Student bylaw for faculty of veterinary medicine

Ministerial decree 730 on 2-3-2022

Content

Introduction

Establishment of the Faculty:

A Presidential Decree was issued on May 28, 1981, to establish the Faculty of Veterinary Medicine at Zagazig University, Banha Branch, located in Moshtohor. Instruction began with the admission of students into the preparatory year, with teaching conducted at the Faculty of Veterinary Medicine in Zagazig during the academic year 1982/1983. Instruction commenced at the current location in Moshtohor starting from the academic year 1983/1984.

The first internal undergraduate regulation of the Faculty of Veterinary Medicine was issued by Ministerial Decree No. 925 dated May 19, 1987.

The undergraduate regulation was amended by Ministerial Decree No. 1727 dated April 26, 2017.

The Faculty obtained institutional academic accreditation from the National Authority for Quality Assurance and Accreditation of Education by Decree No. 122 dated September 25, 2013, and the accreditation was renewed by Decree No. 199 dated October 5, 2020.

The Importance of the Veterinary Profession and the Necessity of Its Development

1. The veterinary profession holds significant importance for both the individual and the state. It is concerned with the protection of both animals and humans from endemic and emerging zoonotic diseases that affect animal productivity and can be transmitted to humans either through direct contact or via animal products and waste. The profession also focuses on the development of animal, poultry, and fish resources and their products, in order to provide animal protein from various sources and to contribute to the national economy.
2. The challenges imposed by globalization, current technological advancements, and the COVID-19 pandemic have placed significant demands on higher education institutions, necessitating their development and enhancement of institutional capacity and educational effectiveness. These institutions must become capable of knowledge production, skill development, and converting these into economic capacities in support of the state's comprehensive development plans. In light of continuous transformations in the higher education system and increased demand for diverse life sciences—particularly modern disciplines that rely on creative and innovative learning paths—a revamp of educational programs in line with global standards and 21st-century skills is imperative. This includes embracing e-learning, distance education, updated teaching, learning, and assessment strategies, and establishing a robust information infrastructure to enable learning opportunities and effective management of the educational process.

Accordingly, veterinary education must be distinguished by efficiency and flexibility across its various aspects (education, training, continuing education, and postgraduate studies) so that veterinary graduates are capable of meeting community needs and earning its trust, thus benefiting the profession, the individual, and society at large.

Veterinary Education Strategy in Light of the Benchmark Guideline Issued by the Veterinary Studies Sector Committee of the Supreme Council of Universities

Veterinary education aims to prepare veterinarians who are able to:

1. Meet essential community needs and adapt to potential regional and global changes.
2. Establish and manage private veterinary enterprises without reliance on government employment.
3. Work efficiently in Arab and African countries.
4. Advance scientific research to enhance animal productivity while maintaining good health and disease prevention.
5. Develop diagnostic methods for diseases in animals, birds, and aquatic life; anticipate emerging diseases; and detect contaminants in animal-origin foods.
6. Work in centers of excellence created to leverage specialists in advancing faculties.

Graduates of the Faculty of Veterinary Medicine are qualified to work in the following areas:

- Care and development of livestock, poultry, and fisheries
- Diagnosis and treatment of diseases in animals, birds, and aquatic organisms
- Preventive veterinary medicine
- Public health and protection of humans from zoonotic diseases and harmful residues transmitted from animals and their products/waste
- Health inspection and safety of food of animal origin
- Environmental and wildlife protection
- Veterinary pharmaceutical research and drug marketing
- Production of animal-based products and waste recycling
- Specialized veterinary consulting and feasibility studies for livestock, poultry, and fish projects

Faculty Policies to Achieve the Veterinary Education Strategy

The Faculty of Veterinary Medicine at Benha University is committed to the following:

1. Teaching preparatory, basic, pre-clinical, and clinical veterinary subjects in accordance with the prescribed ratios stated in the Benchmark Academic Standards Document for the

Veterinary Sector issued by the National Authority for Quality Assurance and Accreditation of Education.

2. Updating the academic content of courses in accordance with national and international standards.
3. Ensuring continuity and integration of quality systems for programs and courses.
4. Continuous review and development of program and course reports and specifications.
5. Ongoing updates to teaching, learning, and assessment strategies.
6. Enhancing students' practical and professional skills in alignment with market needs and job requirements.
7. Continuous assessment and curriculum and exam development based on student feedback.
8. Developing continuing education programs to enhance graduates' skills in line with labor market demands.
9. Enhancing the Faculty's international standing by developing curricula in line with global systems and launching local and international joint programs.
10. Expanding academic exchange channels for students, researchers, and faculty members.
11. Contributing to raising the university's global ranking and the faculty's subject-specific rankings.

Definitions

- **Academic Year:** A period not less than nine calendar months including two semesters, or a full calendar year comprising two main semesters and a summer session.
- **Semester:** A time period of no less than fifteen weeks during which course instruction is delivered, including final examinations.
- **Summer Session:** A period not exceeding eight weeks, including final exams. Weekly instructional hours for each course are doubled.
- **Academic Level:** The academic year or stage in which a student is enrolled according to the approved study plans.
- **Study Plan:** A set of compulsory and elective courses whose total credit hours constitute the graduation requirements that a student must successfully complete to earn a degree.

The plan outlines course titles, instructional hours, exam types and durations, and maximum achievable grades.

- **Course:** A scientific subject within the approved study plan. Each course is identified by a code, number, name, and detailed description that distinguishes its content and level from other courses. A departmental course file is maintained for monitoring, evaluation, and development purposes.
- **Credit Hour:** One theoretical hour or a practical/clinical/field session of 2 to 3 hours weekly over one semester.
- **Academic Warning:** Issued to a student who achieves a cumulative GPA below 1.5 for the first time in a semester. Repeated instances result in reduced enrollment to the minimum credit hours allowed.
- **Coursework Grade:** The score awarded for assessments such as quizzes, research, and other academic activities conducted throughout the semester.
- **Final Examination:** A comprehensive test conducted once at the end of the semester.
- **Final Exam Grade:** The score a student receives in the final exam of a course.
- **OSCE (Objective Structured Clinical Examination):** A modern examination method used in medical faculties to evaluate students' clinical skills and competencies under faculty supervision.
- **Final Grade:** The sum of coursework, practical, oral, and final written exam scores for a course.
- **Grade:** The letter or percentage description of the final score achieved by a student in a course.
- **Incomplete Grade:** Temporarily recorded when a student is absent from the final exam for an accepted excuse, provided they attended classes and completed coursework. A make-up exam is scheduled within the first week of the next semester using a pre-prepared reserve exam. The student record is marked with (IC).
- **Grade Points:** Points corresponding to the percentage score earned by the student.
- **Semester GPA (SGPA):** The sum of (course points × credit hours) divided by the total credit hours of all courses taken during the semester.
- **Cumulative GPA (GPA):** The total grade points earned across all courses since enrollment divided by the total credit hours attempted.

