Academic Program Description Form

University Name: Al-Muthanna University

College/Institute: College of Veterinary Medicine

Department: Single-Department College

Academic or Professional Program Name: Master of Science in Veterinary Medicine ((Veterinary Pathology Diagnostics)

(Certificate Title: Science in Veterinary Medicine (Veterinary Pathology Diagnostics

Academic System: Semester-based

Date of Description Preparation: December 14, 2025

Date of File Completion: December 15, 2025

Signature:
Name of Scientific Assistant
Prof. Dr. Nayer Abdulbari Madloul
Date 24/12/2025

File reviewed by:
Quality Assurance and University Performance Division

Name of the Director of the Quality Assurance and University Performance

Division: Prof. Dr. Khalid Hadi Kadhim

Date 24/12/2025

Signature

Dean's Approval

Assistant Prof. Dr. Muhammad Karim Hamad

Ministry of Higher Education and Scientific Research
Scientific Supervision and Evaluation Authority
Quality Assurance and Academic Accreditation Department
Accreditation Section

Description Guide Academic Program and Course Description

Introduction:

The academic program is a structured and organized package of courses that includes procedures and experiences organized into course content. Its primary purpose is to build and refine graduates' skills, making them qualified to meet the demands of the labor market. It is reviewed and evaluated annually through internal and external audit procedures and programs, such as the external examiner program**.**

The academic program description provides a concise summary of the program's main features and courses, outlining the skills students are designed to acquire, based on the program's objectives. The importance of this description lies in its role as the cornerstone for obtaining program accreditation. It is written collaboratively by faculty members under the supervision of the academic committees in the departments**.**

This second edition of the guide includes an updated academic program description, reflecting the changes and developments in the Iraqi education system. It includes the traditional academic program description (annual, semester-based), as well as the standardized academic program description issued by the Department of Studies, T M3/2906, dated May 3, 2023, for programs that follow the Bologna Process. In this context, we must emphasize the importance of writing descriptions of academic programs and courses to ensure the smooth operation of the educational process**.**

Concepts and Terminology:

Academic Program Description:
The academic program description provides a concise summary of its vision, mission, and objectives, including a precise description of the intended learning outcomes according to specific learning strategies**.**

Course Description:
This provides a concise summary of the most important characteristics of the course and the learning outcomes expected of the student, demonstrating whether they have made the most of the available learning opportunities. It is derived from the program description**.**

Program Vision:
An ambitious vision for the future of the academic program, aiming to be advanced, inspiring, motivating, realistic, and applicable**.**

Program Mission:

This outlines the objectives and activities necessary to achieve them concisely, and defines the program's development paths and directions**.**

Program Objectives:

These are statements that describe what the academic program intends to achieve within a specific timeframe and are measurable and observable. Curriculum Structure: All courses/subjects included in the academic program, according to the approved learning system (semester, annual, Bologna Process), whether required by the Ministry, University, College, or Department, along with the number of credit hours**.**

Learning Outcomes:

A coherent set of knowledge, skills, and values acquired by the student upon successful completion of the academic program. The learning outcomes for each course must be defined in a way that achieves the program objectives**.**

Teaching and Learning Strategies:

These are the strategies used by faculty members to enhance student teaching and learning. They are plans implemented to achieve learning objectives. They describe all classroom and extracurricular activities designed to achieve the program's learning outcomes.

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1. Program Vision

The program aims to develop highly qualified scientific and research professionals capable of providing accurate and comprehensive diagnoses of animal diseases using the latest laboratory and pathological technologies. This contributes to improving animal health, supporting public health, and enhancing food security.

The program emphasizes academic excellence and applied research, bridging the gap between theoretical knowledge and practical application, and keeping pace with global scientific advancements to meet the needs of society, the job market, and scientific research.

2. Program Mission

The program's mission is to provide high-quality postgraduate education aimed at developing specialized scientific personnel capable of diagnosing animal diseases using modern pathological and laboratory methods, and to cultivate scientific research skills, critical analysis, and sound diagnostic decision-making.

