

**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



2024 - 2025

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.

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Academic Program Description Form

University Name: Tikrit University

Faculty/Institute: Veterinary Medicine

Scientific Department: Pharmacology ,Physiology and Biochemistr

Academic or Professional Program Name: Biochemistry

Final Certificate Name: Bachelor of Veterinary Medicine and Surgery

Academic System: Semester

Description Preparation Date: 5/10/2024

Signature:

Head of Department Name:

Prof.Dr.Buthaina

Abdulahameed Abdulla

Date: 6/10/2024



Signature:

Scientific Associate Name:

Proph. Dakheel Hussein Hedree

Date: 6/10/2024

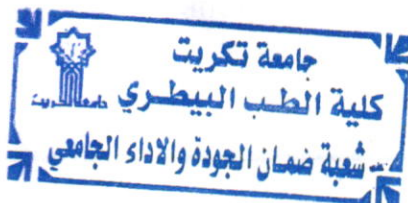
The file is checked by:

Assist. Prof. Dr Ahmed Abdullah Sultan

Quality Assurance And University Performance Manager

Date : 6 / 10 / 2024

Signature:



Approval of the Dean

Prof. Dr. Bashar Sadeq Numi

1. Program Vision

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.

2. Program Mission

Educating and teaching students the principles of biochemistry and laboratory analysis, which can be applied in the fields of veterinary science

3. Program Objectives

- 1- Training students to conduct biochemical analyzes for accurate clinical diagnosis
- 2- Providing them with sufficient information to enable them to understand the biological and metabolic reactions taking place in the human body
- 3- Familiarity with the scientific and laboratory aspects of biochemistry
- 4- Knowledge of biological and metabolic interactions and their relationships to diseases resulting from metabolic disorders
- 5- Identify scientific laboratory equipment for biochemical tests

4. Program Accreditation

Not found

5. Other external influences

Not found

6. Program Structure

| Program Structure | Number of Courses | Study Unit | Percentage | Reviews* |
|--------------------------|-------------------|------------|------------|--------------|
| Institution Requirements | 90 | 90 | | 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 | |
| 2024-2023/second stage | VEP1109 | Biochemistry | 3 theoretical | 2 practical |
| | | | | |

| 8. Expected learning outcomes of the program | |
|--|--|
| Knowledge | |
| | <p>Teaching the rules and foundations of biochemical reactions that occur in the human body in health and disease with basic information about biomolecules such as proteins, carbohydrates, enzymes, hormones and vitamins.</p> <p>Teaching the student how to identify chemical compounds and providing him with sufficient information that enables him to understand the vital activities taking place in the human body at the molecular level, applying them with practical lessons and demonstrating the methods used in diagnosing some diseases.</p> |
| Skills | |
| | <p>A biochemist studies the chemical laws of living organisms and biological processes such as genetics. Biochemists usually work in laboratories where they conduct tests and research on the mutual chemical effects on animals and plants.</p> <p>The ability to use biochemistry techniques and integrate them with genetics and physical biology techniques in addition to molecular biology. Skills in conducting scientific experiments. Writing and publishing research, reports, and research papers. Conducting presentations on the conclusions and discoveries reached by studies.</p> |
| Ethics | |
| | <p>There are many classifications of values, including scientific values, such as respect for science and scientific research, appreciation of the status of scientists, scientific ambition, and respect for the mind and methods of using it; faith values, such as patience, honesty, and sincerity; moral values, such as balance of personality, good behavior, respect for brothers, optimism, modesty, and respect for others; and social values, such as mastery of work and respect for time.</p> |

9. Teaching and Learning Strategies

- 1- Explanation and clarification of the scientific material
- 2- Providing students with knowledge through homework
- 3- Encouraging students to visit websites
- 4- Linking the conclusions of the current lecture with the previous one
- 5- Show educational videos
- 6- Asking a set of thinking questions during lectures (why; how)

| 10. Evaluation methods |
|---|
| 1-Theoretical exams (daily, monthly, end of semester) |
| 2- Practical exams (daily, monthly, end of semester) |

| 11. Faculty | | | | | | |
|--------------------|---------------------------------|-------------------------|---|--|------------------------------|----------|
| Faculty Members | | | | | | |
| Academic Rank | Specialization | | Special Requirements/Skills (if applicable) | | Number of the teaching staff | |
| | General | Special | | | Staff | Lecturer |
| Assistant lecturer | Veterinary medicine and surgery | Clinical biochemistry | | | Staff | |
| Assistant lecturer | | Veterinary pharmacology | | | Staff | |

| Professional Development |
|---|
| Mentoring new faculty members |
| Directing new faculty members to attend online courses and seminars Discussions inside and outside the work environment |
| Professional development of faculty members |
| Using modern educational methods Attend formal courses and conferences |

| 12. Acceptance Criterion |
|--|
| (Establishing regulations related to enrollment in the college or institute) |

| 13. The most important sources of information about the program |
|---|
|---|

| 14. Program Development Plan |
|--|
| 1- Using modern methods to deliver information |
| 2- Developing scientific material using modern sources |