- **Overall Grade:** A description of the student's academic performance throughout their study at the faculty.
- **Academic Load:** The total number of credit hours per week a student is allowed to register for in each semester.

Article (1): Features of the Program Regulations

a. Instruction is based on the credit hour system.

b. The duration of study is five academic years (five levels), in addition to a mandatory internship year.

c. The program comprises three academic clusters: Academic Phase Sciences, Pre-Clinical Phase Sciences, and Clinical Phase Sciences. These are structured into two main stages:

1. **First Stage**: Includes the Academic and Pre-Clinical Phase Sciences. It comprises the first and second levels. Students must successfully complete all courses in these levels to progress to the Pre-Clinical Phase, which corresponds to the third level. Successful completion of all courses in the third level is a prerequisite for progression to the Clinical Phase.
2. **Clinical Stage**: Comprises the fourth and fifth levels.

d. The program is distinguished by a reduction in the number of theoretical credit hours and an increase in the number of practical and applied hours. There is also a decreased proportion of teaching hours during the Academic and Pre-Clinical phases and an increased proportion during the Clinical phase.

e. The curriculum includes a set of general elective courses whose credit hours are not counted toward the total registered hours and whose grades are not included in the cumulative GPA.

f. A summer semester is offered with associated fees, during which students may register for courses they have failed or missed without an accepted excuse, upon payment of the designated fees.

g. An internship year is included, featuring qualifying training courses for graduates.

Article (2): Vision and Mission

a. Vision of the Faculty of Veterinary Medicine – Benha University: The Faculty of Veterinary Medicine at Benha University aspires to be a distinguished institution in the field of veterinary medicine at the local, regional, and international levels.

b. Mission of the Faculty of Veterinary Medicine – Benha University: The Faculty of Veterinary Medicine at Benha University is committed to graduating

professionals capable of providing high-quality veterinary services and contributing to the development of animal resources. This is achieved through advanced veterinary education, the adoption of modern scientific and instructional methodologies, and the production of internationally recognized scientific research by activating international agreements. The faculty also seeks to deliver outstanding community services to safeguard public health and food safety and to introduce new academic programs aligned with labor market needs.

c. Core Objectives of the Faculty of Veterinary Medicine – Benha University:

1. To provide high-quality education that produces distinguished graduates who are capable of competition and innovation.
2. To advance scientific research and enhance its quality and ethical standards, fostering innovation to address societal, industrial, and investment-related challenges.
3. To offer community services that protect animal, poultry, and fish resources, safeguard public health, and ensure food safety

Article (3): Scientific Departments

The faculty consists of 21 academic departments as shown in Table (1) below.

code	Department Name
ANE	**Anatomy and Embryology**
HIS	**Histology**
BMB	**Biochemistry and molecular biology**
PHY	**Physiology**
PAT	**Pathology**
NCN	**Nutrition and clinical Nutrition**
HVC	**Hygiene and veterinary care**
PAR	**Parasitology**
VIR	**Virology**
BIM	**Bacteriology, Immunology & mycology**
PHA	**Pharmacology**
CPA	**Clinical pathology**
FMT	**Forensic Medicine and Toxicology**
FHC	**Food hygiene and control**
AQM	**Aquatic animals medicine**
PRD	**Poultry and Rabbit diseases**
MID	**Animal Medicine**
SUR	**Surgery, Anesthesia and Radiology**
TGA	**Theriogenology, gynecology and artificial insemination**
ZON	**Zoonoses**
AWD	**Animal Wealth development**

Article (4): Academic Degree

The University Council of Benha University shall, upon the recommendation of the Faculty of

Veterinary Medicine Council, confer the degree of **Bachelor of Veterinary Medicine (BVM)** in accordance with Decree No. 407 of 2021 concerning amendments to certain provisions of the executive regulations of the Universities Organization Law.

Article (5):

The Faculty Council may, depending on the nature of the course(s), decide to offer one or more courses in a hybrid or distance learning format, provided that no less than 60% of the course is delivered through face-to-face instruction, and the remaining 40% may be conducted via hybrid learning.

Article (6):

The Faculty Council may, after consulting the relevant departmental councils and considering the nature of the courses, approve the administration of examinations electronically for one or more courses. It may also allow for the full or partial electronic administration of exams in a way that enables digital grading.

Article (7):

The faculty admits students who hold the General Secondary Education Certificate (Science Division) or an equivalent qualification recognized by the Supreme Council of Universities.

Article (8): Language of Instruction

The primary language of instruction is English, with the exception of certain courses that require instruction in Arabic due to their content.

Article (9): Study System

- The program follows the **credit hour system**, with teaching hours calculated as follows: One credit hour is equivalent to **one theoretical hour** or **2–3 practical hours per week** throughout the semester, in accordance with the attached schedules.
- The academic year is divided into **two semesters**, each lasting **15 weeks**, in addition to an **intensive summer semester** that begins on the **first Saturday of July**.
  Enrollment in the summer semester is **optional** and primarily intended for students who have failed or were absent from courses.

- **Course registration** for any academic level must be completed **within two weeks prior to the start of each semester**, after fulfilling the required conditions.

Article (10): Duration of Study

The duration of study for the **Bachelor of Veterinary Medicine** degree is **five academic years**, in addition to a **mandatory internship year**. These five years are structured into **five academic levels**, each comprising **two main semesters**, and the program is divided into three main phases:

1. **Academic and Pre-Clinical Phase**: Includes the **first, second, and third levels**.
2. **Clinical Phase**: Includes the **fourth and fifth levels**, characterized by a reduction in theoretical hours and an increase in practical hours.
3. **Internship Phase**: Commences after successful completion of all academic courses and lasts for **one year**. It consists of **training rotations** across clinical departments, veterinary hospitals, clinics, animal, poultry, and fish farms. Each rotation concludes with an **assessment exam** to evaluate the student's practical learning and engagement.