The program also seeks to serve the community by supporting animal and public health, and contributing to the advancement of scientific knowledge and applied research in accordance with national and international academic standards.

3. Program aims:

The program aims to:

- Prepare highly qualified scientific personnel specializing in the diagnosis of animal diseases using modern pathological and laboratory techniques.
- Develop skills in pathological analysis and the scientific interpretation of laboratory results, linking them to the clinical situation.
- Enhance students' abilities in scientific research, designing pathological studies, analyzing data, and writing reports according to academic standards.
- Equip students with skills in using advanced diagnostic techniques in pathology, hematology, clinical chemistry, and microbiology.
- Qualify students to contribute to supporting animal health, public health, and the prevention of zoonotic diseases.
- Promote the principles of professional ethics and quality control in laboratory and diagnostic work.
- Meet the needs of the labor market and research and regulatory institutions for qualified specialists in veterinary pathological diagnostics.

4. Program accreditation

Program Accreditation
Is the program accredited? If so, by which body؟

5. Other External Influences

Program Sponsors:

1. Ministry of Higher Education and Scientific Research
- General supervision, academic accreditation, and quality assurance of study programs.
2. Al-Muthanna University
- Administrative and academic support, and provision of a suitable educational and research environment.
3. College of Veterinary Medicine
- Direct scientific supervision of the program, and implementation of the study and research plan.
4. Department of Internal and Preventive Medicine
- Academic planning, teaching, and supervision of research and dissertations.
5. Accredited Educational and Research Laboratories
- Support for the practical and applied aspects and modern diagnostic technologies.
6. Veterinary and Health Departments and Institutions/Veterinary Hospital/Veterinary Syndicate
- Cooperation in practical training and application of research results in the service of animal and public health.
7. National Research Centers and Scientific Bodies
- Support for scientific research and development of joint research projects.

6. Program structure

Program Structure	Number of courses	Credit units	Percentage	Notes
Institution Requirements				
College Requirements		8	22.2	
Department Requirements	14	28	77.7	
Summer Training				
Other				

*The notes may include whether the course is core or elective.

7. Program Description				
Year/Level	Code	**Name**	**Hours**	
			T	P
2025\2026 1st semester	**VET640**	Clinical Bacteriology	2	2
2025\2026 1st semester	**VET641**	Clinical Parasitology	2	2
2025\2026 1st semester	**VET642**	Advanced Infectious Diseases I	2	-
2025\2026 1st semester	**VET643**	Deferential Diagnosis	2	2
2025\2026 1st semester	**VET644**	Advanced Vet. Clinic I		2
2025\2026 1st semester	**VET202**	Biostatistics	-	2
2025\2026 1st semester	**VET203**	English Language I	1	-
2025\2026 2nd semester	**VET645**	Clinical Hematology	2	2
2025\2026 2nd semester	**VET646**	Clinical Biochemistry	1	2
2025\2026 2nd semester	**VET647**	Advanced Infectious Diseases II	2	-
2025\2026 2nd semester	**VET648**	Diagnostic Techniques	1	2
2025\2026 2nd semester	**VET649**	Advanced Vet. Clinic II	-	2
2025\2026 2nd semester	**VET204**	Scientific Research Methodology	2	-
2025\2026 2nd semester	**VET205**	Seminar	1	-
2025\2026 2nd semester	**VET206**	English Language II	1	-

8. Expected learning outcomes of the program	
Knowledge	
Enabling the student to conduct animal examinations	Developing students' scientific capabilities and enhancing communication between students and research centers.
Skills	
Enabling students to understand professional ethics.	Enabling students to gain diverse experience working in multiple fields.
Keeping pace with continuing education.	Enabling students to persevere in developing their skills.
Values	
Instilling the concept of community service	Developing students' sense of national pride to increase both the quantity and quality of their output.
Strengthening the relationship with educators to learn about diseases in detail	Enabling students to understand the relationship between veterinary medicine and the job market.

