**Ministry of Higher Education and Scientific Research Scientific supervision and evaluation device Department of Quality Assurance and Academic Accreditation**

**Academic description program form (ADPF) of colleges (2024-2025)**

**University name: Al-Muthanna University**

**College name: College of Veterinary Medicine**

**Scientific Branch: One-department College**

**File filing date: 02/05/2025**

**This document was audited by the Chair of Quality Assurance and University Performance Division : Prof Dr. Khalid Hadi Kadhim**

**Translated by**

**Prof. Dr. Mohenned A. Hemza Alsaadawi**

**Asst. Dr. Hussein Jabar Jassim**

**Lec. Sara A. Alkhafaji**

**Asst. Lec. Qassim A. Raheef**

**Asst. Res. Hani K. Hani**

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### Dean Confirmation

### Asst. Prof. Dr Mohammaed Karim Hamad

**Course description**

ADPF provides a summary of the most important characteristics of the program and the learning outcomes that the student is expected to achieve, demonstrating whether he or she has made the most of the learning opportunities available. It must be linked to the program description

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| 1. Educational institution | Ministry of Higher Education and Scientific Research |
| 2. Scientific Department/Center | College of Veterinary Medicine - Al-Muthanna University |
| 3. Name of the academic or professional program | College of Veterinary Medicine |
| 4. Title of the final certificate | Bachelor of Veterinary Medicine and Surgery |
| 5.The academic system | Semester system |
| 6. Accreditation program | American System of Veterinary Colleges (Theoretical + Practical) |
| 7. Laboratory external influences. | Animal House, the library, Animal slaughter. Veterinary hospital, fields, Related websites |
| 8. The date this description was prepared | 11/1/2023 |
| 9. Objectives of the academic program:• Graduate veterinarians who have science and knowledge and keep them up with the latest scientific developments in their field of specialization.• Courses in academic programs are described accurately, including general information about the course, a brief description of the course, the learning outcomes of the course, the vocabulary included in the course, the sources approved in the course, and the methods adopted in evaluating the course.• The content of the academic program is consistent with the stated mission and objectives of the College of Veterinary Medicine.• Contributing to the development of livestock through developing and following the latest scientific methods and methods in diagnosis and treatment.• The content of courses in the academic program helps students acquire basic concepts in the field of specialization.• The content of the academic program’s courses includes applied cognitive and field experiences and activities in a way that helps students develop their knowledge and skills.• It helps serve the labor market. |

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| **Required learning outcomes and teaching, learning and assessment methods** |
| **A-** **Cognitive objectives** 1. Developing the student’s scientific ability 2. Developing communication between students and research centers 3. Preparing and increasing scientific capabilities by identifying medical problems in veterinary medicine 4. Developing scientific research 5. Enabling the student to acquire skills that will benefit him in his field of work |
| **B. Skills objectives of the program** 1. The student acquires the necessary skills for veterinary medicine 2. Enable the student to demonstrate quality in the field and treatment of animals 3. Enable the student to conduct all animal examinations |
| **Teaching and learning methods** |
| - Scientific lectures - Study groups - Practical lessons and clinical veterinary application |
| **Evaluation methods** |
| • Theoretical exam: MCQ + Short Essay • Practical exam: OSCE+OSPE • Student seminars + reports |
| **C. Sentimental and value goals**  1. Enable the student to know the importance of veterinary medicine 2. Enabling the student to know the effective role of veterinary medicine 3. Enabling the student to know the relationship between veterinary medicine and the labor market 4. Enabling the student to strengthen the relationship with educators |
| **Teaching and learning methods** |
| Field and field visits Scientific trips |
| **D. Generic and transferable skills (other skills related to employability and personal development)** |
| 1. Enabling the student to know professional ethics 2. Enabling the student to persevere to develop his level 3. Keep up with continuing education 4. Enabling the student to gain multiple experience to work in multiple fields |
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| **Teaching and learning methods** |
| 1. Courses and seminars 2. Conferences 3. Field teaching 4. Laboratory teaching 5. Labor market 6. Special projects 7. Public projects |
| **Evaluation methods** |
| • Practical exam • Theoretical exam |
| **• Planning personal development** |
| 1. Continuing education for all specializations and scientific branches 2. Attending veterinary medicine conferences 3. Attending workshops and seminars 4. Voluntary work in specialized institutions to gain experience and skills 5. Attending specialized training programs |
| **• Admission standard (setting regulations related to admission to the college or institute)** |
| 1. Passing the preparatory stage (scientific stream) 2. The acceptance rate must not be less than 70%3. A personal interview must be conducted before completing the final admission procedures Note that these procedures are followed in Arab and foreign countries and the acceptance rate is not less than 90%. |
| **The most important sources of information about the program** |
| - Ministry of Higher Education and Scientific Research / Curricula of colleges of veterinary medicine in Iraqi universities - Similar colleges in Arab and international countries |