Article (11): Advancement to Higher Levels and Registration Limits

- A student progresses to the next academic level **only after successfully passing all courses** from the current level, starting from **Level 3 onward**.
    - Students who fail or miss exams without a valid excuse must **retake or sit for exams during the summer semester** and may receive a maximum grade of **Pass (+D)**.
    - Students with an **excused absence**, as approved by the Faculty Council, are allowed to take the exam during the summer semester **while retaining their original grade assessment**.
- **Credit Hour Registration Requirements:**
    - **Level 1:** Minimum 10 credit hours – Maximum 20 credit hours (including core and elective courses).
    - **Level 2:** Minimum 10 credit hours – Maximum 25 credit hours (including core and elective courses).

- **Level 3:** Minimum 10 credit hours – Maximum 25 credit hours (including core and elective courses).
- **Level 4:** Minimum 10 credit hours – Maximum 25 credit hours (including core and elective courses).
- **Level 5:** Minimum 10 credit hours – Maximum 28 credit hours (including core and elective courses).

Article (12): Registration Requirements

Students may register for courses in the **first or second semesters**, or in the **summer semester**, in accordance with the **minimum and maximum credit hours** specified for each level as detailed in the attached study plan tables.

Students must consult their **academic advisor** before registration and adhere to the **registration timelines and guidelines** issued annually by the Faculty Council and published in the student handbook.

A student may not register for any course unless they have **successfully completed its prerequisites** as outlined in **Table (5)**.

Article (13): Course Modification, Withdrawal, and Suspension of Enrollment

- Students are allowed to **change elective courses** within the **first two weeks** of the semester (first or second semester), provided that they comply with registration conditions.
- In the **summer semester**, students must **register for the courses they failed or were absent from**.
- Enrollment may be **suspended** in accordance with the provisions of the Universities Organization Law and its executive regulations.

Article (14): Withdrawal from a Semester

A student wishing to **withdraw from a semester** due to illness or for a reason **accepted by the Faculty Council** will not have the semester counted as an attempt.

The student may **re-register** for the courses in the **summer semester** and attend both the **classes and exams**.

Article (15): Study Requirements

The total credit hours required by the program are **192 credit hours**, divided into two main parts:

Part One: Compulsory Courses

1. **Faculty Courses**:
    - Total of **182 credit hours** covering veterinary medicine courses across academic, pre-clinical, and clinical phases.
    - Distributed over **five academic levels**, each with **two semesters**, as outlined in Articles (26) and (27).
    - Each course is detailed by code, title, credit hours, exam duration, and maximum grade.
2. **University Compulsory Requirements**:
    - **4 general compulsory courses**, totaling **4 credit hours**, distributed across Levels 1–4.
    - These are **required for the degree** and are **included in the cumulative GPA**.

Part Two: Elective Courses

1. **Clinical Elective Courses**:
    - **3 courses** totaling **6 credit hours**.
    - Taken during the clinical phase, **included in both credit hour count and GPA**.
2. **General University Elective Courses**:
    - **3 courses** totaling **3 credit hours** taken during academic and pre-clinical phases.
    - **Not counted** toward the credit hour total or cumulative GPA, but grades are recorded on the transcript.

Article (16): Graduation Requirements for the Bachelor of Veterinary Medicine

To be awarded the **Bachelor of Veterinary Medicine degree**, a student must successfully complete:

a. All **faculty compulsory courses**: 182 credit hours (**73 courses**).

b. Clinical elective courses: 3 courses totaling 6 credit hours.

c. General compulsory and elective university courses:

- **4 compulsory courses** (4 credit hours), included in credit total and GPA.
- **3 elective courses** (3 credit hours), **not included** in credit total or GPA but shown on transcript.

d. Internship Year:

- Students must successfully complete the internship training rotations as determined by the Faculty Council.
- Training consists of **8 hours per day**, **five days per week**, for **one academic year** after successful completion of Level 5.
- Supervisors (faculty members and staff) receive financial compensation, and **students receive travel allowances**, both as regulated by the Faculty Council.

The **final degree classification (GPA)** is calculated based on the **cumulative grades** from all **compulsory courses** and **clinical elective courses** only.

Article (17): Academic Advisor

The Faculty Council, upon the nomination of the Vice Dean for Education and Student Affairs, appoints an **academic advisor** from among the faculty members for every **10–20 students** upon their enrollment in the program.

The academic advisor's responsibilities include:

- Monitoring student performance and assisting in course selection and credit hour load based on academic results.
- Advising students to reduce their course load to the **minimum credit requirement** if their **GPA falls below 1.0** in any semester.
- Reviewing the student's performance in previously completed courses.
- Maintaining direct communication with students and helping resolve any academic or personal issues encountered during their studies.

Article (18): Student Assessment

- Each course's grade distribution is detailed in the program regulations and includes:
  - **Final written exam (50%)**
  - **Practical exam (30%)**
  - **Oral exam (10%)**
  - **Coursework (10%)**
- To be eligible for the final exam, a student must **attend at least 75%** of both theoretical and practical sessions, unless the course is delivered in a **blended learning format**, in which case the attendance requirement is **60% in-person** and **40% online**.
- A student is considered **failed** if they:
  - Score less than **50% overall**, or
  - Score less than **30% in the written exam**, or
  - Are **barred from the exam**, or
  - **Miss the exam without an accepted excuse**
- **General university compulsory courses (4 courses = 4 credit hours)**: Evaluation: 25 marks for written exam + 25 marks for coursework. These are **included in total credit hours and GPA**.
- **General university elective courses (3 courses = 3 credit hours)**: Evaluation: 25 marks for written exam + 25 marks for coursework. These are **not included in credit hours or GPA**, but grades appear on the transcript.
- When a student repeats a course, it must be retaken in full (study and exam). Only the **most recent grade** is recorded, with a maximum possible grade of **(D)**.
- Academic advisors may recommend additional **clinical elective courses** to help students raise their GPA to meet graduation requirements.
- Attendance in **all final exams** is **mandatory** to pass a course.