9. Teaching and learning strategies

- Interactive Lectures: Presenting essential information while encouraging questions and discussions.
- Problem-Based Learning (PBL): Presenting real-life case studies for analysis and resolution.
- Hands-on/Practical Training: Directly applying laboratory diagnoses to samples.
- Group Learning: Dividing students into groups to discuss case studies and share findings.
- Student Presentations: Training students to present their diagnostic findings scientifically.
- Self-Directed Learning: Encouraging students to research and study advanced concepts independently.
- Simulation/Virtual Labs: Using simulation software to train students on rare or critical diagnoses. Continuous Assessment:
- Short quizzes, surprise exams, or ongoing practical assessment to reinforce learning.
- Case-Based Learning:
- Studying specific disease cases to analyze diagnosis and treatment.
- Journal Clubs/Seminars:
- Analysis and discussion of recent research in veterinary disease diagnostics.

10.Evaluation methods

1. Theoretical Assessment:

-Written Exams: Multiple-choice, essay, or short-answer questions to assess understanding of key concepts.

-Quizzes: Ongoing assessment of student comprehension throughout the course.

-Presentations: Assessing student understanding of the material through case studies or research presentations.

-Scientific Discussions (Journal Club/Seminars): Assessing the ability to analyze recent scientific research and articles.

2. Practical Assessment:

-Practical Exams/Lab Tests: Measuring student skills in performing diagnostic tests and handling samples.

-Case-Based Assessment: Presenting medical cases for analysis, diagnosis, and proposing solutions.

-Individual Skill Assessment: Monitoring student performance during the direct application of laboratory procedures.

3. Continuous and Varied Assessment:

-Lab Reports: Evaluating the quality of observations, results, and scientific analysis. - Class participation: Monitoring student engagement in practical and theoretical discussions.

-Peer assessment: Students' evaluation of each other's group work or presentations.

11.Teaching Authority

Members

Academic rank	Specialization		Special requirements /skills (if any)		Numbers	
	Genera	**private**			Permanent	**lecturer**
Professor	Veterinary Medicine and Surgery	Parasitology	PhD from UK		1	-
Professor	Veterinary Medicine and Surgery	Internal Medicine	PhD from Poland		1	-
Assist. Prof.	Veterinary Medicine and Surgery	Parasitology			1	
Assist. Prof.	Veterinary Medicine and Surgery	Pathology			1	-
Assist. Prof.	Veterinary Medicine and Surgery	Zoonotic			1	-

12.Professional Development

Orientation for New Faculty Members

Program Overview

- Understanding the objectives of the Master of Pathology Diagnostics program: developing diagnostic skills, linking findings to clinical practice, and promoting scientific research.

Key Responsibilities

- Preparing and delivering lectures.
- Managing practical and laboratory sessions in accordance with safety standards.
- Supervising student research and graduation projects.

Teaching and Learning Methods

- Active learning (case studies, results analysis).
- Collaborative learning among students.
- Utilizing modern educational technology and resources.

Assessment and Follow-up

- Ongoing student assessment (tests, reports, presentations).
- Practical evaluation of students' laboratory skills.
- Monitoring the academic performance of new faculty members through observations and student results.

Professional Development

- Attending workshops and conferences.

- Participating in cutting-edge scientific research.
- Continuously updating knowledge in the field of pathology diagnostics.

Professional development of faculty members

❖ Continuing Education
- Attending specialized courses and workshops in medical diagnostics and modern teaching methods.
- Staying up-to-date with scientific developments in recent journals and books.

❖ Scientific Research
- Participating in research projects within and outside the department.
- Publishing in peer-reviewed scientific journals to enhance expertise and credibility.

❖ Conferences and Seminars
- Participating in local and international scientific conferences to exchange experiences and learn about modern technologies.