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| **This academic description program provides a summary of the most important characteristics of the program and the learning outcomes that the student is expected to achieve, demonstrating whether he or she has made the most of the learning opportunities available. It must be linked to the program description** |
| **1. Educational institution** | **College of Veterinary Medicine** |
| **2. Scientific Department/Center** | **Veterinary Public Health Division** |
| **3. Course name/code** | **Animal management, poultry management, computers, democracy and human rights, English language, Arabic language, animal nutrition, genetics, statistics, veterinary public health, veterinary professional behavior** |
| **4. Available forms of attendance** | **Theoretical/practical** |
| **5. Semester/year** | **Annual/quarterly** |
| **6. Number of study hours (total)** | **120,15,30,60,60,90,45,120,60,30,15,120** |
| **7. Course objectives** | **1. Providing the student with theoretical and practical information on how to care for animals and follow modern methods of field management. 2. Teaching the student the basic supporting sciences, which are computers, statistics, genetics, and nutrition. 3. Providing the student with theoretical and practical information on how to manage poultry fields, feed manufacturing plants, slaughterhouses, and animal breeding stations.** |
| **Course outcomes, learning methods, teaching and evaluation** |
| **A. Cognitive objectives:****1. Teaching students how to create an animal field with modern specifications and methods of managing them. 2. Teaching students how to develop the genetic makeup of animals and adopt the principle of breeding to preserve good local characteristics and select and develop animals with high production. 3. How to control diseases transmitted between humans and animals and produce healthy food for humans that is free of diseases by mastering food hygiene and milk hygiene. 4. Methods for developing animal and poultry nutrition and raising the efficiency of animal feed conversion. 5. How to establish and manage poultry fields with international standards.** |
| **B. Skills objectives: . 1. Providing the student with the skills of applying scientific methods regarding establishing animal and poultry fields. 2. Training the student to manufacture good quality feed. 3. Providing the student with the skills of examining meat and giving reports in slaughterhouses.** |
| **Learning and teaching methods: : Providing theoretical and practical lectures on display screens, PowerPoint, and microscopes, and experiments examining milk and meat samples bacteriologically and chemically using various laboratory devices and equipment, in addition to examining feeds and inspecting the animal field, as well as training on animal control and methods of administering medications.** |

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| **Evaluation methods:**Quizzes Monthly examsSemester and final exams |
| **C. Sentimental and value goal:**1. Enabling the student to apply theoretical veterinary information in a practical way.2. Developing the student’s national spirit to increase production in quantity and quality.3. Instilling the concept of community service and the ideal way to deal with the simple segments of the community of farmers and animal breeders.4. Developing the student’s ethics as a veterinarian by following the correct professional behavior |
| **Teaching and learning methods:**Giving practical lectures in the animal field to train student. |
| **Evaluation methods:**Daily, monthly and quarterly exams |
| **D. Generic and transferable skills (other skills related to employability and personal development)**Developing students’ skills and abilities in managing animal fields. |

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| The week | Hours | Required learning outcomes | Name of the unit/topic | Teaching method | Evaluation method |
| Weekly | 2 theoretical + 2 practical | Add learning outcomes | Animal management | Theoretical + practical | Exams |
| Weekly | 2 theoretical +1 practical | Add learning outcomes | Poultry management | Theoretical + practical | Exams |
| Weekly | 2 theoretical +1 practical | Add learning outcomes | Computer | Theoretical + practical | Exams |
| Weekly | 2 theoretical +1 practical | Add learning outcomes | Veterinary public health | Theoretical + practical | Exams |
|  | 2 theoretical | Add learning outcomes | Democracy and human rights | Theoretical | Exams |
| Weekly | 1 theoretical | Add learning outcomes | English language | Theoretical | Exams |
| Weekly | 1 theoretical | Add learning outcomes | Arabic Language | Theoretical | Exams |
| Weekly | 2 theoretical +2 practical | Add learning outcomes | Animal feeding | Theoretical + practical | Exams |
| Weekly | 2 theoretical +2 practical | Add learning outcomes | heredity | Theoretical | Exams |
| Weekly | 2 theoretical +2 practical | Add learning outcomes | Counting | Theoretical + practical | Exams |
| Weekly | 1 theoretical | Add learning outcomes | Veterinary professional behavior | Theoretical | Exams |