Article (19): Calculation of the Cumulative Grade Point Average (GPA) for Academic Semesters and the Overall Graduation GPA

The grade points for each credit hour are calculated as follows:

Table (2): The following table shows the grade descriptions, symbols, and corresponding grade points:

Percentage Grade	Grade Points	Grade Description	Symbol
95 to 100	3.70 to 4.00	Excellent (High)	A+
90 to < 95	3.40 to < 3.70	Excellent	A
85 to < 90	3.10 to < 3.40	Excellent (Low)	A-
80 to < 85	2.80 to < 3.10	Very Good (High)	B+
75 to < 80	2.50 to < 2.80	Very Good	B
70 to < 75	2.20 to < 2.50	Good (High)	C+
65 to < 70	1.90 to < 2.20	Good	C
60 to < 65	1.60 to < 1.90	Pass (High)	D+
55 to < 60	1.30 to < 1.60	Pass	D
50 to < 55	1.00 to < 1.30	Pass (Low)	D-
Below 50%	--------	Fail	F

Semester GPA Calculation:

The semester GPA is calculated using the following formula:

Semester GPA =

∑ (Grade Points for each course Credit Hours of the course) ∑
(Credit Hours of all courses in the semester) \frac {\sum (\text {Grade Points for each course} \times \text {Credit Hours of the course})} {\sum (\text {Credit Hours of all courses in the semester})}

Cumulative GPA Calculation:

The cumulative GPA (GPA) is calculated using this formula:

Cumulative GPA =

∑ (Grade Points for each completed course×Credit Hours of the course) ∑
(Credit Hours of all completed courses) \frac {\sum (\text {Grade Points for each completed course} \times \text {Credit Hours of the course})} {\sum (\text {Credit Hours of all completed courses})}

Important Notes:

- A student is **not considered to have passed** a course unless they achieve **at least a grade of D-**.
- A student will **not be awarded a Bachelor's degree** unless they achieve a **minimum cumulative GPA of 2.00**.

- The **grade points** for any course are calculated by multiplying the **credit hours** by the **grade point earned** in that course.
- The **total grade points** for any semester is the **sum of all individual course grade points** in that semester.
- If a student **scores less than D-** in any course, they must **retake the course**. Upon passing, **the maximum grade recorded will be D+**.
- The **final graduation GPA** (after fulfilling all graduation requirements) is calculated by dividing the **total grade points earned in all completed courses** (including core college courses, mandatory university courses, and elective clinical courses) by the **total credit hours** of these courses.

Article (20): Academic Warning

A student receives an **academic warning** if their **cumulative GPA drops below 1.5** for the first time.
If repeated, the student must **reduce their course load** to the minimum allowed per level.

Article (21): Incomplete (IC) Grade

An **Incomplete (IC)** grade may be temporarily recorded if a student **misses a final exam** for a valid reason accepted by the faculty and has otherwise maintained regular attendance and coursework.

An **exceptional make-up exam** is administered no later than the **first week of the following semester**, using a **pre-prepared backup exam paper**.
The symbol **(IC)** is recorded in the academic transcript until a final grade is issued.

Article (22): Final Examinations

Final exams are held at the **end of each semester** based on a **pre-announced schedule**, and include:

- Written
- Practical
- Oral exams

The **written exam duration** is **two hours**.

Article (23): Honors Classification

- **First-Class Honors**: Awarded to students who earn an **Excellent** grade in all academic levels.
- **Second-Class Honors**: Awarded to students who earn **Very Good** in all levels.
  In both cases, the student must **not have failed any course** during their studies.

Article (24): Academic Semesters

There are three academic semesters:

1. **First Semester** – Begins in **September**
2. **Second Semester** – Begins in **February**
3. **Summer Semester** – Intensive 8-week term

Each regular semester spans **15 weeks**, and exams are held at the end of each term with results announced accordingly.

Article (25): Graduation Batches

Graduation ceremonies are held in **January**, **May**, and **September** of each year.

Article (26): Course Coding System

1. **Compulsory Faculty Courses**:
   - Code format: **Three letters** (department) + **three digits**
     - 1st digit: Academic level
     - 2nd digit: Semester
     - 3rd digit: Course sequence in the semester
2. **Clinical Elective Courses**:
   - Code format: Course serial number from elective table + **CEC**
3. **External Courses (outside the faculty)**:
   - Code format: Serial number from course schedule + **three-letter abbreviation** of the course title
4. **University General Requirements**:

- **General Electives**: Code = Serial number + **GEC**
- **General Compulsory**: Code = Serial number + **GCC**

Article (27): Course Listings

The following tables (A, B, C, D) provide:

- A complete list of courses
- Credit hours per course
- Corresponding theoretical and practical hours
- Written exam duration
- Maximum marks per course

Table (3): List of Courses (Includes Faculty Compulsory Courses (a), Clinical Elective Courses (c), and University General Compulsory and Elective Courses (b1 – b2))

1- Faculty Compulsory Courses (a)

Code	Course Name	Teaching Hours			Exam Hours	Total Marks
		Credit	Theoretical	practical		
ELT.111	English language & veterinary medical terminology	1	1	----	2	50
BIZ.112	Biology (Zoology)	2	1	2	2	100
CHE.113	Chemistry	2	1	2	2	100
ANE.114	Anatomy (A)	2	1	2	2	100
HIS.115	Histology (A)	2	1	2	2	100
BMB.116	Biochemistry and molecular biology (A)	2	1	2	2	100
PHY.117	Physiology (A)	2	1	2	2	100
BIP.121	Biophysics	2	1	2	2	100
AWD.122	Biostatics	2	1	2	2	100
ANE.123	Anatomy (B)	2	1	2	2	100
HIS.124	Histology (B)	2	1	2	2	100
PHY.125	Physiology (B)	2	1	2	2	100
BMB.126	Biochemistry (B)	2	1	2	2	100
AWD.211	Genetics	2	1	2	2	100
PHY.212	Physiology (C)	2	1	2	2	100

