



Ministry of Higher Education

and Scientific Research

Scientific supervision and evaluation device

Department of Quality Assurance and Academic Accreditation

Accreditation Department

university of Diyala

veterinary collage

***Academic program and course description guide for
the internal medicine branch of study***

2026

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate

description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: . Diyala.....

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

Scientific Department:

Academic or Professional Program Name: . Bachelor.

Final Certificate Name: .. Bachelor of Veterinary
Medicine and Surgery

Academic System: yearly

Description Preparation Date:4/10/2024

File Completion Date: 4/10/2024



Prof. Assist. Dr. Ammar Riyadh Qasem



Prof. Dr. Zahid Ismail Mohamed

Date:

Head of Department Name:
Signature

4/10/2025 Date:

Scientific Associate Name:
Signature:

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance

Department: Assist Prof

Signature:

Date:4/10/2025



Approval of the Dean

Prof. Dr. Ammar Riyadh Qasem

1. Program Vision

Teaching students how to deal with various infection cases that may occur or be performed on different animals, as well as teaching the subject of veterinary obstetrics and various reproductive diseases that are taught within the subjects of the First and third stages.

2. Program Mission

The courses of the microbiology department enable the student to know and understand the relationship between the department subjects and other closely related science courses, such as physiology and diseases, and their relationship to the functions of organs, and how to benefit from this knowledge in other applied sciences.

3. Program Objectives

Providing students with integrated knowledge of microbiology sciences, veterinary obstetrics, and technologies that helps them scientifically and practically in understanding and assimilating other veterinary sciences.

4. Program Accreditation

No

5. Other external influences

Is there a sponsor for the program?

No

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	0	10	%0	
College Requirements	66	270	%91,7	
Department Requirements	-	-	-	
Summer Training	1	10	%1,3	In the veterinary hospital
Other				

* This can include notes whether the course is basic or optional

7. program description				
Year / level	Course Code	Course name	Credit hours	
			Theoretical	Practical
Second Semester / First Year	VEA1106	Anatomy - 2	2	2
	VEH1107	Animal Management - 2	2	2
	VED1106	Biology - 2	2	2
	VEP10022	Computer Science - 2	1	2
	VEP1109	General Chemistry - 2	2	2
	VEH10011	Democracy and Human Rights	2	-
	VEH1108	Poultry Management	1	2
	VEP10032	Arabic language	1	
First Semester Second Year	VEA2101	Anatomy - 1	2	2
	VEH2105	Animal Nutrition - 1	2	2
	VEP2104	Biochemistry - 1	2	2
	VEA2102	Histology - 1	2	2

	VEP2103	Physiology - 1	॔	ॡ
	VEH2106	Genetics	ॡ	–
second Semester Second Year	VEA2107	Anatomy - 2	ॡ	ॡ
	VEH2111	Animal Nutrition - 2	ॡ	ॡ
	VEP2110	Biochemistry - 2	ॣ	ॡ
	VEA2108	Histology - 2	ॡ	ॣ
	VEP2109	Physiology - 2	॔	ॡ
	VEH2113	Statistics	ॡ	ॡ
	VEA2112	Embryology	ॡ	–
		VEP2103	Physiology - 1	॔
First Semester Third Year	VEM3114	General Microbiology	ॣ	ॡ
	VED3110	General Pathology	ॣ	ॣ
	VEM3112	Helminthology	ॣ	ॡ
	VEP3115	Immunology	ॡ	ॡ
	VEP3111	Pharmacology - 1	ॣ	ॡ
	VEP3116	Toxicology	ॡ	–
Second Semester / Third Year	VEM3122	Protozoa and Arthropoda	ॣ	ॡ
	VEM3124	Special Microbiology	ॣ	ॡ
	VED3120	Systemic Pathology	ॣ	ॣ
	VEP3121	Pharmacology - 2	ॣ	ॡ
	VEM3126	Virology	ॡ	ॡ
	VEC3127	Veterinary Clinic	–	ॡ
First Semester / Fourth Year	VEC4119	Clinical Pathology - 1	ॡ	ॡ
	VEC4111	Female Fertility	ॡ	ॡ
	VEC4117	Infectious Diseases - 1	ॣ	–
	VEC4110	Internal Medicine - 1	ॣ	–

	VED4111	Morbid Anatomy - 1	१	२
	VED4114	Poultry Diseases - 1	२	२
	VEC4115	Surgery - 1	३	२
	VEC4112	Veterinary Clinic - 1	–	६
	VEC4120	Epidemiology	1	–
Second Semester / Fourth Year	VEC4127	Clinical Pathology - 2	१	२
	VEC4126	Infectious Diseases - 2	३	–
	VEC4128	Internal Medicine -2	३	–
	VED4121	Morbid Anatomy - 2	१	२
	VEC4124	Poultry Diseases - 2	२	२
	VEC4125	Surgery - 2	३	२
	VEC4123	Veterinary Clinic - 2	–	६
	VEC4122	Veterinary Obstetrics	२	२
	VEC4107	Zoonotic Diseases	२	–
First Semester Fifth Year	VED5110	Fish Diseases	२	२
	VEC5113	Internal Medicine - 1	३	–
	VEC5111	Male Fertility	१	२
	VEH5114	Meat Hygiene	२	२
	VEC5115	Surgery - 1	२	२
	VEC5112	Veterinary Clinic - 1	–	१६
Second Semester Fifth Year	VEC5120	Internal Medicine -2	३	–
	VEH5121	Milk Hygiene	२	२
	VEC5117	Reproductive Biotechnology	१	२
	VEC5123	Surgery - 2	२	२
	VEC5118	Veterinary Clinic - 2	–	१२
	VEC5119	Veterinary Ethics	१	–
	VED5122	Veterinary Forensic Medicine	१	–

VEC5125	Research Projects	1	1
VEC5124	Summer Clinic	-	10

8. Expected learning outcomes of the program	
Knowledge	
1. Cognitive objectives:	A1 Knowledge of basic animal anatomy.
	A2 Knowledge of animal production and animal husbandry.
	A3 Knowledge of animal diseases and their causes.
2. Program specific skill objectives: Scientific skills.	A4 Knowledge of animal treatment and disease prevention.
Skills	
Creativity in solving problems Teamwork and leadership	B1 Knowing the methods of administering medications in various animals, ORAL INJECTION Muscle, subcutaneous, or intravenous. Knowledge of surgical techniques. B2 Knowledge of surgical techniques. B3 Examining dead animals, performing an autopsy and taking samples. B4 Knowledge of pregnancy and obstetrics diagnosis in farm animals.
VALUE	C1 Deal honestly with animal breeders, professional colleagues and competent authorities. C2 Act in a professional manner regarding the professional and legal responsibilities of a veterinarian, Understanding and applying the laws of ethics in the veterinary profession. C3 Not being affected by economic and emotional pressures when making decisions. C4 Providing emergency care for all types of animals
Ethics	
Professional Ethics	Gaining the ability to deal with and treat animals Dealing honestly with the breeder
Professional Responsibility	Working in a professional manner Providing emergency care for all types of animals

9. Teaching and Learning Strategies

Providing students with the basics and topics related to knowledge and systems described in:

A - Clarification and explanation of study materials by the academic staff through the blackboard, smart board, and computer.

B- Providing students with knowledge through homework assignments

10. Evaluation methods

Daily and monthly tests with multiple-choice questions for academic subjects

- Grades for sharing difficult competitive questions for students
- Assigning grades to assigned homework
- Student activities

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirement s/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor	Veterinary medicine and surgery	virology			1	
Professor	Veterinary medicine and surgery	pathological			1	
Professor	Veterinary medicine and surgery	Veterinary obstetrics			1	
Professor	Veterinary	Public health			1	

	medicine and surgery					
Professor	Veterinary medicine and surgery	Pathological animal			1	
Assistant Professor	Veterinary medicine and surgery	microbiology			2	
Assistant Professor	microbiology	microbiology			1	
Assistant Professor	Veterinary medicine and surgery	medicine			4	
Assistant Professor	Veterinary medicine and surgery	surgery			3	
Assistant Professor	Veterinary medicine and surgery	physiology			3	
Assistant Professor	Veterinary medicine and surgery	pharmacology			2	
Assistant Professor	chemistry	chemistry			1	
Assistant Professor	Veterinary medicine and surgery	histology			5	
Assistant Professor	Veterinary medicine and surgery	Pulmonary disease			2	
Assistant Professor	programmer	programmer			1	
Assistant Professor	Veterinary medicine and surgery	Parasitology,			1	
Lecturer	Veterinary medicine and surgery	Parasitology,			1	

Lecturer	Veterinary medicine and surgery	microbiology			4	
Lecturer	chemistry	chemistry			2	
Lecturer	biological	microbiology			2	
Lecturer	Veterinary medicine and surgery	Veterinary health			4	
Lecturer	Veterinary medicine and surgery	disease			2	
Lecturer	Veterinary medicine and surgery	medicine			1	
Lecturer	Veterinary medicine and surgery	Pulory disease			2	
Lecturer	Veterinary medicine and surgery	Animal disease			2	
Assistant Lecturer	Veterinary medicine and surgery	parasytology			1	
Assistant Lecturer	chemistry	chemistry			1	
Assistant Lecturer	English	English			1	
Assistant Lecturer	Biological	Biological			4	
Assistant Lecturer	Biologica	emperiology			1	
Assistant Lecturer	Veterinary medicine and surgery	Histology			3	
Assistant Lecturer	programmer	programmer			1	
Assistant Lecturer	Collage of low	low			1	
Assistant Lecturer	geography	geography			1	

Professional Development

Mentoring new faculty members

By participating in training courses, seminars and workshops on modern teaching methods

Professional development of faculty members

- Follow up on scientific development by contacting international universities via the Internet
- Participation in scientific conferences inside and outside the country
- Participation in scientific workshops and seminars inside and outside the country
- Field visits in industrial projects.

12. Acceptance Criterion

((Central - Scientific))

According to the requirements of the Ministry of Higher Education and Scientific Research, so that it matches the latest admission requirements in Iraqi universities

13. The most important sources of information about the program

- Methodological books approved by the sectorial committee for colleges of vet .
- The website of the college and university
- Helping books
- Local scientific trends
- Global scientific requirements

14. Program Development Plan

Curriculum development: By adding modern topics that keep pace with the continuous development in microbiology . Developing and training faculty members: through their participation in seminars, courses, and attendance at scientific conferences for the purpose of being informed of the latest developments. Laboratory development: In cooperation with the Deanship of the College, work is being done to develop the laboratories of the microbiology Department

Program Skills Outline

				Required program Learning outcomes												
	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics				
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	
first semester second year	VEA2101	Anatomy - 1	Basic	✓												
	VEH2105	Animal Nutrition - 1	Basic		✓			✓								
	VEP2104	Biochemistry - 1	Basic					✓			✓					
	VEA2102	Histology - 1	Basic	✓												
	VEP2103	Physiology - 1	Basic		✓			✓			✓					
	VEH2106	Genetics	Basic			✓				✓						
second semester second year	VEA2107	Anatomy - 2	Basic	✓												
	VEH2111	Animal Nutrition - 2	Basic		✓			✓								
	VEP2110	Biochemistry - 2	Basic					✓			✓					
	VEA2108	Histology - 2	Basic	✓												
	VEP2109	Physiology - 2	Basic		✓			✓			✓					
	VEH2113	Statistics	Basic		✓						✓					
	VEA2112	Embryology	Basic	✓												
first semester	VEM3114	General Microbiology	Basic			✓	✓				✓				✓	
	VED3110	General Pathology	Basic	✓		✓					✓					

third year	VEM3112	Helminthology	Basic			✓	✓					✓			
	VEP3115	Immunology	Basic			✓	✓			✓			✓		
	VEP3111	Pharmacology - 1	Basic					✓	✓						✓
	VEP3116	Toxicology	Basic				✓	✓							✓
second semester	VEM3122	Protozoa and Arthropoda	Basic			✓	✓			✓			✓		
	VEM3124	Special Microbiology	Basic			✓	✓			✓			✓		
	VED3120	Systemic Pathology	basic	✓		✓			✓						
	VEP3121	Pharmacology - 2	basic				✓	✓				✓			✓
third year	VEM3126	Virology	basic			✓	✓			✓			✓		
	VEC3127	Veterinary Clinic	basic		✓				✓			✓			
	VEC4119	Clinical Pathology - 1	basic		✓				✓				✓	✓	
	VEC4111	Female Fertility	basic	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
forth year	VEC4117	Infectious Diseases - 1	basic		✓					✓			✓		
	VEC4110	Internal Medicine - 1	basic		✓					✓			✓		
	VED4111	Morbid Anatomy - 1	basic	✓		✓	✓			✓				✓	
	VED4114	Poultry Diseases - 1	basic	✓	✓	✓	✓			✓		✓	✓		
first semester	VEC4115	Surgery - 1	basic	✓				✓	✓						
	VEC4112	Veterinary Clinic - 1	basic		✓				✓				✓		
	VEC4120	EPIDEMIOLOGY	basic		✓				✓				✓		

second semester forth year	VEC4127	Clinical Pathology - 2	basic		✓				✓				✓		
	VEC4126	Infectious Diseases - 2	basic		✓				✓				✓		
	VEC4128	Internal Medicine - 2	basic		✓				✓				✓		
	VED4121	Morbid Anatomy - 2	basic	✓		✓	✓			✓					
	VEC4124	Poultry Diseases - 2	basic	✓	✓	✓	✓			✓		✓	✓		
	VEC4125	Surgery - 2	basic	✓				✓	✓						
	VEC4123	Veterinary Clinic - 2	basic		✓				✓				✓		
	VEC4122	Veterinary Obstetrics	basic	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
	VEC4107	Zoonotic Diseases	basic			✓				✓			✓		
first semester fifth year	VED5110	Fish Diseases	basic	✓	✓	✓	✓			✓		✓	✓		
	VEC5113	Internal Medicine - 1	basic	✓					✓				✓		
	VEC5111	Male Fertility	basic	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
	VEH5114	Meat Hygiene	basic	✓				✓							
	VEC5115	Surgery - 1	basic	✓				✓	✓						
	VEC5112	Veterinary Clinic - 1	basic	✓					✓				✓		
	VEC5120	Internal Medicine - 2	basic	✓					✓				✓		
	VEH5121	Milk Hygiene	basic	✓				✓							
	VEC5117	Reproductive Biotechnology	basic	✓				✓	✓		✓	✓	✓	✓	✓
Second	VEC5123	Surgery - 2	basic	✓				✓	✓				✓		

semester fifth year	VEC5118	Veterinary Clinic - 2	basic	✓					✓			✓	✓		
	VEC5119	Veterinary Ethics	basic		✓							✓	✓	✓	✓
	VED5122	Veterinary Forensic Medicine	basic	✓	✓	✓	✓			✓	✓	✓	✓	✓	
	VEC5125	Research Projects	basic		✓				✓				✓		
	VEC5124	Summer Clinic	basic	✓					✓				✓		

second year

Course Description Form

١. Course Name:
1 animal nutrition

٢. Course Code:
VEH2105

٣. Semester / Year:
First Semester / second Year

٤. Description Preparation Date:
٤/١٠/2025

٥. Available Attendance Forms:
<ul style="list-style-type: none"> Theoretical practical lectures.

٦. Number of Credit Hours (Total) / Number of Units (Total)		
	Credit Hours	Units
Theoretical	2	2
Pract.	2	1
Total	٣٠	3

٧. Course administrator's name (mention all, if more than one name)	
Name: مدرس ولاء محمود محمد	اد زاهد اسماعيل محمد
Walla.m@uodiyala.edu.iq	zahid.i@uodiyala.edu.iq
Email:	

٨. Course Objectives	
Course Objectives	<ol style="list-style-type: none"> ١. Teaching the student the concept of animal nutrition and its general principles ٢. Food analysis ٣. Animal diet

٩. Teaching and Learning Strategies	
Strategy	<ul style="list-style-type: none"> lectures. Discussions during and after the lecture. Motivation through questions and answers. Homework . Preparation of scientific reports .

9-Learning skills outcomes															
Year level	symbol	name	Basic/choice	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
second year	VEH2105	animal & nutrition	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

10. Course Structure - Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Introduction and importance of nutrition of farm animals	Theoretical lectures	Written Exam
2	2		THE ANIMAL AND ITS FOOD		
3	2		a. Water and its functions, regulation and comparative use by farm animals.		
4	2		a. Water and its functions, regulation and comparative use by farm animals.		
5	2		b. Energy metabolism.		
6	2		b. Energy metabolism.		

7	2		c. Carbohydrate metabolism.		
8	2		c. Carbohydrate metabolism.		
9	2		d. Protein and nucleic acids metabolism		
10	2		d. Protein and nucleic acids metabolism		
11	2		e. Lipid metabolism.		
12	2		e. Lipid metabolism.		
13	2		f. Trace elements , functions and deficiency symptoms.		
14	2		f. Trace elements , functions and deficiency symptoms.		
15	2		g. Vitamins, functions and deficiency symptoms		

- Practical Subjects:

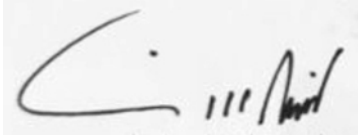
Week	2	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
	2	عملي	Introduction and importance of nutrition of farm animals		
	2	عملي			
	2	عملي	THE ANIMAL AND ITS FOOD		
	2	عملي	a. Water and its functions, regulation and comparative use by farm animals.		
	2	عملي	a. Water and its functions, regulation and comparative use by farm animals.		
	2	عملي	b. Energy metabolism.		
	2	عملي			
	2	عملي	b. Energy metabolism.		
	2	عملي	c. Carbohydrate metabolism.		
	2	عملي			
	2	عملي	c. Carbohydrate metabolism.		

	2	عملي	d. Protein and nucleic acids metabolism		
	2	عملي	d. Protein and nucleic acids metabolism		
	2	عملي	e. Lipid metabolism.		
	2	عملي	exam		

١١. Course Evaluation			
	Course Exam	Final Exam	Sum
Theoretical	40	60	100
Total	40	60	100

١٢. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	كتاب تغذية الحيوان
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Signature



اد زاهد اسماعيل محمد

Course Description Form

٢. Course Name:
2 animal nutrition

٣. Course Code:
VEH2111

٤. Semester / Year:
second Semester / second Year

٥. Description Preparation Date:
٤/١٠/2025

٦. Available Attendance Forms:
<ul style="list-style-type: none"> Theoretical practical lectures.

٧. Number of Credit Hours (Total) / Number of Units (Total)		
	Credit Hours	Units
Theoretical	2	2
Pract.	2	1
Total	٣٠	3

٨. Course administrator's name (mention all, if more than one name)	
Name: مدرس ولاء محمود محمد Walla.m@uodiyala.edu.iq Email:	اد زاهد اسماعيل محمد zahid.i@uodiyala.edu.iq

٩. Course Objectives	
Course Objectives	<ul style="list-style-type: none"> ٤. Teaching the student the concept of animal nutrition and its general principles ٥. Food analysis ٦. Animal diet

١٠. Teaching and Learning Strategies	
Strategy	<ul style="list-style-type: none"> lectures. Discussions during and after the lecture. Motivation through questions and answers. Homework .

- Preparation of scientific reports .

9-Learning skills outcomes															
Year level	symbol	name	Basic/choice	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
second year	VEH2105	animal & nutrition	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

11. Course Structure - Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Introduction and importance of nutrition of farm animals	Theoretical lectures	Written Exam
2	2		THE ANIMAL AND ITS FOOD		
3	2		a. Water and its functions, regulation and comparative use by farm animals.		
4	2		a. Water and its functions, regulation and comparative use by farm animals.		
5	2		b. Energy metabolism.		

6	2		b. Energy metabolism.		
7	2		c. Carbohydrate metabolism.		
8	2		c. Carbohydrate metabolism.		
9	2		d. Protein and nucleic acids metabolism		
10	2		d. Protein and nucleic acids metabolism		
11	2		e. Lipid metabolism.		
12	2		e. Lipid metabolism.		
13	2		f. Trace elements , functions and deficiency symptoms.		
14	2		f. Trace elements , functions and deficiency symptoms.		
15	2		g. Vitamins, functions and deficiency symptoms		

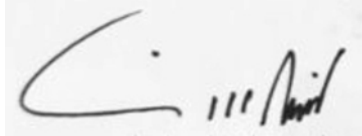
- Practical Subjects:

Week	2	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
	2	عملي	Introduction and importance of nutrition of farm animals		
	2	عملي			
	2	عملي	THE ANIMAL AND ITS FOOD		
	2	عملي	a. Water and its functions, regulation and comparative use by farm animals.		
	2	عملي	a. Water and its functions, regulation and comparative use by farm animals.		
	2	عملي	b. Energy metabolism.		
	2	عملي			
	2	عملي	b. Energy metabolism.		
	2	عملي	c. Carbohydrate metabolism.		
	2	عملي			

	2	عملي	c. Carbohydrate metabolism.		
	2	عملي	d. Protein and nucleic acids metabolism		
	2	عملي	d. Protein and nucleic acids metabolism		
	2	عملي	e. Lipid metabolism.		
	2	عملي	exam		

١٢. Course Evaluation			
	Course Exam	Final Exam	Sum
Theoretical	40	60	100
Total	40	60	100

١٣. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	كتاب تغذية الحيوان
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	




Signature

اد زاهد اسماعيل محمد

مدرس ولاء محمود محمد

Course Description Form

٣. Course Name:
Biostatistics

٤. Course Code:
VEH2113

٥. Semester / Year:
First Semester / second Year

٦. Description Preparation Date:
٤/١٠/٢٠٢٥

٧. Available Attendance Forms:
<ul style="list-style-type: none"> Theoretical pract. lectures

٨. Number of Credit Hours (Total) / Number of Units (Total)		
	Credit Hours	Units
Theoretical	2	2
Pract.	2	1
Total	30	3

٩. Course administrator's name (mention all, if more than one name)
Name: اد زاهد اسماعيل محمد Email: zahid.i@uodiyala.edu.iq

١٠. Course Objectives	
Course Objectives	<ul style="list-style-type: none"> ٧. Teaching the student the concept of Biostatistics and its general principles ٨. Biostatistics of disease quantification Measures of morbidity. <ul style="list-style-type: none"> Prevalence. Incidence. Relationship between prevalence and incidence. ٩. The economics of animal diseases Data collection and management ١٠. Control and Eradication of Diseases ١١. Teaching the student to use scientific.

