كيمياء عامة نظري

كيمياء الكلنزل

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

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: University of Tikrit.

Faculty/Institute: College of Veterinary Medicine,

Scientific Department: Department of Physiology, Pharmacology and Biochemistry

Academic or Professional Program Name: Bachelor's

Final Certificate Name: Bachelor of Veterinary Medicine and Surgery .

Academic System: quarterly

Description Preparation Date: 2025/10/5

File Completion Date 2025/11/6

Signature:

Head of Department

ButhainaAbdulhameed

Date:

PROF. DR. BUTHAINA ABDULHAMEED ABDULLAH

Signature:

Scientific Associate Name:

Montaser Mohamed helal

Date:

Asst . Prof . Dr Montaser M. Helal

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Department of Quality Assurance and University Performance

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Date: Date: 6/11/2025

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Asist . Prof. Dr. Ahmed Abdullah Sultan

Tikrit University College of Veterinary Medicine Prof. Dr. Bashar Sadiq Noomi Dean of the College

Approval of the Dean

Dr.Bashar Sadaq

جامعة تكريت كلية الطب البيطري

جامعة تكريت كلية الطب البيطري شعبة ضمان الجودة والاداء الجامعي

1. Program Vision

The College of Veterinary Medicine seeks to be one of the leading higher education institutions at Tikrit University in the field of modern education and scientific research through its scientific, research and administrative activities. It also works to provide an integrated path for its students and professors to make them active and creative in serving the community in the fields of veterinary medicine education and its six branches and its preparation. Scientific preparation in order to be familiar with the functions of the organs of the animal body and be able to know the changes that occur in the various organs and tissues of the body.

2. Program Mission

Working to prepare and graduate leading scientific and leadership competencies in veterinary medicine and its sciences and to develop the balance of knowledge in the field of scientific research to serve society in this field by developing various plans that keep pace with scientific and practical developments in the field of veterinary medicine, as well as training and refining the minds of students scientifically and cognitively in the intellectual aspect. And the skills of veterinary medicine sciences, and the emphasis on social and cultural values in the ethics of the veterinary profession.

3. Program Objectives

1- **Embodying the vision, mission and goals of Tikrit University / College of Veterinary Medicine, and applying the best educational practices with a focus on ensuring quality and performance and enhancing them to increase the knowledge and understanding of the student in the field of veterinary medicine and prepare him scientifically so that he is familiar with the functions of the organs of the animal's body so that he is able to recognize the changes Which affect the various organs and tissues of the body when infection with various pathogens occurs, and study the effect of drugs and chemical reactions that occur inside and outside the body.**

2- **2-Preparing specialized cadres capable of serving the community in the field of veterinary medicine by developing various plans that keep pace with scientific and practical developments in the field of veterinary medicine and preparing for the preparation of future specialties.**

3- **3- Spreading the culture of scientific diversity in society, transferring scientific knowledge and veterinary skills, writing academic research, and creative scientific achievement through student- and teaching-focused activities in the field of veterinary medicine.**

4- **4- The College of Veterinary Medicine seeks to conclude scientific and cultural cooperation agreements with corresponding colleges, and to hold training courses in the field of veterinary specialization to achieve best practices in the veterinary fields.**

5- **5-Focusing on the scientific and moral aspects of all its members and spreading the spirit of dedication, tolerance, commitment and work to serve the nation.**

4. Program Accreditation
National institutional accreditation standards for higher education institutions in Iraq.

5. Other external influences
All veterinary medicine laboratories, the animal field, the library, the Internet, the slaughterhouse, the veterinary hospital, veterinary projects, magazines and research.

6. Program Structure				
Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements		75hours (practical)		Basic course
College Requirements	yes			
Department Requirements	yes			
Summer Training	No			
Other				

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

7. Program Description				
Year/Level	Course Code	Course Name	Credit Hours	
2025-2026 / first	VET105	General Chemistry		practical

8. Expected learning outcomes of the program	
Knowledge	
Learning Outcomes 1	**1- Enabling students to know general chemistry and the importance of chemical reactions and its relationship to other sciences.**
Skills	
Learning Outcomes 2	**1- Expanding the skill and giving the student skills in how to deal with animals and methods of drawing blood.**
Learning Outcomes 3	**2- Giving the student the skill of conducting chemical experiments and observing their effect.**
Ethics	
Learning Outcomes 4	**Developing students' abilities to share experiments on veterinary animals.**
Learning Outcomes 5	**Innovating the preparation of Nano chemicals and applying them to rats.**

9. Teaching and Learning Strategies

1- Developing students' ability to understand how devices work and the importance of chemicals through the use of illustrative tools, models, and a presentation that contains the most important points necessary for learning.

2- Explaining the scientific material by teaching the student how to use laboratory equipment used in chemistry experiments.

3- Enabling students to know and understand practical experiments on chemical elements, their distribution in nature, and their impact on other sciences.

