, |
| **Week 7** | thyroid gland, structure and function, adrenal gland, structure<br>and function, parathyroid gland, structure and function,<br>endocrine cells in other organs |
| **Week 8** | MALE REPRODUCTIVE SYSTEM:<br>Histological structure of testis, seminiferous tubules, |
| **Week 9** | spermatozoa development, adult spermatozoa, interstitial cells,<br>epididymis, ductus deferens, prostate gland, vesicular gland,<br>bulbourethral gland. |
| **Week 10** | Female reproductive system: |

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|---|---|
| | Histological structure of ovary, ovarian follicle development,<br>ovulation, corpus luteum and function oviduct portions |
| **Week 11** | histological structure of uterus, cyclic changes in the endometrium, cervix, vagina, mammary gland and functional conditions |
| **Week 12** | SENSORY ORGANS:<br>Eye: histological structure: cornea, sclera, choroid, ciliary body,<br>iris, retina, eyelid. |
| **Week 13** | Ear: histological structure of internal ear:<br>osseous labyrinth, membranous labyrinth, cochlear duct, organ of<br>corti. |
| **Week 14** | SKIN:<br>Epidermis, dermis, hair follicles, structure, classification,<br>arrangement, skin glands: sebaceous gland, sweat glands,<br>arrector pili muscle |
| **Week 15** | **exam** |

## Learning and Teaching Resources
مصادر التعلم والتدريس

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | jungari (2020). Veterinary histology of Domestic Mammals Textbook of veterinary histology | Yes |
| **Recommended Texts** | the histology of the domestic animal | yes |
| **Websites** | | |

# نموذج وصف المقرر

## وصف المقرر اللغة العربية

يوفر وصف المقرر هذا إيجازاً مقتضياً لأهم خصائص المقرر ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهناً عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحة. ولابد من الربط بينها وبين وصف البرنامج.

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| ١. المؤسسة التعليمية | جامعة القادسية/كلية الطب البيطري | |
| ٢. القسم العلمي / المركز | التشريح والانسجة | |
| ٣. اسم / رمز المقرر | اللغة العربية<br>QU06<br>م.م. منى نعمة جبار عباس الفتلي<br>muna.neamah@qu.edu.iq | |
| ٤. أشكال الحضور المتاحة | النظري | |
| ٥. الفصل / السنة | فصلي | |
| ٦. عدد الساعات الدراسية (الكلي) | ٢ | |
| ٧. تاريخ إعداد هذا الوصف | 2025/8 /7 | |
| ٨. أهداف المقرر | | |
| تنمية روح الاعتزاز باللغة العربية. | | |
| تطوير مهارات الطلاب اللغوية. | | |
| الارتقاء بمستوى الطلبة المهني والبحثي. | | |
| تنمية القابليات النحوية والأدبية لدى الطالب الجامعي. | | |
| تنشئة جيل يهتم بأرث أمته الأدبي والفكري. | | |

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| العمل على صون فصاحة اللغة العربية. | |

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| ٩. مخرجات المقرر وطرائق التعليم والتعلم والتقييم |
| أ- الاهداف المعرفية<br>أ١-تأهيل الطلبة من الحصول على المعرفة والفهم للاطلاع الفكري وأسس وتطبيقات علوم اللغة العربية.<br>أ٢-تأهيل الطلبة من الحصول على المعرفة والفهم لعلم النحو.<br>أ٣- تأهيل الطلبة من الحصول على المعرفة والفهم لعلم الصرف.<br>أ٤-تأهيل الطلبة من الحصول على المعرفة والفهم لعلم الإملاء والتعبير.<br>أ٥-تأهيل الطلبة من الحصول على المعرفة والفهم لعلم الأدب.<br>أ٦- تأهيل الطلبة من الحصول على المعرفة والفهم للمعايير الأساسية لعلوم اللغة العربية. |
| ب - الاهداف المهاراتية الخاصة بالمقرر<br>ب١ - تعريف الطالب على أهمية (اللغة العربية) من الناحية العلمية والتطبيقية.<br>ب٢ - تنمية مهارات التحدث باللغة العربية.<br>ب٣ - تأهيل الطالب بالمعارف والمخرجات الخاصة بعلم النحو.<br>ب٤- تطوير معارف ومدركات الطالب. |
| طرائق التعليم والتعلم : المحاضرات الورقية والإلكترونية واستخدام برنامج البوربوينت والسبورة . |
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| طرائق التقييم : التحضير اليومي (الإمتحان الشفوي). |
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| ج- الاهداف الوجدانية والقيمية<br>ج١-جعل الطالب يهتم بدراسة وفهم اللغة العربية.<br>ج٢-إدراك الطالب أن اللغة العربية هي من جملة اللغات الحية.<br>ج٣-جعل الطالب محباً للغة العربية .<br>ج٤- رفض اي محا لة للتقليل من شأن اللغة العربية واخراجها من غايتها في التواصل . |
| طرائق التعليم والتعلم |
| إثارة أسئلة متنوعة يمكن عبرها استدعاء المعلومات ، وشرح موضوع ما عبر مصادر متنوعة وحاولة ربط المصادر بعضها ببعض. |
| طرائق التقييم |