١١. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> • lectures. • Discussions during and after the lecture. • Motivation through questions and answers. • Homework . • Preparation of scientific reports .
-----------------	--

9-Learning skills outcomes															
Year level	symbol	name	Basic/choice	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
second year	VEH2113	Biostatistics	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

۱۲. Course Structure					
- Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	۲		Introduction to statistics and statistics symbols.	Theoretical and pract. lectures	Written Exam
2	۲		Tabular and graphical presentation.		
3	۲		Tabular and graphical presentation.		
4	۲		Measures of central tendency.		
5	۲		Measures of dispersion or variation .		

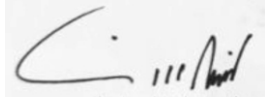
6	٢		Elementary probability theory .		
7	٢		Elementary probability theory .		
8	٢		Discrete probability distribution .		
9	٢		Continuous probability distribution, normal distribution .		
10	٢		Simple regression and correlation.		
11	٢		Tests of hypotheses, Z-distribution.		
12	٢		Tests of hypotheses, Z-distribution.		
13	٢		T- distribution.		
14	٢		Chi- square distribution.		
15	٢		F-distribution		

- Practical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
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١٣. Course Evaluation			
	Course Exam	Final Exam	Sum
Theoretical	40	60	100
Total	40	60	100

١٤. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	



signature

Name : Prof.Dr. zahid Ismael mohammed

Course Description Form

ξ. Course Name:

Genetics

ο. Course Code:

VEH2106

ϖ. Semester / Year:

First Semester / second Year

ϗ. Description Preparation Date:

4/10/2025

⊖. Available Attendance Forms:

- Theoretical Lectures.

⊗. Number of Credit Hours (Total) / Number of Units (Total)

	Credit Hours	Units
Theoretical	2	2
Practice	0	0
<hr/>		
Total	30	30

⊘. Course administrator's name (mention all, if more than one name)

Name: Lecturer ahmed abdulmajeed m.ameen

Email: ahmed.m@uodiyala.edu.iq

⊙. Course Objectives

Course Objectives	<p>⊚. Teaching the student, the concept of genetics its general principles</p> <p>⊛. Field of genetics</p> <p>⊜. Applications of genetics</p> <p>⊝. Advantage of genetics</p> <p>⊞. Teaching the student molecular genetics.</p>
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⊚. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> • lectures. • Discussions during and after the lecture. • Motivation through questions and answers. • Homework .
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- Preparation of scientific reports .

9-Learning skills outcomes															
Year level	symbol	name	Basic/choice	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
second year	VEH2106	genetics	basic			✓			✓						

۱۳. Course Structure					
- Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		History of Genetics	Theoretical lectures	Written Exam
2	2		Applications of genetics		
3	2		DNA structure		
4	2		Mendelian Genetics		
5	2		Genotype and Phenotype		
6	2		Three Laws of Heredity		
7	2		multiple alleles		
8	2		multiple alleles		
9	2		lethal genes		
10	2		LETHAL GENES		

11	2		Sex Linked Inheritance		
12	-		Exam		
13	2		pedigree		
14	2		Cell Division—Mitosis		
15	2		Gene expression		

- Practical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	0				
2	0				
3	0				
4	0				
5	0				
6	0				
7	0				
8	0				
9	0				
10	0				
11	0				
12	0				
	0				
13	0				
14	0				
15	0				

١٤. Course Evaluation			
	Course Exam	Final Exam	Sum
Theoretical	40	60	100
Total	40	60	100

١٥. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Genetics sciences book
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	



Signature

Name : Lecturer ahmed abdulmajeed m.ameen

Ahmed.m@uodiyala.edu.iq

Course Description Form

16. Course Name:	
Embryology	
17. Course Code:	
VEA2112	
18. Semester / Year:	
Second Semester / Second Year	
19. Description Preparation Date:	
ε/10/2020	
20. Available Attendance Forms:	
Theoretical lectures.	
21. Number of Credit Hours (Total) / Number of Units (Total)	
Credit Hours	Units
Theoretical	2
Total	2
22. Course administrator's name (mention all, if more than one name)	
Name: Assist. Prof Dr. Ahmad Abdullah Hussain Email: Ahmed.a@uodiyala.edu.iq	
23. Course Objectives	
Course Objectives	<ol style="list-style-type: none"> 1. Identify the embryological structure of different parts of the body in general and in different animals. 2. Make a comparison of the embryological composition of all parts of the body between different animals and humans. 3. make students to obtain knowledge and understanding of cell division to formation of different organ of embryo . 4. make students to obtain knowledge and understanding of systemical development of embryo .
24. Teaching and Learning Strategies	

Strategy	Powerpoint lecture method using data show and interactive whiteboard. <ul style="list-style-type: none">- Explanation and clarification.- Providing students with the basics and additional topics related to the outcomes of thinking and tissue diagnosis of organs.-Explanation of scientific subjects through theoretical lectures.-Students prepare a scientific-related reports.
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۷۰. Course Structure

- Theoretical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1		Introduction to embryology	Theoretical lectures	Written Exam
2	1		phase of Fertilization		
3	1		phase of cleavage, Implantation process		
4	1		Formation of fetal membranes		
5	1		Phase of Gastrulation and notochord formation		
6	1		Mesoderm differentiation and neurulation process		
7	1		Development of cardiovascular system		
8	1		Development of nervous system		
9	1		Development of brachial arches and pharyngeal pouches		
10	1		Development of digestive system		
11	1		Development of urinary system		
12	1		Development of genital system		
13	1		Development of respiratory system		
14	1		Development of skeletal system		
15	1		Development of lymphatic system		

۲۶ .Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	40	60	100
Total	40	60	100

۲۷ .Learning and Teaching Resources

Essential of domestic animal embryology first Edition	
Essential of Eveterinary histology and embryology 2 nd Edition	

Course Description Form

1.	Course Name:
Anatomy	
2.	Course Code:
VEA2107	
3.	Semester / Year:
Second Semester / Second Year	
4.	Description Preparation Date:
4/10/2025	
5.	Available Attendance Forms:
Theoretical lectures. Practical work in the laboratory.	
6.	Number of Credit Hours (Total) / Number of Units (Total)
75 hours	
7.	Course administrator's name (mention all, if more than one name)
Name: Ramzi Abdulghafoor abood Email: al-agele@uodiyala.edu.iq	
8.	Course Objectives
Course Objectives	<ol style="list-style-type: none"> ١. Identify the histological structure of different parts of the body in general and in different animals. ٢. Make a comparison of the histological composition of all parts of the body between different animals and humans. ٣. Introduce the student to the various components of the microscope and instruct him on its use. ٤. The student learns how to examine different tissue sections and differentiate them from each other. ٥. Developing the student's ability to diagnose normal tissue sections is crucial for distinguishing them from pathological tissue sections in the subsequent stage. ٦. Study the various types of blood cells, as they are among the connective tissues that can benefit from an understanding of their natural components. ٧. Teach the student how to construct models of body parts, treat them histologically, and create histological sections.
9.	Teaching and Learning Strategies
Strategy	Powerpoint lecture method using data show and interactive whiteboard. - Explanation and clarification. - Providing students with the basics and additional topics related to the outcomes of thinking and tissue diagnosis of organs.

10-Learning skills outcomes															
Year Level	Symbol	name	Basic/choise	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
	VEA2101	Anatomy first semester	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second year	VEA2107	Anatomy second semester	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

11. Course Structure										
- Theoretical Subjects:										
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method					
1	2		Lymphatic System: Introduction	Theoretical lectures	Written Exam					
2	2		Lymph vascular system. lymphatic tissue							
3	2		Lymph vessels, lymph capillaries							
4	2		Lymphatic tissue structures, solitary lymph nodules							
5	2		Tonsils, lymph nodes, lymph center							
6	2		Lymph trunks and ducts, thymus, spleen							
7-8	4		Nervous System							
9-10	4		Development of the brain							
11	2	2	Central nervous system	Units (Total)						
12	2		Autonomic nervous system							
13	2		Cardio Vascular System							
14	2		Heart and pericardium							
15	2		Blood supply of the limb							
- Practical Subjects:										
Week	Hours		Required Learning Outcomes				Unit or subject name	Learning method	Evaluation method	
1	2		Superficial dissection of face	Practical work in laboratory	Practical Exam					
2	2		Deep dissection of face region							
3	2		The brain, cranial and spinal meninges							
4-5	4		Dissection of neck region							
6	2		Nerves in thoracic cavity							
7	2		Pericardium, cranial and caudal venae cavae							
8-9	4		Circulatory system							

3. Course Objectives	
Course Objectives	• •

10-11	4		Aortic arch, common brachiocephalic		
12-13	4		Lymph centers in abdominal cavity, spleen4		
14-15	4		Abdominal aorta with		

12. Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	23	35	58
Practical	17	25	42
Total	40	60	100

13. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Text book of veterinary Anatomy -Atlas of Veterinary Anatomy Anatomy of the domestic mammals
Main references (sources)	١. Veterinary Anatomy ٢. Color Atlas of veterinary Anatomy
Recommended books and references (Scientific journals, reports...)	<ul style="list-style-type: none"> • Journal of Anatomy • Anatomia, Histologia and Embryologia
Electronic References, Websites	http://www.iasj.net

Course Description Form

1. Course Name:													
Anatomy													
2. Course Code:													
VEA2101													
3. Semester / Year:													
First Semester / Second Year													
4. Description Preparation Date:													
4 / 10/ 2025													
5. Available Attendance Forms:													
Theoretical lectures. Practical work in the laboratory.													
6. Number of Credit Hours (Total) / Number of Units (Total)													
	<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 20%; text-align: center;">Credit Hours</th> <th style="width: 30%; text-align: center;">Units</th> </tr> </thead> <tbody> <tr> <td>Theoretical</td> <td style="text-align: center;">2</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Practical</td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">4</td> <td style="text-align: center;">3</td> </tr> </tbody> </table>		Credit Hours	Units	Theoretical	2	2	Practical	2	1	Total	4	3
	Credit Hours	Units											
Theoretical	2	2											
Practical	2	1											
Total	4	3											
7. Course administrator's name (mention all, if more than one name)													
Name: Assist. Professor Rawnq Bahman Jimaa Email: ranaq@uodiyala.edu.iq													
8. Course Objectives													
Course Objectives	<ol style="list-style-type: none"> ١. Identify the histological structure of different parts of the body in general and in different animals. ٢. Make a comparison of the histological composition of all parts of the body between different animals and humans. ٣. Introduce the student to the various components of the microscope and instruct him on its use. ٤. The student learns how to examine different tissue sections and differentiate them from each other. ٥. Developing the student's ability to diagnose normal tissue sections is crucial for distinguishing them from pathological tissue sections in the subsequent stage. ٦. Study the various types of blood cells, as they are among the connective tissues that can benefit from an understanding of their natural components. <p>Teach the student how to construct models of body parts, treat them anatomically</p>												
9. Teaching and Learning Strategies													

Strategy	Powerpoint lecture method using data show and interactive whiteboard. - Explanation and clarification. - Providing students with the basics and additional topics related to the outcomes of thinking and tissue diagnosis of organs.
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10-Learning skills outcomes															
Year level	symbol	Name	Basic/choise	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
	VEA2101	Anatomy first semester	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second year	VEA2107	Anatomy second semester	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

11. Course Structure					
- Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Digestive System-General description	Theoretical lectures	Written Exam
2	2		Mouth cavity, Salivary glands		
3	2		Pharynx		
4	2		Muscles of mastication.		
5	2		Classification of stomach		
6	2		Parts of the intestine		
7	2		Liver and its ligaments		
8	2		Gallbladder and the variations in farm animals		
9	2		Pancreas and its variations		
10	2		Peritoneum its reflexation in the abdominal cavity		
11	2		Respiratory System-Introduction		
12	2		Nose, nasal cavity, nasopharynx		
13	2		Paranasal sinuses		
14	2		Larynx, Trachea		
15	2		Lungs, Thoracic cavity		
- Practical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		General description of the skull		

2	2		Cranial cavity, hyoid bone, mandible	Practical work in laboratory	Practical Exam
3-4	4		Skull comparative, Cervical vertebrae comparative		
5	2		Dissection of oral cavity with its contents		
6	2		Dissection of pharynx		
7	2		Viscera: esophagus. Stomach (comparative)		
8	2		Viscera: small and large intestine (comparative)		
9	2		Viscera: liver and its ligaments (comparative)		
10-11	4		Dissection of paranasal sinuses, nasal cavity (comparative)		
12	2		Larynx, blood and nerve supply to the larynx		
13	2		Trachea, pleura, pulmonary ligament, lung comparative, trachea, bronchial tree.		
14-15	4		Dissection of thorax, thoracic fascia, muscles of thoracic wall		

12. Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	27	40	67
Practical	13	20	33
Total	40	60	100

13. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Text book of veterinary Anatomy -Atlas of Veterinary Anatomy Anatomy of the domestic mammals
Main references (sources)	-Veterinary Anatom -Color Atlas of veterinary Anatomy
Recommended books and references	• Journal of Anatomy Anatomia, Histologia and Embryologia
Electronic References, Websites	http://www.iasj.net

Course Description Form

1. Course Name:	
Histology	
2. Course Code:	
VEA2102	
3. Semester / Year:	
First Semester / Second Year	
4. Description Preparation Date:	
4/10/2025	
5. Available Attendance Forms:	
Theoretical lectures. Practical work in the laboratory.	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Assist. Professor Rawnq Bahman Jimaa Email: ranaq@uodiyala.edu.iq	
8. Course Objectives	
Course Objectives	<ul style="list-style-type: none"> ١١. Identify the histological structure of different parts of the body in general and in different animals. ١٢. Make a comparison of the histological composition of all parts of the body between different animals and humans. ١٣. Introduce the student to the various components of the microscope and instruct him on its use. ١٤. The student learns how to examine different tissue sections and differentiate them from each other. ١٥. Developing the student's ability to diagnose normal tissue sections is crucial for distinguishing them from pathological tissue sections in the subsequent stage. ١٦. Study the various types of blood cells, as they are among the connective tissues that can benefit from an understanding of their natural components. <p>Teach the student how to construct models of body parts, treat them histologically, and create histological sections.</p>
9. Teaching and Learning Strategies	
Strategy	<p>Powerpoint lecture method using data show and interactive whiteboard.</p> <ul style="list-style-type: none"> - Explanation and clarification. - Providing students with the basics and additional topics related to the outcomes of thinking and tissue diagnosis of organs. -Explanation of scientific subjects through theoretical lectures. -Training of students for practical applications in laboratories. -Students prepare a scientific-related reports.

10-Learning skills outcomes															
Year Level	Symbol	Name	Basic/Choice	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Second															
	VEA2102	Histology first semester	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	VEA2108	Histology second semester	Basic	√	√	√	√	√	√	√	√	√	√	√	√

11. Course Structure

- Theoretical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-2	4		Cytology	Theoretical lectures	Written Exam
3-4	4		Blood and Myeloid Tissue		
5-6	4		Nervous Tissue		
7-8	4		Cartilage and Bone		
9-10	4		Cardiovascular System		
11-12	4		Lymphatic System		
13-14	4		Respiratory System		
15	2		Skin		

- Practical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3		Laboratory Guiding	Practical work in laboratory	Practical Exam
2	3		Cytology		
3	3		Epithelial Tissues		
4	3		Connective Tissues		
5	3		Muscular tissue		
6	3		Bone and Cartilages		
7	3		Nervous tissue		
8	3		Blood cells		
9	3		Bone marrow		
10	3		Lymph system		
11	3		Cardiovascular system		
12	3		Respiratory system		
13	3		Skin		

14	3		Review		
15	3		Examination		

12. Course Evaluation			
	Course Exam	Final Exam	Sum
Theoretical	23	35	58
Practical	17	25	42
Total	40	60	100

13. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Textbook of Veterinary Histology by Dellmann and Brown 2007 -Textbook of veterinary histology by Samuelson 2010
Main references (sources)	ϣ. Basic histology by Gunqueira 2005 ξ. Color Atlas of Veterinary Histology by Bacha and Bacha 2000
Recommended books and references (Scientific journals, reports...)	<ul style="list-style-type: none"> • Histology of Veterinary Medicine • Cytology and microscopic anatomy
Electronic References, Websites	http://www.iasj.net

Course Description Form

1. Course Name:	
Histology	
2. Course Code:	
VEA2108	
3. Semester / Year:	
Second Semester / Second Year	
4. Description Preparation Date:	
4/10/2025	
5. Available Attendance Forms:	
Theoretical lectures. Practical work in the laboratory.	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Ramzi Abdulghafoor abood Al-Agele Email: al-agele@uodiyala.edu.iq	
8. Course Objectives	
Course Objectives	<ul style="list-style-type: none"> ١. Identify the histological structure of different parts of the body in general and in different animals. ٢. Make a comparison of the histological composition of all parts of the body between different animals and humans. ٣. Introduce the student to the various components of the microscope and instruct him on its use. ٤. The student learns how to examine different tissue sections and differentiate them from each other. ٥. Developing the student's ability to diagnose normal tissue sections is crucial for distinguishing them from pathological tissue sections in the subsequent stage. ٦. Study the various types of blood cells, as they are among the connective tissues that can benefit from an understanding of their natural components. ٧. Teach the student how to construct models of body parts, treat them histologically, and create histological sections.
9. Teaching and Learning Strategies	
Strategy	Powerpoint lecture method using data show and interactive whiteboard. <ul style="list-style-type: none"> - Explanation and clarification. - Providing students with the basics and additional topics related to the outcomes of thinking and tissue diagnosis of organs.
	<ul style="list-style-type: none"> -Explanation of scientific subjects through theoretical lectures. -Training of students for practical applications in laboratories. -Students prepare a scientific-related reports.

10-Learning skills outcomes

Year level	symbol	name	Basic/choise	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Second	VEA2102	Histology first semester													
	VEA2108	Histology second semester	Basic	√	√	√	√	√	√	√	√	√	√	√	√
			Basic	√	√	√	√		√	√	√		√	√	√

11. Course Structure

- Theoretical Subjects:

1-3	6		Digestive System	Theoretical lectures	Written Exam
4-6	6		Urinary System		
7-8	4		Endocrine System		
9-11	6		Male Reproductive System		
12-14	6		Female Reproductive System		
15	2		Sensory Organs		

-Practical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3		Tongue structure, lingual papillae	Practical work in the laboratory	Practical Exam
2	3		Salivary glands		
3	3		Fundic gland region of stomach rumen, reticulum, omasum		
4	3		Small intestine		
5	3		Liver, gallbladder, pancreas		
6-7	6		Endocrine glands		
8-9	6		Adrenal gland, thyroid gland, parathyroid gland		
10	3		Urinary system		
11	3		Male genital system		
12	3		Female genital system		
13	3		Eye: cornea, retina		
14	3		Ear: cochlea, corti organ		
15	3		Mammary gland		

12. Course Evaluation			
	Course Exam	Final Exam	Sum
Theoretical	23	35	58
Practical	17	25	42
Total	40	60	100

13. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Textbook of Veterinary Histology by Dellmann and Brown 2007 -Textbook of veterinary histology by Samuelson 2010
Main references (sources)	<ul style="list-style-type: none"> ◦. Basic histology by Gunqueira 2005 ∩. Color Atlas of Veterinary Histology by Bacha and Bacha 2000
Recommended books and references (Scientific journals, reports...)	<ul style="list-style-type: none"> • Histology of Veterinary Medicine • Cytology and microscopic anatomy
Electronic References, Websites	http://www.iasj.net

Course Description Form

٥. Course Name:

Physiology I

٦. Course Code:

VEP2103

٧. Semester / Year:

First Semester / Second Year

٨. Description Preparation Date:

4/ 10/ 2025

٩. Available Attendance Forms:

- Theoretical lectures.
- Practical classes

١٠. Number of Credit Hours (Total) / Number of Units (Total)

	Credit Hours	Units
Theoretical	4	4
Practical	2	1
Total	6	5

١١. Course administrator's name (mention all, if more than one name)

Name: Muna Mohammed Esmail
 Email: muna.i@uodiyala.edu.iq
 Name: Marah Salim Hameed
 Email: marah.s@uoduyala.edu.iq
 Name: Mohammed Saad Mohammed
 Email: mohammed.s@uodiyala.edu.iq

١٢. Course Objectives

Course Objectives	<ul style="list-style-type: none"> • -Learn about the different natural functions of the body • - The student will acquire laboratory skills. • - You must also be a laboratory student
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١٣. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> • Power point presentation with explanation on the board to clarify the basic topics • Providing students with the basics and additional topics • Form discussion groups during lectures • Asking students for a set of thinking questions and practicing solving questions during the lectures • Giving students homework
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1ξ. Course Structure

- Theoretical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	A2+B1+ B3	Introduction	1- Lecture notes. 2- Presentations. 3- Whiteboard.	1- Quizzes. 2- Essays. 3- Reports. 4- Monthly Exams. 5- Final Exams.
2	4		Cell physiology		
3-4	8		Muscle cell		
5-6	8		Nerve cell		
7-9	12		Hematology		
10	4		Peripheral nervous system		
11-12	8		Cardiovascular system		
13	4		Respiratory system		
14-15	8		Digestive system		

- Practical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	A2+B1+ B3	Properties of skeletal muscle	Laboratory Experiments	Practical Exam.
2	4		Properties of cardiac muscle		
3	2		Properties of smooth muscle		
4	2		Blood film		
5-6	4		Red blood cell count		
7-8	2		White blood cell count		
9	2		Thrombocytes count		
10	2		Packed cell volume		
11	4		Estimation of hemoglobin		
12-13	2		Differential white blood cells		
14	2		Clotting time		
15	2		Bleeding time		