ANE.213	**Anatomy (C)**	**3**	**2**	**2**	**2**	**100**
HVC.214	**Behavior of Animal, poultry and fish (A)**	**3**	**2**	**2**	**2**	**100**
AWD 215	**Animal and poultry production(A)**	**2**	**1**	**2**	**2**	**100**
HIS 216	**Histology (C)**	**2**	**1**	**2**	**2**	**100**
BMB.217	**Biochemistry (C)**	**3**	**2**	**2**	**2**	**100**
PHY.221	**Physiology (D)**	**2**	**1**	**2**	**2**	**100**
AWD 222	**Genetic Engineering**	**2**	**1**	**2**	**2**	**100**
AWD.223	**Veterinary Economics**	**3**	**2**	**2**	**2**	**100**
HVC.224	**Behavior of Animal, poultry and fish (B)**	**3**	**2**	**2**	**2**	**100**
AWD.225	**Animal and poultry breeding(B)**	**2**	**1**	**2**	**2**	**100**
BMB.226	**Biochemistry (D)**	**2**	**1**	**2**	**2**	**100**
HIS 227	**Histology of poultry and Fish(D)**	**2**	**1**	**2**	**2**	**100**
ANE.228	**Anatomy (D)**	**2**	**1**	**2**	**2**	**100**
PHA.311	**General pharmacology**	**3**	**2**	**2**	**2**	**100**
VIR.312	**Virology (A)**	**3**	**2**	**2**	**2**	**100**
PAT.313	**General pathology (A)**	**2**	**1**	**2**	**2**	**100**
BIM.314	**General bacteriology , immunology and mycology**	**3**	**2**	**2**	**2**	**100**
PAR.315	**Parasitology (A)**	**3**	**2**	**2**	**2**	**100**
NCN.316	**Animal, poultry and fish nutrition and malnutrition diseases (A)**	**3**	**2**	**2**	**2**	**100**
FHC.317	**Milk control, Hygiene, Safety and Technology (A)**	**3**	**2**	**2**	**2**	**100**
PHA.321	**Special pharmacology**	**3**	**2**	**2**	**2**	**100**
VIR.322	**Virology (B)**	**3**	**2**	**2**	**2**	**100**
PAT.323	**pathology**	**2**	**1**	**2**	**2**	**100**
BIM.324	**Special bacteriology**	**3**	**2**	**2**	**2**	**100**
PAR.325	**Parasitology (B)**	**3**	**2**	**3**	**2**	**100**

NCN.326	**Animal, poultry and fish nutrition and malnutrition diseases (B)**	**3**	**2**	**2**	**2**	**100**
FHC.327	**Milk control, Hygiene, Safety and Technology (B)**	**3**	**2**	**2**	**2**	**100**
MID.411	**General medicine**	**2**	**1**	**3**	**2**	**100**
FMT.412	**Forensic medicine & veterinary regulations**	**3**	**2**	**2**	**2**	**100**
HVC.413	**Veterinary Epidemiology**	**1**	**1**	**-**	**2**	**100**
CPA.414	**Clinical pathology**	**3**	**2**	**2**	**2**	**100**
HVC.415	**Animal, poultry, Fish Hygiene and Environment (A)**	**3**	**2**	**2**	**2**	**100**
PAT.416	**Pathology (C)**	**2**	**1**	**2**	**2**	**100**
SUR.417	**General Surgery**	**2**	**1**	**3**	**2**	**100**
TGA.418	**Gynecology**	**2**	**1**	**3**	**2**	**100**
MID.421	**Special medicine (A)**	**2**	**1**	**3**	**2**	**100**
FMT.422	**Toxicology**	**3**	**2**	**2**	**2**	**100**
CPA.423	**Clinical pathology (B)**	**3**	**2**	**2**	**2**	**100**
TGA.424	**Andrology**	**2**	**1**	**2**	**2**	**100**
HVC.425	**Animal , poultry, Fish Hygiene and Environment (B)**	**3**	**2**	**2**	**2**	**100**
PAT.426	**Pathology (D)**	**2**	**1**	**2**	**2**	**100**
SUR.427	**Anesthesiology and diagnostic imaging**	**2**	**1**	**3**	**2**	**100**
MID511	**Special medicine (C)**	**3**	**2**	**3**	**2**	**100**
ZON.512	**Zoonoses (A)**	**3**	**2**	**3**	**2**	**100**
MID.513	**Infectious Diseases (A)**	**3**	**2**	**3**	**2**	**100**
SUR.514	**Special Surgery**	**3**	**2**	**3**	**2**	**100**
TGA.515	**Obstetric**	**3**	**2**	**3**	**2**	**100**
PRD 516	**Poultry and Rabbit diseases (A)**	**3**	**2**	**3**	**2**	**100**

AQM.517	**Aquatic animals medicine (Management and aquaculture) A**	**3**	**2**	**2**	**2**	**100**
FHC.518	**Meat and meat products Control, Hygiene, Safety and Technology (A)**	**3**	**2**	**2**	**2**	**100**
ZON.521	**Zoonoses (B)**	**3**	**2**	**3**	**2**	**100**
MID.522	**Infectious Diseases (B)**	**3**	**2**	**3**	**2**	**100**
SUR.523	**Lameness**	**3**	**2**	**3**	**2**	**100**
TGA.524	**Artificial insemination and embryo-transfer**	**3**	**2**	**3**	**2**	**100**
PRD.525	**Poultry and Rabbit diseases (B)**	**3**	**2**	**3**	**2**	**100**
AQM.526	**Aquatic animals medicine (Diseases) B**	**3**	**2**	**2**	**2**	**100**
FHC.527	**Meat and meat products control, Hygiene, Safety and Technology (B)**	**3**	**2**	**2**	**2**	**100**
MID.528	**Clinical Diagnosis & Therapeutics "advanced approaches" (medicine and infectious diseases D)**	**3 2**	**1 2**	**3**	**2**	**100**

(b1)- General University

Code	Course Name	Teaching Hours			Exam Hours	Total Marks
		Level	Credit	Theoretical		
GCC.001	**English language**	**1**	**1**	**1**	**1**	**50**
GCC.002	**Social Issues**	**2**	**1**	**1**	**1**	**50**
GCC.003	**Information Technology and communications**	**3**	**1**	**1**	**1**	**50**
GCC.004	**Professional Ethics**	**4**	**1**	**1**	**1**	**50**

(b 2)- General Elective Courses

Code	Course Name	Teaching Hours			Exam Hours	Total Marks
		Level	Credit	Theoretical		
GEC.001	**Programing**	**1**	**1**	**1**	**1**	**50**

GEC.002	**Intellectual property rights**	**1**	**1**	**1**	**1**	**50**
GEC.003	**Marketing and entrepreneurship**	**1**	**1**	**1**	**1**	**50**
GEC.004	**Academic study skills**	**1**	**1**	**1**	**1**	**50**
GEC.005	**Egyptian identity and personality**	**2**	**1**	**1**	**1**	**50**
GEC.006	**Quality management systems**	**2**	**1**	**1**	**1**	**50**
GEC.007	**Human Recourses**	**2**	**1**	**1**	**1**	**50**
GEC.008	**Business commination**	**2**	**1**	**1**	**1**	**50**
GEC.009	**Business administration**	**3**	**1**	**1**	**1**	**50**
GEC.010	**Leadership skills**	**3**	**1**	**1**	**1**	**50**
GEC.011	**First aid skills**	**3**	**1**	**1**	**1**	**50**
GEC.012	**communication skills**	**3**	**1**	**1**	**1**	**50**

