Zagazig University

Faculty of Veterinary Medicine

# ProgrammeSpecification

## *Bachelor of Veterinary Medicine*

## *(Poultry medicine)*

## *(BVMSc-PM)*

### *CREDIT HOURS*

***Facultycouncil approval Date: 10 -10- 2022***

***Ministry decree: 29-8-2022***

**(2022-2023)**

# Programme Specification (2022-2023)

**Zagazig University** **Faculty of Veterinary Medicine**

## Programme specification

## Basic information

1- **ProgrammeTitle:**Bachelor of Veterinary Medicine (Poultry medicine)
2- **Programme type:** Single
3- **Departments: A- Faculty Departments**

1. Anatomy and Embryology
2. Histology
3. Biochemistry&Molecular Biology
4. Physiology
5. Pathology
6. Nutrition and Clinical Nutrition
7. Behavior and Management of Animal, Poultry and Aquatic life
8. Parasitology
9. Virology
10. Microbiology
11. Pharmacology
12. Clinical Pathology
13. Forensic Medicine, Toxicology&Vet. Regulations
14. Veterinary Public Health
15. Hygiene, Safety and Technology of Food
16. Aquatic life Medicine
17. Avian and Rabbit Medicine
18. Animal Medicine
19. Surgery ,Anaesthesia and Radiology
20. Gynecology and Obstetrics
21. Zoonoses
22. Animal Wealth Development

**B- Dean'scapinet nominates the responsible staff members for the teaching and learning of (** Ethics and Professional MoraL, Risk and Crisis Management and Sociological Problems**).**

**C- Other departments and other organizations share in training.**

**4-External Institutions:** ELP Centre of Zagazig University "English Language and Terminology" (ELT 101)

**5-Date of program approval:** The program was approved by the Ministry decree No. 3229 on 29-8-2022.

**6-The start date of the study in the program:** 2022-2023

**7-Date of programme specification approval:** (Faculty council approval 10/10/2022).The current bylaw is issued by the ministerial decree no. 3229 on 29-8-2022. The Bachelor of Veterinary Medicine (poultry medicine) programme was reviewed and approved (Faculty council 10 -10- 2022).

8-**The last adoption with NARS**

According to the approved reviewing study (28-11-2020) for adoption and application of NARS Feb. 2009 and justification matching of program specification to fulfill the NARS, The last adoption with NARS in faculty council 10-10-2022.

**9- Program Coordinator**:Dr.Shimaa Ahmed Mohamed Ezzeldein

Assistant professor of Surgery, Anaethesiology and Radiology, Faculty of Veterinary Medicine, ZagazigUniversity

**10-External evaluator:** Committee nominated by Faculty Council.

Prof. Dr.Mahmoud Mousa Ismail

Professor of Avian and Rabbit medicine,Faculty of Veterinary Medicine, Kafer Elsheikh University.

**11- Internal evaluator:**Dr. Ashraf Hamed

Assistant Professor of Avian and Rabbit Medicine, Faculty of Veterinary Medicine, ZagazigUniversity.

# B- Professional Information

## 1 - Programme aims

The main objective of the Faculty of Veterinary Medicine–Zagazig University is to supply the local, national, and regional societies with highly qualified veterinarians able to:

1. Recognize the scientific basis of veterinary and poultry medicineand apply that understanding to veterinary practice ethically with legal frame.
2. Comprehend poultry and animal diseases at a molecular, cellular, systemic, individual, and population level.
3. Combine their knowledge into the effective diagnosis, medical management and treatment of sick poultry and animals and other health-related issues.
4. Utilize the scientific veterinary research concepts (uncovering curiosity and criticism…..etc) as well as cooperation and working in groups.
5. Find out and use medical information. They should engage in lifelong learning to remain current in their understanding of the scientific basis of poultry medicine and other veterinary fields.
6. Promote the health of poultry and animals in addition the public through client and public education, service, and action.
7. Distinguish the important and diverse roles that poultry and animals play in the health, economics, food-supply, recreation, and well-being of mankind.
8. Be aware that the BVMSc (Poultry Medicine) degree is an entry-level degree and that, to function effectively as a distinguished veterinarian Poultry Medicine or as a specialist, they will need to invest considerable additional educational time and efforts.

## 2 - Intended learning Outcomes (ILOs)

### a - Knowledge and Understanding

The Zagazig Veterinary Medicinegraduates(poultry medicine) should be able to:

a.1- Distinguish some terminology,differentexpressionsand suffix used in the veterinary and poultry field.

a.2- Recognize the mechanisms of preserving the body's homeostasis, the macro and microscopical picture of normal tissue and different types of injuries in animal and poultry.

a.3- Describe the naked eye and histopathological picture with functional correlation of different body tissues and organs in different animals and poultry

a.4- Identify the physiologicalfunction of the major body organs and systems with reference to nervous, circulatory and respiratory system and distinguish the different components of blood and their function**.**

a.5- Recognize the embryological development of the genital system and possible malformation, the basic of ultra-sonography application to be used in pregnancy diagnosis in rabbit and different animal species.

a.6- Acquire the fundamentals of computer science, biostatistics and biochemistry, as well as their applications in animal and poultry breeding and prevention of infection.

a.7- Identify the inheritance basis of different types of traits in animal and poultry flocks and the genetic base of population genetics and environment.

a..8- Acquire supplementary sciences to enhance computer abilities for managing poultry and animal farms and protecting poultry and other animals.

a.9- Recognize principles in poultry behavior and have good knowledge about proper methods of achieve welfare in massive poultry production.

a.10- Acquire knowledge on the various causes of autoimmune diseases and the principles of adequate nutrition, normal feeding patterns

a.11- Distinguish the genetic makeup of commonanimal and poultry breeds within neighboring localities.

a.12- Identify the normal behavior and abnormal ones.

a.13- Recognize the different methods to control and prevent diseases which causing infertility in different animal species and poultry.

a.14- Recognize the embryological development of the genital system and possible choosing the excellent specimens for artificial insemination the economic impact and factors on the delivery of reproductive health care helping in increase the economic factor of breeding

a.15- Define the different methods to control and prevent internal and infectious diseases and the economic impact of surgical judgment.

a.16- Identify the suitable methods of differentialdiagnosis of poultry and animal diseases and microbial detection.

a.17- Recognize pathogenesis, clinical signs and various microbiologic causes of disorders in poultry, detection of bacteria, helminths, protozoa and arthropods.

a.18- Describe the effect of different diseases on body organs which make changing the normal function of organs and systems and make differential diagnosis between different poultry diseases

a 19 - Identify the most suitable methods of treatment of diseases with choosing the medicaments and doing the most effective protocol of treatment.

a.20- Distinguish the methods of the Production of healthy milk, egg, meat and chicken without drug residues or infection.

a.21- Recognize the different methods of milk and meat adulteration and how to make detection of it.

a.22- Identify the fundamental concepts of poultry bacteriology,mycology, immunology, virology Parasitology and occupational zoonotic diseases
a.23- Identify the basics of taking decision of debridement of dairy and poultry meat, requirementsforpoultry and animal transport, slaughter houses and storage of meat and its products.
a.24- Recognizeavian, rabbit and fish diseases toxicological condotionsand their prophylactic and control measures.
a.25- Define the different methods to control and prevent infectious diseases causing waste in animal and poultry flocks.
a.26- Recognize poultry and animal health maintenance application in order to prevent transmission of infection
a.27. Distinguish the rules of Veterinary quarantine and the epidemiology.
a.28. Recognize the permissible limits of pollutants in water, feed and air and soil
a.29. Recognize principles of sterilization of surgical cloths, instruments as well as disinfections of site of operationand disinfection of poultry farms.
a.30- Distinguish different stages of death and the medico legal importance of each one, the types of asphyxial death and their mechanism of action. Identify forensic chemistry of blood stain, physical injuries and wounds of poultry
a.31. Define the different methods of anesthesia in different poultry and animal species, preoperative techniques as well as general surgical procedures.
a.32. be aware to follow the legal and ethical methods for meat and food safety and hygiene
a.33. Select the appropriate method of euthanasia of poultry and animals helping in environmentalsafety.
a.34, Differentiate between sound and unsound poultry and animals to make management and control of the flock
a.35- Be aware of Sociological problems and different methods for communication.