1ο. Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	30	40	70
Practical	10	20	30
Total	40	60	100

١٦. Learning and Teaching Resources	
Required textbooks (Text book of veterinary physiology)	
Main references (Ganong - Guyton)	
Recommended books and references (JAVMA, JVPT, Iraqi J. Vet. Med)	
Electronic References, https://www.ivsl.org/ , https://www.iasj.net/	

13-Learning skills outcomes															
Year level	symbol	name	Basic/choice	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First Semester / Second Year	VEP2103	Physiology	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Name : Muna Mohammed Esmail

signature

Course Description Form

٦. Course Name:

Physiology II

٧. Course Code:

VEP2109

٨. Semester / Year:

Second Semester / Second Year

٩. Description Preparation Date:

4 / 10 / 2025

١٠. Available Attendance Forms:

- Theoretical lectures.
- Practical classes

١١. Number of Credit Hours (Total) / Number of Units (Total)

	Credit Hours	Units
Theoretical	4	4
Practical	2	1
Total	6	5

١٢. Course administrator's name (mention all, if more than one name)

Name: Muna Mohammed Esmail
Email: muna.i@uodiyala.edu.iq
Name: Marah Salim Hameed
Email: marah.s@uoduyala.edu.iq
Name: Mohammed Saad Mohammed
Email: mohammed.s@uodiyala.edu.iq

١٣. Course Objectives

Course Objectives	
	<ul style="list-style-type: none">• -Learn about the different natural functions of the body• - The student will acquire laboratory skills.• - You must also be a laboratory student

١٤. Teaching and Learning Strategies

Strategy	
	<ul style="list-style-type: none">• Power point presentation with explanation on the board to clarify the basic topics• Providing students with the basics and additional topics

- Form discussion groups during lectures
- Asking students for a set of thinking questions and practicing solving questions during the lectures
- Giving students homework

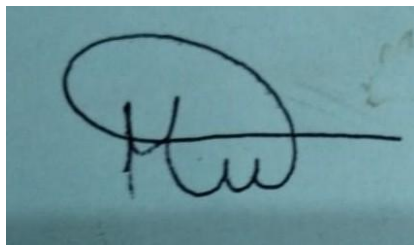
١٥. Course Structure					
- Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	A2+B1+ B3	Introduction	ξ- Lecture notes. ρ- Presentations. ٦- Whiteboard.	٦- Quizzes. ٧- Essays. ٨- Reports. ٩- Monthly Exams. ١٠- Final Exams.
2-3	8		Urinary System		
4	4		Acid Base Balance		
5-6	8		Central Nervous System		
7-9	12		Endocrine Glands		
10-11	8		Male Reproductive System		
12-13	8		Female Reproductive system		
14-15	8		Pregnancy Parturitopn And Lactation		
- Practical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-2	4	A2+B1+ B3	Blood groups	Laboratory Experiments	Practical Exam.
3-4	4		Lung volumes and capacities		
5-6	4		Erythrocyte sedimentation rate		
7-8	4		Reflexes		
9-10	4		Digestive enzyme		
11-12	4		Male reproductive system		
13-15	6		Female reproductive system		

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١٦. Course Evaluation			
	Course Exam	Final Exam	Sum
Theoretical	30	40	70
Practical	10	20	30
Total	40	60	100

١٧. Learning and Teaching Resources	
Required textbooks (Text book of veterinary physiology)	
Main references (Ganong - Guyton)	
Recommended books and references (JAVMA, JVPT, Iraqi J. Vet. Med)	
Electronic References, https://www.ivsl.org/ , https://www.iasj.net/	

13-Learning skills outcomes															
Year level	symbol	name	Basic/choice	knowledge				skills				valu			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Second Semester / Second Year	VEP2109	Physiology	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



signature

Name : Muna Mohammed Esmail

Course Description Form

٧. Course Name:

Biochemistry I

٨. Course Code:

VEP2104

٩. Semester / Year:

First Semester / Second Year

١٠. Description Preparation Date:

4 / 10 / 2025

١١. Available Attendance Forms:

- Theoretical lectures.
- Practical classes

١٢. Number of Credit Hours (Total) / Number of Units (Total)

	Credit Hours	Units
Theoretical	3	3
Practical	2	1
Total	5	4

١٣. Course administrator's name (mention all, if more than one name)

Name: Ehssan Nesaif J.

Email: ehssan.n@uodiyala.edu.iq

Name: Measer Zaid M.

Email: measer.z@uodiyala.edu.iq

١٤. Course Objectives

Course Objectives	<ul style="list-style-type: none">• That the student acquires important information, which is confirmed by his awareness of life and its interactions and the resulting information it needs in physiology, anatomy, and other subjects at later stages.• The student acquires the skill of laboratory testing.
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١٥. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> • Power point presentation with explanation on the board to clarify the basic topics • Providing students with the basics and additional topics • Form discussion groups during lectures • Asking students for a set of thinking questions and practicing solving questions during the lectures • Giving students homework
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١٦. Course Structure					
- Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	A ^٤ +B3	Cell Biochemistry	٧- Lecture notes. ٨- Presentations. ٩- Whiteboard.	١١- Quizzes.
2-4	9		Carbohydrates		١٢- Essays.
5-7	9		Proteins		١٣- Reports.
8	3		Nuclie acids		١٤- Monthly Exams.
9-11	9		Lipids		١٥- Final Exams.
12-13	6		Vitamines		
14-15	6		Minerals		
- Practical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	A ^٤ +B3	Glycogens	Laboratory Experiments	Practical Exam.
2	2		Proteins		
3	2		Fibrous proteins		
4	2		Separation of albumin and globulin by precipitation		
5	2		Glycoprotein		
6	2		Phosphoprotein		
7	2		Enzymes		
8	2		Amylolytic activity of amylase		
9	2		Effect of ph on amylase activity		

10	2	Effect of temperature on amylase activity urine Physical properties of urine Normal and abnormal constituents of urine Unknown of urine	
11	2		
12-13	2		
14	2		
15	2		

١٧. Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	30	40	70
Practical	10	20	30
Total	40	60	100

١٨. Learning and Teaching Resources

Required textbooks (Text book of biochemistry)	
Main references (Harper's Illustrated Biochemistry)	
Recommended books and references (مدخل الى الكيمياء الحياتية)	
Electronic References, https://www.ivsl.org/ , https://www.iasj.net/	

13-Learning skills outcomes

Year level	symbol	name	Basic/choice	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First Semester / Second Year	VEP2104	Biochemistry	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Name : Ehsan Nesaif J.

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Course Description Form

٨. Course Name:

Biochemistry II

٩. Course Code:

VEP2110

١٠. Semester / Year:

Second Semester / Second Year

١١. Description Preparation Date:

4 / 10 / 2025

١٢. Available Attendance Forms:

- Theoretical lectures.
- Practical classes

١٣. Number of Credit Hours (Total) / Number of Units (Total)

	Credit Hours	Units
Theoretical	3	3
Practical	2	1
Total	5	4

١٤. Course administrator's name (mention all, if more than one name)

Name: Ehssan Nesaif J.

Email: ehssan.n@uodiyala.edu.iq

Name: Measer Zaid M.

Email: measer.z@uodiyala.edu.iq

١٥. Course Objectives

Course Objectives

- That the student acquires important vital information that qualifies him to understand the cell and its interactions and the resulting information he needs in physiology, anatomy, and other subjects at later stages.
- The student acquires the skill of laboratory testing.

١٦. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> • Power point presentation with explanation on the board to clarify the basic topics • Providing students with the basics and additional topics • Form discussion groups during lectures • Asking students for a set of thinking questions and practicing solving questions during the lectures • Giving students homework
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١٧. Course Structure					
- Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	A ξ +B3	Introduction	١٠- Lecture notes. ١١- Presentations. ١٢- Whiteboard.	١٦- Quizzes. ١٧- Essays. ١٨- Reports. ١٩- Monthly Exams. ٢٠- Final Exams.
2	3		Enzymes		
3	3		Hormones		
4	3		Carbohydrates& Metabolism , Biological Oxidation :Bioenergetics		
5	3		Respiratory chain, Oxidative Phosphorylation ,Citric acid cycle		
6	3		Gluconeogenesis &Glycolysis pentose phosphate		
7	3		Lipid , Oxidation of fatty acids, ketogenesis , Biosynthesis of fatty acids		
8	3		Lipid transport storage		
9	3		Cholesterol synthesis ,transport		
10	3		Anabolism& catabolism protein and amino acids		
11	3		Nucleotides structure &function		

12	3		Metabolism of Nucleotides		
13	3		Regulation of gen express		
14	3		RNA Synthesis, process, modification		
15	3		DNA Organization Replication & Repair		

- Practical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	A ξ +B3	Photometric methods in biochemical analysis	Laboratory Experiments	Practical Exam.
2	4		Determination of serum total protein		
3	2		Calibration curve of protein		
4	2		Determination of serum amaylase activity		
5	4		Determination of serum inorganic phosphates		
6	2		Determination of serum total calcium		
7	2		Determination of serum bilirubin		
8	2		Determination of serum creatinin		
9	4		Determination of serum uric acid		
10	2		Determination of serum cholesterol		
11	2		Enzymatic method for glucose		
12-13	ξ		Determination of serum total lipid		
14-15	ξ		Determination of serum urea		

18. Course Evaluation

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	Course Exam	Final Exam	Sum
Theoretical	30	40	70
Practical	10	20	30
Total	40	60	100

١٩. Learning and Teaching Resources	
Required textbooks (Text book of biochemistry)	
Main references (Harper's Illustrated Biochemistry)	
Recommended books and references (مدخل الى الكيمياء الحياتية)	
Electronic References, https://www.ivsl.org/ , https://www.iasj.net/	

13-Learning skills outcomes															
Year level	symbol	name	Basic/choice	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Second Semester / Second Year	VEP2110	Biochemistry	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Third stage

Course Description Form

١. Course Name	
Parasitology	
٢. Course Code:	
VEM3112	
٣. Semester / Year:	
First semester / 2024/2025	
٤. Description Preparation Date:	
4/10/2025	
٥. Available Attendance Forms:	
Mandatory attendance	
٦. Number of Credit Hours (Total) / Number of Units (Total)	
Theory 45 + practical 30 hours / number of units 4	
٧. Course administrator's name (mention all, if more than one name)	
Name: haleem hamza hussien Email: halem.h@uodiyala.edu.iq	
٨. Course Objectives	
Course Objectives	<ul style="list-style-type: none"> ١. -The student will acquire the ability to diagnose parasites isolated from humans and animals. ٢. The student must have knowledge of analyzing samples, whether they are stool, blood, or skin scrapings ٣. -The student's skill in using the equipment used in diagnosis, such as the microscope and the ELISA device ٤. -The student's skill in collecting samples and recording case data and medical case histories
٩. Teaching and Learning Strategies	
Strategy	<ul style="list-style-type: none"> 1- Using the method of presenting on the screen, asking direct questions to the students and involving them in the lecture. 2- Conducting various modern diagnostic methods for samples received into the laboratory in the practical subject lessons 3- Assigning the student to write a report on the most important parasites in Iraq that are related to the academic course.

4- Display colorful pictures and videos of diagnostic methods.

Course Structure Theoretical Parasitology Course Program / Third Level / first Course

week	hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Parasitology	General Introduction Helminthology Phylum	lecture	Exam
2	3	Parasitology	Nemathelminths Class Nematoda	lecture	Exam
3	3	Parasitology	Ascaridida	lecture	Exam
4	3	Parasitology	"Family Heterakidae "	lecture	Exam
5	3	Parasitology	Order Srongylida	lecture	Exam
6	3	Parasitology	Family Ancylostomidae Family Dictyocaulidae	lecture	Exam
7	3	Parasitology	Order Enoplida	lecture	Exam
8	3	Parasitology	order spirurida	lecture	Exam
9	3	Parasitology	Phylum Acanthocephala	lecture	Exam
10	3	Parasitology	Phylum:Annelida Lamarck, 1809	lecture	Exam
11	3	Parasitology	Phylum Platyhelminthes Class Cestoda (Tape worms	lecture	Exam
12	3	Parasitology	<u>Families Of Order</u> <u>Cyclophyllidea :</u> <u>Taeniidae,</u>	lecture	Exam
13	3	Parasitology	Family Anoplocephalidae.	lecture	Exam
14	3	Parasitology	Family Hymenolepididae	lecture	Exam
15	3	Parasitology	Class Trematoda (Fluke worms	lecture	Exam

Course Structure: Theoretical Parasitology Course Program / Third Level / Second Course

1	3	Parasitology	Family Fasciolidae	lecture	Exam
2	3	Parasitology	Family Paramphistomidae	lecture	Exam
3	3	Parasitology	Protozoology Introduction :	lecture	Exam
4	3	Parasitology	Phylum Kinetoplastida	lecture	Exam
5	3	Parasitology	Phylum Parabasalia	lecture	Exam
6	3	Parasitology	Phylum Apicomplex "Sporozoa"	lecture	Exam
7	3	Parasitology	Family Sarcocystidae	lecture	Exam
8	3	Parasitology	Family: Cryptosporidiidae	lecture	Exam
9	3	Parasitology	Family Plasmodiidae (MALARIAL)	lecture	Exam
10	3	Parasitology	"Piropasms" Order PIROPLASMIDA Family Theileriidae	lecture	Exam
11	3	Parasitology	Phylum Microsporidia	lecture	Exam
12	3	Parasitology	Veterinary & Medical Entomology	lecture	Exam
13	3	Parasitology	Family Fasciolidae	lecture	Exam
14	3	Parasitology	Class Insecta (Hexapoda) Order: Hemiptera (Cimicidae) Order Siphonaptera (fleas)	lecture	Exam
15	3	Parasitology	Order Diptera (flies ; mosquitoes ; midges) Order: Diptera; suborder: Brachycera	lecture	Exam

١١. Course Evaluation	
Mid-course exams at the end of the course Short quizzes Practical, oral and clinical examinations the activities	
١٢. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> - E.J.L. Soulsby (2006) - Veterinary medicine. 10th Ed Textbook of Veterinary Clinical Parasitology
Main references (sources)	<ul style="list-style-type: none"> - Veterinary Parasitology 2014 - Clinical Parasitology A PRACTICAL 2011 3rd Ed Principles of Veterinary Parasitology Dennis Jacobs 2020
Recommended books and references (scientific journals, reports...)	-Veterinary medical journals issued by Iraqi veterinary medical colleges. Arab and international medical journals
Electronic References, Websites	Iraqi academic scientific journals http://www.iasj.net

Course Description Form

١. Course Name	Toxicology I
٢. Course Code	VEP3116
٣. Semester /Year	1 st Semester/ 3 rd year
٤. Description of Preparation date	4/10/2024
٥. Available Attendance Forms	Attendance
٦. Number of Credit Hours (Total) / Number of Units (Total)	30 hrs./ 2 credits
٧. Course administrator's name (mention all, if more than one name)	
- Lecturer: Khudair A. Al-Ani	khudhair.a@uodiyala.edu.iq
- Lecturer: Mustafa A. Aljumaili	mustafa.a@uodiyala.edu.iq
٨. Course Objectives	
- Explain the different terms related to toxicology.	
- For the student to learn about the harmful effects of chemicals on humans, animals and the environment.	
- For the student to learn about the mechanism of action of toxic substances within the body.	
- The student will know how to prevent and treat cases of poisoning with chemicals.	
٩. Teaching and Learning Strategies	
- Lecture notes from accredited references.	

- Presentations.
- Illustrations and comments using whiteboard.

10. Course Structure					
Week	Theoretical (2 hrs.)	Practical ()	Learning outcomes	Learning method	Evaluation method
1	Concepts and Terminology of Toxicology		1- Identify the basics of kinetics and dynamics of toxic substances on various body tissues 2- Teaching the student the main methods on how to deal with poisoning cases. 3- Identify the most important symptoms that accompany cases of poisoning and how to identify a toxic substance through symptoms. 4- Understanding the most important methods for diagnosing poisoning cases and how to give appropriate anti-poisoning agents.	13- Lecture notes. 14- Presentations. 15- Whiteboard.	21- Quizzes. 22- Essays. 23- Reports. 24- Monthly Exams. 25- Final Exams.
2	Toxicokinetics				
3	Antidotes and General Treatment of Poisoning				
4	Antidotes and General Treatment of Poisoning				
5	Diagnostic Aspects of Toxicology				
6	Insecticides				
7	Herbicides				
8	Toxic Metals				
9	Mycotoxins				
10	Feed – Associated Toxicants				
11	House – Hold & Industrial Products				
12	Toxic Plants				
13	Bio Toxins				
14	Environmental Pollution with Toxicants				
15	Pharmaceuticals				

			o- The student must have knowledge in treating poisoning cases.		
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١١. Course Evaluation
Complete mark = 100 % Theoretical part 100 %
١٢. Learning and Teaching Resources
Recommended Textbook\ (The Basic Science of Poisons)
Recommended Reference\ (Clinical Veterinary Toxicology)
Recommended journals\ (JAVMA, JVPT, Iraqi J. Vet. Med)
Recommended Websites\ https://www.ivsl.org/ , https://www.iasj.net/

Course Description Form

١٢. Course Name:

Microbiology - 1

١٠. Course Code:

VEM3114

١١. Semester / Year:

First Semester / Third Year

١٢. Description Preparation Date:

4/10/2025

١٣. Available Attendance Forms:

- Theoretical Lectures.
- Practical Classes.

١٤. Number Of Credit Hours (Total) / Number Of Units (Total)

	Credit Hours	Units
Theoretical	3	3
Practical	2	1
Total	5	4

١٥. Course Administrator's Name (Mention All, If More Than One Name)

Name: Shaymaa Jabbar Hassoon

Email: Shiymaa113@Gmail.Com

Name: Noor Their Talib

Email: Noor.T@Uodiyala.Edu.Iq

١٦. Course Objectives

Course Objectives

-
-
-

١٧. Teaching And Learning Strategies

Strategy	<ul style="list-style-type: none"> • Explanation Of Scientific Subjects Through Theoretical Lectures. • Training Of Students For Practical Applications In Laboratories. • Student Prepare A Scientific Related Reports.
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10-Learning Skills Outcomes															
Year Level	Symbol	Name	Basic/Choice	Knowledge				Skills				Value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Third Year	VEM3114	Microbiology -1	Basic			✓	✓			✓				✓	

1A. Course Structure					
- Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit Or Subject Name	Learning Method	Evaluation Method
1	3	A3+A4+B3+C3	Introduction And History Of Microbiology	Theoretical Lectures	Written Exam
2-3	6		Bacterial Cell Structure And Function		
4-5	6		Bacterial Classification And Bacterial Motility		
6	3		Microbial Growth		
7	3		Virulence Factors And Their Mechanisms Of Action		
8	3		Control Of Microbial Growth		
9	3		Antimicrobial Drugs		
10	3		Bacterial Genetic		
11	3		Normal Flora And Probiotic		
12	3		Mycology\Introduction And Structure		
13	3		Classification Of Fungi		

14	3		Reproduction Of Fungi		
15	3		Pathogenesis Of Fungi		
- Practical Subjects:					
Week	Hours	Required Learning Outcomes	Unit Or Subject Name	Learning Method	Evaluation Method
1	2	A3+A4+B3+C3	General Laboratory Instructions	Practical Work In Laboratory	Practical Exam
2	2		Equipment And Tools In Microbiology Lab		
3	2		Sterilization And Disinfection		
4-5	ε		Culture Media For Bacterial Growth		
6-7	ε		Pure Culture Isolation		
8	2		Gram Stain		
9	2		Practical Exam		
10	2		Endospore Stain		
11	2		Methods Of Specimen Collection		
12	2		Media Use For Diagnosis Of Fungi		
13	2		Stain Use For Diagnosis Of Fungi		
14	2		Diagnosis Of Fungi In Laboratory		
15	2		Practical Exam		

• Course Evaluation			
	Course Exam	Final Exam	Sum
Theoretical	27	40	67
Practical	13	20	33
Total	40	60	100

• Learning And Teaching Resources	
Required Textbooks (Curricular Books, If Any)	
Main References (Sources)	
Recommended Books And References (Scientific Journals, Reports...)	
Electronic References, Websites	

Name

Signature

Course Description Form

١. Course Name:

Immunology

٢. Course Code:

VEP3115

٣. Semester / Year:

First Semester / Third Year

٤. Description Preparation Date:

4 / 10 / 2025

٥. Available Attendance Forms:

- Theoretical Lectures.
- Practical Work In Laboratory.

٦. Number Of Credit Hours (Total) / Number Of Units (Total)

	Credit Hours	Units
Theoretical	2	2
Practical	2	1
Total	4	3

٧. Course Administrator's Name (Mention All, If More Than One Name)

Name: Walaa Najm Abboud

Email: **Walaa.N@Uodiyala.Edu.Iq**

٨. Course Objectives

Course Objectives

-
-
-
-

9. Teaching And Learning Strategies	
Strategy	<ul style="list-style-type: none"> • Explanation Of Scientific Subjects Through Theoretical Lectures. • Training Of Students For Practical Applications In Laboratories. • Student Prepare A Scientific Related Reports.