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| اجراء الاختبارات السريعة اليومية والاختبارات الفصلية مع التنوع في طبيعة الاسئلة ،وكتابة التقاربر العلمية والواجبات البيتية |
| د - المهارات العامة والتأهيلية المنقولة ( المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي ).<br>د١-جعل اللغة وسيلة للإتصال بين بني البشر .<br>د٢-جعل اللغة وسيلة يستفيد منها الفرد للتمتع بالمطالعة والقراءة.<br>د٣-توظيفها للإقناع .<br>د٤- جعل اللغة أداة للنصح والإرشاد . |

| ١٠.بنية المقرر | | | | | |
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| الأسبوع | الساعات | مخرجات التعلم المطلوبة | اسم الوحدة / أو الموضوع | طريقة التعليم | طريقة التقييم |
| -الاول | 2 | النعت | تعريفه، أقسامه،أنواعه وامثلة تطبيقية عليه | المحاضرات الورقية والإلكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي (الامتحان الشفوي) |
| الثاني | 2 | البدل | تعريف،أنواعه وأمثلة تطبيقية عليه | المحاضرات الورقية والالكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي والامتحان الشفوي |
| الثالث | 2 | التوكيد اللفظي والمعنوي . | تعريفه وأقسامه وأمثلة تطبيقية عليه | المحاضرات الورقية والإلكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي (الامتحان الشفوي) |
| الرابع | 2 | العطف | تعريفه وانواعه وامثلة تطبيقية عليه | المحاضرات الورقيةواستخ دام برنامج البوربوينت والسبورة | التحضير اليومي(الامتح ان الشفوي) |
| الخامس | 2 | الممنوع من الصرف | تعريفه وأمثلة تطبيقية عليه | المحاضرات الورقية والإلكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي (الامتحان الشفوي) |
| السادس | 2 | المدارس الأدبية في العصر الحديث | (الاحياء، المهجر ، أبولو، الديوان،الحر ) | المحاضرات الورقية والإلكترونية واستخدام برنامج | التحضير اليومي (الامتحان الشفوي) |

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| | | | | البوربوينت والسبورة | |
| السابع | 2 | مدرسة الإحياء | تعريفها وخصائصها ومميزاتها وأبرز روادها | المحاضرات الورقية والالكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي والامتحان الشفوي |
| الثامن | 2 | مدرسة المهجر | تعريفها ومميزاتها وأبرز روادها | المحاضرات الورقية والالكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي (الامتحان الشفوي) |
| التاسع | 2 | مدرسة أبولو | تعريفها وخصائصها ومميزاتها وابرز روادها | المحاضرات الورقية والالكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي(الامتحان الشفوي) |
| العاشر | 2 | مدرسة الديوان | تعريفها وخصائصها ومميزاتها وأبرز روادها | المحاضرات الورقية والالكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي(الامتحان الشفوي) |
| 11 | 2 | مدرسة الشعر الحر | تعريفها وخصائصها ومميزاتها وأبرز روادها | المحاضرتت الورقية والالكترونية واستخدام برنامج البوربوينت | التحضير اليومي(الامتحان الشفوي) |
| 12 | 2 | نماذج شعراء من المدارس الادبية في العصر الحديث | الجواهري ، جبران خليل جبران ، السياب . | المحاضرات الورقية والالكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي والامتحان الشفوي |
| 13 | 2 | الجواهري | تعريفه، حياته ونشأته،مؤلفاته وأبرز قصائده | المحاضرات الورقية والألكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي (الامتحان الشفوي) |
| 14 | 2 | جبران خليل جبران | تعريفه ، حياته ونشأته،مؤلفاته وأبرز قصائده | المحاضرات الورقية والالكترونية واستخدام برنامج البوربوينت والسبورة | التحضير اليومي (الامتحان الشفوي) |
| 15 | 2 | بدر شاكر السياب | تعريفه ،حياته ونشأته ،مؤلفاته وأبرز قصائده | المحاضرات الورقية والالكترونية واستتخدام برنامج البوربوينت والسبورة | التحضير اليومي(الامتحان الشفوي) |