(c)- Clinical Elective Courses

Code	Course Name	Teaching Hours				Exam Hours	Total Marks
		levels	Credit	Theoretical	Practical		
CEC.001	**Veterinary Medical sports**	**4**	**2**	**1**	**2**	**2**	**50**
CEC.002	**Clinical and laboratory diagnosis in case of toxicity in animals of poultry**	**4**	**2**	**1**	**2**	**2**	**50**
CEC.003	**Equine diagnostic Imaging**	**4**	**2**	**1**	**2**	**2**	**50**
CEC.004	**Ultrasonography (Reproductive)**	**4**	**2**	**1**	**2**	**2**	**50**
CEC.005	**Veterinary physiotherapy**	**5a**	**2**	**1**	**2**	**2**	**50**
CEC.006	**Equine Orthopedic Surgery**	**5a**	**2**	**1**	**2**	**2**	**50**
CEC.007	**Vaccination program in ruminant**	**5a**	**2**	**1**	**2**	**2**	**50**
CEC.008	**Clinical and laboratory diagnosis in reproductive diseases**	**5a**	**2**	**1**	**2**	**2**	**50**
CEC.009	**Ophthalmology**	**5b**	**2**	**1**	**2**	**2**	**50**
CEC.010	**Clinical and laboratory diagnosis in poultry and rabbit diseases**	**5b**	**2**	**1**	**2**	**2**	**50**
CEC.011	**Vaccination programs in pets and equine**	**5b**	**2**	**1**	**2**	**2**	**50**
CEC.012	**Clinical and laboratory diagnosis of Aquatic animal diseases**	**5b**	**2**	**1**	**2**	**2**	**50**

	and basics of biosecurity in fish farms						

Article (28): Study Plan:

The following Tables A-B-C-D-E:4 illustrate the distribution of courses across different academic levels, showing the number of theoretical and practical credit hours, as well as the maximum marks for each course.

Table (A:4) – Study Plan for Level One

Maximum grade	Number of credit hours			Course name	No. & code	Semester	level
	Total	Practical	Theoretical				
50	1	–	1	English language & veterinary medical terminology	ELT.111	First semester	Level one
100	2	1(2)	1	Biology (zoology)	BIZ.112		
100	2	1(2)	1	Chemistry	CHE.113		
100	2	1(2)	1	Anatomy (A)	ANE.114		
100	2	1(2)	1	Histology (A)	HIS.115		
100	2	1(2)	1	Biochemistry and molecular biology (A)	BMB.116		
100	2	1(2)	1	Physiology (A)	PHY.117		
50	1	-	1	English language	GCC.001		
700	14	6(12)	8	Total number of credit hours in the first semester weekly		Second semester	
100	2	1(2)	1	Biophysics	BIP.121		
100	2	1(2)	1	Biostatistics	AWD.122		
100	2	1(2)	1	Anatomy (B)	ANE.123		
100	2	1(2)	1	Histology (B)	HIS.124		
100	2	1(2)	1	Physiology (B)	PHY.125		
100	2	1(2)	1	Biochemistry (B)	BMB.126		
600	12	6 (12)	6	Total number of credit hours in the second semester weekly			
50**	1	–	1	General elective course			
1300	26	12(24)	14	Total number of credit hours in the first level weekly			

Table (B:4) – Study Plan for Level Two

Maximum grade	Number of credit hours			Course name	No. & code	Semester	level
	Total	Practical	Theoretical				
100	2	1(2)	1	Genetics	AWD.211	First semester	Level two
100	2	1(2)	1	Physiology (C)	PHY.212		
100	3	1(2)	2	Anatomy (C)	ANE.213		
100	3	1(2)	2	Behavior of Animal, poultry and fish(A)	HVC.214		
100	2	1(2)	1	Animal and poultry production (A)	AWD.215		
100	2	1(2)	1	Histology (C)	HIS 216		
100	3	1(2)	2	Biochemistry (C)	BMB.217		
50	1		1	Social issues	GCC.002		
750	18	7(14)	11	Total number of credit hours in the first semester weekly			
100	2	1(2)	1	Physiology(D)	PHY.221	Second semester	
100	2	1(2)	1	Genetic Engineering	AWD 222		
100	3	1(2)	2	Veterinary Economics	AWD.223		
100	3	1(2)	2	Behavior of Animal, poultry and fish (A)	HVC.224		
100	2	1(2)	1	Animal and poultry breeding (B)	AWD.225		
100	2	1(2)	1	Biochemistry (D)	BMB.226		
100	2	1(2)	1	Histology of poultry and Fish (D)	HIS.227		
100	2	1(2)	1	Anatomy (D)	ANE.228		
800	18	8(16)	10	Total number of credit hours in the second semester weekly			
50**	1	–	1	General elective course			
1550	36	15(30)	21	Total number of credit hours in level two weekly			

Table (C:4) – Study Plan for Level Three

Maximum grade	Number of credit hours			Course name	No. & code	Semester	level
	Total	Practical	Theoretical				
100	3	1 (2)	2	General & systemic pharmacology	PHA.311	First semester	Level three
100	3	1 (2)	2	Virology (A)	VIR.312		
100	2	1 (2)	1	General pathology	PAT.313		
100	3	1 (2)	2	General bacteriology, immunology & mycology	BIM.314		
100	3	1 (2)	2	Parasitology (A)	PAR.315		
100	3	1 (2)	2	Animal, poultry and fish nutrition and malnutrition diseases (A)	NCN.316	Second semester	
100	3	1 (2)	2	Milk control, Hygiene, Safety and Technology (A)	FHC.317		
50	1		1	Information technology and communication	GCC.003		
750	21	7 (14)	14	Total number of credit hours in the first semester weekly			
100	3	1 (2)	2	Special pharmacology	PHA.321		
100	3	1 (2)	2	Virology (B)	VIR.322		
100	2	1 (2)	1	Pathology (B)	PAT.323		
100	3	1 (2)	2	Special Bacteriology	BIM.324		
100	3	1 (2)	2	Parasitology (B)	PAR.325		
100	3	1(2)	2	Animal, poultry and fish nutrition and malnutrition diseases (B)	NCN.326		
100	3	1(2)	2	Milk control, Hygiene, Safety and Technology (B)	FHC.327		
700	20	7 (14)	13	Total number of credit hours in the second semester weekly			
50**	1	–	1	General elective course			
1450	41	14 (28)	27	Total number of credit hours in the third level weekly			