**b - Intellectual skills**

The Zagazig Veterinary Medicine graduates (poultry medicine) must be able to:
b.1- Identify critical clinical queries arising from case interaction in poultry and animal.
b.2- Differentiate between normal and abnormal behavior of different animals,fish and poultry
b.3- Interpret the macro and microscopical picture of different body organs andcausative agents in different diseases, wounds ,asphyxial deaths and physical injuries affections.
b.4- Have a commitment to continuous learning and categorize information from a number of sources in order to gain a coherent understanding of theory and practice.
b.5- Determine the strategies for appropriate selection of most suitable method of approach in, biochemistry, microbiological, forensic medicine and clinical pathology
b.6- Employ problem solving skills and a commitment to continuous learning.

b.7- Differentiate problems and finding solution in field inbreeding problems and find solution to overcome veterinary congenital defectsand use all poultry byproducts.
b.8- Locate the appropriate method of medicinaltreatmentin different medicinal diseases.
b.9- Utilize the basic knowledge of poultry science to improve poultry production with suitable vaccination programs, the most effective methods of meat and egg safety and hygiene.
b.10- evaluate the normal anatomical and physiological state of all animals' species during feeding, standing and recumbent position
b.11. Interpret the results of sensitivity to different antibiotics and antimycotics depending on disc diffusion test of pathogenic bacteria and fungi.
b.12- Employ the pharmacological characters of medicine to help in medicinal induction.
b. 13-Classify the zoonotic and infectious diseases for choosing the suitable treatment protocol.
b.14- Employ the surgical and gynecologicalinterference to help in surgical treatment of different animals and poultry cases, gynecological examination and treating obstetricalcomplications.
b15- analyze the statistical information using the recent computer programs and give a conclusion.

**c - Professional and practical skills**

The Zagazig Veterinary Medicine graduates(poultry medicine) must be able to:
c.1- Apply the safety handling methods of different animals and poultry,making recommendation on behavioral poultry disorders and apply the ethical codes and behave in a professional manner.
c.2- Isolate different helminths in tissues and demonstration of their reactions in such tissues by naked eye.
c.3- Carryout all the laboratories examination for diagnosis of diseases.
c.4- Diagnose different metabolic diseases and make differential diagnosis of viral,bacterial, mycotic and parasitic diseases of poultry and animals and Isolate bacteria and fungi from different sources.
c.5- Differentiate between different nutritional needs and detect the suitable ration of poultry and other animals.
c.6- Apply the most effective method of anesthesia in different animal and poultry cases
c.7- Make different methods of naked eye al examination of the dead animals and take the suitable specimens for diagnosis of different lesions.
c-8- Apply different surgical operations and obstetrics procedures for different animals and poultry.
c.9- Take case history of the diseased poultry and different animal species.
c.10- Implement procedures of disinfection and discarding the dangerous carcass.

c.11- Treat the diseased cases effectively and choose the suitable medicament.
c.12- Choose the suitable analgesics, apply saline solutions and overcome the emergency period.
c.13- apply the appropriate laboratory safety procedures,disinfection and sterilization.
c.14- Apply marketing studies for poultry production
c.15- Apply different methods of meat and milk inspection.
c.16- Apply preventive measures in veterinary premises and fields.
c.17. Using the most recent method of diagnosis of diseases as ultrasonography, X-ray, CT ,MRI and chromatography.
c.18- Apply the doses of anesthesia for making humanely euthanasia in different animals and poultry.
c.19- Detect the sex of poultry and different breeds. Discriminate poultry production levels. Evaluate the effect of stress on poultry production and reproduction
.c.20- Examine histopathological lesions under microscope to detect the affection and make different sensitivity tests for bacteria and microscopical diagnosis helminths, protozoa and arthropods their different stages to identify them.
c.21- Carryout suitable procedure of vaccination in different poultry and animal species.
c.22- Practice skilled competent and evaluative scientific experiment and test.
c.23- Isolate differentmicrobiological, bacteriological and mycotic agents that causes diseases.
c.24- Isolate different etiological agents of viral diseases indifferent animals and poultry species.
c.25- Identify the metabolic causes of diseases and nutritional deficiency.
c.26- Identify different types of toxic agents and application of forensic medicine rules.

**d - General and transferable skills**

The Zagazig Veterinary Medicine graduates(poultry medicine must be able to:
d.1- Co-operate successfully with colleagues.
d.2- Participate in team work to achieve a specific task for solving histological and behavior related problems.
d.3- Perform research on common causes of endemic diseases in the surrounding areas
d.4- Demonstrate knowledge of the organization and management of animal and poultry farms,vaccination, and using byproducts.
d.5- be familiar with different critical cases and working in complicated cases with the utilizing of medical pharmacological characters.
d.6- Acquire computer skills in obtaining information from web sites and application of software in the bioscience.
d.7- Evaluate own performance in diagnosis of different zoonotic diseases and toxicological cases.
d.8- Cooperatein team work for solving a specific nutritional and feeding problems

d.9- cooperate the team work for doing surgical operation task and gynecological interference.
d.10-cooperate the team work for correct diagnosis of physiological disorders, internal disease bacterial, viral and parasitic causes of diseases
d.11-Perform research on common causes of carcasscondemnation, slaughter houses and differentiationbetweennormal and abnormal chickens and different milk, blood, serum analysis.
d.12- Debatedatafrom different animals and poultry problems through naked eye andmicroscopic examination
.d.13- Evaluate own performance in laboratory work
d.14- Utilize information technology for preparation of follow-up seminarinmeatand milk technology, forensic medicine and toxicology.
d.15- preparation of oral presentation in different causes of poultry diseases,safety, meathygiene and marketing

## 3-Academic standards

**3.1-**The national academic reference standards (NARS) of veterinary medicine issued by national authority of quality assurance and accreditation for education (NAQAAE) were adopted by the faculty council 12/4/2010. The last adoption date, Faculty council 10-10-2022