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| **12-Human structures:** |
| Required prescribed books | Prescribed methodological books |
| Main references | Supporting sources for each course |
| Recommended books and references (scientific journals, reports, etc.) | Basic journals in veterinary and scientific specialties |
| Scientific references and websites | Al-Muthanna University e-learning website |
| **13-Course development plan:** |
| Developing academic curricula to suit the specificity of the governorate in terms of animal production, focusing on poultry farming, introducing a fish farming lesson, and developing the animal field to suit the requirements of the study. |

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| **ADPF provides a summary of the most important characteristics of the program and the learning outcomes that the student is expected to achieve, demonstrating whether he or she has made the most of the learning opportunities available. It must be linked to the program description** |
| **1-Educational institution** | College of Veterinary Medicine |
| **2-Scientific Department/Center** | Branch of diseases and diseases of poultry and fish |
| **3-Course name/code** | General pathology, special pathology, histopathology and forensic medicine PAT, SPA, LPS |
| **4-Available forms of attendance** | Theoretical/practical |
| **5- Semester/year** | Annual/quarterly |
| **6-Number of study hours (total*)*** | 30,60,45,45 |
| **7-Course objectives** | 1- Providing the student with theoretical and practical information about diseases and diseases of poultry and fish2-Increasing capabilities in the field of diseases and diseases of poultry and fish3-Explaining the diseases that affect poultry and fish and methods of diagnosing and treating them.4-Explaining the most important signs that occur to the animal after death and knowing the causes of death. |
| **Course outcomes, learning methods, teaching and evaluation** |
| **A. Inspirational forces:****1- Identify the concept of pathology****2- The animal’s condition after the appearance of sick signs****3- Disease developments and disease course****4- Post-no signs above the animal****5- Knowing the histological events and types and linking them to disease developments.****6- Important knowledge of poultry and fish diseases** |
| **A. Skills objectives:****1-Differentiating between healthy tissue and diseased tissue.****2-Increasing the student’s awareness of tissue changes after contracting the disease.****3- Increase the ability to identify the histological structure of the body’s organs.****4-Knowledge of animal anatomy methods** |
| **Learning and teaching method:****The student learns the basics of pathology and fish diseases, in addition to laboratory methods for reading slides and animal dissection methods** |
| **Evaluation methods:****Surprising daily exams****Monthly exams****Semester and final exams** |
| **C. Sentimental and value goals:****1-Identify diseases in detail.****2-Knowing the most important signs and changes of disease.****3-Linking changes to reach an accurate diagnosis.****4-eveloping the student’s ethics as a veterinarian by following the correct professional behavior.** |
| **Teaching and learning methods:****Giving practical lectures and training students to read slides in the laboratory** |
| **Evaluation methods:****Daily, monthly and quarterly exams** |
| **D.Generic and transferable skills (other skills related to employability and personal development)****1-How to diagnose the disease****2- Knowing the differential diagnosis for other** **Diseases****3-Linking with diseases common between humans and animals****4-Knowing the extent of the impact of diseases on public health** |
| 11- Course structure |
| Evaluation method | Teaching method | Name of the unit/topic | Required learning outcomes | Hours | The week |
| Exams | theoretical +practical | General pathology sem1 | Add learning outcomes | 3theoretical +3 practical  | weekly |
| Exams | theoretical +practical | Special PathologySem2 | Add learning outcomes | 3theoretical +3practical | weekly |
| Exams | theoretical +practical+field | Annual poultry diseases | Add learning outcomes | 2theoretical +2practical | weekly |
| Exams | theoretical +practical+field | Fish diseases sem1 | Add learning outcomes | 2theoretical +1practical | weekly |
| Exams | theoretical +practical | Pathological anatomy and forensic medicine sem2 | Add learning outcomes | 1theoretical | weekly |

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| **12-Infrastructure:** |
| **Required prescribed books** | Prescribed methodological books |
| **Main references** | Supporting sources for each course |
| **Recommended books and references (scientific journals, reports, etc.)** | Basic journals in veterinary and scientific specialties |
| **Scientific references and websites** | E- Al-Muthanna University learning website |
| **12- Course development plan:** |
| **1- Increase visits to civil and governmental projects****2-Encouragement to visit the university library and the college library and review the sources****3-Benefit from summer training and the veterinary hospital****4-Improving research and graduation projects** |