Table (D:4) – Study Plan for Level Four

Maximum grade	Number of credit hours			Course name	No. & Code	Semester	level
	Total	Practical	Theoretical				
100	2	1(3)	1	General Medicine (A)	MID.411	First semester	Level four
100	3	1(2)	2	Forensic medicine & veterinary regulations	FMT 412		
100	1	–	1	Veterinary Epidemiology	HVC.413		
100	3	1(2)	2	Clinical pathology (A)	CPA.414		
100	2	1(2)	1	Animal , poultry, fish Hygiene and Environment (A)	HVC.415		
100	2	1(2)	1	Pathology (C)	PAT.416		
100	2	1(3)	1	General surgery	SUR.417		
100	2	1(3)	1	Gynecology	TGA.418		
50	1		1	Professional ethics	GCC.004		
850	18	7 (17)	11	Total number of credit hours in the first semester weekly			
100	2	1(3)	1	Special Medicine (B)	MID.421	Second semester	
100	3	1 (2)	2	Toxicology	FMT.422		
100	3	1(2)	2	Clinical pathology (B)	CPA.423		
100	2	1(3)	1	Andrology	TGA.424		
100	3	1(2)	2	Animal, poultry, fish Hygiene and Environment (B)	HVC.425		
100	2	1(2)	1	Pathology(D)	PAT.426		
100	2	1(2)	1	Anesthesiology and diagnostic imaging	SUR.427		
50	2	1(2)	1	Clinical Elective Course			
750	14	8(18)	11	Total number of credit hours in the second d semester weekly			
1600	37	15(35)	22	Total number of credit hours in the fourth level weekly			

Table (E:4) – Study Plan for Level Five

Maximum grade	Number of credit hours			Course name	No. & code	Semester	level
	Total	Practical	Theoretical				
100	3	1(3)	2	Special medicine (C)	MID.511	First semester	Level five
100	3	1(3)	2	Zoonoses (A)	ZON.512		
100	3	1(3)	2	Infectious Diseases (A)	MID.513		
100	3	1(3)	2	Special surgery	SUR.514		
100	3	1(3)	2	Obstetric	TGA.515		
100	3	1(3)	2	Poultry and Rabbit diseases(A)	PRD.516		
100	3	1(2)	2	Aquatic animals medicine (Management and aquaculture) (A)	AQM.517		
100	3	1(2)	2	Meat control, Hygiene, Safety and Technology (A)	FHC.518		
50	2	1(2)	1	Clinical Elective course	C.E.C	Second semester	
850	26	9(24)	17	Total number of credit hours in the First semester weekly			
100	3	1(3)	2	Zoonoses (B)	ZON.521		
100	3	1(3)	2	Infectious Diseases (B)	MID.522		
100	3	1(3)	2	Lameness	SUR.523		
100	3	1(3)	2	Artificial insemination and embryo transfer	TGA.524		
100	3	1(3)	2	poultry and Rabbit diseases (B)	PRD525		
100	3	1(3)	2	Aquatic animals medicine (Diseases) (B)	AQM.526		
100	3	1(3)	2	Meat Control, Hygiene, Safety and Technology (B)	FHC.527		
100	3	1(3)	2	Clinical Diagnosis & Therapeutics “advanced approaches” (medicine and infectious diseases)	MID.528		
50	2	1(2)	1	Clinical Elective Course	C.E.C.		

800	**26**	**9(25)**	**17**	**Total number of credit hours in the second semester weekly**
1700	**52**	**18(49)**	**34**	Total number of credit hours in the fifth level weekly
8300	**192**	**74(169)**	**118**	Total number of credit hours across all levels (80 courses)

Table (5): Courses with Prerequisites

(Students are not allowed to register for a course with prerequisites unless they have successfully completed the required preceding courses.)

Course	Prerequisite(s)
Genetics	Histology (A)
Pathology	Anatomy – Histology
Biochemistry (C)	Biochemistry (B)
Animal and Poultry Nutrition and Malnutrition Diseases	Biochemistry
Pharmacology	Biochemistry, Physiology
Veterinary Economics	Biostatistics
Meat Inspection and Hygiene	Parasitology – Bacteriology
Toxicology	Pharmacology
Clinical Pathology	Physiology – Clinical Biochemistry
Animal and Poultry Hygiene	Animal Behavior and Welfare
Veterinary Epidemiology	Virology – Bacteriology
Aquatic Animal Medicine	Bacteriology – Parasitology
Poultry and Rabbit Diseases	Virology – Bacteriology – Parasitology
Zoonotic Diseases	Virology – Bacteriology – Parasitology
Infectious Diseases	Virology – Bacteriology
Internal Medicine	Physiology
Surgery	Anatomy

Here is the translated and formatted version of **Table (6)** along with the relevant notes and articles:

Table (6): Weekly Distribution of Actual Theoretical and Practical Hours Across Academic Levels

Level	Theoretical Hours	Practical Hours	Total Hours	% Theoretical	% Practical
Level 1	14	24	570	36.84%	63.16%
Level 2	21	30	765	41.10%	58.90%
Level 3	27	28	825	49.00%	51.00%

Level 4	22	35	855	38.59%	61.41%
Level 5	34	49	1245	40.96%	59.04%
Total	**1770**	**2490**	**4260**	**41.50%**	**58.50%**

Additional Totals:

- **Total Hours:** 4305
- **Total Practical Hours:** 2535
- **Total Theoretical Hours:** 1770

Second: Internship Year:

Practical training is conducted for **8 hours daily**, **5 days a week**, over **30 weeks (one academic year)**, totaling **1200 hours annually**.

Third: General Courses:

The total number of hours allocated to general courses is **165 hours**.

Article (29):

The College Council has the right to develop the academic content of the courses based on proposals submitted by the relevant academic departments, or to add new elective courses.

Article (30):

This bylaw shall be applied to new students enrolled at the College starting from the academic year **2022/2023**, with due consideration to the continuation of current students under the previously applicable bylaws.

Article (31):

The **Universities Organization Law** and its executive regulations shall apply in any matters not explicitly covered by this bylaw.

Article (32): Scientific Content of the Study Courses

A. Core Compulsory Courses

- **Level One**

Course Name: **English language, veterinary medical**	**Credit hours**

Terminology		
Code number: **ELT.111**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Reading skills; reviewing, recognizing, perception, analysis, evaluation & comprehending. Writing skills/ thinking & itemizing points, choosing effective phrases, planning, preparing good sentences & better ones, comprehension and revising. Basic principles of veterinary medical terminology.		