❖ Developing Teaching Skills
- Learning modern teaching methods such as active learning and problem-based learning.
- Using educational technology (data analysis software, electronic resources.(

❖ Self-Assessment and Feedback
- Receiving feedback from colleagues and students to improve teaching performance.
- Reviewing and developing curricula and educational materials periodically.

13.Admission standard

1. Previous Qualifications
- Applicants must hold a Bachelor's degree or Higher Diploma in Veterinary Medicine and Surgery, Applied Medical Sciences, Biology, or Chemistry from a recognized university.
2. Academic GPA
- The graduation GPA must meet the minimum requirements set by the Ministry of Higher Education (usually "Good" or equivalent), with priority given to applicants with higher GPAs.
3. Academic Ranking: Applicants will be ranked according to the following criteria:
- Bachelor's GPA.
- Competitive Exam Score (written and/or oral)

- Year of Graduation (the most recent is preferred in case of a tie)
- Relevant work or professional experience (if any)

4. Competitive Examination
- Successful completion of the competitive examination is a prerequisite for admission, subject to regulations and instructions.
5. Medical Fitness
- Applicants must be medically fit and capable of performing the practical and laboratory requirements, as evidenced by an official medical report.

6. Commitment and Attendance
- Applicants must commit to full-time attendance and fulfill all theoretical, practical, and research study requirements.
7. Official Documents
- Submit all required documents in accordance with the law (certificate, grades document, appointment orders if any, leave from the department if the applicant is a government employee, ID, personal photos)

14.Key sources of information about the program
Regulations and instructions for academic departments and postgraduate studies of the Iraqi Ministry of Higher Education

15.Program development plan
First: Justifications for Development -Keeping pace with scientific and technological advancements in the field of pathological diagnosis. -Bridging the gap between theoretical aspects and practical application. -Aligning the curriculum with the demands of the labor market and scientific research. -Enhancing the graduates' competence in integrated laboratory diagnosis. Second: Objectives of Development -Preparing specialized personnel capable of accurately diagnosing veterinary diseases. -Developing pathological analysis skills and linking clinical and laboratory results. -Developing students' abilities in scientific research and critical thinking. -Introducing modern technologies in pathological and clinical diagnosis. Third: Curriculum Development Focus Areas 1. Developing the Scientific Content

Updating topics:
General and Special Pathology
Clinical Pathology
Histochemical and Cytological Diagnosis
Adding new topics:
Molecular Diagnosis
Histochemical Immunology Techniques
Biosafety and Biosecurity in Laboratories

2. Developing the Practical Aspect

Increasing practical and laboratory hours. Training students in:
Reading histological slides
Interpreting hematological and chemical analyses
Differential diagnosis of pathological conditions
Using real case studies.

3. Teaching and Learning Strategies

Problem-Based Learning (PBL.(
Case-Based Learning.
Scientific discussions and presentations.
Integration of e-learning and digital platforms.

4. Assessment Methods

Written and practical examinations.
Documented laboratory reports.
Evaluation of presentations and seminars.
Research project or diagnostic case study.

Fourth: Faculty Development
-Encouraging participation in specialized courses and workshops.
-Supporting scientific research and academic publication.
-Exchanging expertise with advanced laboratories and centers.

Fifth: Infrastructure Development
-Updating laboratories and diagnostic equipment.
- Providing modern histological slides and educational models.