### 3.2- Comparison of provision to external references:

### 3.2.1- Comparing the NARS with Bachelor of Veterinary Medicine (Poultry medicine) (BVMSc-PM) programme ILOS

| **Knowledge and understanding** | |
|---|---|
| **NARS** | **BVMSc (Poultry medicine) Programme ILOS** |
| 1 | a 1,6,7,8 |
| 2 | a 9, 11, 12, 14, 25 |
| 3 | a 3 |
| 4 | a 2,4 |
| 5 | a 13, 26,34 |
| 6 | a 10 |
| 7 | a 15,16,17,18 |
| 8 | a 19,20 |
| 9 | a 25 |
| 10 | a 5,30, 31 |
| 11 | a 22,24 |
| 12 | a 27,29 |

| | |
|---|---|
| 13 | a 21,23,32,33 |
| 14 | a 26,32 |
| 15 | a 28,30, 35 |
| **Intellectual Skills** | |
| **NARS** | **BVMSc-PM Programme ILOS** |
| 1 | b 1,3,10 |
| 2 | b 2,14 |
| 3 | b 4, 5, 7,13 |
| 4 | b 8,9,11,12 |
| 5 | b 1,6,15 |
| **Professional and practical skills** | |
| **NARS** | **BVMSc-PM Programme ILOS** |
| 1 | c 3,6,7,8,14,17,21 |
| 2 | c 1,18 |
| 3 | c 9,23,24,25,26 |
| 4 | c 3,20 |
| 5 | c 12, c 22 |
| 6 | c 15 |
| 7 | c 5,19 |
| 8 | c 11,12 |
| 9 | c 2,4 |
| 10 | c 11, 12 |
| 11 | c 13 |
| 12 | c 10, 15, 16 |
| 13 | c 13 |
| **General and transferable Skills** | |
| **NARS** | **BVMSc- PM Programme ILOS** |
| 1 | d 5 |
| 2 | d 1,8,9,10 |
| 3 | d 2, 6 |
| 4 | d 4 |
| 5 | d 3,11,12 |
| 6 | d 7,13,14,15 |

**3.2.2- Comparing the adopted NARS with Bachelor of Veterinary Medicine (Poultry MedicineBVMSc-PM)program structure.**

**Total Credit hours:**

Obligatory courses: 170 credit hours

Elective courses: 20 credit hours

Training: One academic year (Prime Minister Decree No.407,2021,Article No.183)

- **Training:**

One year of field training in veterinary medicine work and employing
Number of hours: Representative with a total contact hours :1080
Percentage of training: 21.9 %

- **Computer and ICT :**

| Items | Lectures | Practical | Training | Total core | Elective | Total core + elective |
|---|---|---|---|---|---|---|
| **Credit** | 113 | 57 | - | 170 | 20 | 190 |
| **Contact hours** | 1695 | 1710 | 1080 | 4485 | 435 | 4920 |

ICDL isn’t required to obtain a bachelor's degree

-Biostatistics and computer serve ICDL, therefore, a section on teaching computer science in the course title was added in line with NARS 2009, and the new course specification of the biostatistics and computer courses beside the other courses with percentage of 1.8 %.

# Program Structure and components:

## Obligatory courses

- University requirements

- **Humanities:**

| Courses | Credit houres | No. of houres | | Prerequisite courses | Code | المقرر |
|---|---|---|---|---|---|---|
| | | Pra. | Lec. | | | |
| English and Medical Terminology | 2 | - | 2 | | ELT-101 | اللغة الانجليزية والمصطلحات الطبية |
| Sociological Problems | 2 | - | 2 | | SOP-102 | القضايا المجتمعية |
| Risk and Crisis Management | 2 | - | 2 | | RCM-301 | إدارة المخاطر والأزمات |
| Ethics and Professional MoraL | 2 | - | 2 | | EPM-201 | اخلاقيات واداب المهنة |
| Feasibility Studies and Marketing | 3 | 2 | 2 | | FSM-302 | دراسات الجدوى والتسويق |
| | 11 | 2 | 10 | | | الاجمالي |

- Clinical and preclinical sciences

| Course | total | No. of houres | | Prerequisite Courses | Code | المقرر |
|---|---|---|---|---|---|---|
| | | pra | Lec | | | |
| General Histology and Cytology | 3 | 2 | 2 | | CHI-103 | أنسجة وخلايا عام |
| General Anatomy and Embryology | 3 | 2 | 2 | | ANE-104 | تشريح وأجنة عام |

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|---|---|---|---|---|---|---|
| General Vet Genetics and genetic Engineering | 2 | 2 | 1 | | AWD-105 | وراثة بيطرية وهندسة وراثية عام |
| Basic Biochemistry | 3 | 2 | 2 | | BmB-106 | اساسيات الكيمياء الحيوية |
| Biostatics and Computer | 3 | 2 | 2 | | AWD-107 | الاحصاء الحيوي والكمبيوتر |
| General Physiology | 3 | 2 | 2 | | PHY-202 | فسيولوجيا عام |
| General Nutrition and Clinical Nutrition | 3 | 2 | 2 | | NCN-203 | تغذية وتغذية الكلينيكية عام |
| General Pathology | 3 | 2 | 2 | | PAT-303 | عامباتولوجيا |
| General Bacteriology, Mycology and Immunology | 3 | 2 | 2 | | MIC-304 | بكتريولوجيا وفطريات ومناعة عام |
| General Virology | 3 | 2 | 2 | | VIR-305 | فيرولوجيا عام |
| General Parasitology | 3 | 2 | 2 | | PAR-306 | طفيليات عام |
| General Pharmacology | 3 | 2 | 2 | | PHA-307 | فارماكولوجيا عام |
| General Clinical Pathology | 3 | 2 | 2 | | CPA-401 | باتولوجيا إكلينيكية عام |
| Forensic Medicine and Vet Regulations | 3 | 2 | 2 | | TFM-340 | الطب الشرعي والاجراءات البيطرية |
| Toxicology | 3 | 2 | 2 | | TFM-402 | السموم |
| General Gynecology and Obstetrics | 3 | 2 | 2 | | OGA-406 | توليد وتناسليات عام |
| Epidemiology | 3 | 2 | 2 | | VPH-404 | وبائيات |
| Fish Diseases and Management | 3 | 2 | 2 | | ALM-410 | مراض ورعاية الأسماك |

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|---|---|---|---|---|---|---|
| General Infectious Diseases | 3 | 2 | 2 | | ANM-413 | أمراض معدية - عام |
| General Internal Medicine | 3 | 2 | 2 | | ANM-414 | أمراض باطنة عام |
| Environmental health and Pollution | 3 | 2 | 2 | VPH-411 | VPH-501 | الصحة البيئية والتلوث |
| General Surgery | 3 | 2 | 2 | | SAR-502 | جراحة عامة |
| Special Histology and Cytology | 3 | 2 | 2 | CHI-103 | CHI-108 | انسجة وخلايا خاص |
| Special Anatomy and Embryology | 3 | 2 | 2 | ANE-104 | ANE-109 | تشريح واجنة خاص |
| Special Vet Genetics and Genetic Engineering | 2 | 2 | 1 | AWD-105 | AWD-110 | وراثة بيطرية وهندسة وراثية خاص |
| Biochemistry and Molecular biology | 3 | 2 | 2 | BMB-106 | BMB-111 | الكيمياء الحيوية والبيولوجيا الجزيئية |
| General Behavior and Management of Animal and Poultry | 3 | 2 | 2 | | 204BHM- | سلوكيات ورعاية الحيوان والدواجن عام |
| General Breeding and Anim al production Economics and Farm Management | 3 | 2 | 2 | | AWD-205 | تربية وإنتاج حيواني عام |
| Economic s and farmmanagement | 3 | 2 | 2 | | AWD-206 | اقتصاد وادارة المزارع |
| Special Physiology | 3 | 2 | 2 | PHY-202 | PHY-207 | فسيولوجيا خاص |
| Special Behavior and Management of Animal and Poultry | 3 | 2 | 2 | BHM-204 | BHM-208 | سلوكيات ورعاية الحيوان |