| ١١.البنية التحتية | |
|---|---|
| ١- الكتب المقررة المطلوبة | -التوابع في النحو العربي محمود سليمان ياقوت<br>-دراسة العلة النحوية في التوابع للقصاب الرومي<br>-الفن ومذاهبه في الشعر العربي لشوقي ضيف |
| ٢- المراجع الرئيسية (المصادر) | *القرآن الكريم<br>*شرح ابن عقيل<br>*الوجيز في اللغة العربية<br>*قواعد اللغة العربية (النحو والصرف الميسر)<br>*الفن ومذاهبه في الشعر العربي لشوقي ضيف |
| أ- الكتب والمراجع التي يوصى بها (المجلات العلمية ،التقارير ،.....) | الوجيز في اللغة العربية لغير المتخصصين<br>جامع الدروس العربية /مصطفى الغلاييني |
| ب- المراجع الالكترونية ،مواقع الانترنيت ،..... | المواقع العديدة التي تعنى بمادة اللغة العربية ومن ضمنها اليوتيوب والبحوث العلمية . |

| ١٢.خطة تطوير المقرر الدراسي |
|---|
| اضافة المزيد من المهارات للطلبة لتعليم اللغة العربية وذلك باعداد الملصقات الجدارية التي توضح للطلبة اهمية اتقان اللغة العربية في كافة مجالات العلوم الاكاديمية والتطبيقية |

MODULE DESCRIPTION FORM

# نموذج وصف المادة الدراسية/ اللغة الانكليزية

| **Module Information**<br>معلومات المادة الدراسية | | |
|---|---|---|
| **Module Title** | **اللغة الانكليزية** | **Module Delivery** |
| **Module Type** | B | ☒ **Theory**<br>☒ **Lecture**<br>☐ **Lab**<br>☐ **Tutorial**<br>☐ **Practical** |
| **Module Code** | **QU21** | |

| | | | | | |
|---|---|---|---|---|---|
| **ECTS Credits** | 2 | | ☐ **Seminar** | | |
| **SWL (hr/sem)** | 33 | | | | |
| **Module Level** | 2 | | **Semester of Delivery** | 2 | |
| **Administering Department** | Physiology and pharm. | | **College** | Veterinary medicine | |
| **Module Leader** | Israa Najm Abdullah Al-Ibadi | | **e-mail** | Esraa.najm@qu.edu.iq | |
| **Module Leader's Acad. Title** | Assist. Prof | | **Module Leader's Qualification** | PHD | |
| **Module Tutor** | Israa Najm Abdullah Al-Ibadi | | **e-mail** | Esraa.najm@qu.edu.iq | |
| **Peer Reviewer Name** | | | **e-mail** | | |
| **Scientific Committee Approval Date** | | | **Version Number** | 1 | |

## Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

| | |
|---|---|
| **Module Objectives**<br>أهداف المادة الدراسية | - enhance the communication skills of students.<br>- development of the four language skills (speaking, listening, reading and writing). |
| **Module Learning Outcomes**<br>مخرجات التعلم للمادة الدراسية | 1. The knowledge, skills, values and ethics that a student must possess upon graduation from a particular course or educational program.<br>2. Enabling students to gain knowledge of the principles of speech and sentences and the types they consist of.<br>3. Enabling students to acquire knowledge of the correct pronunciation of English vocabulary, especially scientific vocabulary.<br>3. Students acquire the ability to speak correctly and in accordance with the principles of the language.<br>4. Students acquire the ability to pronounce letters correctly in line with the principles of language and vocabulary.<br>5. Students acquire the skill of writing sentences correctly and with the fewest possible mistakes. |

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| **Indicative Contents**<br>المحتويات الإرشادية | 1- The course covers core language and skills students need to communicate successfully in technical specializations,<br>2. give their opinions and participate in discussions on a wide range of topical issues,<br>3. communicate effectively in written format on a range of contemporary topics, especially the technical ones,<br>4. understand the key points of a range of moderately complex oral and written texts with relative ease,<br>5. communicate effectively as part of a multicultural group,<br>6. manage, interpret and create meaning using a variety of digital devices and tools |

| **Learning and Teaching Strategies**<br>استراتيجيات التعلم والتعليم | |
|---|---|
| **Strategies** | 1. Use of audio, visual and video presentation tools to engage students<br>2. Establish a conversation connected to daily life.<br>3. Motivate students to be passionate about their abilities to listen and speak. Students are more likely to be enthusiastic about potential career paths, as many consider them at the university level.<br>4. Asking intriguing questions at the beginning of the lecture stimulates students' curiosity and enthusiasm for the English language. |

| **Delivery Plan (Weekly Syllabus)**<br>المنهاج الاسبوعي النظري | |
|---|---|
| | **Material Covered** |
| **Week 1** | Grammar, vocabulary and everyday English : **Getting to Tenses,** know you Present, past, future **,** Using a bilingual dictionary **,** Parts of speech, adjective, preposition , Words with more than one meaning, Social expressions 1 |