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| **Description of this academic program provides a summary of the most important characteristics of the program and the learning outcomes that the student is expected to achieve, demonstrating whether he or she has made the most of the learning opportunities available. It must be linked to the program description** |
|  **1-Educational institution** | College of Veterinary Medicine |
|  **2-Scientific Department/Center** | Branch of Veterinary Microbiology and Parasitology |
|  **3-Course name/code** | Microbiology, viruses, immunityMIC,SMI,VIR,IMU |
|  **4-Available forms of attendance** | Theoretical/practical |
|  **5-Semester/year** | Annual/quarterly |
|  **6-Number of study hours (total)** | 60,60,75,90 |
|  **7-Course objectives** | 1-Training students on knowledge of microscopic organisms and modern molecular methods for their detection and diagnosis2- Study the immune system and know the types of immunity3-Classification of bacteria, viruses and fungi |
| **Course outcomes, learning methods, teaching and evaluation** |
|  **A-Cognitive objectives:****1-Learn about the concept of microbiology****2-Knowledge and understanding of immunology****3-Understanding the science of viruses and fungi** |
| **B-Skills objectives:****1-Providing the student with the skills of sterilization and bacterial cultivation.****2-Knowing how to preserve pathological samples and food materials** |
| **Teaching and learning methods:****The student learns basic microbiology and links practical and theoretical subjects** |
| **Evaluation methods:****Surprising daily exams****Monthly exams****Semester and final exams** |
| C. Sentimental and value goals : 1.Analytical skills that enable the student to know the function of the immune system in the body 2. Knowledge of sterilization and disinfection methods. |
| Teaching and learning methods :Training in the laboratory on how to detect microscopic organisms and prevent infection with them |
| Evaluation methods :Daily, monthly and quarterly exams |
| D. Generic and transferable skills (other skills related to employability and personal development)Linking microbiology and immunology |

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|  **11. courrse structure**  |
| **the week** | hours | Required learning outcomes | Name of the Unit/topic | Teaching method | Evaluation method |
| **weekly** | 3 theoretical+ 3 practical | Add learning outcomes | General Microbiology |  theoretical+ practical | Examination |
| **weekly** | 2 theoretical+ 2 practical | Add learning outcomes | Immunity |  theoretical+ practical | Examination |
| **weekly** | 3 theoretical+ 2practical | Add learning outcomes | Special microbiology |  theoretical+ practical | Examination |
| **weekly** | 2 theoretical+ 2 practical | Add learning outcomes | Viruses |  theoretical+ practical | Examination |

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| 12 . Infrastructure : |
| Required prescribed books | Prescribed methodological books |
| Main references | Supporting sources for each course |
| Recommended books and references (scientific journals, reports, etc.) | Basic journals in veterinary and scientific specialties |
| Scientific references and websites | Al-Muthanna University e-learning website |
| 13 . Course development plan : |
| Adding vocabulary to the curricula not exceeding 10% . |
| *This academic program description provides a summary of the most important characteristics of the program and the learning outcomes that the student is expected to achieve, demonstrating whether he or she has made the most of the learning opportunities available. It must be linked to the program description* |
| *1 . Educational institution* | *College of Veterinary Medicine* |
| *2 . Scientific Department/ Center* | *Branch of Physiology , Pharmaceuticals and Biochemistry* |
| *3 .Course name/code* | *General chemistry, physiology , biochemistry, drugs and toxins, parasitology**GCH,PHY,BIO,PHA,PAR* |
| *4 .Available forms of attendance* | *Theoretical/practical* |
| *5 . Semester/year*  | *Annual/quarterly* |
| *6 .Number of study hours (total)* | *75,30,75,90,75,75* |
| *7 Course objectives* | *1 .Understanding the functions of cells and the functions of systems and organs**2 .Understanding the biochemical processes taking place within the body**3 . Identify medicines, their composition, benefits and harms to the body**4 .Knowing toxins and dealing with them**5 .Knowledge of parasitic diseases and methods of diagnosing and preventing them* |
| *Course outcomes, learning methods, teaching and evaluation* |
| *Cognitive objectives:**1 .Knowing and understanding the functions of the body’s organs and systems**2 .Understanding chemistry and biochemistry**3 . Identify toxins and methods of classifying them**4 . Learn about methods of diagnosing and treating parasitic diseases* |
| *Skills objectives :**1 . Providing the student with the skills to understand body functions**2 .Providing the student with the skills to understand cellular metabolism and interactions within the body**3 . Providing the student with knowledge of drugs and poisons**4. Methods of diagnosing and culturing eggs for various parasites**5 .Knowing the relationship between parasitic infections and the diseases they cause between humans and animals* |
| *Learning and teaching methods :**The theoretical side and the practical side* |
| *Evaluation methods :**Surprising daily exams**Monthly exams**Semester and final exams* |
| *C. Emotional and value goals :**1. Enables the student to know the function of the body .**2 . Make the student know how to draw a complete picture of the body’s functions .**3.Enabling the student to make the correct choice of veterinary medicines* |
| Teaching and learning methods :Displaying videos, shapes, pictures, and models that increase the student’s understanding of physiological and chemical processes |
| Evaluation methods :Daily, monthly, and quarterly exams |
| D. Generic and transferable skills (other skills related to employability and personal development)1. Increasing the student’s skills in understanding physiological and chemical processes and methods for manufacturing medicines and poisons2. Knowing the methods of diagnosing parasitic diseases |