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| | | | | | | والدواجن خاص |
| Special Breeding and Animal Production | 3 | 2 | 2 | | AWD-209 | تربية وإنتاج حيواني خاص |
| Special Nutrition and Clinical Nutrition | 3 | 2 | 2 | NCN-203 | NCN-210 | تغذية وتغذية اكلينيكية خاص |
| Special pathology | 3 | 2 | 2 | PAT-303 | PAT-308 | باثولوجيا خاص |
| Special Bacteriology, Mycology and Immunilogy | 3 | 2 | 2 | MIC-304 | MIC-309 | بكتيولوجيا وفطريات ومناعة خاص |
| Special Virology | 3 | 2 | 2 | VIR-305 | VIR-310 | فيرولوجيا خاص |
| Special Parasitology | 3 | 2 | 2 | PAR-306 | PAR-311 | طفيليات خاص |
| Special Pharmacology | 3 | 2 | 2 | PHA-307 | PHA-312 | فارماكولوج يا خاص |
| General Milk Hygiene, Safety and Technology | 2 | 2 | 1 | | 405FHS- | صحة وسلامة وتكنولوجيا الالبان عام |
| Nutritional deficiency Diseases of Poultry | 3 | 2 | 2 | | BRM-407 | أمراض النقص الغذائي للدواجن |
| Special Clinical Pathology | 3 | 2 | 2 | CPA-401 | CPA-408 | الهاتولوجيا الاكلينيكية خاص |
| Special Milk Hygiene, Safety and Technology | 2 | 2 | 1 | FHS-405 | FHS-409 | صحة وسلامة وتكنولوجيا الالبان خاص |
| Hygiene and Biosecurity of Poultry Farms | 3 | 2 | 2 | | 411VPH- | الصحة والأمن |

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| | | | | | | الحيوى المزارع الدواجن |
| Special Gynecology and Al | 3 | 2 | 2 | | OGA-412 | تناسليات خاص و تلقيح اصطناعى |
| Poultry Bacterialand Mycotic Diseas es | 3 | 2 | 2 | | BRM-503 | أمراض الدواجن البكتيرية والقطرية |
| Viral Diseas es of Poultry | 3 | 2 | 2 | | BRM-504 | امراض الدواجن الفيروسية |
| Parasitic Diseases of Poultry | 2 | 2 | 1 | | BRM-505 | أمراض الدواجن الطفيلية |
| General Hygiene, Safety and Meat Technology | 3 | 2 | 2 | | 506FHS- | صحة وسلامة وتكنولوجيا اللحوم عام |
| Poultry Vaccines | 2 | 2 | 1 | | BRM-507 | لقاحات الدواجن |
| Zoonotic Diseases | 3 | 2 | 2 | | ZON-508 | الأمراض المشتركة |
| Special Hygiene, Safety and Meat Technology | 3 | 2 | 2 | FHS-506 | FHS-509 | صحة وسلامة وتكنولوجيا اللحوم خاص |
| Laboratory Diagnosis of Poultry Diseases | 3 | 2 | 2 | | BRM-510 | التشخيص المعملى الأمراض الدواجن |
| Poultry By-products | 3 | 2 | 2 | 2 | FHS-511 | مخلفات الدواجن |
| Special Internal Medicine | 2 | 2 | 1 | ANM-414 | ANM-512 | أمراض باطنة خاص |
| Special Infectious Diseases | 2 | 2 | 1 | ANM-413 | ANM-513 | امراض معدية خاص |

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| Special Surgery | 2 | 2 | 1 | SAR-502 | SAR-514 | جراحة خاص |
| | 159 | 112 | 103 | | | الاجمالي |

- **Elective courses**:

| Courses | Credit houres | No. of houres | | Code | المقرر |
|---|---|---|---|---|---|
| | | Prac. | Lec. | | |
| Embalmment and Plastination | 2 | 2 | 1 | ANE-001 | التحنيط والبلستكة |
| Histological Structure of Wild Birds | 2 | 2 | 1 | CHI-002 | التركيب النسيجي للطيور البرية |
| Dietary Metabolism of poultry | 2 | 2 | 1 | BMB-003 | الأيض الغذائي للدواجن |
| Poultry Wealth in Arab States | 2 | - | 2 | AWD-004 | الثروة الداجنة في الوطن العربي |
| Physiology of Wild Birds | 2 | 2 | 1 | PHY-005 | فسيولوجيا الطيور البرية |
| Genetic Improvement of Poultry | 2 | 2 | 1 | AWD-006 | التحسين الوراثي للدواجن |
| Clinical Nutrition of Poultry | 2 | 2 | 1 | NCN-007 | التغذية الاكلينيكية للدواجن |
| Preparations of Poultry Farms | 2 | 2 | 1 | VPH-008 | تجهيزات المزارع |
| Pathology of Wild Birds | 2 | 2 | 1 | PAT-009 | بلثولوجيا الطيور البريه |
| Molecular Biology of Bacteria | 2 | 2 | 1 | MIC-010 | البيولوجيا الجزيئية للبكتريا |
| Viral Diagnostic Biotechnology | 2 | 2 | 1 | VIR-011 | بيوتكنولوجيا تشخيص الفيروسات |
| Drug Marketing and Promotion | 2 | 2 | 1 | PHA-012 | تسويق وإعلام دوائي |
| Special Studies in Toxicology and T Forensic Medicine | 2 | 2 | 1 | TFM-013 | دراسات خاصة في السموم والطب الشرعي |
| Hatchery | 2 | 2 | 1 | VPH-014 | صحة المفرخات |

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|---|---|---|---|---|---|
| Hygiene | | | | | |
| Cytodiagnosis of Poultry diseases | 2 | 2 | 1 | CPA-015 | التشخيص الخلوي لأمراض الدواجن |
| Ornamental Birds | 2 | 2 | 1 | BHM-016 | طيور الزينة |
| Occupational Zoonoses | 2 | 2 | 1 | ZON-017 | الأمراض المهنية المشتركة |
| Diseases of Wild and Migratory Birds | 2 | 2 | 1 | BRM-018 | امراض الطيور البرية والمهاجرة |
| Poultry Plants Sanitation | 2 | 2 | 1 | FHS-019 | الشئون الصحية المصانع لحوم الدواجن |
| Surgery of Poultry | 2 | 2 | 1 | SAR-020 | جراحة الدواجن |

| NARS | | | BVM (Poultry Medicine ) academic standards | | |
|---|---|---|---|---|---|
| Subject | Range | Sciences | Percent | Sciences | Remarks |
| Basic sciences | 22-28 | Biology, biophysics, chemistry, biostatics, animal husbandry, *embryology*, histology, physiology, anatomy | 21.2%<br><br>(As per core credit) | General Anatomy and embryology, General Histology,<br>, Special Anatomy and embryology, Special Histology, ,Basics of Biochemistry,<br>General Physiology<br>Molecular biology<br>General and special animal breeding<br>Special physiology<br>General and special animal Behavior and Management | Near to adopted NARS |
| Pre-clinical sciences | 17-23 | Genetics, microbiology, nutrition, mycology, immunology, pharmacology, parasitology, virology, pathology, milk and meat hygiene | 29.4% (As per core credit) | General Pathology<br>General Bacteriology, mycology and Immunology<br>General Virology<br>General Parasitology<br>General Pharmacology<br>Special Pathology<br>Special Bacteriology, mycology and immunology<br>Special Virology<br>Special Parasitology<br>Special pharmacology | Higher than NARS |

