

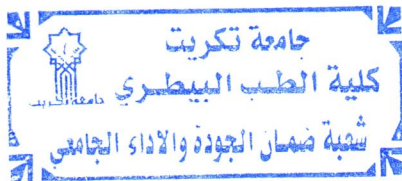
أخضرتة بولوسيا

Ministry of Higher Education and Scientific Research  
Scientific Supervision and Scientific Evaluation Apparatus  
Directorate of Quality Assurance and Academic Accreditation  
Accreditation Department



# Academic Program and Course Description Guide

2025-2026



## **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: ..... Tikrit university.....

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

Scientific Department: ..... Vet Public Health.....

Academic or Professional Program Name: ..... Veterinary Medicine.....

Final Certificate Name: ..... BSc degree in Veterinary Medicine.....

Academic System: ..... Course.....

Description Preparation Date: 5\10\2025

File Completion Date: 6\11\2025



Signature:

Head of Department Name:

P.h.D. Ali Qays jalii

Veterinary public health

Date: 6 \ 11 \ 2025

Signature:

Scientific Associate Name:

Date: 6 \ 11 \ 2025  
Asst. Prof. Dr.  
Montaser M. Helal

The file is checked by:

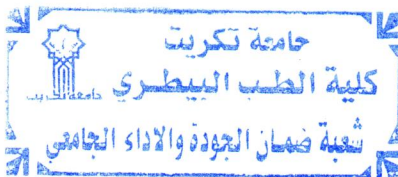
Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 6 \ 11 \ 2025

Signature:

Asist. Prof. Dr.  
Ahmed Abdullah Sultan



Tikrit University  
College of Veterinary Medicine  
Prof. Dr. Bashar Saad Nooni  
Dean of the College

## MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Animal Nutrition	Module Delivery	
Module Type	Core	<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	VET205		
ECTS Credits	3.00		
SWL (hr./sem)	75		
Module Level	2		
Administering Department	Public Health	College	Veterinary Medicine
Module Leader	Prof. Ahmed A. Allaw Ph.D. Thamer A. Khattab Prof. Ziyad. T. Omer Ph.D. Ali Q. Jalil	e-mail	<a href="mailto:Drallaw@tu.edu.iq">Drallaw@tu.edu.iq</a> <a href="mailto:thamer.a.k@tu.edu.iq">thamer.a.k@tu.edu.iq</a> <a href="mailto:ziyad1976tariq@tu.edu.iq">ziyad1976tariq@tu.edu.iq</a> <a href="mailto:alijalil85@tu.edu.iq">alijalil85@tu.edu.iq</a>
Module Leader's Acad. Title	Prof.	Module Leader's Qualification	PH.D
Module Tutor	Ph.D. Thamer A. Khattab Ph.D. Ali Q. Jalil	e-mail	<a href="mailto:thamer.a.k@tu.edu.iq">thamer.a.k@tu.edu.iq</a> <a href="mailto:alijalil85@tu.edu.iq">alijalil85@tu.edu.iq</a>
Peer Reviewer Name	Dr. Ali Qays Jalil	e-mail	<a href="mailto:alijalil85@tu.edu.iq">alijalil85@tu.edu.iq</a>
Scientific Committee Approval Date	6 \ 11 \ 2025	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

<b>Relation with other Modules</b> العلاقة مع المواد الدراسية الأخرى			
<b>Prerequisite module</b>	None	<b>Semester</b>	1
<b>Co-requisites module</b>	None	<b>Semester</b>	1
<b>Module Aims, Learning Outcomes and Indicative Contents</b> أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية			
<b>Module Objectives</b> أهداف المادة الدراسية	1- The student's knowledge of the concept of food, its components and composition, as well as identifying the metabolic processes that occur within the body, in addition to nutritional deficiency diseases. 2- Providing the student with skills in how to deal with animals. 3- Providing the student with skills in how to work with the laboratory equipment. 4- Giving the student the skill of forming relationships and observing their effect.		
<b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية	1-Train students in laboratory methods for food and feed analysis. 2-Measure nutrient composition and digestion parameters. 3-Evaluate feed quality and nutritional requirements for different species. 4-Identify nutritional deficiency cases and their effects.		
<b>Indicative Contents</b> المحتويات الإرشادية	The Animal Nutrition course is taught using an approach that integrates theoretical knowledge with practical skills. Students gain understanding of the concepts of feed, its components, metabolic processes, and nutritional deficiency diseases, while developing hands-on skills in feed analysis, nutrient measurement, and evaluation of feed quality and nutritional requirements for different species. The training also includes handling animals and collaborative laboratory work, enhancing practical understanding and the ability to address nutritional challenges in the field.		

<b>Learning and Teaching Strategies</b> استراتيجيات التعلم والتعليم	
<b>Strategies</b>	1. Enable students to acquire and perform practical skills by mastering laboratory techniques, allowing them to accurately identify and evaluate feeds that are beneficial and suitable for different animal species. 2. Develop students' analytical and creative skills to determine appropriate feed quantities based on the animal's species, age, physiological status, and production level. 3. Facilitate the practical application of theoretical knowledge through hands-on laboratory exercises and experimental procedures. 4. Teach students essential planning, research, and problem-solving skills relevant to veterinary and animal nutrition specialization, fostering evidence-based decision-making.