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| **11. courrse structure**  |
| **the week** | hours | Required learning outcomes | Name of the Unit/topic | Teaching method | Evaluation method |
| weekly | 2 theoretical+ 2 practical | Add learning outcomes | biology |  theoretical+ practical | Examination |
| weekly | 3 theoretical+ 2 practical | Add learning outcomes | parasitology |  theoretical+ practical | Examination |
|   |   | Add learning outcomes |   |   |   |

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| **11. courrse structure**  |
| **the week** | hours | outputs learning required | Name of the Unit/topic | Teaching method | Evaluation method |
| weekly | 3 theoretical+ 2practical | Add output learning  | General chemistry |  theoretical+ practical | Examination |
| weekly | 4 theoretical+ 2 practical | Add output learning  | physiology |  theoretical+ practical | Examination |
| weekly | 3theoretical+ 2 practical | Add output learning  | Biochemistry |  theoretical+ practical | Examination |
| weekly | 2 theoretical | Add output learning  |   |  theoretical+ practical | Examination |
| weekly | 3 theoretical+ 2practical | Add output learning  | poisons |  theoretical+ practical | Examination |

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| 12 . Infrastructure : |
| Required prescribed books | Prescribed methodological books |
| Main references | Supporting sources for each course |
| Recommended books and references (scientific journals, reports, etc.) | Basic journals in veterinary and scientific specialties |
| Scientific references and websites | Al-Muthanna University e-learning website |
| 13 . Course development plan : |
| Adding vocabulary to the curricula not exceeding 10% . |

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| *This academic program description provides a summary of the most important characteristics of the program and the learning outcomes that the student is expected to achieve, demonstrating whether he or she has made the most of the learning opportunities available. It must be linked to the program description* |
| *1. Educational institution* | College of Veterinary Medicine |
| *2.Scientific Department/Center* | Branch of Internal and Preventive Medicine |
| *3. Course name/code* | Internal medicine , infectious diseases, pathological diagnoses, common diseases, veterinary application, summer veterinary applicationIMD,CDI,CPA,CDI,PVI,SVP |
| *4 .Available forms of attendance* | Theoretical/practical |
| *5. Semester/year*  | Annual/quarterly |
| *6 .Number of study hours (total)* | 90,30,30,90,90,90 |
| *7 . Course objectives* | 1 .Identify diseases that affect animals, methods of diagnosing them, diagnosis, differentiation, prevention and treatment2 . Identify diseases common between humans and animals3 .Knowledge of laboratory diagnostic methods |
| *Course outcomes, learning methods, teaching and evaluation* |
| 1. *Cognitive objectives :*

*1. Enable the student to know the diseases that affect animals**2 .Understanding diagnostic and treatment procedures**3.Knowledge of diseases common between humans and animals**4.Empowering and training students in clinical and laboratory diagnosis* |
| 1. *Skills objectives :*

*1 Providing the student with diagnostic skills.**2 . Providing the student with animal examination skills**3. Providing the student with knowledge of laboratory diagnosis* |
| *Learning and teaching methods :**The theoretical aspect, the practical aspect and the veterinary hospital* |
| *Evaluation methods :**Surprising daily exams**Monthly exams**Semester and final exams* |
| *C. Emotional and value goals :**1. Enables the student to know the methods of examining animals .**2. Make the student knowledgeable about diagnosing and treating animals .**3. Knowledge of animal treatment methods* |
| *Teaching and learning methods :**Examine the animal clinically, record the clinical signs, take samples for laboratory examination, and link the signs with the test results to reach the correct diagnosis and prescribe the appropriate treatment and how to administer it .* |
| *methods :**Daily, monthly and quarterly exams* |
| *D*. Generic and transferable skills (other skills related to employability and personal development)1. Increasing the student’s clinical and laboratory diagnosis skills |

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| **11. courrse structure**  |
| **the week** | hours | Required learning outcomes | Name of the Unit/topic | Teaching method | Evaluation method |
| weekly | 3 theoretical | Add learning outcomes | internal medicine |  theoretical | the exam |
| weekly | 3 theoretical | Add learning outcomes | infectious and epidemic diseases |  theoretical | the exam |
| weekly | 1 theoretical+ 2practical | Add learning outcomes | pathological diagnoses |  theoretical+ practical | the exam |
| weekly | 2 theoretical | Add learning outcomes | common diseases |  theoretical | the exam |
| weekly |  13 practical | Add learning outcomes | veterinary application | practical | the exam |
| weekly | 3 practical | Add learning outcomes | summer veterinary aplication | practical | the exam |
|   |   | Add learning outcomes |   |   |   |