| | | | | | |
|---|---|---|---|---|---|
| Clinical sciences | 40-44 | Epidemiology and pathogenesis, internal medicine, infectious diseases, forensic medicine and toxicology, poultry and fish diseases, hygiene, surgery, zoonoses, theriogenology, and clinical investigation, and treatment of animals | 40% (As per core credit) | General clinical pathology<br>Fish diseases and management<br>General and special medicine<br>General and special surgery<br>General and special infectiousdiseases<br>General and special obstetric and Gynecology<br>Forensic medicine and Toxicology<br>Nutritional deficiency diseasesof Poultry<br>Epidemiology<br>Bacterial and mycotic diseases of poultry<br>Viral Diseases of Poultry<br>Parasitic diseases of poultry<br>Hygiene and biosafety<br>Poultry Vaccines<br>Zoonotic Diseases<br>Laboratory Diagnosis of Poultry Diseases<br>Poultry By Product | Similar to adopted NARS |

| | | | | | |
|---|---|---|---|---|---|
| Training* | 2-6 | Field trips and clinical investigations | 21.9%<br>(Estimated per total contact hours) | One year of field training in veterinary medicine work and employing representative | |
| Computing and ICT | 1-3 | Computer sciences and application IT | 1.8<br>(As per core credit) | Biostatics and computer | Similar to adopted NARS |
| Humanities | 2-4 | English, economics, human rights and social studies | 7.6%<br>(As per core credit) | English language<br>social topics<br>Ethics<br>Economics<br>Risk and Disaster management<br>Feasibility Study and Marketing | Higher than NARS |
| Discretionary subjects | 4-8 | Allowed to each faculty to be used based on its mission | 10.5%<br>(As per core credit) | Twenty credit Hours , 10 elective courses | Higher than NARS |

## 4 - Curriculum structure and content.

4.a) Programme duration: 5 years.

4.b) Programme structure:

### A- No. of credit hours

| Academic year | Lectures | Practical | Total |
|---|---|---|---|
| 1st year | 330 | 165 | 495 |
| 2nd year | 330 | 165 | 495 |
| 3rd year | 390 | 195 | 585 |
| 4th year | 440 | 220 | 660 |
| 5th year | 410 | 205 | 615 |
| Total | 1900 | 950 | 2850 |

**4.Total credit hours:**

**Lectures:** 113 **Practical:**57 **Summer Training:**- **Total:**170

**Elective : 20**

**4.bii- No of credit hours compulsory** (170)**,** plus 20 elective hours **Total :190**

**4.biii- No of credit hours of basic sciences:** **No:**36 **%:**21.2

**4.biv- No of credit hours of social science and humanities:** **No:** 13 %: 7.6

**4.bv- No of credit hours of specialized:** **No:**118 **%:**69.4

**4.bvi- discretionary subjects:** **No:** 20 **%:**11.8

**4.bvii- No of field training (training):** **No:**1080 **%:**21.9

**4.bviii- Single programme**

## Table (1) curriculum structure and course percentage

### First level

| Semester | Code No | Course title | Total credit hours | Percentage |
|---|---|---|---|---|
| First | ELT101 | English language and medical terminology | 30 | 11.7 |
| | SOP 102 | Sociological problems | 30 | 11.7 |
| | CHI 103 | General histology | 45 | 17.6 |
| | ANE104 | General Anatomy and embryology | 45 | 17.6 |
| | AWD105 | General vet Genetics and genetic engineering | 30 | 11.7 |
| | BMB106 | Basic Biochemistry | 45 | 17.6 |
| | | Elective Course | 30 | 11.7 |
| Total | | | 255 | |

- Not included in GPA.

| Semester | Code No | Course title | Total credit hours | Percentage |
|---|---|---|---|---|
| Second | AWD107 | Biostatics and computer | 45 | 18.8 |
| | CHI108 | Special Histology and cytology | 45 | 18.8 |
| | ANE109 | special Anatomy and embryology | 45 | 18.8 |
| | AWD110 | Special vet Genetics and genetic engineering | 30 | 12.5 |
| | BMB111 | Biochemistry and molecular biology | 45 | 18.8 |
| | | Elective course* | 30 | 12.5 |
| Total | | | 240 | |

*First level elective courses from 1 to 4 listed in elective schedule.

# Second Level

| Semester | Code No | Course title | Total credit hours | Percentage |
|---|---|---|---|---|
| First | EPM201 | Ethics and professional Moral | 30 | 10.5 |
| | PHY202 | General Physiology | 45 | 15.7 |
| | NCN203 | General Nutrition and clinical nutrition | 45 | 15.7 |
| | BHM204 | General behavior and husbandry | 45 | 15.7 |
| | AWD205 | General Breeding and animal production | 45 | 15.7 |
| | AWD 206 | Economics and Farm management | 45 | 15.7 |
| | | Elective course | 30 | 10.5 |
| TOTAL | | | 285 | |

| Semester | Code No | Course title | Total credit hours | Percentage |
|---|---|---|---|---|
| Second | PHY207 | Special Physiology | 45 | 21.4 |
| | PHM208 | special Behavior | 45 | 21.4 |
| | AWD209 | Special breeding and animal Production | 45 | 21.4 |
| | NCN210 | Special Nutrition and clinical nutrition | 45 | 21.4 |
| | | Elective course* | 30 | 14.3 |
| TOTAL | | | 210 | |

*Second level elective courses from 5 to 8 listed in elective schedule.

# Third Level

| Semester | Code No | Course title | Total credit hours | Percentage |
|---|---|---|---|---|
| **First** | RCM301 | Risk and crisis management | 30 | 10.5 |
| | PTH303 | General Pathology | 45 | 15.8 |
| | MIC304 | General Bacteriology, mycology and immunology | 45 | 15.8 |
| | VIR305 | General Virology | 45 | 15.8 |
| | PAR306 | General Parasitology | 45 | 15.8 |
| | PHA307 | General Pharmacology | 45 | 15.8 |
| | FCNT 538 | Elective course | 30 | 10.5 |
| Total | | | 285 | |

| Semester | Code No | Course title | Total credit hours | Percentage |
|---|---|---|---|---|
| **Second** | FSM302 | Feasibility Study and Marketing | 45 | 15 |
| | PTH308 | special Pathology | 45 | 15 |
| | MIC309 | Special Bacteriology, mycology and immunology | 45 | 15 |
| | VIR310 | Special Virology | 45 | 15 |
| | PAR311 | Special Parasitology | 45 | 15 |
| | PHA312 | special Pharmacology | 45 | 15 |
| | | Elective course* | 30 | 10 |
| Total | | | 300 | |

*Third level elective courses from 9 to 12 listed in elective schedule.