Program Skills Plan															
				Learning outcomes required from the program											
Year/Level			Essential or optional	Knowledge				Skills				Values			
				1A	**2**A	**3**A	4A	1B	2B	3B	4B	1C	2C	3C	4C
2025\2026 1st semester	**VET640**	Clinical Bacteriology	Essential	✔				✔						✔	
2025\2026 1st semester	**VET641**	Clinical Parasitology	Essential			✔					✔	✔			
2025\2026 1st semester	**VET642**	Advanced Infectious Diseases I	Essential			✔			✔					✔	
2025\2026 1st semester	**VET643**	Deferential Diagnosis	Essential	✔						✔					✔
2025\2026 1st semester	**VET644**	Advanced Vet. Clinic I	Essential	✔				✔				✔			
2025\2026 1st semester	**VET202**	Biostatistics	Essential			✔					✔			✔	
2025\2026 1st semester	**VET203**	English Language I	Essential				✔		✔					✔	
2025\2026 2nd semester	**VET645**	Clinical Hematology	Essential	✔						✔					✔
2025\2026 2nd semester	**VET646**	Clinical Biochemistry	Essential	✔				✔						✔	
2025\2026 2nd semester	**VET647**	Advanced Infectious Diseases II	Essential			✔					✔			✔	
2025\2026 2nd semester	**VET648**	Diagnostic Techniques	Essential			✔			✔				✔		
2025\2026 2nd semester	**VET649**	Advanced Vet. Clinic II	Essential	✔						✔					✔
2025\2026 2nd semester	**VET204**	Scientific Research Methodology	Essential				✔		✔				✔		
2025\2026 2nd semester	**VET205**	Seminar	Essential		✔					✔					✔
2025\2026 2nd semester	**VET206**	English Language II					✔		✔					✔	

Please check the boxes corresponding to the individual learning outcomes from the program that are being assessed.

Course description template

1. Course name	
Advanced Vet. Clinic	
2. Course Code	
VET644	
3. Year\Level	
1st semester 2025/2026	
4. تاريخ إعداد هذا الوصف	
5. Available attendance formats	
List	
6. Number of study hours (total) / Number of units (total)	
2 hours\ 1 unit	
7. 7. Name of the course coordinator (if there is more than one, mention it).	
Assist. Prof. Hussein A. Khamees hussinabbaskhamees@mu.edu.iq	
8. Course aims	
Subject aims	• Develop skills in clinical examination and differential diagnosis. • Integrate lab findings with clinical data for accurate diagnosis. • Enhance professional communication and ethical practice.
9. Teaching and learning strategies	
strategies	2. Conduct a general and specific clinical examination of various vital systems. 3. Recognize the clinical signs and symptoms of common diseases. 4. Formulate a differential diagnosis and develop a plan for a confirmed diagnosis. 5. Suggest appropriate therapeutic intervention based on the diagnosis. 6. Present a scientific clinical case presentation.

Course structure

Week	hours	Required learning outcomes	Subject	Learning method	assessment method
1	**2**	**3**C **1**B **1** A	Introduction to the steps of clinical veterinary diagnosis.	**Vet. Hospital**	Oral
2+3	**4**	**3**C **1**B **1** A	Diagnosing respiratory diseases	**Vet. Hospital**	field
4	**2**	**3**C **1**B **1** A	Distinguishing between bacterial, viral, and parasitic infections.	**Vet. Hospital**	Editorial
5+6	**4**	**3**C **1**B **1** A	Discussing the most important supporting tests (x-rays, swab, cultures).	**Vet. Hospital**	Laboratory
7+8	**4**	**3**C **1**B **1** A	Diagnosing gastrointestinal diseases	**Vet. Hospital**	Oral
9+10	**4**	**3**C **1**B **1** A	Clinical examination of the abdomen and rectum.	**Vet. Hospital**	field
11+12	**4**	**3**C **1**B **1** A	Diagnosis of nervous system diseases	**Vet. Hospital**	field
13+14	**4**	**3**C **1**B **1** A	Distinguishing between infectious and non-infectious causes.	**Vet. Hospital**	Editorial
15	**2**	**3**C **1**B **1** A	Practical OSCE (Complete Clinical Case Study)	**Vet. Hospital**	Editorial

10.Course Evaluation	
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc. - Attendance and active participation: 10% - Practical assignments and case discussions: 20% - Case presentations: 20% - Midterm practical exam: 20% - Final oral and practical exam: 30% - Total: 100%	
11.Learning and teaching resources	
Required textbooks (methodology, if applicable)	
Main references (sources)	
Recommended supplementary books and references (scientific journals, reports, etc)	
Electronic resources, websites	