10-Learning Skills Outcomes															
Year Level	Symbol	Name	Basic/Choice	Knowledge				Skills				Value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Third Year	VEP3115	Immunology	Basic			✓	✓			✓			✓		

19. Course Structure					
- Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit Or Subject Name	Learning Method	Evaluation Method
1	2	A3+A4+B3+C2	Introduction To Immune System Innate (Nonspecific)	Theoretical Lectures	Written Exam
2-3	ε		Specific Immune Response(Adaptive Immune)		
4	2		Immunoglobulin: Structure, Variation, Function		
5-6	ε		Antigen And Cd Marker		
7	2		B Cell Development		
8	2		T Cell Development		
9	2		First Exam		
10	2		Complement		
11	2		Cytokines		

12	2	MHC System	Immune System
13-14	2	Infection Diseases	And
15	2	Second Exam	

- Practical Subjects:

Week	Hours	Required Learning Outcomes	Unit Or Subject Name	Learning Method	Evaluation Method
1	2	A3+A4+B3+C2	Introduction To Immunology Lab	Practical Work In Laboratory	Practical Exam
2	2		Lab Animals		
3-4	ε		Preparation Of Antigens		
5-6	ε		Preservation Of Antigens And Antibodies		
7	2		Agglutination Test		
8	2		Precipitation Test		
9	2		Complement Test		
10	2		Neutralization Test		
11-12	ε		Separation Of Lymphocytes From Blood And Lymph Nodes		
13	2		Separation Of Immunoglobulin		
14	2		Leukocytes		
15	2		Phagocytosis		

11. Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	30	40	70
Practical	10	20	30
Total	40	60	100

• Learning And Teaching Resources	
Required Textbooks (Curricular Books, If Any)	
Main References (Sources)	
Recommended Books And References (Scientific Journals, Reports...)	
Electronic References, Websites	

Name Walla Najem Abboud

Signature



Course Description Form

٢. Course Name:

Microbiology-2

٣. Course Code:

VEM3124

٤. Semester / Year:

Second Semester / Third Year

٥. Description Preparation Date:

4 / 10 / 2025

٦. Available Attendance Forms:

- Theoretical Lectures.
- Practical Work In Laboratory.

٧. Number Of Credit Hours (Total) / Number Of Units (Total)

	Credit Hours	Units
Theoretical	3	3
Practical	2	1
Total	5	4

٨. Course Administrator's Name (Mention All, If More Than One Name)

Name: Shaymaa Jabbar Hassoon

Email : Shiymaa113@gmail.com

Name: Noor Their Talib

Email: Noor.T@Uodiyala.Edu.Iq

٩. Course Objectives

Course Objectives

- Fundamental Understanding Of How A Cell Works Has Come Through The Study Of Microorganisms
- Microbiology Has Helped To Treat And Prevent Diseases Which Are Caused By , Bacteria, Protozoa And Fungi
- Comprehend The Fundamentals Of Molecular Microbiology

١٠. Teaching And Learning Strategies

Strategy	<ul style="list-style-type: none"> • Explanation Of Scientific Subjects Through Theoretical Lectures. • Training Of Students For Practical Applications In Laboratories. • Student Prepare A Scientific Related Reports.
-----------------	---

10-Learning Skills Outcomes

Year Level	Symbol	Name	Basic/ Choice	Knowledge				Skills				Value					
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4		
Third Year	VEM3124	Microbiology -2	Basic			✓	✓				✓			✓			

١١. Course Structure

- Theoretical Subjects:

Week	Hours	Required Learning Outcomes	Unit Or Subject Name	Learning Method	Evaluation Method
1	3	A3+A4+B3+C2	Mycotoxin	Theoretical Lectures	Written Exam
2	3		Dermatophytes		
3	3		Zygomycetes <i>Fungi</i>		
4	3		<i>Candida Spp</i> And <i>Cryptococcus Spp</i>		
5	3		Staphylococcus		
6	3		Streptococcus		
7	3		Corynebacterium Listeria		
8	3		Enterobacteriaceae		
9	3		Pseudomonadaceae		
10	3		Burkholderia		
11	3		Clostridia		
12	3		Mycobacterium		
13	3		Spore-Forming G Positive Bacilli		
14	3		Brucella And Pasteurella		
15	3		Actinomyces Actinobacillus		

- Practical Subjects:

Week	Hours	Required Learning Outcomes	Unit Or Subject Name	Learning Method	Evaluation Method
1	2	A3+A4+B3+C2	Diagnosis Of <i>Pencillium</i> And <i>Aspergillus</i>	Practical Work In Laboratory	Practical Exam
2	2		Dermatophate <i>Verrcosum</i>		
۳	2		<i>Candidia Albicans</i>		
۴	2		<i>Cryptococcus</i>		
5-6	۴		Bacterial Virulence Factors		
7	2		Practical Exam		
8-10	۶		Biochemical Tests		
۱۱	2		<i>Micrococcus Staphylococcus</i>		
۱۲	2		<i>E.Coli</i>		
13			Sensitivty Test		
14	2	Practical Exam			

۱۲. Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	27	40	67
Practical	13	20	33
Total	40	60	100

• Learning And Teaching Resources

Required Textbooks (Curricular Books, If Any)	
Main References (Sources)	
Recommended Books And References (Scientific Journals, Reports...)	
Electronic References, Websites	

Name

Signature

Course Description Form

٣. Course Name:
Virology

٤. Course Code:
VEM3126

٥. Semester / Year:
Second Semester / Third Year

٦. Description Preparation Date:
4/10 / 2025

٧. Available Attendance Forms:
<ul style="list-style-type: none"> Theoretical Lectures. Practical Work In Laboratory.

٨. Number Of Credit Hours (Total) / Number Of Units (Total)		
	Credit Hours	Units
Theoretical	2	2
Practical	2	1
Total	4	3

٩. Course Administrator's Name (Mention All, If More Than One Name)
Name: Amer Khazaal Saleh
Email: Amer.K@Uodiyala.Edu.Iq

١٠. Course Objectives	
Course Objectives	<ul style="list-style-type: none"> Study The History Of Virology Study The Morphology , Viral Taxonomy And Classification Of The Viruses Study The Virus Replication 2- Special Virology Included Study The Virus Family (Coronaviridae, Paramyxoviridae, Poxvirus, Etc.)

12. Teaching And Learning Strategies

Strategy	<ul style="list-style-type: none"> • Explanation Of Scientific Subjects Through Theoretical Lectures. • Training Of Students For Practical Applications In Laboratories. • Student Prepare A Scientific Related Reports.
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13. Learning Skills Outcomes

Year Level	Symbol	Name	Basic/ Choice	Knowledge				Skills				Value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Third Year	VEM3126	Virology	Basic			✓	✓			✓			✓		

14. Course Structure

- Theoretical Subjects:

Week	Hours	Required Learning Outcomes	Unit Or Subject Name	Learning Method	Evaluation Method
1	2	A3+A4+B3+C2	Introduction And Discovering Of Viruses	Theoretical Lectures	Written Exam
2	2		Morphology And Chemistry Of Viruses		
3	2		Virus Classification And Taxonomy		
4	2		Replication Of Viruses And Effects Of Viruses On Cells		
5	2		Antiviral Drugs		
6	2		Viral Genetics And Pathogenesis Of Viruses		
7	2		Paramyxoviridae		

8	2	Coronaviridae
9	2	Orthomyxoviridae
10	2	Reoviridae And Retroviridae
11	2	Hepatitis Viruses
12	2	Rhabdoviridae And Birnaviridae
13	2	Poxviridae And Herpesviridae
14	2	Adenoviridae And Parvoviridae
15	2	Picornaviridae

- Practical Subjects:

Week	Hours	Required Learning Outcomes	Unit Or Subject Name	Learning Method	Evaluation Method
1	2	A3+A4+B3+C2	Laboratory Instruction	Practical Work In Laboratory	Practical Exam
2	2		Collecting And Handling Specimens For Virology		
3	2		Processing Of Specimens.		
4	2		Cultivation Of Viruses		
5	2		Diagnostic Virology		
٦-٧	٤		Methods Of Virus Titration		
8	2		Indirect Examination Of Specimen		
9	2		Serology		
10	2		Molecular Techniques For The Direct Detection Of Viral Genomes		
11	2		Elisa		
12	2		Exam		

١٣. Course Evaluation			
	Course Exam	Final Exam	Sum
Theoretical	27	40	67
Practical	13	20	33
Total	40	60	100

• Learning And Teaching Resources	
Required Textbooks (Curricular Books, If Any)	
Main References (Sources)	
Recommended Books And References (Scientific Journals, Reports...)	
Electronic References, Websites	

Course Description Form

٩. Course Name:

Pharmacology I

١١. Course Code:

VEP31١١

١٢. Semester / Year:

First Semester / Third Year

١٣. Description Preparation Date:

4 / 10 / 2025

١٤. Available Attendance Forms:

- Theoretical lectures.
- Practical classes utilizing lab. animals.

١٥. Number of Credit Hours (Total) / Number of Units (Total)

	Credit Hours	Units
Theoretical	3	3
Practical	2	1
Total	5	4

١٦. Course administrator's name (mention all, if more than one name)

Name: Mustafa A. Aljumaili

Email: mustafa.a@uodiyala.edu.iq

Name: Khudair A. Al-Ani

Email: khudhair.a@uodiyala.edu.iq

١٧. Course Objectives

Course Objectives

- Explaining different terms relevant to pharmacology.
- Understanding how the body handles the drug molecules.
- Understanding how the drug molecules affect different body tissues.
- Detailing drugs that affect the nervous, digestive, autocooids, and skin.
- Interlocking theoretical knowledge to the practical part.

١٨. Teaching and Learning Strategies	
Strategy	<ul style="list-style-type: none"> • Handouts from accredited references. • Presentations. • Illustrations and comments using whiteboard.

٢١. Course Structure					
- Theoretical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-3	9	A4+B2+C4	Principles of pharmacology	١٦- Lecture notes. ١٧- Presentations. ١٨- Whiteboard.	٢٦- Quizzes. ٢٧- Essays. ٢٨- Reports. ٢٩- Monthly Exams. ٣٠- Final Exams.
4-7	12		Drugs acting on autonomic and somatic nervous system		
8-11	12		Drugs acting on central nervous system		
12	3		Drug affecting gastrointestinal function		
13-14	6		Autacoids and anti-inflammatory drugs		
15	3		Dermato-pharmacology		
- Practical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	A4+B2+C4	Metrology	Laboratory Experiments	Practical Exam
2-3	4		Sources of drugs		
4	2		Pharmaceutical preparations and drug forms		
5	2		Routes of drug administration		
6-7	4		Variations in drug response		

8	2	Microsomal enzymes activity induction and drug response	
9	2	Excretion of drugs	
10	2	Prescription writing	
11-12	4	Dispensing	
13	2	Action of drugs on the eyes	
14	2	Action of drugs on isolated guinea pig's ileum	
15	2	Drugs and effects on the rabbit intestine	

١٩. Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	30	45	75
Practical	10	15	25
Total	40	60	100

٢٠. Learning and Teaching Resources

Required textbooks (Lippincott's illustrated review of pharmacology)	
Main references (Veterinary Pharmacology and Therapeutics)	
Recommended books and references (JAVMA, JVPT, Iraqi J. Vet. Med)	
Electronic References, https://www.ivsl.org/ , https://www.iasj.net/	

13-Learning skills outcomes

Year level	symbol	name	Basic/choice	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First Semester / Third Year	VEP3111	Pharmacology	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Course Description Form

١٠. Course Name:
Pharmacology II

١٢. Course Code:
VEP31٢١

١٣. Semester / Year:
Second Semester / Third Year

١٤. Description Preparation Date:
4 /10 / 2025

١٥. Available Attendance Forms:
<ul style="list-style-type: none">• Theoretical lectures.• Practical classes utilizing lab. animals.

١٦. Number of Credit Hours (Total) / Number of Units (Total)												
<table><thead><tr><th></th><th>Credit Hours</th><th>Units</th></tr></thead><tbody><tr><td>Theoretical</td><td>3</td><td>3</td></tr><tr><td>Practical</td><td>2</td><td>1</td></tr><tr><td>Total</td><td>5</td><td>4</td></tr></tbody></table>		Credit Hours	Units	Theoretical	3	3	Practical	2	1	Total	5	4
	Credit Hours	Units										
Theoretical	3	3										
Practical	2	1										
Total	5	4										

١٧. Course administrator's name (mention all, if more than one name)
Name: Mustafa A. Aljumaili Email: mustafa.a@uodiyala.edu.iq Name: Khudair A. Al-Ani Email: khudhair.a@uodiyala.edu.iq

١٨. Course Objectives		
<table><tr><td>Course Objectives</td><td><ul style="list-style-type: none">• Study the role of medicines in the treatment of cardiovascular, urinary, and respiratory problems.• Understanding the role of hormones and their analogs in the modulation of body functions• Understanding the importance of chemotherapy in the treatment of microbial infections.</td></tr></table>	Course Objectives	<ul style="list-style-type: none">• Study the role of medicines in the treatment of cardiovascular, urinary, and respiratory problems.• Understanding the role of hormones and their analogs in the modulation of body functions• Understanding the importance of chemotherapy in the treatment of microbial infections.
Course Objectives	<ul style="list-style-type: none">• Study the role of medicines in the treatment of cardiovascular, urinary, and respiratory problems.• Understanding the role of hormones and their analogs in the modulation of body functions• Understanding the importance of chemotherapy in the treatment of microbial infections.	

- Interlocking theoretical knowledge to the practical part.

19. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> • Handouts from accredited references. • Presentations. • Illustrations and comments using whiteboard.
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22. Course Structure

- Theoretical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-4	12	A4+B2+C4	Chemotherapy of microbial diseases	19- Lecture notes. 20- Presentations. 21- Whiteboard.	21- Quizzes. 22- Essays. 23- Reports. 24- Monthly Exams. 25- Final Exams.
5-7	9		Chemotherapy of parasitic diseases		
8-9	6		Drugs acting on cardiovascular system and blood		
10-11	6		Drugs affecting renal function and fluid-electrolyte therapy		
12-13	6		Drugs affecting the respiratory system		
14-15	6		Endocrine pharmacology and hormones		

- Practical Subjects:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	A4+B2+C4	Drugs and effects on rabbit uterus	Laboratory Experiments	Practical Exam.
2	4		Neuromuscular blocking (on the frog)		
3	2		Calculation of drug dosage		
4	2		Xylazine-ketamine anesthesia in rabbits		
5	4		Dose -response relationships (ED50, LD50, TI)		

6	2	Anticonvulsants
7	2	Determination of blood cholinesterase activity
8	2	Organophosphate poisoning in rats or mice
9	4	Xylazine effects in sheep
10	2	Diuretics
11	2	Aspirin toxicity (comparison with acetaminophen)
12-13	2	Veterinary pharmaceutical preparations
14		Neurobehavioral effects of drugs and toxicants
15		Effects of drugs on the perfused heart

٢٠. Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	30	45	75
Practical	10	15	25
Total	40	60	100

٢١. Learning and Teaching Resources

Required textbooks (Lippincott's illustrated review of pharmacology)	
Main references (Veterinary Pharmacology and Therapeutics)	
Recommended books and references (JAVMA, JVPT, Iraqi J. Vet. Med)	
Electronic References, https://www.ivsl.org/ , https://www.iasj.net/	

13-Learning skills outcomes

Year level	symbol	name	Basic/choice	knowledge				skills				valu				
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	
Second Semester / Third Year	VEP3121	Pharmacology	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Forth year

١. Program vision

After graduation our students will be able to work in a multidisciplinary team in the veterinary health sector.

To ensure optimal team performance and effective results in treating medical cases.

٢. Program message

Our college seeks to obtain international accreditation and rise to the global level in terms of quality of outputs and graduation highly qualified veterinarians in caring for field and pet animals, and serving the community.

3.objectives of the program

- ❖ Achieving quality standards based on scientific institutional quality standards.
- ❖ Graduating veterinarians with a bachelor's degree in veterinary medicine and surgery, who are able to conduct and examine
- ❖ Disease cases, diagnosing the disease and providing treatment on scientific basis.
- ❖ After graduation, our students will be able to work in a multidisciplinary team in the health and wealth sector, animals to ensure optimal team performance and effective results for the safety of society and field animals.
- ❖ Preparing veterinarians capable of interacting in the workplace and solving urgent problems in the livestock sector.
- ❖ Graduating doctors with high skills and knowledge in conducting scientific research in various specialized fields.

❖ Encouraging faculty members, staff, and students to enhance their technical skills and benefit from modern technologies in transferring knowledge, producing scientific research, and creating curricula for educational programs.

□ Implementing a development program for faculty and staff.

4. Program accreditation

The application process has begun

5. Other external influences

Veterinary hospital, library, Internet, community, Doctors Syndicate

6. Program structure

Program structure	percentage	Credit hours	Number of Courses	Reviews
	% 100		9	Institution Requirements
	% 100		9	College Requirements
	% 100		9	Department Requirements
	% 100	3	1	Summer Training
	Other

*Notes may include whether the course is basic or elective.

7. Program description				
Credit hours		Name of the course or course	Course or course code	Year/level
practical	theoretical			
hours ٣.		Veterinary application	VEC3127	the third
hours ١٢. hours ٦.	hours ٩. hours ٩. hours ٣. hours ١٥ hours ٣.	Internal medicine Infectious diseases Clinic Pathological diagnoses Epidemiological zoonotic diseases	VEC4110,VEC4128 VEC4117,VEC4126 VEC4112,VEC4123 VEC4119,VEC4127 VEC4120 VEC4107	the fourth
hours ١٢.	hours ٩.	Internal medicine Clinic	VEC5113,VEC5120 VEC5112,VEC5118	Fifth

8. Expected learning outcomes of the program	
Knowledge	
<ol style="list-style-type: none"> ١. .Learning Outcomes 1 Study of various internal diseases, especially common ones or emergency cases that the veterinarian may face. ٢. Identifying medical conditions and methods of treating them. ٣. Understanding the veterinary pathological interactions between internal diseases and diseases in other branches ٤. Knowing ways to prevent some diseases ٥. Identifying the legal responsibilities for some diseases, especially transmissible ones Statement of learning outcomes	
Skills	
<ol style="list-style-type: none"> ١- Take an accurate medical history, especially for infectious diseases ٢- The correct methods for measuring and reading clinical conditions ٣- Clinical skills in examining animals 	
Value	
<ol style="list-style-type: none"> 1- Developing expertise by dealing with transitional situations 2- Recognizing professional responsibility in dealing with communicable diseases 3-Using modern methods in treating medical conditions 	

9. Teaching and learning strategies

١. Theoretical lectures using illustrations (interactive whiteboard and data show)
٢. Practical application of concepts studied in laboratories and the veterinary hospital.
٣. Seminars (students are assigned a topic within the curriculum for presentation and discussion)
٤. Solving scientific problems by discussing them within small groups to reach the correct solutions
5. In-person and electronic blended learning for student activities via the e-learning platform (Classroom)

10. Evaluation methods

1. Discussion within lectures
٢. Mid-course exams and end-of-course exams
٣. Continuous evaluation
٤. Clinical groups
٥. Practical exams

11. The teaching staff

Faculty members

Preparing the teaching staff		Special requirements/skills (if any)		Specialization		Scientific rank
lecturer	Basic			private	general	
nothing	√			Internal and preventive medicine	Veterinary medicine and surgery	ا.م.د رعد محمودحسين
nothing	√			Internal and preventive medicine	Veterinary medicine and surgery	ا.م.د احمد حنش خلاف
nothing	√			Internal and preventive medicine	Veterinary medicine and surgery	ا.م.د طارق رفعت منت
nothing	√			Internal and preventive medicine	Veterinary medicine and surgery	ا.م. وليد ابراهيم جليل

nothing	√			Internal and preventive medicine	Veterinary medicine and surgery	م.د روى عدنان
nothing	√			zoonotic diseases	Veterinary medicine and surgery	م.م ايات جاسم
experienced				Medicine and treatment	Veterinary medicine and surgery	ا.د نزار جبار مصلح

Professional development

Orienting new faculty members

Guiding new faculty members through preparing courses and seminars in addition to meetings for college councils and councils Branches and through official notifications on the official website.

Professional development for faculty members

Continuing and permanent education through searching for developments in the library and scientific journals And the Internet, in addition to scientific seminars and seminars, and through practice in hospitals Veterinary.