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| **12 . Infrastructure :** |
| **Required prescribed books** | **Prescribed methodological books** |
| **Main references** | **Supporting sources for each course** |
| **Recommended books and references (scientific journals, reports, etc.)** | **Basic journals in veterinary and scientific specialties** |
| **Scientific references and websites** | **Al-Muthanna University e-learning website** |
| **13. Course development plan :** |
| **Adding vocabulary to the curricula not exceeding 10% .** |

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| **This academic program's description provides a brief including most important features of the program and learning outcomes which are expected to be achieved by students to proof if they benefit from available learning opportunities. And it's necessary to connect them with the program's description.** |
| **1. Educational institution** | College of veterinary medicine |
| **2.Scientific department / Center** | Department of surgery and obstetrics |
| **3.Name / Code of curriculum** | Veterinary surgery، Fertility Genital diseases، Veterinary obstetrics، Artificial insemination، Reproduction techniquesSUR,FF,VO,AI,RT |
| **4.Available forms of attendance** | Theoretical/ Practical |
| **5.Semester/ year** | Yearly/Semesterical |
| **6.Number of study hours (total)** | 90,60,60,60 |
| **7. Goals of curriculum** | 1. Learning basics of surgery and animal surgical procedures2.Anatomy of reproductive system and differential anatomy and the most important diseases of female reproductive system3. Diseases of male genital system and artificial insemination4. Learning the latest updates of in vitro fertilization and assisting reproduction techniques |
| **Outcomes of curriculum and methods of learning, education and evaluation** |
| **Cognitive goals****1. Enabling students to know about genital diseases and ways of treating them****2.Understanding surgical cases and how to deal with them****3 .Learning basics of anesthesia in animals****4.Enabling and training student on artificial insemination technique****5. Learning methods of collecting semen, examining it, evaluating it and injecting it****6.How to deal with cases of dystocia and pregnancy problems****7.Learning most important modern methods to help treating poor fertility and infertility** |
| **Skill goals****1. Giving students skills of anesthesia and performing major and minor surgeries****2. Giving students skills to perform obstetrical maneuvers****3. Giving students skills of collecting semen, examining it and evaluating it** |
| **Methods of learning and education****Theoretical side and practical side and veterinary hospital** |
| **Methods of evaluation****Daily quizzes****Monthly exams****Semesterical and final exams** |
| **Sentimental and valuable goals****1.****Enabling students to know about surgical procedures and to use diagnosis instruments such as X-Ray and endoscope****2.****Enabling students to know how to deal with cases of dystocia****3.****Knowing basics of pregnancy testing in different methods** |
| **Methods of education and learning****1.****Field training in veterinary hospital on incoming surgical and obstetrical cases and how to deal with them****2.****Rectal palpation to detect pregnancy in large animals** |
| **Methods of evaluation:****Daily and monthly and semesterical exams** |
| **Common and transferred skills (other skills related to ability to employment and personal development)****1.****Increasing students' skills to perform surgical or obstetrical procedures and methods of pregnancy diagnosis in different animals** |

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| **11. courrse structure**  |
| **the week** | hours | Required learning outcomes | Name of the Unit/topic | Teaching method | Evaluation method |
| weekly | 1 theoretical | Add outcomes of learning  | veterinary obstetrics |  theoretical | Exams |
| weekly |  2 practical | Add outcomes of learning  | veterinary obstetrics | obstetrics room | Exams |
| weekly | 2 theoretical | Add outcomes of learning  | fertility and genital deseases |  theoretical | Exams |
| weekly |  2 practical | Add outcomes of learning  |   |  |  |

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| 12.Infrastructure |
| Required curriculum books | Systematic curriculum books |
| Main references | Supportive references for every curriculum |
| Recommended books and references (scientific journals, reports, etc) | Basic journals in veterinary and scientific specializations |
| Scientific references and websites | Almuthanna university electronic education website |
| 13. Curriculum development plan |
| 1. Construction of a surgery room supplied with modern devices that help in accurate diagnosis and conducting surgeries and treating dystocia2. Construction of a lab for artificial insemination and reproduction assistant techniques3. Construction of veterinary Ultrasound device unit |