## Fourth Level

| Semester | Code No | Course title | Total creditt hours | Percentage |
|---|---|---|---|---|
| First | CPA401 | General clinical pathology | 45 | 13.6 |
| | TFM402 | Toxicology | 45 | 13.6 |
| | FHS405 | General milk hygiene, safety and technology | 30 | 13.6 |
| | OGA406 | General gynecology and obstetrics | 45 | 13.6 |
| | PRM407 | Nutritional deficiency diseases of Poultry | 45 | 13.6 |
| | ALM410 | Fish diseases and management | 45 | 13.6 |
| | ANM 413 | General infectious diseases | 45 | 13.6 |
| | | Elective course* | 30 | 9.09 |
| Total | | | 330 | |

| Semester | Code No | Course title | Total Contact hours | Percentage |
|---|---|---|---|---|
| Second | TFM403 | ForensicMedicine and Veterinary regulations | 45 | 13.6 |
| | VPH404 | Epidemiology | 45 | 13.6 |
| | CPA408 | Special clinical pathology | 45 | 13.6 |
| | FHS409 | Special milk hygiene, safety and technology | 30 | 9.09 |
| | VPH411 | Farm animal hygiene and Biosecurity | 45 | 13.6 |
| | OGA412 | Special gynecology and Artificial insemination | 45 | 13.6 |
| | ANM 414 | General internal medicine | 45 | 13.6 |
| | | Elective course* | 30 | 9.09 |
| Total | | | 330 | |

*Fourth level elective courses from 13 to 16 listed in elective schedule.

# Fifth Level

| Semester | Code No | Course title | Total creditt hours | Percentage |
|---|---|---|---|---|
| First | VPH501 | Environmental health and pollution | 45 | 14.2 |
| | SAR502 | General Surgery | 45 | 14.2 |
| | BRM503 | Bacterial and mycotic poultry diseases | 45 | 14.2 |
| | BRM504 | Viral Poultry Diseases | 45 | 14.2 |
| | BRM505 | Parasitic poultry diseases | 30 | 9.5 |
| | FHS506 | GeneralHygienic,safety and meat technology | 45 | 14.2 |
| | ANM 512 | Special internal medicine | 30 | 9.5 |
| | | Elective course* | 30 | 9.5 |
| Total | | | 315 | |

| Semester | Code No | Course title | Total credit hours | Percentage |
|---|---|---|---|---|
| | BRM507 | Poultry Vaccine | 30 | 10 |
| | ZON508 | Zoonotic Diseases | 45 | 15 |
| | FHS509 | Special hygiene, safety and meat technology | 45 | 15 |
| | BRM510 | Laboratory Diagnosis of Poultry Diseases | 45 | 15 |
| | FHS511 | Poultry By Product | 45 | 15 |
| | ANM 513 | Special infectious diseases | 30 | 10 |
| | SAR 514 | Special surgery | 30 | 10 |
| | | Elective course* | 30 | 10 |
| Total | | | 300 | |

*Fifth level elective courses from 17 to 20 listed in elective schedule.

# 5- Programme courses

## 5-1- First year- Semester I

| Code No | Course title | Total credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| ELT101 | English language and medical terminology | 30 | 2 | 0 | 2 | 1 | 4,6 | - | 1 |
| SOP 102 | Sociological problems | 30 | 2 | 0 | 2 | 35 | 1,2, 4 | - | 1, 2 |
| CHI 103 | General histology | 45 | 2 | 1 | 4 | 2,3 | 3, 4 | 20 | 1, 2, 12 |
| ANE104 | General Anatomy and embryology | 45 | 2 | 1 | 4 | 1,2,3, 33 | 3, 6,10 | 17,18 | 1, 6,12 |
| AWD105 | General vet Genetics and genetic engineering | 30 | 1 | 1 | 3 | 1,7,11 | 4,6,8 | 3,13 | 1, 6 |
| BMB106 | Basic Biochemistry | 45 | 2 | 1 | 4 | 1,2, 6 | 5,6 | 22 | 1,13 |
| | Elective Course | 30 | 1 | 1 | 3 | | | | |
| | Total | 255 | 12 | 5(10) | | | | | |

## 5-2- First year- Semester II

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| AWD107 | Biostatics and computer | 45 | 2 | 1 | 3 | 6, 8 | 4,6,15 | 22 | 6 |
| CHI108 | Special Histology and cytology | 45 | 2 | 1 | 3 | 2,3 | 3, 4 | 20 | 1, 2, 12 |
| ANE109 | special Anatomy and embryology | 45 | 2 | 1 | 3 | 2, 3 | 3, 6, 10 | 17,18 | 1,6, 12, 13 |
| AWD110 | Special vet Genetics and genetic engineering | 30 | 1 | 1 | 2 | 1,7,11 | 4,6,8 | 3,13 | 1,6 |
| BMB111 | Biochemistry and molecular biology | 45 | 2 | 1 | 4 | 1,6 | 5,6 | 3,22 | 1,13 |
| | Elective course* | 30 | 1 | 1 | 2 | | | | |
| | Total | 240 | 10 | 6 (12) | | | | | |

## Elective courses (First level)

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| ANE-001 | Embalmment and Plastination | 30 | 1 | 1 | 2 | 1,6 | 4,5,6 | 22 | 1,6 |
| CHI-002 | Histology of wild birds | 30 | 1 | 1 | 2 | 2,3 | 3, 4 | 20 | 1, 2, 12 |
| BMB-003 | Dietary Metabolism of Poultry | 30 | 1 | 1 | 2 | 2, 6 | 4, 5 | 3,22 | 1, 13 |
| AWD-004 | Poultry Wealth in Arab States | 30 | 2 | - | 2 | 14 | 2,3,4,5,6,7,9, | - | 1,2,3,5,6,7, |

## 5-3- Second year- Semester I

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| EPM201 | Ethics and professional Moral | 30 | 2 | 0 | 2 | 32, 33, | 6 | - | 1, 2 |
| PHY202 | General Physiology | 45 | 2 | 1 | 3 | 2, 4 | 6, 10 | 3, 22 | 1, 10 |
| NCN203 | General Nutrition and clinical nutrition | 45 | 2 | 1 | 3 | 2,6 | 4,10 | 3,5 | 1,8 |
| BHM204 | General behavior and husbandry | 45 | 2 | 1 | 3 | 9,34 | 6 | 1 | 1,2 |
| AWD205 | General Breeding and animal production | 45 | 2 | 1 | 3 | 7,11,14 | 7, 9 | 19 | 1, 4, 6 |
| AWD206 | Economics and farm managements | 45 | 2 | 1 | 3 | 1,8,9 | 4,7,9 | 14,19,22 | 1,2,6,15 |
| | Elective course | 30 | 1 | 1 | 2 | | | | |
| | Total | 285 | 12 | 6(12) | | | | | |

## 5-4- Second year- Semester II

| Code No | Course title | Total Contact hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| PHY207 | Special Physiology | 45 | 2 | 1 | 3 | 2,18 | 4,10 | 3,18 | 1, 10 |
| PHM208 | special Behavior | 45 | 2 | 1 | 3 | 9,12 | 2, 6 | 1, 19 | 1, 2, 6 |
| AWD209 | Special breeding and animal Production | 45 | 2 | 1 | 3 | 9,11 | 7,9 | 19 | 1, 4 |
| NCN210 | Special Nutrition and clinical nutrition | 45 | 2 | 1 | 3 | 10 | 1,6,10 | 5 | 1, 8 |
| | Elective course* | 30 | 1 | 1 | 2 | | | | |
| | Total | 210 | 9 | 5(10) | | | | | |