<b>Student Workload (SWL)</b> الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
<b>Structured SWL (h/sem)</b> الحمل الدراسي المنتظم للطالب خلال الفصل	63	<b>Structured SWL (h/w)</b> الحمل الدراسي المنتظم للطالب أسبوعيا	4.2
<b>Unstructured SWL (h/sem)</b> الحمل الدراسي غير المنتظم للطالب خلال الفصل	12	<b>Unstructured SWL (h/w)</b> الحمل الدراسي غير المنتظم للطالب أسبوعيا	0.48
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10%	4-8	1-2
	Assignments	2	10%	6-12	1-2-3
	Projects / Lab.	1	15%		All
	Report	1	5	11	1-2-3
Summative assessment	Midterm Exam	2h	10	7	3-4
	Final Exam	3h	50	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المناهج الاسبوعي النظري	
	Material Covered
Week 1	<b>Introduction to Animal Nutrition</b> • Definition and importance of animal nutrition • Development of nutrition science and its role in agriculture • Composition of animal body and feed • Basic concepts and terminology
Week 2	<b>Water and Its Functions in the Animal Body</b> • Vital functions of water • Sources and losses of water • Factors affecting intake • Water quality and its impact on performance
Week 3	<b>Energy in Animal Nutrition</b> • Energy sources and concepts • Gross, digestible, metabolizable, and net energy • Efficiency of energy utilization for production
Week 4	<b>Carbohydrates and Their Metabolism</b> • Types and sources of carbohydrates • Digestion and absorption processes • Biological importance of glucose
Week 5	<b>Advanced Carbohydrate Metabolism and Volatile Fatty Acids (VFA)</b> • Pathways of degradation and synthesis • Production and utilization of VFAs in ruminants
Week 6	<b>Lipids</b> • Classification • Biological functions • Synthesis and catabolism • Role in energy and cell membrane structure
Week 7	<b>Proteins and Amino Acids</b> • Chemical structure • Essential and non-essential amino acids • Protein quality evaluation and sources
Week 8	<b>Protein and Nucleic Acid Metabolism</b> • Protein synthesis and degradation • Role of nucleic acids in protein formation • Protein metabolism in ruminants and non-ruminants
Week 9	<b>Enzymes and Their Role in Digestion and Metabolism</b> • Definition and mechanism of enzyme action • Digestive and metabolic enzymes • Factors affecting enzyme activity • Feed enzymes and their applications
Week 10	<b>Minerals (Macro minerals &amp; Trace Elements)</b> • General classification and biological functions • Deficiency, excess, and dietary sources
Week 11	<b>Vitamins</b> • Classification and characteristics • Fat- and water-soluble vitamins • Biological functions and deficiency symptoms
Week 12	<b>Anatomy of the Digestive System in Poultry and Ruminants</b> • Comparative anatomy • Rumen, glandular stomach, and intestines • Relationship between anatomy, feed type, and digestion efficiency
Week 13	<b>Nutrition of Large Animals (Cattle, Sheep, Camels)</b> • General feeding principles • Nutritional requirements according to production stages
Week 14	<b>Poultry Nutrition</b> • Nutrient requirements by age and production stage • Commercial and specialized diets • Feed additives and their effects on performance
Week 15	<b>Feed Formulation and Evaluation</b> • Principles of ration formulation • Calculation of nutritional requirements • Feed efficiency and cost analysis
Week 16	Exam

**Delivery Plan (Weekly Lab. Syllabus)**

المنهاج الاسبوعي للمختبر

	<b>Material Covered</b>
<b>Week 1</b>	Directions and Instructions for Working in the Nutrition Laboratory
<b>Week 2</b>	Feedstuffs and Methods of Sampling
<b>Week 3</b>	Sampling and Preparation of Feed for Chemical Analysis
<b>Week 4</b>	Determination of Moisture Content in Feedstuffs
<b>Week 5</b>	Determination of Ash Content in Feedstuffs
<b>Week 6</b>	Determination of Silica from the Ash of Feedstuffs
<b>Week 7</b>	Preparation of Standard Solutions
<b>Week 8</b>	Determination of Crude Protein in Feedstuffs
<b>Week 9</b>	Determination of Crude Fat in Feedstuffs
<b>Week 10</b>	Determination of Crude Fiber in Feedstuffs
<b>Week 11</b>	Determination of Soluble Carbohydrates in Feedstuffs
<b>Week 12</b>	Determination of Gross Energy by the Calculated Method
<b>Week 13</b>	Fiber Analysis by Van Soest Method (NDF & ADF)
<b>Week 14</b>	Evaluation of Energy Systems in Animal Nutrition (GE, DE, ME, NE)
<b>Week 15</b>	Digestibility Trials

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	-Animal Nutrition, P McDonald et al, 2010 -Animal Nutrition Handbook, 2009, Lee I. Chiba -General-Animal-Nutrition, P.S. Niranjana and Sanjay Kumar, 2008	
Recommended Texts	-A-Guide-to-the-Principles-of-Animal-Nutrition-2019	
Websites	<a href="https://www.researchgate.net/publication/395992631_Introductory_Chapter_Recent_Advances_in_Animal_Feeding_and_Nutrition">https://www.researchgate.net/publication/395992631_Introductory_Chapter_Recent_Advances_in_Animal_Feeding_and_Nutrition</a> <a href="https://www.intechopen.com/chapters/1236752">https://www.intechopen.com/chapters/1236752</a> <a href="https://www.mdpi.com/2077-0472/14/3/448">https://www.mdpi.com/2077-0472/14/3/448</a>	

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F - Fail	راسب	(0-44)	Considerable amount of work required
<p><b>Note:</b> Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.</p>				