12. Acceptance criterion

١. Central admission through the Ministry of Higher Education and Scientific Research, based on the sixth grade average, is done via an electronic form
٢. Parallel acceptance channel

١٣. The most important sources of information about the program

١. University website
٢. The website of the Ministry of Higher Education and Scientific Research

3. The college library and the university's central library

14. Program development plan

١. Developing academic curricula annually and updating them in line with developments in the diagnosis and treatment of diseases esotericism
٢. Developing the scientific and administrative staff in the college based on annual evaluations and diagnosing areas of weakness and strength
٣. Developing senior leaders, faculty members, employees, and workers at the college

Please check the boxes corresponding to the individual learning outcomes from the program subject to evaluation •

Program skills chart															
Learning outcomes required from the programme												Essential or optional	Course Name	Course Code	Year/level
values				Skills				Knowledge							
٤ج	٣ج	٢ج	١ج	٤ب	٣ب	٢ب	١ب	٤ا	٣ا	٢ا	١ا				
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Veterinary application	VEC3127	the third
												Basic			
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Internal medicine	VEC4110,VE C4128	the fourth
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Infectious diseases	VEC4117,VE C4126	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Clinical pathology	VEC4112,VE C4123	
		✓				✓				✓		Basic	Epidemiological	VEC4119,VE C4127	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Clinic	VEC4120	
		✓				✓				✓		Basic	Zoonotic diseases	VEC4107	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Internal medicine	VEC5113,VE C5120	Fifth
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	clinic	VEC5112,VE C5118	

Course description form

1. Course Name:					
Medicine					
2. Course Code:					
VEC5113,VEC5120					
3. Semester / Year:					
First and 2 nd semester 2025-2026					
4. Description Preparation Date:					
٤/١٠/٢٠٢٥					
5. Available Attendance Forms:					
Mandatory attendance					
6. Number of Credit Hours (Total) / Number of Units (Total)					
90 hours					
7. Course administrator's name (mention all, if more than one name)					
Name: Raad M. Hussein					
Email: raad.m@uodiyala.edu.iq					
8-Course Objective					
Course Objectives	<ul style="list-style-type: none"> ١- Identify internal diseases of field animals ٢- Diagnosis of diseases related to animal production (milk, meat) ٣- Identify diseases of the musculoskeletal system ٤- Identify diseases of the cardiovascular system ٥- Identify diseases of the urinary system ٦- Diseases resulting from poisoning 7- Nutritional deficiency diseases 				
9. Teaching and learning strategies					
<ul style="list-style-type: none"> ١. The method of delivery is accompanied by interrogation by directing questions to the students and involving them in the lecture. ٢. Assigning the student to write reports related to the course topics. ٣. Displaying pictures and films of surgical operations through the data show device. ٤. Use of computers 					
10. Course structure					
Evaluation method	Learning method	Unit or subject name	Required learning Outcomes	Hours	Week
11. Course evaluation					

١. Daily exams ٢. Reports preparation ٣. Mid-course exam ٤. final exam	
١٢ .Learning and teaching resources	
Veterinary Medicine	Required textbooks (methodology, if any(
- Large animal internal medicine - Disease of dairy cattle - Bovine medicine Disease of small Ruminants	Main references (sources(
- Veterinary medical journals issued by Iraqi veterinary medical colleges. - Arab and international medical journals	Recommended supporting books and references (scientific journals, reports(...
http://www.iasj.net Iraqi academic scient journals	Electronic references, Internet sites

Course Structure: Internal Medicine/Fifth Stage/First Course

Evaluation method	Learning method	Unit or subject name	Required learning Outcomes	Hours	Week
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Introductions	Enabling students to understand and know about metabolic diseases ((Introduction	٣	١
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Milk fever	Enabling students to understand and know about metabolic diseases, nutritional deficiencies, and knowledge of the profile test	٣	٢
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Milk fever· Downer cow syndrom	Enabling students to understand and know about milk fever	٣	٣
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases caused by nutritional deficiencies: Introduction	Enabling students to understand and know about	٣	٤

			recumbency syndrome in cows		
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Downer cow syndrome	Enabling students to understand and know about recumbency syndrome in cows	۳	۵
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Hypomagnesemia tetany	Enabling students to understand and know about acetonemia in cattle and pregnancy fever in sheep and goats	۳	۶
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Pregnancy toxemia· Azoturia	Enabling students to understand and know magnesium deficiency	۳	۷
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Iodine deficiency Zinc deficiency,	Enabling students to understand and know phosphorus deficiency	۳	۸
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Ketosis	Enabling students to understand and know about stress rhabdomyolysis in horses	۳	۹
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Post parturient hemoglobinuria	Enabling students to understand and know diseases of the musculoskeletal system	۳	۱۰
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Vitamin A deficiency	Enabling students to understand and know Vitamin A deficiency	۳	۱۱
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Vitamin E and selenium deficiency	Enabling students to understand and know Vitamin E deficiency	۳	۱۲
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Vitamin D deficiency	Enabling students to understand and know Vitamin D deficiency	۳	۱۳

- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Copper deficiency	Enabling students to understand and know Copper deficiency	٣	١٤
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Deficiency of calcium, magnesium and phosphorus· Deficiency of vitamin C and manganese· Deficiency of thiamin, B12, riboflavin and cholline	Enabling students to understand and know mineral deficiency	٣	١٥
Course Structure: Internal Medicine/Fifth Stage/Second Course					
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of cardiovascular system	Enabling students to understand and know diseases of the cardiac system	٣	١
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of cardiovascular system	Enabling students to understand and know diseases of the cardiac system	٣	٢
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of cardiovascular system	Enabling students to understand and know diseases of the cardiac system	٣	٣
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of cardiovascular system	Enabling students to understand and know diseases of the cardiac system	٣	٤
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of cardiovascular system	Enabling students to understand and know diseases of the cardiac system	٣	٥
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of urinary system	Enabling students to understand and know urinary system diseases	٣	٦
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of urinary system	Enabling students to understand and know urinary system diseases	٣	٧
- Daily exams - Homework	Board and interactive whiteboard	Diseases of urinary system	Enabling students to understand and know urinary system diseases	٣	٨

-Monthly exams					
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of musculoskeletal system	Enabling students to understand and know urinary system diseases	۳	۹
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of musculoskeletal system	Enabling students to understand and know urinary system diseases	۳	۱۰
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of musculoskeletal system	Enabling students to understand and know urinary system diseases	۳	۱۱
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of musculoskeletal system Diseases caused by poisonous materials	Enabling students to understand and know the diseases of organic substance poisoning	۳	۱۲
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases caused by poisonous materials	Enabling students to understand and know the diseases of organic substance poisoning	۳	۱۳
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases caused by poisonous materials	Enabling students to understand and know the diseases of organic substance poisoning	۳	۱۴
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases caused by poisonous materials	Enabling students to understand and know the diseases of organic substance poisoning	۳	۱۵

Course Description Form

۱. Course Name:
Veterinary Clinic - 1
۲. Course Code:
VEC5112
۳. Semester / Year:
First Semester / Fifth Year
۴. Description Preparation Date:
4/10/ 2025

٥. Available Attendance Forms:
<ul style="list-style-type: none"> • Practical classes utilizing live animals. • Practice in the University Veterinary Clinic.

٦. Number of Credit Hours (Total) / Number of Units (Total)									
<table border="1"> <thead> <tr> <th></th> <th>Credit Hours</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>Practical</td> <td>14</td> <td>7</td> </tr> <tr> <td>Total</td> <td>210</td> <td>7</td> </tr> </tbody> </table>		Credit Hours	Units	Practical	14	7	Total	210	7
	Credit Hours	Units							
Practical	14	7							
Total	210	7							

٧. Course administrator's name (mention all, if more than one name)
Name: Assist. Prof. Dr. Raad M. Hussein Email: raad.m@uodiyala.edu.iq

٨. Course Objectives		
<table border="1"> <tr> <td>Course Objectives</td> <td> <ul style="list-style-type: none"> • Students acquire practical skills • Students' ability to diagnose medical conditions • Students' ability to treat medical conditions </td> </tr> </table>	Course Objectives	<ul style="list-style-type: none"> • Students acquire practical skills • Students' ability to diagnose medical conditions • Students' ability to treat medical conditions
Course Objectives	<ul style="list-style-type: none"> • Students acquire practical skills • Students' ability to diagnose medical conditions • Students' ability to treat medical conditions 	

٩. Teaching and Learning Strategies		
<table border="1"> <tr> <td>Strategy</td> <td> <ul style="list-style-type: none"> • Explanation of scientific subjects through theoretical lectures. • Practical classes utilizing live animals. • Practice in the University Veterinary Clinic. • Student prepare a scientific related reports. </td> </tr> </table>	Strategy	<ul style="list-style-type: none"> • Explanation of scientific subjects through theoretical lectures. • Practical classes utilizing live animals. • Practice in the University Veterinary Clinic. • Student prepare a scientific related reports.
Strategy	<ul style="list-style-type: none"> • Explanation of scientific subjects through theoretical lectures. • Practical classes utilizing live animals. • Practice in the University Veterinary Clinic. • Student prepare a scientific related reports. 	

١٠. Course Structure - Practical Subjects:
--

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-15	14	Enable students to obtain knowledge and understanding of different diseases infect animals(name of disease, causes, clinical signs , diagnosis , treatment and prevention)	Weekly rotation at the departments of the University Veterinary Clinic: 1. Internal medicine 2. Surgery. 3. Obstetrics. 4. Poultry and fish. 5. Clinical pathology.	Practice in the University Veterinary Clinic	Objective Structured Practical Veterinary examination (OSPVE)

۱۱. Course Evaluation

	Course Exam	Final Exam	Sum
Practical	40	60	100
Total	40	60	100

۱۲. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

١. Course Name:

Veterinary Clinic - 2

٢. Course Code:

VEC5118

٣. Semester / Year:

Second Semester / Fifth Year

٤. Description Preparation Date:

4/10/ 2025

٥. Available Attendance Forms:

- Practical classes utilizing live animals.
- Practice in the University Veterinary Clinic.

٦. Number of Credit Hours (Total) / Number of Units (Total)

	Credit Hours	Units
Practical	12	6
Total	180	6

٧. Course administrator's name (mention all, if more than one name)

Name: Assist. prof. Dr. Ahmed H. Khlaf

Email: ahmed.h@uodiyala.edu.iq

٨. Course Objectives

Course Objectives

- **Students acquire practical skills**
- **Students' ability to diagnose medical conditions**
- **Students' ability to treat medical conditions**

٩. Teaching and Learning Strategies

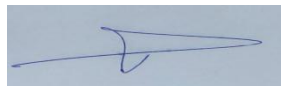
Strategy

- Explanation of scientific subjects through theoretical lectures.
- Practical classes utilizing live animals.
- Practice in the University Veterinary Clinic.
- Student prepare a scientific related report.

١٠. Course Structure					
- Practical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-15	12	Enable students to obtain knowledge and understanding of different diseases in infected animals (name of disease, causes, clinical signs, diagnosis, treatment and prevention)	Weekly rotation at the departments of the University Veterinary Clinic: 1. Internal medicine 2. Surgery. 3. Obstetrics. 4. Poultry and fish. 5. Clinical pathology.	Practice in the University Veterinary Clinic	Objective Structured Practical Veterinary examination (OSPVE)

١١. Course Evaluation			
	Course Exam	Final Exam	Sum
Practical	40	60	100
Total	40	60	100

١٢. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	



الاستاذ الدكتور
رعد محمود حسين
رئيس فرع الطب الباطني والوقائي

Course description form

1. Course Name:	
Internal Medicine \ fourth stage	
2. Course Code:	
VEC4110 first semester \ VEC4128 second semester	
3. Semester / Year:	
First and 2 nd semester 2025-2026	
4. Description Preparation Date:	
4/10/2025	
5. Available Attendance Forms:	
Mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
90 hours	
7. Course administrator's name (mention all, if more than one name)	
Assist. prof. Dr. Ahmed H. Khlaf Email: ahmed.h@uodiyala.edu.iq Assist. prof. Dr. Tareq R. Minaat tareq.r@uodiyala.edu.iq	
8-Course Objective	
Course Objectives	1-Identify the most important signs of health and illness in field animals 2-Identify internal field diseases ٣ - Identify diseases of the digestive system in ruminants and horses ٤ -Identify respiratory diseases ٥ -Distinguishing diseases of the nervous system ٦- Identify skin diseases
9. Teaching and learning strategies	
١ – The method of delivery is accompanied by interrogation by directing questions to the students involving them in the lecture.	
٢ –Assigning the student to write reports related to the course topics.	

३ –Displaying pictures and films of surgical operations through the data show device.

4- Use of computers

10. Course structure: Internal Medicine/fourth Stage/First semester

Week	Hours	Required learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Cognitive goals -Enable students to obtain knowledge and understanding of diseases infect animals (introduction)	Introductions	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
2	3	Enable students to obtain knowledge and understanding of Disease of Buccal cavity	Disease of Buccal cavity	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
3	3	Enable students to obtain knowledge and understanding of internal diseases that affect different parts of the digestive system of ruminants	SIMPLE INDIGESTION	Board and interactive whiteboard	- Daily exams - Homework - Monthly exams
4	3		RUMINAL TYMPANY	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
5	3		TRAUMATIC RETICULOPERITONITIS	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
6	3		VAGUS INDIGESTION	Board and interactive whiteboard	- Daily exams - Homework Monthly exams
7	3		Right-Side DISPLACEMENT OF THE ABOMASUM	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
8	3		LEFT-SIDE DISPLACEMENT OF THE ABOMASUM	Board and interactive whiteboard	- Daily exams - Homework - Monthly exams
9	3		INTESTINAL OBSTRUCTION IN CATTLE	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
10	3		HEMORRHAGIC BOWEL	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
11	3		DIETARY ABOMASAL IMPACTI ON IN CATTLE	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams

12	3		ABOMASAL ULCERS OF CATTLE	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
13	3	Enable students to obtain knowledge and understanding of Diseases affecting horses (colic)	1 EQUINE COLIC	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
14	3	Enable students to obtain knowledge and understanding of	Diseases of the liver	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
15	3	Diseases affecting the liver in ruminants and mono gastric animals	Manifestations of liver and biliary disease	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams

Internal Medicine/fourth Stage/second semester

1	۳	Enable students to obtain knowledge and understanding of Diseases affecting the respiratory system, knowledge how to diagnose them, and understanding how to treat them in different animals	Diseases of the Respiratory System	Board and interactive whiteboard	- Daily exams - Homework - Monthly exams
2	۳		Principal manifestations of respiratory insufficiency	Board and interactive whiteboard	- Daily exams - Homework Monthly exams
3	۳		Diseases of the pleura and diaphragm	Board and interactive whiteboard	- Daily exams - Homework Monthly exams
4	۳		Special examination of the respiratory system	Board and interactive whiteboard	- Daily exams - Homework Monthly exams
5	۳		PRINCIPLES TREATMENT OF RESPIRATORY TRACT DISEASE	Board and interactive whiteboard	- Daily exams - Homework - Monthly exams
6	۳		DISEASES OF THE LUNG	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
7	۳	Enable students to obtain knowledge and understanding of Diseases that affect the nervous system, knowing how to diagnose them, and understanding how to treat them in different animals	Diffuse diseases of the brain	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
8	۳		INCREASED INTRACRANIAL PRESSURE	Board and interactive whiteboard	- Daily exams - Homework - Monthly exams
9	۳		Focal diseases of the brain	Board and interactive whiteboard	- Daily exams - Homework - Monthly exams
10	۳	Enable students to obtain knowledge and understanding of Diseases that affect the skin, the possibility of diagnosing,	Diseases of the epidermis and dermis	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
11	۳		Disease of wool ,hair .folcils	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams

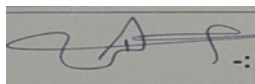
12	۳	distinguishing them from other diseases, and knowledge ways to treat and control them	Diseases of the skin, conjunctiva, and External ear and PPT	Board and interactive whiteboard	- Daily exams - Homework -Monthly exams
13	۳		Dermatitis and dermatosis	Board and interactive whiteboard	- Daily exams - Homework Monthly exams
14	۳		Diseases of the skin	Board and interactive whiteboard	- Daily exams - Homework Monthly exams
15	۳		URTICARIA	Board and interactive whiteboard	- Daily exams - Homework Monthly exams

11. Course evaluation

Daily exams
Reports preparation
Mid-course exam
final exam

۱۲ .Learning and teaching resources

Veterinary Medicine	(Required textbooks (methodology, if any
<ul style="list-style-type: none"> - Large animal internal medicine - Disease of dairy cattle - Bovine medicine <p style="text-align: center;">Disease of small Ruminants</p>	(Main references (sources
<p>Veterinary medical journals issued - .by Iraqi veterinary medical colleges</p> <p>Arab and international medical journals -</p> <p>http://www.iasj.net Iraqi academic scientific journals</p>	Recommended supporting books and (...references (scientific journals, reports
	Electronic references, Internet sites



Assist. Prof. Dr. Ahmed H. Khlaf

1. Course Name:	
Infectious disease	
2. Course Code: VEC4117 first semester\ VEC4126 second semester	
Forth year	
3. Semester / Year:	
First and 2 nd semester 2025-2026	
4. Description Preparation Date:	
4/10/2025	
5. Available Attendance Forms:	
Mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 hours	
7. Course administrator's name (mention all, if more than one name)	
Mail : roaa.a@uodiyala.edu.iq	Name : Lecturer Dr. Roaa Adnan Hussien Asisst.Prof. Waleed Ibrahim
8-Course Objective	
Course Objective	<ul style="list-style-type: none"> - ١ Identify internal diseases of field animals - ٢ Diagnosis of diseases related to animal production (milk, meat) - ٣ Identify diseases of the musculoskeletal system - ٤ Identify diseases of the cardiovascular system - ٥ Identify diseases of the urinary system - ٦ Diseases resulting from poisoning 7- Nutritional deficiency diseases
9. Teaching and learning strategies	
<ul style="list-style-type: none"> ١- The method of delivery is accompanied by interrogation by directing questions to the students involving them in the lecture. - ٢ Assigning the student to write reports related to the course topics. - ٤ Displaying pictures and films of surgical operations through the data show device. 5- Use of computers 	
10. Course structure	
11. Course evaluation	

Daily exams Reports preparation Mid-course exam final exam	
١٢ .Learning and teaching resources	
- 1- Veterinary Epidemiology - An Introduction Introduction to Veterinary Epidemiology Mark Stevenson	Main references (sources)
Veterinary medical journals issued by Iraqi .veterinary medical colleges Arab and international medical journals	Recommended supporting books and references (...(scientific journals, reports
http://www.iasj.net Iraqi academic scientific journals	Electronic references, Internet sites

Course Structure: Infectious /Fourth Stage/First Course

Evaluation method	Learning method	Unit or subject name	Required learning Outcomes	Hours	Week
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Introductions	Cognitive goals -Enable students to obtain knowledge and understanding of terminology Types of epidemiology	2	١
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Closteridal disease	Enable students to obtain knowledge and understanding of Occurrence of disease	٢	٢
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Sudden death disease	Enable students to obtain knowledge and understanding of Diseases Transmission and Determinants	٢	٣
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Brucellosis	Enable students to obtain knowledge and understanding of The economics of animal diseases	٢	٤
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Campylobacteriosis	Enable students to obtain knowledge and understanding of Data collection and management	٢	٥

- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	brucellosis	Enable students to obtain knowledge and understanding of Sampling and sample size	۲	۶
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Johnes disease	Enable students to obtain knowledge and understanding of Study Design	۲	۷
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Actinobacillosis	Enable students to obtain knowledge and understanding of Measures of association	۲	۸
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	leptospirosis	Enable students to obtain knowledge and understanding of	۲	۹
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	colibacillosis	Enable students to obtain knowledge and understanding of Control and Eradication of Diseases	۲	۱۰
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	salmonellosis	Enable students to obtain knowledge and understanding of Assessing validity and reliability of diagnostic tests (serological epidemiology)	۲	۱۱
		Examination		۲	۱۲
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Sporotrichosis	Enable students to obtain knowledge and understanding of Occurrence of disease	۲	۱۳
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Epizootic lymphangitis	Enable students to obtain knowledge and understanding of Diseases Transmission and Determinants	۲	۱۴
		Examination		۲	۱۵
Course Structure: Infectious /Fourth Stage/Second Course					
Evaluation method	Learning method	Unit or subject name	Required learning Outcomes	Hours	Week
- Daily exams - Homework	Board and interactive whiteboard	Rinderpest	Cognitive goals -Enable students to obtain knowledge and understanding of	3	۱

-Monthly exams			terminology Types of epidemiology		
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Malignant catarrhal fever	Enable students to obtain knowledge and understanding of Occurrence of disease	۳	۲
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Infectious Bovine Rhinotracheitis	Enable students to obtain knowledge and understanding of Diseases Transmission and Determinants	۳	۳
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Foot & mouth disease	Enable students to obtain knowledge and understanding of The economics of animal diseases	۳	۴
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Bovine viral diarrhea	Enable students to obtain knowledge and understanding of Data collection and management	۳	۵
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Equine infectious anemia	Enable students to obtain knowledge and understanding of Sampling and sample size	۳	۶
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	EQUINE ENCEPHALOMYELITIS	Enable students to obtain knowledge and understanding of Study Design	۳	۷
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	EQUINE VIRAL RHINOPHEUMONITIS	Enable students to obtain knowledge and understanding of Measures of association	۳	۸
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Equine Viral Arteritis	Enable students to obtain knowledge and understanding of	۳	۹
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Equine influenza	Enable students to obtain knowledge and understanding of Control and Eradication of Diseases	۳	۱۰
- Daily exams - Homework	Board and interactive whiteboard	African Horse Sickness	Enable students to obtain knowledge and understanding of Assessing	۳	۱۱

-Monthly exams			validity and reliability of diagnostic tests (serological epidemiology)		
		Examination		۳	۱۲
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Joines disease	Enable students to obtain knowledge and understanding of Occurrence of disease	۳	۱۳
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Pseudorabies	Enable students to obtain knowledge and understanding of Diseases Transmission and Determinants	۳	۱۴
		Examination		۳	۱۵

1. Course Name:	
Pathological diagnosis ,	
2. Course Code:	
VEC4112 first semester \ VEC4123 second semester	
3. Semester / Year:	
First and 2 nd semester 2025-2026	
4. Description Preparation Date:	
4 \10 \2025	
5. Available Attendance Forms:	
Mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
90 hours	
7. Course administrator's name (mention all, if more than one name)	
Email : treq.r@uodiyala.edu.iq Name : Asisst.Prof.Dr. Tareq Rifaht Minnat	
8-Course Objective	
Course Objectives	

	<p>A1- Teaching the student the concept of pathological diagnoses and its general principles</p> <p>A2- Knowledge, understanding and comprehension of the scientific subject curriculum</p> <p>A3- To classify the theoretical and practical needs for the development of learning and teaching in the appropriate manner with the scientific material</p> <p>A4- Identifying pathogens that may affect animals to give the correct diagnosis of the disease state.</p> <p>B. The skills goals special to the course.</p> <p>B1 - Teaching the student how to make an accurate diagnosis of the disease.</p> <p>B2 - Teaching the student to use scientific methods in diagnosis.</p> <p>B 3 - Teaching the student the modern techniques used to diagnose diseases.</p>
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9. Teaching and learning strategies

١. lectures.
٢. Discussions during and after the lecture.
٣. Motivation through questions and answers.
٤. Homework .
٥. Preparation of scientific reports .

Assessment methods

Semester and final theory exams by 60%

2. Semester and final practical exams at a rate of 40% from it Evaluation of extracurricular activities (reports, posters and homework) by 5% and Daily exams.