Elective courses (second level)

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| PHY-005 | Physiology of wild birds | 30 | 1 | 1 | 2 | 2,18 | 6,10 | 3,18 | 1 |
| AWD-006 | Genetic Improvement of Poultry | 30 | 1 | 1 | 2 | 1,7,11 | 4,6,8 | 3,13 | 1,6 |
| NCN-007 | Clinical Nutrition of Poultry | 30 | 1 | 1 | 2 | 10 | 5,6,7 | 25 | 8 |
| VPH 008 | Preparations of poultry farms | 30 | 1 | 1 | 2 | 2,9,22,26,28, 32 | 1,2,3,6 | 18,22 | 1,2,4,5, |

## 5-5 Third year - Semester I

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| RCM301 | Risk and crisis management | 30 | 2 | 0 | 2 | 1,24,34 | 6,7 | - | 1,12 |
| PTH303 | General Pathology | 45 | 2 | 1 | 3 | 15,16 | 3, 4 | 3,7,20, 22 | 12 |
| MIC304 | General Bacteriology, mycology and immunology | 45 | 2 | 1 | 3 | 16,17,22 | 9,11,13 | 4,23 | 7,10 |
| VIR305 | General Virology | 45 | 2 | 1 | 3 | 15,16,22 | 3,13 | 4,24 | 7,10 |
| PAR306 | General Parasitology | 45 | 2 | 1 | 3 | 3,17,22 | 4, 5 | 2,4,20 | 7,10 |
| PHA307 | General Pharmacology | 45 | 2 | 1 | 3 | 19,20 | 4,11,12 | 11,12, 13, | 5 |
| | Elective course | 30 | 1 | 1 | 2 | | | | |
| | Total | 285 | 13 | 6(12) | | | | | |

## 5-6 Third year- Semester II

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| FSM302 | Feasibility Study and Marketing | 45 | 2 | 1 | 3 | 1,8,9 | 4,6,7,9 | 14,19,22 | 1,2,6,15 |
| PTH308 | special Pathology | 45 | 2 | 1 | 3 | 15,16 | 3, 4,5 | 3,7,20, 22 | 12 |
| MIC309 | Special Bacteriology, mycology and immunology | 45 | 2 | 1 | 3 | 17,22 | 3, 4, 5,11 | 4,23 | 7,10 |
| VIR310 | Special Virology | 45 | 2 | 1 | 3 | 15,16,22 | 3,13 | 4,24 | 7,10 |
| PAR311 | Special Parasitology | 45 | 2 | 1 | 3 | 3,22,17 | 4, 5 | 2,4,20 | 2,3 |
| PHA312 | special Pharmacology | 45 | 2 | 1 | 3 | 19,20 | 4,11,12 | 11,12, 13 | 5 |
| | Elective course* | 30 | 1 | 1 | 2 | | | | |
| | Total | 300 | 13 | 7(14) | | | | | |

Elective courses (Third level )

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| PAT-009 | Pathology of Wild Birds | 30 | 1 | 1 | 2 | 15,16 | 3,4 | 3,7,20,22 | 12 |
| MIC-010 | Molecular Biology of Bacteria | 30 | 1 | 1 | 2 | 15,16,22, | 9,11,13,15 | 3,4,22 | 6,7 |
| VIR-011 | Viral Diagnostic Biotechnology | 30 | 1 | 1 | 2 | 15,16,22 | 3,13 | 4,24 | 7,10 |
| PHA-012 | Drug Marketing and Promotion | 30 | 1 | 1 | 2 | 8 | 6,14 | 4 | 1,5,6 |

## 5-7 Fourth year- Semester I

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| CPA401 | General clinical pathology | 45 | 2 | 1 | 3 | 16,17 | 4,5 | 3, 4 | 1,13 |
| TFM402 | Toxicology | 45 | 2 | 1 | 3 | 1,24,29 | 1,2 | 3,7,17,26 | 7,14 |
| FHS405 | General milk hygiene, safety and technology | 30 | 1 | 1 | 2 | 20,21 | 9 | 15 | 11,14 |
| OGA406 | General gynecology and obstetrics | 45 | 2 | 1 | 3 | 5,12,13,14,15,19,25,31 | 1,2,3,4,5,6,8 | 3,4,6,8,9,11 | 1,2,4,6,7 |
| BRM407 | Nutritional deficiency diseases of Poultry | 45 | 2 | 1 | 3 | 10,17,24,25 | 1,3,5,6,8,9 | 3,5,9,11,13 | 3,7,8,12 |
| ALM410 | Fish diseases and management | 45 | 2 | 1 | 3 | 1,12,16,19,24,25,26 | 2,3,8,13 | 3,7,9,11,13,19 | 1,2,4,7,8 |
| ANM 413 | General infectious diseases | 45 | 2 | 1 | 3 | 15, 16,17,22,23,25,35 | 11,13 | 2,3,9,11,12,21,23, 24 | 3,5,7,15 |
| | Elective course* | 30 | 1 | 1 | 2 | | | | |
| | Total | 330 | 14 | 8(16) | | | | | |

## 5-8 Fourth year - Semester II

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| TFM403 | Forensic Medicine and Veterinary regulations | 45 | 2 | 1 | 3 | 1,7,27,30 | 3,5 | 7,18,26 | 11,14 |
| VPH404 | Epidemiology | 45 | 2 | 1 | 3 | 27,28, 29, 33 | 4,5 | 10,16,19 | 3 |
| CPA408 | Special clinical pathology | 45 | 2 | 1 | 3 | 4,16,17, 18 | 4,5 | 3, 4 | 1,11 |
| FHS409 | Special milk hygiene, safety and technology | 30 | 1 | 1 | 2 | 20,21 | 9 | 15 | 11,14 |
| VPH411 | Hygiene& Biosecurity of poultry farms | 45 | 2 | 1 | 3 | 1,25,26,28,33 | 4,9 | 10,19 | 1,3 |
| OGA 412 | Special gynecology and Artificial insemination | 45 | 2 | 1 | 3 | 5, 12,13,14,15 | 2,3,4,5,6,8 | 3,4,9,13,17 | 1,2,4,6 |
| ANM 414 | General Internal Medicine | 45 | 2 | 1 | 3 | 15,16 ,19 | 1,6,8 | 3,9,11,12,16,17 | 1,5,10 |
| | Elective course* | 30 | 1 | 1 | 2 | | | | |
| | Total | 330 | 14 | 8(16) | 22 | | | | |

## Elective courses (Fourth level)

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| TFM-013 | Special Studies in Toxicology | 30 | 1 | 1 | 2 | 7,24,30 | 1,2,3 | 7,17,26 | 1,14 |
| VPH-14 | Hatchery Hygiene | 30 | 1 | 1 | 2 | 13,28,29,33 | 4 | 10,16,19 | 1,3 |
| CAP-15 | Cytodiagnosis of Poultry diseases | 30 | 1 | 1 | 2 | 16,17, | 4,5 | 3,4 | 1,13,19 |
| BHM-016 | Ornamental Birds | 30 | 1 | 1 | 2 | 9 | 6 | 1 | 1,2 |
| | Total | 120 | 4 | 4 | 8 | | | | |