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| **This academic program's description provides a brief including most important features of the program and learning outcomes which are expected to be achieved by students to proof if they benefit from available learning opportunities. And it's necessary to connect them with the program's description.** |
| **1.Educational institution** | College of veterinary medicine |
| **2.Scientific department / Center** | Department of anatomy and histology and embryology |
| **3.Name / Code of curriculum** | Anatomy, histology, embryologyANA,HIS,EMB |
| **4.Available forms of attendance** | Theoretical/ Practical |
| **5.Semester/year** | Yearly/ semesterical |
| **6.Number of study hours (total)** | 150,150,15 |
| **Goals of curriculum** | 1. Learning basics of anatomy and organs and systems of body and blood and nerve supply2. Knowing histological composition for body organs3. Knowing development of embryos and ways to conduct tissue dissection |
| **Outcomes of curriculum and methods of learning, education and evaluation** |
| **Cognitive goals****1. Enabling students to know ways of killing and dissecting an animal and ways of course samples preservation****2. Understanding histology and methods of making tissue dissection****3. Understanding embryology and methods to identify fetus age** |
| **Skill goals****1. Teaching students skills of correct anatomy and comparative anatomy and ways of corpse reservation****2. Teaching students skills of tissue dissection****3. Teaching students skills of embryo development and identifying age** |
| **Ways of education and learning****Theoretical side and practical side and veterinary hospital** |
| **Ways of evaluation****Daily quizzes****Monthly exams****Semesterical and final exams** |
| **Sentimental and valuable goals****1. Enabling students to distinguish between intact and damaged organs after anatomy****2. Enabling students to know how important tissue dissection is to detect changes** |
| **Ways of education and learning****Training students on anatomy and differential anatomy and special features of organs for different species of animals** |
| **Methods of evaluation****Daily monthly and semestrial exams** |
| **Common and transferred skills (other skills related to ability to employment and personal development)****Increasing students’ skills about importance of anatomy, histology and embryology and connecting them to other sciences** |

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| **11. courrse structure**  |
| **the week** | hours | outputs learning required | Name of the Unit/topic | Teaching method | Evaluation method |
| weekly | 2 theoretical+3practical | Add learning outcomes | veterinary anatomy |  theoretical+ practical | Exams |
| weekly | 2 theoretical+ 3 practical | Add learning outcomes | veterinary histology |  theoretical+ practical | Exams |
| weekly | 1theoretical | Add learning outcomes | veterinary embryology |  theoretical+ practical | Exams |

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| 12. Infrastructure |
| Required curriculum books | Systematic curriculum books |
| Main references | Supportive references for every curriculum |
| Recommended books and references (scientific journals, reports, etc) | Basic journals in veterinary and scientific specializations |
| Scientific references and websites | AL-Muthanna university electronic education website |
| 13. Curriculum development plan |
| Adding curriculums that keep pace with development in these sciences and according to determined proportion |

**First Year**

1. muscular Anatomy
2. Animal husbandary
3. Computer science
4. General chemistry
5. Poultry Management
6. English language
7. Democracy and human rights
8. skeleton anatomy
9. Animal Management
10. Bio-Risk Management
11. Biology General
12. Arabic language

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**Second Year**

1. **Anatomy**
2. **nutrition**
3. **Physiology**
4. **Biochemistry**
5. **Histology**
6. **Embryology**
7. **Genetics**
8. **Biostatistic**

First semester **( 1st)**subjects

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Subjects** | **Hours** | **Units** | **Total**  | **Codes** |
| Theoretical | Practical | Theoretical | Practical |
| **1** | Anatomy | 2 | 2 | 2 | 1 | 3 | Anat1st |
| **2** | Histology | 2 | 3 | 2 | 1.5 | 3.5 | Hist1st |
| **3** | Physiology  | 4 | 2 | 4 | 1 | 5 | Phy1st |
| **4** | Biochemistry | 3 | 2 | 3 | 1 | 4 | Bioc1st |
| **5** | Animal nutrition | 2 | 2 | 2 | 1 | 3 | AN1st |
| **6** | Genetic | 2 | 0 | 2 | 0 | 2 | Gen1st |
| Total  | 15 | 11 | 15 | 5.5 | 20.5 |  |

S**econd semester( 2nd ) subjects**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Subjects** | **Hours** | **Units** | **Total**  | **Codes** |
| Theoretical | Practical | Theoretical | Practical |
| **1** | Anatomy | 2 | 2 | 2 | 1 | 3 | Anat 2nd  |
| **2** | Histology | 2 | 3 | 2 | 1.5 | 3.5 | Hist 2nd  |
| **3** | Physiology  | 4 | 2 | 4 | 1 | 5 | Phy 2nd  |
| **4** | Biochemistry | 3 | 2 | 3 | 1 | 4 | Bioc 2nd  |
| **5** | Animal nutrition | 2 | 2 | 2 | 1 | 3 | AN 2nd  |
| **6** | Embryology  | 1 | 0 | 1 | 0 | 1 | Emb 2nd  |
| **7** | Statistics  | 2 | 2 | 2 | 1 | 3 | Stat 2nd  |
| Total  | 16 | 13 | 16 | 6.5 | 22.5 |  |