11. Course evaluation

Daily exams

Reports preparation

Mid-course exam

final exam

١٢ .Learning and teaching resources

<p>1- Fundamentals of veterinary clinical pathology ,Steven L.Stokham and Michael A.Scott ,second edition .</p> <p>2- Veterinary clinical diagnosis by laboratory methods , R.S. Brar ,H.S. Sandhu and Avtar Singh .</p> <p>3- Clinical pathology and laboratory techniques for veterinary technicians, ANNE M.BARGER and AMY L. MACNEILL .</p> <p>4- Pathology and parasitology for veterinary technicians , Leland S. Shapiro ,second edition .</p> <p>5- Color atlas of veterinary pathology , J.E.van Dijk ,E.Gruys and J.M.V.M.Mouwen , second edition .</p> <p>6- Manual of small animal clinical pathology , Malcolm Davidson ,Roderick Else and John Lumsden .</p>	<p>Main references (sources)</p>
<p>A- Recommended books and references (scientific journals, reports...).</p>	<p>non</p>
<p>Veterinary medical journals issued - .by Iraqi veterinary medical colleges - rab and international medical journals -</p>	<p>Recommended supporting books and (...references (scientific journals, reports</p>
<p>http://www.iasj.net Iraqi academic scientific journals</p>	<p>Electronic references, Internet sites</p>

Course Structure: Pathological diagnosis /Fourth Stage/First Course

Evaluation method	Learning method	Unit or subject name	Required learning Outcomes	Hours	Week
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Introduction (terminology and concepts)	Cognitive goals -Enable students to obtain knowledge and understanding of terminology and concepts)	۳	۱
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Bone marrow and Haematopoiesis Collection of samples	Enable students to obtain knowledge and understanding of Bone marrow and Haematopoiesis Collection of samples	۳	۲
- Daily exams - Homework - Monthly exams	Board and interactive whiteboard	Erythron- physiology and morphology of RBCs. RBC counting	Enable students to obtain knowledge and understanding of Erythron- physiology and morphology of	۳	۳
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Diseases of RBCs Haemoglobin and PCV measurement	Enable students to obtain knowledge and understanding of Diseases of RBCs Haemoglobin and PCV measurement	۳	۴
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Anaemia Erythrocyte indices	Enable students to obtain knowledge and understanding of Anaemia Erythrocyte indices	۳	۵
- Daily exams - Homework Monthly exams	Board and interactive whiteboard	Causes of anaemia Abnormal RBCs	Enable students to obtain knowledge and understanding of Causes of anaemia Abnormal RBCs	۳	۶
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Kinds of anaemia Blood film preparation and differential WBC count	Enable students to obtain knowledge and understanding of	۳	۷
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Erythrocyte indices and anaemia WBC count	Enable students to obtain knowledge and understanding of Kinds of anaemia Blood film preparation and	۳	۸

			differential WBC count		
- Daily exams - Homework - Monthly exams	Board and interactive whiteboard	Polycythemia Abnormal WBCs	Enable students to obtain knowledge and understanding of	۳	۹
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	White blood cells ESR	Enable students to obtain knowledge and understanding of Polycythemia Abnormal WBCs	۳	۱۰
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	White blood cells Plasma protein and fibrinogen	Enable students to obtain knowledge and understanding of White blood cells Plasma protein and fibrinogen	۳	۱۱
- Daily exams - Homework Monthly exams	Board and interactive whiteboard	White blood cells Platelet count	Enable students to obtain knowledge and understanding of	۳	۱۲
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Platelets (Thrombocytes) Bleeding tests	Enable students to obtain knowledge and understanding of White blood cells Platelet count	۳	۱۳
- Daily exams - Homework - Monthly exams	Board and interactive whiteboard	Thrombocytosis and thrombocytopenia Revision	Enable students to obtain knowledge and understanding of Thrombocytosis and thrombocytopenia Revision	۳	۱۴
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Laboratory tests for platelets. Examination	Enable students to obtain knowledge and understanding of	۳	۱۵

Course Structure: Pathological diagnosis /Fourth Stage/Second Course

- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Haemostasis Fecal examination (1)	Enable students to obtain knowledge and understanding of Haemostasis Fecal examination	۳	۱
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Liver and Liver function tests (1) Fecal examination (2)	Enable students to obtain knowledge and understanding of Fecal examination	۳	۲
- Daily exams - Homework - Monthly exams	Board and interactive whiteboard	Liver and Liver function tests (2) Skin scrapings (1)	Enable students to obtain knowledge and understanding of	۳	۳

- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Liver and liver function tests (3) Skin scrapings(2)	Enable students to obtain knowledge and understanding of Liver and liver function tests (3) Skin scrapings(2)	۳	۴
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Kidney and kidney function tests (1) Urine examination (1)	Enable students to obtain knowledge and understanding of	۳	۵
- Daily exams - Homework Monthly exams	Board and interactive whiteboard	Kidney and kidney function tests (2) Urine ex.(2)	Enable students to obtain knowledge and understanding of	۳	۶
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Kidney and kidney function tests (3) Antibiotic sensitivity test	Enable students to obtain knowledge and understanding of Acid base balance Blood parasite)	۳	۷
- Daily exams - Homework - Monthly exams	Board and interactive whiteboard	Kidney and kidney function tests (4) Lymph smear collection and examination	Enable students to obtain knowledge and understanding of	۳	۸
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Acid base balance (1) Blood parasite (1)	Enable students to obtain knowledge and understanding of Acid base balance and Blood parasite	۳	۹
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Acid base balance (2) Blood parasite (2)	Enable students to obtain knowledge and understanding of Acid base balance Blood parasite	۳	۱۰
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Electrolytes and minerals (1) Mastitis and milk examination(1)	Enable students to obtain knowledge and understanding of Electrolytes and minerals and Mastitis and milk examination	۳	۱۱
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Electrolytes and minerals (2) Mastitis and milk examination (2)	Enable students to obtain knowledge and understanding of Electrolytes and minerals Mastitis and milk examination	۳	۱۲
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Microbiology (1) Bacterial culture	Enable students to obtain knowledge and understanding of Microbiology Bacterial culture	۳	۱۳

- Daily exams	Board and interactive whiteboard	Microbiology (2) Bacterial stains	Enable students to obtain knowledge and understanding of Microbiology Bacterial stains	٣	١٤
- Homework	Board and interactive whiteboard	Clinical parasitology Biochemical tests and media Examination	Enable students to obtain knowledge and understanding of Clinical parasitology Biochemical tests and media Examination	٣	١٥

1. Course Name:	
Epidemiology	
2. Course Code:	
VEC4120	
3. Semester / Year:	
First semester 2025-2026	
4. Description Preparation Date:	
4 \10 \2025	
5. Available Attendance Forms:	
Mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
15 hours	
7. Course administrator's name (mention all, if more than one name)	
Email : treq.r@uodiyala.edu.iq Name : Asisst.Prof.Dr. Tareq Rifaht Minnat Lecturer Dr. Roaa Adnan Hussien	
8-Course Objective	
Course Objectives	<p>١٧. - Teaching the student the concept of Epidemiology and its general principles</p> <p>١٨. Basic concepts of disease quantification Measures of morbidity.</p> <ul style="list-style-type: none"> ● Prevalence. ● Incidence.

	<ul style="list-style-type: none"> Relationship between prevalence and incidence. <p>١٩. The economics of animal diseases Data collection and management</p> <p>٢٠. Control and Eradication of Diseases</p> <p>٢١. Identifying pathogens that may affect animals to give the correct diagnosis of the disease state.</p> <p>٢٢. The skills goals special to the course.</p> <p>٢٣. Teaching the student how to make an accurate diagnosis of the disease.</p> <p>٢٤. Teaching the student to use scientific methods in diagnosis.</p> <p>٢٥. Assessing validity and reliability of diagnostic tests (serological epidemiology)</p>
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9. Teaching and learning strategies

- ٦. lectures.
- ٧. Discussions during and after the lecture.
- ٨. Motivation through questions and answers.
- ٩. Homework .
- ١٠. Preparation of scientific reports .

10. Course structure

Course Structure: Epidemiology /Fourth Stage/First Course					
Evaluation method	Learning method	Unit or subject name	Required learning Outcomes	Hours	Week
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	<ul style="list-style-type: none"> Definitions. Objectives of epidemiology and preventive medicine. Uses of epidemiology. <p>Types of epidemiology</p>	Cognitive goals -Enable students to obtain knowledge and understanding of terminology Types of epidemiology	٣	١
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	<p>Occurrence of disease</p> <p>٢٦. Basic concepts of disease quantification</p> <p>٢٧. Measures of morbidity.</p>	Enable students to obtain knowledge and understanding of Occurrence of disease	٣	٢

		<p>۲۸. Prevalence. ۲۹. Incidence. ۳۰. Relationship between prevalence and incidence. ۳۱. Measures of mortality.</p>			
<p>- Daily exams - Homework -Monthly exams</p>	Board and interactive whiteboard	<p>Diseases Transmission and Determinants</p> <ul style="list-style-type: none"> • Mode of disease transmission. • Susceptibility. • Clinical vs. subclinical diseases. • Endemic, epidemic, pandemic, and outbreaks. • Diseases determinants 	Enable students to obtain knowledge and understanding of Diseases Transmission and Determinants	۳	۳
<p>- Daily exams - Homework -Monthly exams</p>	Board and interactive whiteboard	The economics of animal diseases	Enable students to obtain knowledge and understanding of The economics of animal diseases	۳	۴
<p>- Daily exams - Homework -Monthly exams</p>	Board and interactive whiteboard	Data collection and management	Enable students to obtain knowledge and understanding of Data collection and management	۳	۵
<p>- Daily exams - Homework -Monthly exams</p>	Board and interactive whiteboard	<p>Sampling and sample size</p> <ul style="list-style-type: none"> • Sampling methods. • Sample size importance and calculation 	Enable students to obtain knowledge and understanding of Sampling and sample size	۳	۶
<p>- Daily exams - Homework -Monthly exams</p>	Board and interactive whiteboard	<p>Study Design</p> <ul style="list-style-type: none"> • Prospective vs. Retrospective • Observational studies: <ul style="list-style-type: none"> • Descriptive. • Cross-sectional. • Case-control. • Cohort. • Experimental studies <ul style="list-style-type: none"> • Field trials. 	Enable students to obtain knowledge and understanding of Study Design	۳	۷

		<ul style="list-style-type: none"> Randomized controlled trials (clinical trials). 			
- Daily exams - Homework - Monthly exams	Board and interactive whiteboard	Measures of association <ul style="list-style-type: none"> Absolute risk. Relative risk. Relative odds (odds ratio). Attributable risk. Hazard ratio. Association vs. causation Bias, confounding, and interaction. 	Enable students to obtain knowledge and understanding of Measures of association	۳	۸
- Daily exams - Homework - Monthly exams	Board and interactive whiteboard	Survey and Surveillance	Enable students to obtain knowledge and understanding of	۳	۹
- Daily exams - Homework - Monthly exams	Board and interactive whiteboard	Control and Eradication of Diseases	Enable students to obtain knowledge and understanding of Control and Eradication of Diseases	۳	۱۰
- Daily exams - Homework - Monthly exams	Board and interactive whiteboard	Assessing validity and reliability of diagnostic tests (serological epidemiology)	Enable students to obtain knowledge and understanding of Assessing validity and reliability of diagnostic tests (serological epidemiology)	۳	۱۱
		Exam		۳	۱۲
- Daily exams - Homework - Monthly exams	Board and interactive whiteboard	Occurrence of disease <p>۳۲. Basic concepts of disease quantification</p> <p>۳۳. Measures of morbidity.</p> <p>۳۴. Prevalence.</p> <p>۳۵. Incidence.</p> <p>۳۶. Relationship between prevalence and incidence.</p> <p>۳۷. Measures of mortality.</p>	Enable students to obtain knowledge and understanding of Occurrence of disease	۳	۱۳
- Daily exams - Homework	Board and interactive whiteboard	Diseases Transmission and Determinants	Enable students to obtain knowledge and understanding of Diseases	۳	۱۴

-Monthly exams		<ul style="list-style-type: none"> • Mode of disease transmission. • Susceptibility. • Clinical vs. subclinical diseases. • Endemic, epidemic, pandemic, and outbreaks. • Diseases determinants <p>The economics of animal diseases</p>	Transmission and Determinants		
		Examination		٣	١٥

11. Course evaluation	
Daily exams Reports preparation Mid-course exam final exam	
١٢ .Learning and teaching resources	
- 1- Veterinary Epidemiology - An Introduction Introduction to Veterinary Epidemiology Mark Stevenson	Main references (sources)
Veterinary medical journals issued - .by Iraqi veterinary medical colleges Arab and international medical journals - http://www.iasj.net Iraqi academic scientific journals	Recommended supporting books and (....references (scientific journals, reports
	Electronic references, Internet sites

1. Course Name:
zoonosis disease
2. Course Code:VEC4107 \ second semester
Forth year
3. Semester / Year:
First and 2 nd semester 2025-2026
4. Description Preparation Date:
4/10/2025
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours

Course Structure: zoonosis /Fourth Stage/First Course					
Evaluation method	Learning method	Unit or subject name	Required learning Outcomes	Hours	Week
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Introductions	Cognitive goals -Enable students to obtain knowledge and understanding of zoonotic diseases	2	1
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Bacterial zoonotic disease	Enable students to obtain knowledge and understanding of Occurrence of bacterial disease	2	2
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	anthrax	Enable students to obtain knowledge and understanding of Diseases Transmission and Determinants	2	3
- Daily exams	Board and interactive whiteboard	Food born disease	Enable students to obtain knowledge and understanding of The	2	4

- Homework -Monthly exams			economics of animal diseases		
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	brucellosis	Enable students to obtain knowledge and understanding of Data collection and management	2	5
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	listeriosis	Enable students to obtain knowledge and understanding of Sampling and sample size	2	6
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	tuberculosis	Enable students to obtain knowledge and understanding of Study Design	2	7
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	glanders	Enable students to obtain knowledge and understanding of Measures of association	2	8
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	leptospirosis	Enable students to obtain knowledge and understanding of	2	9
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	colibacillosis	Enable students to obtain knowledge and understanding of Control and Eradication of Diseases	2	10
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	salmonellosis	Enable students to obtain knowledge and understanding of Assessing validity and reliability of diagnostic tests	2	11

			(serological epidemiology)		
		Examination		2	12
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Cat scratch diseases and rat bite fever	Enable students to obtain knowledge and understanding of Occurrence of disease	2	13
- Daily exams - Homework -Monthly exams	Board and interactive whiteboard	Parasitic zoonotic disease	Enable students to obtain knowledge and understanding of Diseases Transmission and Determinants	2	14
Daily - exams - Homework -Monthly exams	Board and interactive whiteboard	fasciolosis	Enable students to obtain knowledge and understanding of Diseases Transmission and Determinants	2	15
Course Objective	- ١ Identify zoonotic diseases in animal and human - ٢ Diagnosis of bacterial zoonotic diseases(- ٣ Identify of parasitic zoonotic diseases 4-Identified viral zoonotic diseases				
9. Teaching and learning strategies					
١ – The method of delivery is accompanied by interrogation by directing questions to the students and involving them in the lecture. - ٢ Assigning the student to write reports related to the course topics. - ٤ Displaying pictures and films of surgical operations through the data show device. 5– Use of computers					
10. Course structure					
11. Course evaluation					
Daily exams Reports preparation Mid-course exam final exam					
١٢ .Learning and teaching resources					

Course Structure:zoonosis /Fourth Stage/First Course	Course Structure:zoonosis /Fourth Stage/First Course
Veterinary medical journals issued by Iraqi veterinary medical colleges - Arab and international medical journals -	Recommended supporting books and references (scientific (...journals, reports
http://www.iasj.net Iraqi academic scientific journals	Electronic references, Internet sites

Course Description Form

١. Course Name:	Veterinary Clinic – 1st semester
٢. Course Code:	VEC4112
٣. Semester / Year:	First Semester / Fourth Year
٤. Description Preparation Date:	4/ 10/ 2025
٥. Available Attendance Forms:	<ul style="list-style-type: none"> • Practical lessons on animals in the animal field of collage • receiving sick animal cases in the clinic Veterinary college

٦. Number of Credit Hours (Total) / Number of Units (Total)		
	Credit Hours	Units
Practical	4	2
Total	٦	2

٧. Course administrator's name (mention all, if more than one name)
Name: Assist. prof. Dr. Ahmed H. Khlaf Email: ahmed.h@uodiyala.edu.iq

٨. Course Objectives	
Course Objective	Identify the most important signs of health and illness in field animals ٢ - Identify diseases in animals

٩. Teaching and Learning Strategies	
Strategy	<ul style="list-style-type: none"> • Explanation of scientific subjects through theoretical lectures. • Practical classes utilizing live animals. • Practice in the University Veterinary Clinic. • Student prepare a scientific related reports.

١٠. Course Structure					
- Practical Subjects:					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-15	4	Enable students to obtain knowledge and understanding of different diseases infect animals	Weekly rotation at the departments of the University Veterinary Clinic: 1. Internal medicine 2. Surgery. 3. Obstetrics. 4. Poultry and fish. 5. Clinical pathology.	Practice in the University Veterinary Clinic	Objective Structured Practical Veterinary examination (OSPVE)

١١. Course Evaluation			
	Course Exam	Final Exam	Sum
Practical	40	60	100
Total	40	60	100

١٢. Learning and Teaching Resources	
Veterinary Medicine	Required textbooks (curricular books, if any)
<ul style="list-style-type: none"> - Large animal internal medicine - Equine surgery - Poultry diseases Disease of small Ruminants 	Main references (sources)
<ul style="list-style-type: none"> - Veterinary medical journals issued by Iraqi veterinary medical colleges. Arab and international medical journals 	Recommended books and references (scientific journals, reports...)
p://www.iasj.net Iraqi academic scientific journals	Electronic References, Websites

Course Description Form

١. Course Name:

Veterinary Clinic – second semester

٢. Course Code:

VEC4123

٣. Semester / Year:

Second Semester / Fourth Year

٤. Description Preparation Date:

4/ 10 / 2025

٥. Available Attendance Forms:

- Practical lessons on animals in the animal field of collage
- receiving sick animal cases in the clinic Veterinary college

٦. Number of Credit Hours (Total) / Number of Units (Total)

	Credit Hours	Units
Practical	4	2
Total	60	2

٧. Course administrator's name (mention all, if more than one name)

Name: Assist. prof. Dr. Ahmed H. Khlaf Email: ahmed.h@uodiyala.edu.iq

٨. Course Objectives

Course Objectives	-Identify the most important signs of health and illness in field animals - Identify diseases in animals
--------------------------	---

٩. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none">• Explanation of scientific subjects through theoretical lectures.• Practical classes utilizing live animals.• Practice in the University Veterinary Clinic.• Student prepare a scientific related report.
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١٠. Course Structure

- **Practical Subjects:**

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-15	4	Enable students to obtain knowledge and understanding of different diseases infect animals(name of disease, causes, clinical signs , diagnosis ,	Weekly rotation at the departments of the University Veterinary Clinic:	Practice in the collage Veterinary Clinic	Objective Structured Practical Veterinary examination (OSPVE)

		treatment and prevention)	1. Internal medicine 2. Surgery. 3. Obstetrics. 4. Poultry and fish. 5. Clinical pathology.		
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١١. Course Evaluation			
	Course Exam	Final Exam	Sum
Practical	40	60	100
Total	40	60	100

١٢. Learning and Teaching Resources	
Veterinary Medicine	Required textbooks (curriculum books, if any)
<ul style="list-style-type: none"> - Large animal internal medicine - Equine surgery - Poultry diseases Disease of small Ruminants	Main references (sources)
<ul style="list-style-type: none"> - Veterinary medical journals issued by Iraqi veterinary medical colleges. Arab and international medical journals	Recommended books and references (scientific journals, reports...)
http://www.iasj.net Iraqi academic scientific journals	Electronic References, Website

Course Description Form

١. Course Name:
Veterinary Clinic

٢. Course Code:
VEC3127

٣. Semester / Year:
Second Semester / Third Year

٤. Description Preparation Date:
4/10/2025

٥. Available Attendance Forms:
<ul style="list-style-type: none">• Practical classes utilizing live animals.• Practice in the University Veterinary Clinic.

٦. Number of Credit Hours (Total) / Number of Units (Total)									
<table border="1"><thead><tr><th></th><th>Credit Hours</th><th>Units</th></tr></thead><tbody><tr><td>Practical</td><td>2</td><td>1</td></tr><tr><td>Total</td><td>2</td><td>1</td></tr></tbody></table>		Credit Hours	Units	Practical	2	1	Total	2	1
	Credit Hours	Units							
Practical	2	1							
Total	2	1							

٧. Course administrator's name (mention all, if more than one name)
Name: Assist. Prof. Dr. Raad M. Hussein
Email: raad.m@uodiyala.edu.iq

٨. Course Objectives		
<table border="1"><tr><td>Course Objectives</td><td><ul style="list-style-type: none">• Acquiring basic practical skills in identifying pathological conditions• Learn methods of clinical and physical examinations• Learn routine screenings for medical conditions</td></tr></table>	Course Objectives	<ul style="list-style-type: none">• Acquiring basic practical skills in identifying pathological conditions• Learn methods of clinical and physical examinations• Learn routine screenings for medical conditions
Course Objectives	<ul style="list-style-type: none">• Acquiring basic practical skills in identifying pathological conditions• Learn methods of clinical and physical examinations• Learn routine screenings for medical conditions	

٩. Teaching and Learning Strategies	
Strategy	<ul style="list-style-type: none"> • Explanation of scientific subjects through theoretical lectures. • Practical classes utilizing live animals. • Practice in the University Veterinary Clinic. • Student prepare a scientific related report.