## 5-9 Fifth year- Semester I

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| VPH501 | Environmental health and pollution | 45 | 2 | 1 | 3 | 13, 26, 27,28, 33 | 2, 4,6, 9 | 10,13 | 3,4 |
| SAR502 | General Surgery | 45 | 2 | 1 | 3 | 17,18,29,31 | 4,5,8 | 1,6,8,9,11,17 | 4,6,9,15 |
| BRM503 | Bacterial and mycotic poultry diseases | 45 | 2 | 1 | 3 | 16,17,18,19,24,25 | 1,3,4,8,11 | 1,3,4,7,11,13 | 1,3,4,5,6,7,8,9 |
| BRM504 | Viral Poultry Diseases | 45 | 2 | 1 | 3 | 15,17,24,26 | 4,5,6,9 | 3,4,9,16,21 | 1,4,7,10 |
| BRM505 | Parasitic poultry diseases | 30 | 1 | 1 | 2 | 17,19,24 | 1,2,3,4,5 | 2,3,4,5 | 1,2,4,5,6 |
| FHS506 | Generals Hygienic, safety and meat technology | 45 | 2 | 1 | 3 | 16,22, 25,26,27 | 1,4,9 | 10,15, | 11,14,15 |
| ANM512 | Special internal medicine | 30 | 1 | 1 | 2 | 15,19 | 6,8 | 3,4,9,11,25 | 1,5,8 |
| | Elective course* | 30 | 1 | 1 | 2 | | | | |
| | Total | 315 | 13 | 8(16) | | | | | |

**5-10 Fifth year -Semester II**

| Code No | Course title | Total credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| BRM507 | Poultry Vaccine | 30 | 1 | 1 | 2 | 17,22,25,26,32,34 | 1,3,4,8,9,13 | 7,9,13,16,21 | 1,6,10,13 |
| ZON508 | Zoonotic Diseases | 45 | 2 | 1 | 3 | 1,22,25,26,27 | 7,13 | ,3, 9,13, 16,21,23,24 | 1,7 |
| FHS509 | Special hygiene, safety and meat technology | 45 | 2 | 1 | 3 | 20, 21, 23, 32 | 1 ,6,9 | 10, 15 | 1,14,15 |
| BRM510 | Laboratory Diagnosis of Poultry Diseases | 45 | 2 | 1 | 3 | 10,13,16,17,18,22,24,25 | 1,3,4,6,8,13 | 3,4,7,9,11,13 | 1,4,10,13 |
| FHS511 | Poultry By Product | 45 | 2 | 1 | 3 | 1, 15,26,33 | 7 | 10,15, | 1,4 |
| ANM 513 | Special infectious diseases | 30 | 1 | 1 | 2 | 15, 16,19,23,24, 25 | 11,13 | 2,3,9,11,12,21,23, 24 | 3,5,7 |
| SAR 514 | Special surgery | 30 | 1 | 1 | 2 | 18,19 | 4,5,8 | 1,6,8,9,11,17 | 4,6,9 |
| | Elective course* | 30 | 1 | 1 | 2 | | | | |
| | Total | 300 | 12 | 8(16) | 20 | | | | |

# Elective courses (Fifth level)

| Code No | Course title | Total Credit hours | No. of hours / week | | | Programme ILOs covered (by No.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lect. | Lab. | Total | K,U (a) | I.S (b) | P.S (c) | G.T.S (d) |
| ZON-017 | Occupational Zoonoses | 30 | 1 | 1 | 2 | 1,21,27 | 1,5,8 | 2,10,13,16,21 | 1,2,3,4,5 |
| BRM-018 | Diseases of Wild and Migratory Birds | 30 | 1 | 1 | 2 | 16,17,19,22,,24,26 | 1,3,6,9,11,13 | 3,4,7,9,13,21 | 1,3,4,10 |
| FHS-019 | Poultry Plants Sanitation | 30 | 1 | 1 | 2 | 16,22, 25,26,27 | 1,4,9 | 10,15, | 11,14,15 |
| SAR-020 | Surgery of Poultry | 30 | 1 | 1 | 2 | 18,19 | 4,5,8 | 8,9,16,17 | 4,6,9,15 |

## 6 - Programme admission requirement:

The student could admit to join the Bachelor of Veterinary Medical Sciences (Poultry Medicine) programme, if he/she has one of the following:

1) The general Secondary school certificate, science branch with the grades stated by the Central Admission Office, or has granted bachelor degree of Agriculture (Animal Production).
2) A percentage of students enrolled are holders of the equivalent certificates such as the American Diploma and IGCSE.
3) A percentage of students from Arab countries with the equivalent grades determined by the Ministry of Higher Education, Central Admission office in the same academic year.
4) Students can be transferred from equivalent governmental universities with a condition of minimum good grades and if health and social status necessitate this transfer.

## 7. Assessment of Student Learning

**a.** Assessment methods measure student performance in all of the professional competencies in accordance with the stated outcome expectations. Basis on which Assessment of Student Achievements are evaluated:

- Periodic quizzes
- Formal written Exam
- Summative practical assessment
- Laboratories and other written reports
- Problem-solving exercises
- Oral Exam
- Oral presentations

**b.** For each course, a final written examination is held at the end of each semester, with a score of 50% of the course's assessment scores, in addition to an oral (10 %), practical (25%) and mid-term (15%) exams.

The student must attend 75% of all the lectures and practical hours of the course in order to be allowed to enter the final exam of the course.

**c.** The student is not considered successful in any course unless he obtains at least a grade "**D –**"

d. The course in which the student gets a grade **"F",** he repeats it, and his grade is calculated for him in it as a maximum **D**.

**5) Grading Scheme is as follows:**

| Percent | Equivalent Rate | GPA | Letter Grade |
|---|---|---|---|
| 95% or more | Excellent | 4 | A+ |
| 90% to <95% | Excellent | 3.7 | A |
| 85% to<90% | Very good | 3.3 | B+ |
| 80% to <85% | Very good | 3 | B |
| 75% to <80% | good | 2.7 | C+ |
| 70% to <75% | Good | 2.3 | C |
| 65% to <70% | Good | 2 | C- |
| 60% to <65% | Pass | 1.7 | D+ |
| 55% to <60% | Pass | 1.3 | D |
| 50% to <55% | Pass | 1 | D- |
| Less than 50% | Fail | zero | F |

## 7 - Regulations for progression and programme completion.

The policy of student retention and progression are determined according to the University regulations. Promotion to the next year requires that student passes. The student to grant bachelor degree require pass in all registered courses and summer training.

## 8 - Evaluation of programme intended learning outcomes:

| Evaluator | Tool | Samples |
|---|---|---|
| 1- Senior students | Questionnaires and open discussion | 50/ Grade |
| 2- Alumni | Questionnaires and open discussion | 25 |
| 3- Stakeholders (Employers) | Questionnaires and open discussion | Random |
| 4- External Evaluators | Report | - |
| Other (External examiners) | Report | - |

**Program coordinator**

Shimaa Ezzeldin

**Shimaa Ahmed Mohamed Ezzeldein**

**Vice Dean for Education and Student Affairs**

**Prof. Dr. Mohamed El-Sayed Mohamed**

**Dean of the Faculty**

**Prof. Dr. Nasr Abd El-Wahab Mohamed**

**Date of approval: 10-10-2022**