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|---|---|
| | |
| **Week 2** | Grammar, vocabulary and everyday English; **Present tenses,** Present Simple**,** Present Continuous**,** have/have got**,** Describing countries**,** This country exports wool. p14**,** Collocation**,** Daily life**,** listen to music<br>talk to my friends p17, Making conversation, Asking questions, Showing that you're interested |
| **Week 3** | Grammar, vocabulary, everyday English**, Past tenses**, Past Simple, Past Continuous, Irregular verbs Making connections, breaklmend, lose/find p Nouns, verbs, and adjectives, Suffixes to make different parts of speech, discuss, Making negatives, Time expressions t |
| **Week 4** | Grammar, vocabulary and everyday English : **Quantity,** shopping! much and many ,some and any**,** some apples, any grapes something, anyone, nobody, everywhere<br>a few, a little, a lot of , **Articles**a shopkeeper, an old shop, the River Thames, He sells bread..<br>Stop and check 1 Teacher s Book |
| **Week 5** | Grammar, vocabulary and everyday English : **What do you Verb patterns 1,want to do?**<br>**Future intentions** going to and will**,** Hot verbs, have, go, come have an accident go wrong come first |
| **Week 6** | Grammar, vocabulary and everyday English : **Tell me! What's it like? What's it like?** What's Paris like? **Comparative and superlative adjectives**<br>big, bigger, biggest, good, better, best , Talking about towns, modern buildings, night-life /Money<br>make money, inheri , Synonyms and antonyms, lovely, beautiful, interested, bored , Directions, farm, wood, pond<br>opposite the car park |
| **Week 7** | Grammar, vocabulary and everyday English : **Present Perfect and Past Simple, for and since, Tense revision,** Past participles**,** Adverbs**,** Word pairs**,** this and that<br>ladies and gentlemen , Short answers |
| **Week 8** | Grammar, vocabulary and everyday English : **Do's and don'ts have** (got) to, **Should, must,** Words that go together, Verb + complement, take responsibility, live abroad<br>Compound nouns post office, headache . |
| **Week 9** | Grammar, vocabulary and everyday English : **Time and conditional clauses, What i f .**Hot verbs**,** take, get, do, make, take a photo, get angry, do me a favour |
| **Week 10** | Grammar, vocabulary and everyday English : Grammar **Verb patterns 2,** manage to do, used to do, go walking<br>**Infinitives** Purpose**,** what, etc. + infinitive**,** I don't know what to say. something, etc. + infinitive everyday English Exclamations |

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|---|---|
| **Week 11** | Grammar, vocabulary and everyday English : Verbs and past participles grown, produced<br>Verbs and nouns that go together, tell a story, keep a promise p89<br>Notices, Keep off the grass, Out of order p |
| **Week 12** | Grammar, vocabulary and everyday English : **Dreams and Second conditional reality** *If I were a princess, I'd live In a castle.**migh t***Phrasal verbs /**Social expressions 2<br>*Congratulations!/Never mind./I haven't a clue.* |
| **Week 13** | Grammar, vocabulary and everyday English : **Present Perfect Continuous, Present Perfect Simple versus Continuous**<br>Jobs and the alphabet game - *architect,*<br>*Bookseller* |
| **Week 14** | Grammar, vocabulary and everyday English : Word formation**;** *death, die/variety, various*<br>Adverbs/*mainly, possibly, exactly, carefully* p /Telephoning |
| **Week 15** | Grammar, vocabulary and everyday English : **Past Perfectl***They had met only one week earlier,* **Reported statements**<br>Words in context pi 16 Saying goodbye;*Have a safe journey!* |

## Learning and Teaching Resources

مصادر التعلم والتدريس

| | Text | Available in the Library? |
|---|---|---|
| **Required Texts** | New Headway . Oxford University press. 5th edition.<br>Liz & John Soars • Stacey Hughes<br>with photocopiable activities by Rachel Godfrey<br>Pre-intermediate | yes |
| **Recommended Texts** | Michael Swan & Catherine Walter<br>Oxford English Grammar Course | yes |

| | | |
|---|---|---|
| | Basic<br>A grammar practice book for<br>elementary to pre-intermediate<br>students of English | |
| **Websites** | chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://dl.avasshop.ir/headw/fifedition/book/head_prei_teachers_avasshop.pdf | |