١٠. Course Structure					
- Practical Subjects					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Enable students to obtain knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	Introduction	Practical classes utilizing live animals	-Daily exams -Monthly exams
2	2	Enable students to obtain knowledge and understanding of physical examination	Inspection, Palpation, Percussion and Auscultation		-Daily exams -Monthly exams
3	2	Enable students to obtain knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	Examination of Body Temperature	Enabling students to understand and knowledge the methods of temperature checking	-Daily exams -Monthly exams
4	2	Enable students to obtain knowledge and understanding	Examination of Arterial Pulse	Enabling students to understand and knowledge the	-Daily exams -Monthly exams

		of Dealing with the animal and knowing the signs of health and disease		methods of Pulse measurement	
5	2	Enable students to obtain knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	Examination of Respiration	Enabling students to understand and knowledge the methods of Examination of Respiration	-Daily exams -Monthly exams
6	2	Enable students to obtain knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	Examination of Lymph nod	Enabling students to understand and knowledge the methods of Examination of Lymph node	-Daily exams -Monthly exams
7	2	Enable students to obtain knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	Examination of Mucous membranes	Enabling students to understand and knowledge the Examination of Mucous membranes	-Daily exams -Monthly exams
8	2	Enable students to obtain knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	Examination of Respiratory System	Enabling students to understand and knowledge the Examination of Respiratory System	-Daily exams -Monthly exams
9	2	Enable students to obtain	Examination of Cardiovascular	Enabling students to	-Daily exams

		knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	System: Heart, Jugular vein	understand and knowledge the Examination of Heart	-Monthly exams
10	2	Enable students to obtain knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	Examination of Digestive System: Rumen, Liver, Pain reflex	Enabling students to understand and knowledge the Examination of Digestive System	-Daily exams -Monthly exams
11	2	Enable students to obtain knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	Examination of Urinary System	Enabling students to understand and knowledge the Examination of Urinary System	-Daily exams -Monthly exams
12	2	Enable students to obtain knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	Examination of Skin	Enabling students to understand and knowledge the Examination of Skin	-Daily exams -Monthly exams
13	2	Enable students to obtain knowledge and understanding of Dealing with the animal and knowing the signs of health and disease	Examination of Reproductive System (Udder + Genital System)	Enabling students to understand and knowledge the Examination of Udder	-Daily exams -Monthly exams

14	2	Enable students to obtain knowledge and understanding of treated infected animals	Route of Administration of Drugs	Enabling students to understand and knowledge the Examination of Route of Administration of Drugs	-Daily exams -Monthly exams
15	2	Enable students to obtain knowledge and understanding of diagnosed infected animals	Allergic Tests (Diagnostic Tests) and Revising	Enabling students to understand and knowledge the Examination of Allergic Tests	-Daily exams -Monthly exams

١١. Course Evaluation			
	Course Exam	Final Exam	Sum
Practical	40	60	100
Total	40	60	100

١٢. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

١١. Course Name:
Vet. Obstetrics

١٢. Course Code:
VEC4122

١٤. Semester / Year:
Second Semester / Fourth Year

١٥. Description Preparation Date:
4/ 10 / 2025

١٦. Available Attendance Forms:
<ul style="list-style-type: none">• Theoretical lectures.• Practical classes.

١٧. Number of Credit Hours (Total) / Number of Units (Total)												
<table><thead><tr><th></th><th>Credit Hours</th><th>Units</th></tr></thead><tbody><tr><td>Theoretical</td><td>2</td><td>2</td></tr><tr><td>Practical</td><td>2</td><td>1</td></tr><tr><td>Total</td><td>4</td><td>3</td></tr></tbody></table>		Credit Hours	Units	Theoretical	2	2	Practical	2	1	Total	4	3
	Credit Hours	Units										
Theoretical	2	2										
Practical	2	1										
Total	4	3										

١٨. Course administrator's name (mention all, if more than one name)
Name: الاستاذ نور الدين ياسين خضير والاساذ المساعد الدكتور صلاح نوري محمد nooraldin.y@uodiyala.edu.iq Email: salah.n@uodiyala.edu.iq

١٩. Course Objectives		
<table><tr><td>Course Objectives</td><td><ul style="list-style-type: none">• Identify the most important reproductive techniques in the field of veterinary medicine</td></tr></table>	Course Objectives	<ul style="list-style-type: none">• Identify the most important reproductive techniques in the field of veterinary medicine
Course Objectives	<ul style="list-style-type: none">• Identify the most important reproductive techniques in the field of veterinary medicine	

	<ul style="list-style-type: none"> • Teaching the student methods for examining the female reproductive system in various field animals • -Identify methods of diagnosing reproductive diseases.
--	--

٢٠. Teaching and Learning Strategies	
Strategy	1- The method of delivery is accompanied by interrogation by asking direct questions to the students and involving them in the lecture. 2- Conducting various types of clinical examinations of the reproductive system in large and small animals in the animal field. 3- Assigning the student to write reports related to the course topics. 4- Displaying pictures and films of obstetric maneuvers through the data show device

9-Learning skills outcomes															
Year Level	symbol	name	Basic/choise	knowledge				skills				valu			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Fourth	VEC4122	Vet. Obstetrics	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

10. Structure of obstetrics					
Week	Hours	Required learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	4	Physiology of pregnancy+types of placenta	Obstetrics	Lecture	Exam
second	4	Pregnancy diagnosis+ types of placenta	Obstetrics	Lecture	Exam
Third	4	Maternal recognition of pregnancy+ pregnancy diagnosis	Obstetrics	Lecture	Exam
Fourth	4	Fetal membranes and fetal fluids+ uterine torsion	Obstetrics	Lecture	Exam
Fifth	4	Position of uterus during	Obstetrics	Lecture	Exam

		pregnancy+ fetal anomalies			
sixth	4	Maintenance of pregnancy+ normal P1,P2,P3	Obstetrics	Lecture	Exam
Seventh	4	Length of gestation+ obstetrical equipment	Obstetrics	Lecture	Exam
Eighth	4	Pregnancy diagnosis+ obstetrical manoeuvres	Obstetrics	Lecture	Exam
Ninth	4	Problems of pregnancy+ fetotomy	Obstetrics	Lecture	Exam
Tenth	4	Parturition+ ovarioectomy	Obstetrics	Lecture	Exam
Eleventh	4	Dystocia+cesarean section	Obstetrics	Lecture	Exam
Twelvish	4	Induction of parturition+ vaginal prolapse during pregnancy	Obstetrics	Lecture	Exam
Thirteenth	4	Puerperium+ uterine torsion	Obstetrics	Lecture	Exam
Fourteenth	4	Puerperal metritis and retained placenta+ uterine prolapse	Obstetrics	Lecture	Exam
Fifteenth	2	Exam	Obstetrics	Lecture	Exam

٢١. Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	26	40	66
Practical	14	20	34
Total	40	60	100

٢٢. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Name

استاذ نور الدين ياسين خضير

ام د صلاح نوري محمد

signature

education institution-١٢						
education institution						
Preparing the teaching staf		requirement / skills		specialization		Scientific rank
محاضر	ملاك			specialized	general	
لا يوجد	√			خصوصية تناسلية	veterinian	ا. نور الدين ياسين خضير
لا يوجد	√			سونار توليد	veterrenian	ا.م.د صلاح نوري محمد

Course Evaluation-١٣			
	course	final	total
theiory	26	40	66
practical	14	20	34
total	40	60	100

٢٣. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Objectives	<ul style="list-style-type: none"> Identify the most important reproductive techniques in the field of veterinary medicine Teaching the student methods for examining the female reproductive system in various field animals -Identify methods of diagnosing reproductive diseases.
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٢١. Teaching and Learning Strategies	
Strategy	1- The method of delivery is accompanied by interrogation by asking direct questions to the students and involving them in the lecture. 2- Conducting various types of clinical examinations of the reproductive system in large and small animals in the animal field. 3- Assigning the student to write reports related to the course topics. 4- Displaying pictures and films of obstetric maneuvers through the data show device

10-Learning skills outcomes															
Year level	symbol	name	Basic/choise	knowledge				skills				valu			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Fifth	VEC511	Male fertility	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1														

11. Structure of Male Fertility					
Week	Hours	Required learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	٣	Male puberty and maturity	Male Fertility	Lecture	Exam
second	٣	Hormonal control of male reproductive system	Male Fertility	Lecture	Exam
Third	٣	Spermatogenesis	Male Fertility	Lecture	Exam
Fourth	٣	Composition of semen	Male Fertility	Lecture	Exam
Fifth	٣	Sperm metabolism	Male Fertility	Lecture	Exam

sixth	٣	Method of semen collection	Male Fertility	Lecture	Exam
Seventh	٣	Method of semen evaluation	Male Fertility	Lecture	Exam
Eighth	٣	Semen dilution	Male Fertility	Lecture	Exam
Ninth	٣	Method of semen dilution	Male Fertility	Lecture	Exam
Tenth	٣	Semen storage	Male Fertility	Lecture	Exam
Eleventh	٣	Method of semen dilution	Male Fertility	Lecture	Exam
Twelvish	٣	Infertility in males	Male Fertility	Lecture	Exam
Thirteenth	٣	Artificial insemination and sperm transport	Male Fertility	Lecture	Exam
Fourteenth	٣	Insemination technique	Male Fertility	Lecture	Exam
Fifteenth	٣	Exam	Male Fertility	Lecture	Exam

12-Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	20	30	50
Practical	20	20	50
Total	40	60	100

13-Learning and Teaching Resources

Required textbooks (curricular books, if any)	1-Veterinary reproduction and obstetrics (Noakes et.al.٢٠٠٩) ٢-Veterinary endocrinology and reproduction (McDonalds .2003).
Main references (sources)	Current therapy in large animal theriogenology
Recommended books and references (scientific journals, reports...)	Iraqi Veterinary Journals
Electronic References, Websites	<i>Research gate ,Google Scholar</i> http://www.iasj.net

١٤-الهيئة التدريسية

أعضاء هيئة التدريس

Preparing the teaching staf		requirement / skills		specialization		Scientific rank
محاضر	ملاك			خاص	عام	
-	√			توليد وامراض تناسلية بيطرية	Veterinary an surgical	ا. د محمد يوسف محمود
-	√			توليد وامراض تناسلية بيطرية	Veterinary an syrgical	ا.م ياسين محمود رشيد



رئيس الفرع

فلاح حسن

مدرس دكتور

Fith year

Course Description Form

١٣. Course Name:

Stageir

١٥. Course Code:

VEC5124

١٦. Semester / Year:

Second Semester / Fifth Year

١٧. Description Preparation Date:

4/ 10/ 2025

١٨. Available Attendance Forms:

- Practical classes.

١٩. Number of Credit Hours (Total) / Number of Units (Total)

	Credit Hours	Units
Practical	6	3
Total	6	3

٢٠. Course administrator's name (mention all, if more than one name)

أ.م ياسين محمود رشيد

Email: yaseen.m@uodiyala.edu.iq

٢١. Course Objectives

Course Objectives	<ul style="list-style-type: none">• Identify the most important reproductive techniques in the field of veterinary medicine• Teaching the student methods for examining the female reproductive system in various field animals• -Identify methods of diagnosing reproductive diseases.
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٢٢. Teaching and Learning Strategies	
Strategy	1- The method of delivery is accompanied by interrogation by asking direct questions to the students and involving them in the lecture. 2- Conducting various types of clinical examinations of the reproductive system in large and small animals in the animal field. 3- Assigning the student to write reports related to the course topics. 4- Displaying pictures and films of obstetric maneuvers through the data show device

9-Learning skills outcomes															
Year level	symbol	name	Basic/choice	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Fifth	VEC5124	Stagier	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

10. Structure of obstetrics					
Week	Hours	Required learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	6	Physiology of pregnancy +types of placenta	Stagier	Lecture	Exam
second	6	Pregnancy diagnosis+ types of placenta	Stagier	Lecture	Exam
Third	6	Maternal recognition of pregnancy+ pregnancy diagnosis	Stagier	Lecture	Exam
Fourth	6	Fetal membranes and fetal fluids+ uterine torsion	Stagier	Lecture	Exam
Fifth	6	Position of uterus during pregnancy+ fetal anomalies	Stagier	Lecture	Exam
sixth	6	Maintenance of pregnancy+ normal P1,P2,P3	Stagier	Lecture	Exam

Seventh	6	Length of gestation+ obstetrical equipment	Stagier	Lecture	Exam
Eighth	6	Pregnancy diagnosis+ obstetrical maneuvers	Stagier	Lecture	Exam
Ninth	6	Problems of pregnancy+ fetotomy	Stagier	Lecture	Exam
Tenth	6	Parturition+ ovarioectomy	Stagier	Lecture	Exam
Eleventh	6	Dystocia+ caesarean section	Stagier	Lecture	Exam
Twelfth	6	Induction of parturition+ vaginal prolapse during pregnancy	Stagier	Lecture	Exam
Thirteenth	6	Puerperium+ uterine torsion	Stagier	Lecture	Exam
Fourteenth	6	Puerperal metritis and retained placenta+ uterine prolapse	Stagier	Lecture	Exam
Fifteenth	6	Exam	Stagier	Lecture	Exam

٢٢. Course Evaluation

	Course Exam	Final Exam	Sum
Practical	40	60	100
Total	40	60	100

٢٤. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

٢. Program vision

After graduation our students will be able to work in a multidisciplinary team in the veterinary health sector.

To ensure optimal team performance and effective results in treating medical cases.

٢. Program message

Our college seeks to obtain international accreditation and rise to the global level in terms of quality of outputs and graduation highly qualified veterinarians in caring for field and pet animals, and serving the community.

3.objectives of the program

- Achieving quality standards based on scientific institutional quality standards.
- Graduating veterinarians with a bachelor's degree in veterinary medicine and surgery, who are able to conduct and examine Disease cases, diagnosing the disease and providing treatment on scientific basis.
- After graduation, our students will be able to work in a multidisciplinary team in the health and wealth sector
Animals to ensure optimal team performance and effective results for the safety of society and field animals.
- Preparing veterinarians capable of interacting in the workplace and solving urgent problems in the livestock sector.
- Graduating doctors with high skills and knowledge in conducting scientific research in various specialized fields.
- Encouraging faculty members, staff, and students to enhance their technical skills and benefit from modern technologies in transferring knowledge, producing scientific research, and creating curricula for educational programs.
- Implementing a development program for faculty and staff.

4. Program accreditation

The application process has begun

5. Other external influences

Veterinary hospital, library, Internet, community, Doctors Syndicate

6. Program structure

Program structure	percentage	Credit hours	Number of Courses	Reviews
	%100		6	Institution Requirements
	%100		6	College Requirements
	%100		6	Department Requirements
				Summer Training
	Other

*Notes may include whether the course is basic or elective.

7. Program description

Credit hours		Name of the course or course	Course or course code	Year/level
hours 9.	9. hours 6. hours	Surgery Clinic		the fourth

hours ٩٠	٦٠ hours ٩٠ hours	Surgery Clinic		Fifth
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8. Expected learning outcomes of the program	
Knowledge	
<p>1.Learning Outcomes 1 Study of various surgical cases, especially common ones or emergency cases that the veterinarian may face.</p> <ul style="list-style-type: none"> -٢ Identifying medical conditions and methods of treating them. -٣ Understanding the veterinary pathological interactions between internal diseases and diseases in other branches -٤ Knowing ways to prevent some diseases -٥ Identifying the legal responsibilities for some diseases, especially transmissible ones <p>Statement of learning outcomes</p>	
Skills	
<ul style="list-style-type: none"> -١ Take an accurate medical history, especially surgical cases -٢ The correct methods for measuring and reading clinical conditions <p>3-Clinical skills in examining animals</p>	
Value	
<ul style="list-style-type: none"> 1- Developing expertise by dealing with transitional situations 2- Recognizing professional responsibility in dealing with communicable diseases 3-Using modern methods in treating medical conditions 	

9. Teaching and learning strategies
<ul style="list-style-type: none"> ١.Theoretical lectures using illustrations (interactive whiteboard and data show) ٢.Practical application of concepts studied in laboratories and the veterinary hospital. ٣.Seminars (students are assigned a topic within the curriculum for presentation and discussion) ٤.Solving scientific problems by discussing them within small groups to reach the correct solutions

5. In-person and electronic blended learning for student activities via the e-learning platform (Classroom)

10. Evaluation methods

1. Discussion within lectures
٢. Mid-course exams and end-of-course exams
٣. Continuous evaluation
٤. Clinical groups
٥. Practical exams

11. The teaching staff

Faculty members						
Preparing the teaching staff		Special requirements/skills (if any)		Specialization		Scientific rank
lecturer	Basic			private	general	
nothing	√			Surgery	Veterinary medicine and surgery	م.د.فلاح حسن خلف

Professional development

Orienting new faculty members

Guiding new faculty members through preparing courses and seminars in addition to meetings for college councils and councils Branches and through official notifications on the official website.

Professional development for faculty members

Continuing and permanent education through searching for developments in the library and scientific journals And the Internet, in addition to scientific seminars and seminars, and through practice in hospitals Veterinary.

12. Acceptance criterion

١. Central admission through the Ministry of Higher Education and Scientific Research, based on the sixth grade average, is done via an electronic form
2. Parallel acceptance channel

١٣. The most important sources of information about the program

١. University website
٢. The website of the Ministry of Higher Education and Scientific Research
- 3- The college library and the university's central library

14. Program development plan

١. Developing academic curricula annually and updating them in line with developments in the diagnosis and treatment of diseases
Esotericism
٢. Developing the scientific and administrative staff in the college based on annual evaluations and diagnosing areas of weakness
And strength
٣. Developing senior leaders, faculty members, employees, and workers at the college

Program skills chart

Learning outcomes required from the programme												Essential or optional	Course Name	Course Code	Year/level
values				skills				Knowledge							
ج٤	ج٣	ج٢	ج١	ب٤	ب٣	ب٢	ب١	أ٤	أ٣	أ٢	أ١				
												Basic			F ourth Fifth
		✓				✓				✓		Basic	Surgery		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Clinic		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Surgery		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	clinic		
			✓				✓				✓	Basic	Research of methods		

Please check the boxes corresponding to the individual learning outcomes from the program subject to • evaluation

Course description form

1. Course Name:					
Surgery					
2. Course Code: 4115					
Forth year					
3. Semester / Year:					
First and 2 nd semester 2025-2026					
4. Description Preparation Date:					
4/10/2025					
5. Available Attendance Forms:					
Mandatory attendance					
6. Number of Credit Hours (Total) / Number of Units (Total)					
90 hours					
7. Course administrator's name (mention all, if more than one name)					
الاسم: م.د فلاح حسن خلف الايميل: Falah.h@uodiyala.edu.iq					
8-Course Objective					
Course Objectives			Introduction and classification of surgery Sterilization - Response to trauma Inflammation Hemostasis Wound classification		
9. Teaching and learning strategies					
١- The method of delivery is accompanied by interrogation by directing questions to the students and involving them in the lecture. -٢ Assigning the student to write reports related to the course topics. -٤ Displaying pictures and films of surgical operations through the data show device. 5- Use of computers					
10. Course structure					
Evaluation method	Learning method	Unit or subject name	Required learning Outcomes	Hours	Week

11. Course evaluation					
Daily exams Reports preparation Mid-course exam final exam					
١٢ .Learning and teaching resources					
Veterinary Medicine			(Required textbooks (methodology, if any		
<ul style="list-style-type: none"> - Textbook of small animal surgery. - Equine surgery. - Vet. anaesthesia. - Lameness in horse. - Vet. Radiology 			(Main references (sources		
<ul style="list-style-type: none"> ١. Textbook of small animal surgery ٢. Textbook of large animal surgery ٣. الجراحة البيطرية التطبيقية 			Recommended supporting books and (...references (scientific journals, reports		
p://www.iasj.net Iraqi academic scientific journals			Electronic references, Internet sites		

Course Structure: surgery/Fifth Stage /First Course

Evaluation method	Learning method	Unit or subject name	Required learning Outcomes	Hours	Week
<i>Exam</i>	Oesophagotomy	Digestive system: affection of salivary gland	A+B+C	٤	١
<i>Exam</i>	Oesophagotomy	Affection of tongue	A+B+C	٤	٢
<i>Exam</i>	Tracheotomy	Affection of teeth	A+B+C	٤	٣
<i>Exam</i>	Tracheotomy	Affection esophagus	A+B+C	٤	٤
<i>Exam</i>	Intestinal surgery	Affection of stomach	A+B+C	٤	٥
<i>Exam</i>	Intestinal surgery	Affection of small intestine	A+B+C	٤	٦
<i>Exam</i>	Enterotomy	Affection of digestive accessory organs	A+B+C	٤	٧

<i>Exam</i>	Enterotomy	Facial paralysis	A+B+C	ε	8
<i>Exam</i>	Castration	Respiratory system: affection of upper tract	A+B+C	ε	9
<i>Exam</i>	Castration	Affection of larynx and guttural	A+B+C	ε	10
<i>Exam</i>	Gastrotomy	Affection lungs and trachea	A+B+C	ε	11
<i>Exam</i>	Gastrotomy	Affection lungs and trachea	A+B+C	ε	12
<i>Exam</i>	Mamectomy	Affection of chest wall	A+B+C	ε	13
<i>Exam</i>	Mamectomy	Cardiovascular system: cardiac anomalies	A+B+C	ε	14
<i>Exam</i>	Teat fistula	Pericarditis	A+B+C	ε	15

Course Structure: surgery/Fifth Stage/Second Course

<i>Exam</i>	Nephrectomy	Treatment of fistula wither	A+B+C	ε	1
<i>Exam</i>	Nephrectomy	Affection of male genital system	A+B+C	ε	2
<i>Exam</i>	Ovariohysterectomy	Affection of female genital system	A+B+C	ε	3
<i>Exam</i>	Ovariohysterectomy	Treatment pneumovagina	A+B+C	ε	4
<i>Exam</i>	Cystotomy and cystectomy	Affection of penis and prepuce	A+B+C	ε	5
<i>Exam</i>	Cystotomy and cystectomy	Preparation of teaser	A+B+C	ε	6
<i>Exam</i>	Urethrostomy and urethrotomy	Castration	A+B+C	ε	7
<i>Exam</i>	Urethrostomy and urethrotomy	Urinary system: affection of kidney	A+B+C	ε	8
<i>Exam</i>	Splenectomy	Affection of ureter	A+B+C	ε	9
<i>Exam</i>	Splenectomy	Affection of urinary bladder	A+B+C	ε	10

<i>Exam</i>	Rumenotomy	Affection of urethra	A+B+C	٤	١١
<i>Exam</i>	Rumenotomy	Affection of teat and udder	A+B+C	٤	١٢
<i>Exam</i>	Ophthalmic surgery	Ear surgery	A+B+C	٤	١٣
<i>Exam</i>	Ophthalmic surgery	Eye surgery	A+B+C	٤	١٤
<i>Exam</i>	Nephrectomy	Eye surgery	A+B+C	٤	١٥



المدرس الدكتور
فلاح حسن خلف
رئيس فرع الجراحة والتوليد

Academic description forms for the department of surgery and obstetrics

This course description provides a brief summary of the most important characteristics of the course and the educational objectives that the student is expected to achieve, demonstrating whether he has made the most of the available learning opportunities, and this must be linked to the program description.