**Third Year**

1. Veterinary Clinic
2. Immunity
3. Microbiology
4. Parasitology
5. Pathology
6. Pharmacology
7. Toxicology

F**irst semester ( 1st ) subjects**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Subjects** | **Hours** | **Units** | **Total**  | **Codes**  |
| Theoretical | Practical | Theoretical | Practical |
| **1** | Pathology | 3 | 3 | 3 | 1.5 | 4.5 | Path 1st  |
| **2** | Pharmacology | 3 | 2 | 3 | 1 | 4 | Pharm 1st  |
| **3** | Parasitology  | 3 | 2 | 3 | 1 | 4 | Para 1st  |
| **4** | Microbiology | 3 | 3 | 3 | 1.5 | 4.5 | Micro 1st  |
| **5** | Immunology | 2 | 2 | 2 | 1 | 3 | Immun 1st  |
| **Total**  | 14 | 12 | 14 | 6 | 20 |  |

**Second semester ( 2nd ) subjects**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Subjects** | **Hours** | **Units** | **Total** | **Codes** |
| Theoretical | Practical | Theoretical | Practical |
| **1** | Pathology | 3 | 3 | 3 | 1.5 | 4.5 | Path 2nd |
| **2** | Pharmacology | 3 | 2 | 3 | 1 | 4 | Pharm2nd |
| **3** | Parasitology | 3 | 2 | 3 | 1 | 4 | Para 2nd |
| **4** | Microbiology | 3 | 3 | 3 | 1.5 | 4.5 | Micro 2nd |
| **5** | Toxicology | 2 | 0 | 2 | 0 | 2 | Toxo 2nd |
| **6** | Clinic | 0 | 2 | 0 | 1 | 1 | Clin 2nd |
| **Total**  | 14 | 12 | 12 | 6 | 20 |  |

**Fourth Year**

1. **Veterinary clinic**
2. **Medicine**
3. **Infectious diseases & epidemiology**
4. **Female fertility and venereal diseases**
5. **Poultry diseases**
6. **Surgery**
7. **clinical pathology**
8. **Zoonotic diseases (2nd semester)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Subjects** | **Hours** | **Units** | **Total****Units** | **Codes** |
| Theoretical | Practical | Theoretical | Practical |  |  |
| **1** | Clinic | 0 | 4 | 0 | 4 | 4 | Clin |
| **2** | Medicine | 3 | 0 | 6 | 0 | 6 | Med |
| **3** | Infectious diseases &epidemiology | 3 | 0 | 3 | 0 | 6 | Infec& Epid |
| **4** | Female fertility | 2 | 2 | 4 | 2 | 6 | FF |
| **5** | Poultry diseases | 2 | 2 | 4 | 2 | 6 | PD |
| **6** | Surgery | 3 | 2 | 6 | 2 | 8 | Surg |
| **7** | Clinical pathology | 1 | 2 | 2 | 2 | 4 | CP |
| **8** | Zoonotic diseases (2nd semester) | 2 | 0 | 2 | 0 | 2 | ZD |
| Total | 16 | 12 | 27 | 12 | 42 |  |

**Fifth Year**

1. **Medicine**
2. **Surgery**
3. **Veterinary public health**
4. **Obstetrics**
5. **Research project**
6. **Fish diseases**
7. **Morbid anatomy & forensic medicine**
8. **Veterinary ethics**
9. **Summer Clinic**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Subjects** | **Hours** | **Units** | **Total****Units** |
| Theoretical | Practical | Theoretical | Practical |  |  |
| **1** | Clinic | 0 | 13 | 0 | 13 | 13 | Clin |
| **2** | Medicine | 3 | 0 | 6 | 0 | 6 | Med |
| **3** | Surgery | 2 | 2 | 4 | 2 | 6 | Surg |
| **4** | Veterinary public health | 2 | 2 | 4 | 2 | 6 | VPH |
| **5** | Obstetrics | 1 | 2 | 2 | 2 | 4 | Obst |
| **6** | Research project | 1 | 0 | 2 | 0 | 2 | RP |
| **7** | Fish diseases (1st semester) | 1 | 1 | 2 | 2 | 2 | FD |
| **8** | Morbid anatomy & forensicMedicine (2nd semester) | 1 | 2 | 1 | 1 | 2 | MA |
| **9** | Veterinary ethics (2nd semester) | 1 | 0 | 1 | 0 | 1 | VE |
| **10** | Summer Clinic | 0 | 3 | 0 | 2 | 2 | SClin |
| **Total** | 12 | 26 |  |  | 44 |  |