10. Evaluation methods

Theoretical and practical exams (daily, monthly and annual).

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistant Professor Doctor	chemistry	Organic Chemistry/Nano			angel	Dr. Reem Suhail Najm
Assistant Lecturer	Physiology	Physiology			angel	Aliaa Badeea Abdullah
Assistant Lecturer	Pharmacology	Pharmacology			angel	hmood shamil subhi
Assistant Lecturer	Physiology	Physiology			angel	ghadaabed Ali

Professional Development

Mentoring new faculty members

Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.

Professional development of faculty members

Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

12.	**Acceptance Criterion**
(Setting regulations related to enrollment in the college or institute, whether central admission or others)	

13.	**The most important sources of information about the program**
State briefly the sources of information about the program.	

14.	Program Development Plan
A comparative study on the application of preparing different chemicals and working on comparing these experiments on animals.	

=	=	Cellular Basis of Animal Physiology, Animal cell ultra-structure, composition and functions Body fluid and its Dynamics. . Physio-chemical laws and membranes' phenomena. Transport of through biological membrane.)Review exam(.	Identify cellular structure	6	5
=	=	Excitable cells, Neurophysiology: structure and functions, Excitability and transmission of impulse in neuron and muscle. Junctional transmission. Neuro-transmitters and action potential. Synapse, (Review exam.)	Identify the nervous system and its structure	10	6
=	=	Muscle Physiology Muscle types and their intra-cellular contractile mechanisms. Electrophysiology of muscles. Neuromuscular junction. Excitation contraction coupling, its biochemical and ionic mechanisms. Molecular basis of muscle contraction (Review exam.)	Identify the function and importance of the muscular system and its relationship with the nervous system	10	7
=	=	Nervous system: organization of the nervous system, CNS, PNS, Spinal cord, Reflex arch, Autonomic nervous system, (sympathetic, and	Specialized nervous system function	6	8 & 9
=	=	Cardiovascular physiology: Cellular component of blood, Types and Functions, Hemoglobin Structure and Function, Electrical activity of the heart, (ECG...EKG), Capillaries and fluid exchange. Neural and Hormonal Control of Blood pressure, Blood Volume. and Hemostasis.	Identify the circulatory system, its components, and the importance of each component	10	10 & 11
=	=	Endocrinology: Endocrine system (Glands and their Functions) (Review exam	Identify the endocrine system and the importance of hormones and their work	10	10
=	=	Gastrointestinal Physiology and Metabolism: Organization of the Digestive System, Saliva and Salivary Glands, Liver and Pancreas, Digestive Enzymes, Ruminant physiology and fermentation	Identify digestive system function	12	11
=		Renal Physiology: Nephron structure and Function, Glomerular Filtration, Solute reabsorption, Water Balance, and Acid Base Balance.	Identify urinary system	8	12 & 13
=	Lecture and explanation with preview of samples	Respiratory System Physiology, Respiratory Volumes, Gas Exchange, Gas transport in the Blood, and Control of ventilation	Identify respiratory system	8	12
=	Lecture and explanation with preview of samples	Reproductive Physiology: Gamete development, Ovulation, Reproductive cycle, Pregnancy, Mammary gland and Lactation, Reproductive physiology of the male. (Review exam.)	Identify reproductive system and its function	10	13
=	=	Homeostasis		2	14 & 15

15 - Coures level :2nd year

Course Name :Practical physiology / 2 hours

1. Semester: second

15 - Coures level :2nd year

Course Name :Practical physiology / 2 hours

Semester: second

Evaluation methods	Learning methods	Subject name	Learning method outcome	Hours	lweeks
Daily exam questions and discussion	Lecture and explanation with ppt presentation	Safety in the physiological Laboratory		2	1
=	=	Introduction to apparatus and instruments.		2	2
=	=	Fragility of Red Blood cell.		2	3
=	=	Red blood cell count.		2	4
=	=	White blood cell count.		2	5
=	=	Differential leukocyte count		2	6
=	=	Estimation of hemoglobin		2	7
=	=	Estimation of packed cell volume		2	8
=	=	Estimation of erythrocyte sedimentation		2	9
=	=	The Win Trobe erythrocyte indexes		2	10
=	=	Blood groups		2	11
=	=	Coagulation		2	12
=	=	Bleeding time		2	13
=	=	Blood pressure		2	14
=	=	Effect of exercise and gravity on blood pressure and venous pressure		2	15
Examine					

1. Course Evaluation	
The distribution is as follows: 40 marks for the annual pursuit and 60 marks for the final exams	
2. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	**Veterinary physiology**
Main references (sources)	Gyuton and Hill , medi physiology,
Recommended books and references (scientific journals, reports...)	Jim E. Riviere , Mark G. Papich . Veterinary Pharmacology and Therapeutics, 9th Edition **-Journal of physiology** **-Amer. J. of pharmacology** ..
Electronic References, Websites