1. Program vision

Teaching students how to deal with various surgical cases that may occur or be performed on different animals, as well as teaching the subject of veterinary obstetrics and various reproductive diseases that are taught within the subjects of the fourth and fifth stages.

2. Program mission

The courses of the Surgery and Obstetrics department enable the student to know and understand the relationship between the department subjects and other closely related science courses, such as physiology and diseases, and their relationship to the functions of organs, and how to benefit from this knowledge in other applied sciences.

٣. Program Objective

Providing students with integrated knowledge of surgical sciences, veterinary obstetrics, and reproductive technologies that helps them scientifically and practically in understanding and assimilating other veterinary sciences.

4. Program Accreditation

No

5. Other external influences

Is there a sponsor for the program?

No

٦. Program structure

Program structure	percentage	Credit hours	Number of Courses	Reviews
Institution Requirements	%١٠٠	24	٨	Basic
College Requirements	%١٠٠	24	٨	Basic
Department Requirements	%١٠٠	24	٨	Basic
Summer Training	%١٠٠	3	١	Basic
Other	---	----	----	

*Notes may include whether the course is basic or elective.

Course Description Form

1. Course Name:	
Male Fertility	
2. Course Code:	
VEC5111	
3. Semester / Year:	
First semester 2025-2026	
4. Description Preparation Date:	
٤/١٠/٢٠٢٥	
5. Available Attendance Forms:	
Mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Total Credit hours 30(Theory +Practical) :Total Units 2	
7. Course administrator's name (mention all, if more than one name)	
الاسم: أ.د محمد يوسف محمود ، mohamd.y@uodiyala.edu.iq أ.م ياسين محمود رشيد : yaseen.m@uodiyala.edu.iq	
8-Course Objectives	
Course Objectives	<ol style="list-style-type: none">١ -Identify the most important reproductive techniques in the field of veterinary medicine٢ -Teaching the student methods for examining the male reproductive system in various field animals٣ -Identify methods of diagnosing reproductive diseases.
9-Teaching and Learning Strategies	
Strategies	<ol style="list-style-type: none">1- The method of delivery is accompanied by interrogation by asking direct questions to the students and involving them in the lecture.2- Conducting various types of clinical examinations of the reproductive system in large and small animals in the animal field.3- Assigning the student to write reports related to the course topics.4- Displaying pictures and films of obstetric maneuvers through the data show device

10. Structure of Male Fertility

Week	Hours	Required learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	۳	Male puberty and maturity+ Anatomy of male genital system	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
second	۳	Hormonal control of male reproductive system+ Breeding soundness	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Third	۳	Spermatogenesis+ Semen collection	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Fourth	۳	Composition of semen+ Semen collection	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Fifth	۳	Sperm metabolism+ Semen evaluation (macroscopically, Volume, color, microscopically)	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
sixth	۳	Method of semen collection+ Semen evaluation (macroscopically, Volume, color, microscopically)	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Seventh	۳	Method of semen evaluation+ Semen evaluation(live/dead and abnormal percentage)	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Eighth	۳	Method of semen evaluation+ Semen dilution	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Ninth	۳	Method of semen dilution (Liquid and frozen)	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Tenth	۳	Semen storage	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Eleventh	۳	Method of semen dilution+ Semen storage(Liquid and frozen)	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly

					exams
Twelvish	٣	Infertility in males	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Thirteenth	٣	Artificial insemination and sperm transport+	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Fourteenth	٣	Insemination technique	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Fifteenth	٣	Exam	Male Fertility	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams

١١-Course Evaluation	1.Preparing class and homework assignments .٢ Preparing reports on practical experiments .٣ Conducting daily and quarterly examinations .٤ Conducting final exams
12-Learning and Teaching Resources	
Required textbooks (methodology, if any)	1-Veterinary reproduction and obstetrics (Noakes et.al.2009) 2- Veterinary endocrinology and reproduction (McDonalds .2003).
Main references/sources	-Current therapy in large animal theriogenology
Recommended supporting books and references (scientific journals, reports....)	-Veterinary medical journals issued by Iraqi veterinary medical colleges. -Arab and international medical journals
Electronic references, websites	<i>Research gate , Google Schooler</i> http://www.iasj.net

1. Course Name:	
Repro. Biotechnology	
2. Course Code:	
VEC5117	
3. Semester / Year:	
Second semester 2025-2026	
4. Description Preparation Date:	
4/10/2025	
5. Available Attendance Forms:	
Mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Total Credit hours 30(Theory +Practical) :Total Units 2	
7. Course administrator's name (mention all, if more than one name)	
الاسم: أ.د محمد يوسف محمود ، mohamd.y@uodiyala.edu.iq أم ياسين محمود رشيد : yaseen.m@uodiyala.edu.iq	
8-Course Objectives	
Course Objectives	1-Identify the most important reproductive techniques in the field of veterinary medicine 2-Teaching the student methods for examining the male reproductive system in various field animals 3- Identify methods of diagnosing reproductive diseases.
9-Teaching and Learning Strategies	
Strategies	1- The method of delivery is accompanied by interrogation by asking direct questions to the students and involving them in the lecture. 2- Conducting various types of clinical examinations of the reproductive system in large and small animals in the animal field. 3- Assigning the student to write reports related to the course topics. 4- Displaying pictures and films of obstetric maneuvers through the data show device

10. Structure of Male Fertility

Week	Hours	Required learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	३	Ultrasonography –general information+ Clinical applications of ultrasonography	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
second	३	Ultrasonography in large animals+ Clinical applications of ultrasonography	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Third	३	Ultrasonography in small animals	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Fourth	३	Estrus synchronization in bovine	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Fifth	३	Estrus synchronization in ovine and caprine	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
sixth	३	Controlling the age of puberty	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Seventh	३	Superovulation+ intrauterine insemination	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Eighth	३	Embryo transfer+ Methods of oocyte collection and maturation	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Ninth	३	Embryo transfer+ In-vitro fertilization	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Tenth	३	Laparoscopic intrauterine insemination+ In-vitro fertilization	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Eleventh	३	Methods of oocyte collection and maturation+ Sperm sexing(gender selection)	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly

					exams
Twelfth	٣	In vitro fertilization+ Cloning and splitting of embryo	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Thirteenth	٣	Sperm sexing(gender selection)+ Suppress of reproductive activity	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Fourteenth	٣	Cloning and splitting of embryo+ Ovariectomy and Castration	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams
Fifteenth	٣	Exam	Repro. Biotechnology	Board and interactive whiteboard	-Daily exams - Homework - Monthly exams

١١-Course Evaluation\	1.Preparing class and homework assignments .٢Preparing reports on practical experiments .٣Conducting daily and quarterly examinations .٤Conducting final exams
12-Learning and Teaching Resources	
Required textbooks (methodology, if any)	1-Veterinary reproduction and obstetrics (Noakes et.al.2009) 2- Practical Atlas of Ruminant and Camelid Reproductive Ultrasonography
Main references/sources	-Current therapy in large animal theriogenology
Recommended supporting books and references (scientific journals, reports....)	Veterinary medical journals issued by Iraqi - .veterinary medical colleges Arab and international medical journals-
Electronic references, websites	<i>Research gate , Google Schooler</i> http://www.iasj.net

Course Description Form

1. Course Name:	
Female Fertility	
2. Course Code:	
VEC4111	
3. Semester / Year:	
First semester 2025-2026	
4. Description Preparation Date:	
4/10/2025	
5. Available Attendance Forms:	
Mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Total Credit hours 60 (Theory +Practical) :Total Units 45	
7. Course administrator's name (mention all, if more than one name)	
الاسم: أ.نورالدين ياسين خضير nooraldin.y@uodiyala.edu.iq أ.م. د.صلاح نوري محمد salah.n@uodiyala.edu.iq	
8-Course Objectives	
Course Objectives	1-Identify the most important reproductive techniques in the field of veterinary medicine ٢ -Teaching the student methods for examining the female reproductive system in various field animals 3-Identify methods of diagnosing reproductive diseases.
9-Teaching and Learning Strategies	
Strategies	1- The method of delivery is accompanied by interrogation by asking direct questions to the students and involving them in the lecture. 2- Conducting various types of clinical examinations of the reproductive system in large and small animals in the animal field. 3- Assigning the student to write reports related to the course topics. 4- Displaying pictures and films of obstetric maneuvers through the data show device

10. Structure of Female Fertility					
Week	Hours	Required learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	4	Female puberty and maturity+ comparative anatomy of female genital system	Female Fertility	Lecture	Exam
second	4	Anatomy of female reproductive system+ comparative anatomy of female genital system	Female Fertility	Lecture	Exam
Third	4	Estrous cycle in domestic animals+estrus signs and estrus detection in cows	Female Fertility	Lecture	Exam
Fourth	4	Seasonality+ estrus detection in cows	Female Fertility	Lecture	Exam
Fifth	4	Ovulation+ principles of rectal palpation	Male Fertility	Lecture	Exam
sixth	4	Luteolysis+ principles of rectal palpation	Female Fertility	Lecture	Exam
Seventh	4	Reproductive hormones+ clinical uses of reproductive hormones)	Female Fertility	Lecture	Exam
Eighth	4	Reproduction in mares+ clinical uses of reproductive hormones	Female Fertility	Lecture	Exam
Ninth	4	Reproduction in Buffaloes+ Vaginal examination in farm animals	Female Fertility	Lecture	Exam
Tenth	4	Reproduction in camels+ vaginal examination in farm animals	Female Fertility	Lecture	Exam
Eleventh	4	Reproduction in Bitches+ intra-uterine therapies)	Female Fertility	Lecture	Exam
Twelvish	4	Reproduction in feline+ overview of anomalies of female genital system	Female Fertility	Lecture	Exam
Thirteenth	4	Infertility and sterility in cows+ records of reproductive events in bovine herd	Female Fertility	Lecture	Exam
Fourteenth	4	Infertility and sterility + reproductive performance in dairy herds	Female Fertility	Lecture	Exam
Fifteenth	2	Exam	Female Fertility	Lecture	Exam

11-Course Evaluation	1.Preparing class and homework assignments .2 Preparing reports on practical experiments .3 Conducting daily and quarterly examinations .4 Conducting final exams
12-Learning and Teaching Resources	
Required textbooks (methodology, if any)	1-Veterinary reproduction and obstetrics (Noakes

	<p>et.al.2009) 2- Veterinary endocrinology and reproduction (McDonalds .2003).</p>
Main references/sources	-Current therapy in large animal theriogenology
Recommended supporting books and references (scientific journals, reports....)	<p>-Veterinary medical journals issued by Iraqi veterinary medical colleges. -Arab and international medical journals</p>
Electronic references, websites	<p><i>Research gate , Google Schooler</i> http://www.iasj.net</p>

Course Description Form

Course Name:	
Obstetrics	
Course Code:	
VEC4122	
Semester / Year:	
Second semester 2025-2026	
Description Preparation Date:	
4/10/2025	
5. Available Attendance Forms:	
Mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Total Credit hours 60 (Theory +Practical) :Total Units 45	
7. Course administrator's name (mention all, if more than one name)	
الاسم: أ.نورالدين ياسين خضير nooraldin.y@uodiyala.edu.iq	
أ.م. د. صلاح نوري محمد salah.n@uodiyala.edu.iq	
8-Course Objectives	
Course Objectives	<ol style="list-style-type: none"> ١ -Identify the most important reproductive techniques in the field of veterinary medicine ٢ -٢Teaching the student methods for examining the female reproductive system in various field animals ٣ -Identify methods of diagnosing reproductive diseases.
9-Teaching and Learning Strategies	
Strategies	<ol style="list-style-type: none"> 1- The method of delivery is accompanied by interrogation by asking direct questions to the students and involving them in the lecture. 2- Conducting various types of clinical examinations of the reproductive system in large and small animals in the animal field. 3- Assigning the student to write reports related to the course topics. 4- Displaying pictures and films of obstetric maneuvers through the data show device

10. Structure of Obstetrics

Week	Hours	Required learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	4	Physiology of pregnancy+types of placenta	Obstetrics	Lecture	Exam
second	4	Pregnancy diagnosis+ types of placenta	Obstetrics	Lecture	Exam
Third	4	Maternal recognition of pregnancy+ pregnancy diagnosis	Obstetrics	Lecture	Exam
Fourth	4	Fetal membranes and fetal fluids+ uterine torsion	Obstetrics	Lecture	Exam
Fifth	4	Position of uterus during pregnancy+ fetal anomalies	Obstetrics	Lecture	Exam
Ssixth	4	Maintenance of pregnancy+ normal P1,P2,P3	Obstetrics	Lecture	Exam
Seventh	4	Length of gestation+ obstetrical equipment	Obstetrics	Lecture	Exam
Eighth	4	Pregnancy diagnosis+ obstetrical manoeuvres	Obstetrics	Lecture	Exam
Ninth	4	Problems of pregnancy+ fetotomy	Obstetrics	Lecture	Exam
Tenth	4	Parturition+ ovarioectomy	Obstetrics	Lecture	Exam
Eleventh	4	Dystocia+cesarean section	Obstetrics	Lecture	Exam
Twelvish	4	Induction of parturition+ vaginal prolapse during pregnancy	Obstetrics	Lecture	Exam
Thirteenth	4	Puerperium+ uterine torsion	Obstetrics	Lecture	Exam
Fourteenth	4	Puerperal metritis and retained placenta+ uterine prolapse	Obstetrics	Lecture	Exam
Fifteenth	2	Exam	Obstetrics	Lecture	Exam

11-Course Evaluation	1.Preparing class and homework assignments 2-Preparing reports on practical experiments 3-Conducting daily and quarterly examinations 4-Conducting final exams .
12-Learning and Teaching Resources	
Required textbooks (methodology, if any)	1-Veterinary reproduction and obstetrics (Noakes et.al.2009) 2- Veterinary endocrinology and reproduction (McDonalds .2003).
Main references/sources	-Current therapy in large animal theriogenology
Recommended supporting books and references (scientific journals, reports....)	Veterinary medical journals issued by Iraqi - .veterinary medical colleges Arab and international medical journals-
Electronic references, websites	<i>Research gate , Google Schooler</i> http://www.iasj.net

11-Course Evaluation	1.Preparing class and homework assignments ٢ .Preparing reports on practical experiments ٣. Conducting daily and quarterly examinations ٤. Conducting final exams
12-Learning and Teaching Resources	
Required textbooks (methodology, if any)	1-Veterinay reproduction and obstetrics (Noakes et.al.2009) 2- Veterinary endocrinology and reproduction (McDonalds .2003).
Main references/sources	
Recommended supporting books and references (scientific journals, reports....)	-Veterinary medical journals issued by Iraqi veterinary medical colleges. -Arab and international medical journals
Electronic references, websites	<i>Research gate, Google Schooler http://www.iasj.net</i>

7.Program description				
Year/level	Course Code	Course Name	Credit Hours	
			Theoretical	Practical
fourth	VEC4115	Surgery-1st semester	3	2
	VEC4125	Surgery-2 nd Semester	3	2
	VEC4111	Female fertility-1 st semester	2	2
	VEC4122	Vet.Obstetrics-2 nd semester	2	2
Fifth	VEC5115	Surgery-1st semester	2	2
	VEC5123	Surgery-2nd semester	2	2
	VEC5111	Male fertility-1st semester	1	2
	VEC5117	Repro.Biology 2nd semester	1	2

8–Expected Learning outcomes of the program

Knowledge

Learning Outcomes 1	<ul style="list-style-type: none">- The student will be familiar with the most important techniques used in the field of animal reproduction.- For the student to become familiar with the mechanism of operation of modern technologies.-Understanding the pathological and non-pathological causes of the male and female reproductive system and how to treat them.-That the student recognizes the special symptoms of each disease that affects the male and female reproductive system and understands the various types of therapeutic methods.
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Skills

Learning Outcomes 2	. The ability to speak in front of an audience and discuss reproductive topics and the ability of the graduate to be a veterinarian familiar with the diagnosis and treatment of reproductive diseases
Learning Outcomes 3	. The ability to express opinions in diagnosing and treating diseases that require skills and competence and ability to be a researcher in modern reproductive diseases and treatments

Ethics

Learning Outcomes 4	∧- Commitment to veterinary medicine ethics in practicing the profession and in accordance with community values and respect the rights of his colleagues and participate positively in scientific discussions to solve problems
Learning Outcomes 5	∨-Commitment to attending discussion sessions in general and appreciating the importance of continuous study and updating information to keep pace with scientific development

9–Teaching and learning Strategies

Providing students with the basics and topics related to knowledge and systems described in:

a- The method of delivery is accompanied by interrogation by asking direct questions to the students and involving them in the lecture.

b-Conducting various types of clinical examinations of the reproductive system in large and small animals in the animal field.

c-Assigning the student to write reports related to the course topics.

d- Displaying pictures and films of obstetric maneuvers through the data show device

10.Evaluation methods.

Daily and monthly tests with multiple-choice questions for academic subjects

- Theoretical lectures using illustrations
- Practical application of the concepts studied in specialized laboratories and veterinary teaching hospitals
- Seminars and seminars
- Solve problems after discussing them in small groups to develop appropriate solutions

11. faculty.

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of teaching staff
	General	Special			
Professors	Bch.vet medicine and Surgery	Vet. Theriogenology and Obstetrics	--	--	2
Assist.Professors	Bch.vet medicine and Surgery	Vet. Theriogenology and Obstetrics	--	---	2
Lecturer	Bch.vet medicine and Surgery	Vet. Theriogenology and Obstetrics	---	----	1
Lecturer	Bch.vet medicine and Surgery	Vet. Surgery	---	---	1

11. Professional Development

Mentoring new faculty members

Preparing seminars and introductory courses for new teachers, holding periodic meetings to introduce them to work contexts, daily guidance, continuous follow-up, and giving advice and directions.

Professional development of faculty members

-Continuous learning through searching for new developments using the library and the Internet, -Attending seminars, workshops, and specialized scientific seminars,
-Active attendance at the veterinary teaching hospital to hone skills.

١٢. Acceptance Criterion

(Central – Scientific)

According to the requirements of the Ministry of Higher Education and Scientific Research, so that it matches the latest admission requirements in Iraqi universities

13. The most important sources of information about the program

-The website of the university and college, in addition to the official website of the Ministry of Higher Education and Scientific Research,
- The college library and the central library of the university.
-Global scientific requirements

١٤. Program Development Plan

. Developing the scientific and administrative staff at the college through annual evaluation files that reveal strengths and weaknesses.

- Conducting evaluation studies related to developing and improving the performance of senior leaders, faculty members, and employees working in the college.

- Proposing strategies, plans and executive policies to ensure quality and reliability.

- Developing guidelines for methods of applying quality and academic accreditation in order to achieve the best.

. Preparing detailed data and statistics about the college, its objectives, departments, activities and future plans to be accomplished.

.Providing advice and guidance on what the institution must do in order to improve in full compliance with accreditation standards

	<ul style="list-style-type: none"> • Teaching the student methods for examining the female reproductive system in various field animals • -Identify methods of diagnosing reproductive diseases.
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٢٢. Teaching and Learning Strategies

Strategy	<p>1- The method of delivery is accompanied by interrogation by asking direct questions to the students and involving them in the lecture.</p> <p>2- Conducting various types of clinical examinations of the reproductive system in large and small animals in the animal field.</p> <p>3- Assigning the student to write reports related to the course topics.</p> <p>4- Displaying pictures and films of obstetric maneuvers through the data show device</p>
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10-Learning skills outcomes

Year level	symbol	name	Basic/choise	knowledge				skills				value			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Fifth	VEC5117	Reprod. Biotechnology	basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

11. Structure of Reproduction Biotechnology

Week	Hours	Required learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	٣	Ultrasonography –general information	Reprod. Biotechnology	Lecture	Exam
second	٣	Ultrasonography in large animals	Reprod. Biotechnology	Lecture	Exam
Third	٣	Ultrasonography in small animals	Reprod. Biotechnology	Lecture	Exam
Fourth	٣	Estrus synchronization in bovine	Reprod. Biotechnology	Lecture	Exam

Fifth	۳	Estrus synchronization in ovine and caprine	Reprod. Biotechnology	Lecture	Exam
sixth	۳	Superovulation	Reprod. Biotechnology	Lecture	Exam
Seventh	۳	Embryo transfer	Reprod. Biotechnology	Lecture	Exam
Eighth	۳	Methods of oocyte collection and maturation	Reprod. Biotechnology	Lecture	Exam
Ninth	۳	In-vitro fertilization	Reprod. Biotechnology	Lecture	Exam
Tenth	۳	Laparoscopic intrauterine insemination	Reprod. Biotechnology	Lecture	Exam
Eleventh	۳	Methods of oocyte collection and maturation	Reprod. Biotechnology	Lecture	Exam
Twelvish	۳	Cloning and splitting of embryo	Reprod. Biotechnology	Lecture	Exam
Thirteenth	۳	Sperm sexing(gender selection)+ Suppress of reproductive activity	Reprod. Biotechnology	Lecture	Exam
Fourteenth	۳	Cloning and splitting of embryo+ Overiectomy and Castration	Reprod. Biotechnology	Lecture	Exam
Fifteenth	۳	Exam	Reprod. Biotechnology	Lecture	Exam

12-Course Evaluation

	Course Exam	Final Exam	Sum
Theoretical	20	30	50
Practical	20	20	50
Total	40	60	100

13-Learning and Teaching Resources	
Required textbooks (curricular books, if any)	<p>1-Veterinary reproduction and obstetrics (Noakes et.al.2009)</p> <p>٢-Veterinary endocrinology reproduction (McDonalds .2003).</p>
Main references (sources)	Current therapy in large animal theriogenolog
Recommended books and references (scientific journals, reports...)	Iraqi Veterin Journals
Electronic References, Websites	<p>Research gate ,Google Schooler</p> <p>http://www.iasj.net</p>



م.د فلاح حسن

رئيس فرع الجراحة والتوليد



Approval of the Dean
Prof. Assist. Dr. Ammar Riyadh Qasem