- 3- Periodic meetings to develop curricula
- 4- Attending workshops and seminars on teaching and learning methods.
- 5- Diversifying the methods of delivering the material given to students

Course Description Form

| | |
|--|--|
| 1. Course Name: | |
| Biochemistry | |
| 2. Course Code: | |
| VEP1109 | |
| 3. Semester / Year: | |
| 2024-2025/ second year | |
| 4. Description Preparation Date: | |
| 23/1/2025 | |
| 5. Available Attendance Forms: | |
| Attendance | |
| 6. Number of Credit Hours (Total) / Number of Units (Total) | |
| 90 hours annually 3 hours theoretical 2hours practical | |
| 7. Course administrator's name (mention all, if more than one name) | |
| Name: Huda Ayad Hameed Email: hudahameed199222@tu.edu.iq Name :- Dhuha waleed salih Email :- dhuha.salih23@tu.edu.iq | |
| 8. Course Objectives | |
| 1- Graduating veterinarians who are distinguished by their extensive scientific skills and high qualifications 2- Familiarity with the scientific and laboratory aspects of biochemistry 3- Knowing the biological and metabolic interactions and their relationship to early diseases in the case of metabolic disease 4- Identify laboratory equipment for biochemical tests 5- Linking biochemical sciences to other sciences such as genetics. | |
| 9. Teaching and Learning Strategies | |
| Strategy | 1-Electronic learning method 2- Brainstorming education strategy. 3- Education Strategy Notes Series |
| 10.Course structure | |
| First semester | |

| Evaluation methods | Learning methods | Required learning outcomes | Practical hours | Required learning outcomes | Theoretical hours | Weeks |
|---|---|--|-----------------|----------------------------|-------------------|-------|
| Weekly exams | | General instruction of carbohydrates | 2 | Carbohydrates metabolism | 3 | 1-6 |
| Monthly, daily, written, and the end-of-year exam | 1-Explaining scientific material by giving theoretical lectures | Urine ;physical properties of urine | 2 | | | |
| | 2- Linking current lectures with previous ones | Normal and abnormal constituents of urine. | | Enzymes | 3 | 7- 8 |
| | 3-Providing students with homework | | | | | |
| | 4- Active participation in practical subject matter and laboratory work | | | | | |

| | | | | | | |
|--|--|---|---|--------------------------------------|---|-------|
| | | Photometric methods in biochemical analysis | 2 | Integrative metabolism bioenergetics | 3 | 9-10 |
| | | Enzymatic methods for glucose | 2 | Amino acids and proteins | 3 | 11-13 |
| | | Determination of serum total protein | | | | |

| | | | | | | |
|------------------------|--|--|---|------------------|---|-------|
| | | Determination of serum cholesterol | | | | |
| | | Determination serum total protein | 2 | Vitamins | 3 | 14-15 |
| Second semester | | | | | | |
| | | Determination serum urea | 2 | Lipid metabolism | 3 | 1-5 |
| | | Determination serum uric acid | | | | |
| | | Determination serum creatinine | | | | |
| | | Determination of serum bilirubin | 2 | Hormones | 3 | 6-7 |
| | | Determination of serum total calcium | 2 | Nucleic acids | 3 | 8-14 |
| | | Determination of serum inorganic phosphate | | | | |

| | |
|---|---|
| 1. Course Evaluation | |
| Theoretical 25 Practical 15 First semester average 40 Theoretical final exam 40 Final practical exam 20 | |
| 2. Learning and Teaching Resources | |
| Required textbooks (curricular books, if any) | Medical biochemistry (Solomon adugna , Lakshmi Ahuja mekonnen alemu) |
| Main references (sources) | Textbook book of veterinary chemistry R.Engelking).second edition (larry \ |
| Recommended books and references (scientific journals, reports...) | Lippincott's Illustrated Reviews: .. Biochemistry |
| Electronic References, Websites | |