Course Name: **Biology (Zoology)**	**Credit hours**	
Code number: **BIZ.112**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Classification Of The Animal Kingdom; General Characteristics Of Each Class.		

Course Name: **Chemistry**	**Credit hours**	
Code number: **CHE.113**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Physical chemistry (states of matter, solutions, chemical equilibrium and kinetics. Thermochemistry, electrolytic conduction, application of ionic theory). Organic chemistry (General principles of alkanes, alkenes, alkynes, alcohols, ethers aldehydes and ketones); saturated monocarboxylic acids; monocarboxylic, acid derivatives; amines; mono substituted monocarboxylic acids; carbohydrates; isomerism, aromatic compounds.		

Course Name: **Anatomy and Embryology (A)**	**Credit hours**

Code number: **ANE.114**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Introduction of general anatomy, topographic anatomy in animals..		

Course Name: **Histology (A)**	**Credit hours**	
Code number: **HIS.115**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Cytology: Cytology, cell biology, histochemistry, immunohistochemistry and cytogenetics, histological techniques; microscopy & E.M; immunoflurcence Microscopy		

Course Name: **Biochemistry and molecular biology (A)**	**Credit hours**	
Code number: **BMB.116**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Molecular structure and chemistry of carbohydrates; lipids and proteins		

Course Name: **Physiology (A)**	**Credit hours**	
Code number: **PHY.117**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Cell physiology, physiology of blood and body fluids and physiology of respiratory system.		

Course Name: **Biophysics**	**Credit hours**

Code number: **BIP.121**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Body electricity and tissue /organ electric conductivity, Biophysical basics of diagnostic X- ray; natural and artificial nuclear activity; control of ionized radiation and personal preventive means; cooling and heating measures in medical and surgical treatment.		

Course Name: **Biostatistics**	**Credit hours**	
Code number: **AWD.122**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Introduction; Description of the data; Measures of central tendency; measures of dispersion; probability laws; binomial distribution; normal distribution, testing hypothesis (independent T-test and paired T-test): (Latin square) and Nested design simple correlation and simple regression.		

Course Name: **Anatomy and Embryology (B)**	**Credit hours**	
Code number: **ANE.123**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: . Male gentile system, female gentile system, general embryology, bones of the pelvic limb, dissection of the pelvic limb of horse, special arthrology of pelvic limb of horse and hoof anatomy.		

Course Name: **Histology (B)**	**Credit hours**	
Code number: **HIS.124**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)

Course contents: General histology, tissues, epithelium, muscular system, connective tissues, blood and cardiovascular system. Nervous tissues and system

Course Name: **Physiology (B)**	**Credit hours**	
Code number: **PHY.125**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Muscles and nerves physiology, physiology of urinary system and physiology of energy metabolism		

Course Name: **Biochemistry (B)**	**Credit hours**	
Code number: **BMB.126**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Chemistry of enzymes, vitamins and minerals		

Level two

Course Name: **Genetic**	**Credit hours**	
Code number: **AWD.211**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Molecular genetics and Biotechnology: The genetic materials; DNA replication; Genetic expression; Gene regulation and protein synthesis; mutations and mutagens;		

Course Name: **Physiology (C)**	**Credit hours**	
Code number: **PHY.212**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Physiology of cardiovascular system, physiology of endocrine system and physiology of CNS.		

Course Name: **Anatomy and Embryology (c)**	**Credit hours**	
Code number: **ANE.213**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Digestive system, lymphatic system, vertebral column, anatomy of ribs and sternum and dissection of the abdomen and thorax		

Course Name: **Behavior Of Animal, Poultry and fish (A)**	**Credit hours**	
Code number: **HVC.214**	**Lectures**	**Practical**
Prerequisite courses:- **-**	2	1(2)
Course contents: Animal & poultry behavior: introduction, Behavior of equines, cattle and buffaloes, sheep and goats, pet animals, camel, laboratory animals, poultry, rabbits and fish.		

Course Name: Animal and poultry Production	**Credit hours**	
Code number: **AWD.215**	**Lectures**	**Practical**

Prerequisite courses:-	1	1(2)
Course contents: Animal & poultry and Fish production: Dairy industry; Essentials for profitable dairy farm; reproductive performance; lactation ; rearing calves & heifers; herd replacement and culling; herd health program; the commercial cow-calf producer; growth and development in beef cattle, carcass characteristics and factors affecting meat quality, beef production system; establishing the flock of sheep & Goats; wool and mohair production system of sheep and goat production; Management of commercial poultry breeders; light regime for open and closed poultry house system; principles of quail & ostrich production; Duck, Gees and Turkey production; Rabbit production; fish production.		

Course Name: **Histology (C)**	**Credit hours**	
Code number: **HIS.216**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Special histology of system, digestive, respiratory, skin, endocrine, urogenital system, sense organs		

Course Name: **Biochemistry (C)**	**Credit hours**	
Code number: **BMB.217**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Biological oxidation. Carbohydrate and lipid metabolism		

Course Name: **Physiology (D)**	**Credit hours**

Code number: **PHY.221**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: physiology of reproduction, digestive system and comparative physiology		

Course Name: **Genetic Engineering**	**Credit hours**	
Code number: **AWD.222**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Ggenetic engineering; Gene transfer; DNA fingerprint; methods of studying the genome and farm animal improvement; Genetic and cancer, Genetic and animal disease; immunogenetics, Genetic and behavior.		

Course Name: **Veterinary Economics**	**Credit hours**	
Code number: **AWD.223**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: .introduction about economic; Economic problem: Economic factors; Demand; Supply Elasticity and their types; consumer behavior theory; production function theory; costs and their types; Economic and productive efficiency; Feasibility studies; Economic effect of disease on animal productivity; Budgeting; Farm records, linear programming; Measures of performance; interest rate; position of animals farms and relationship between them; Marketing (Types, agencies, channels, enterprises); planning marketing operation, problems of marketing animal production.		

Course Name: **Management of animal, poultry and fish (B).**	**Credit hours**	
Code number: **HVC.224**	**Lectures**	**Practical**

Prerequisite courses:- -	2	1(2)
Course contents: Animal & poultry management: introduction, management of equines, cattle and buffaloes, camel, sheep and goats, pet animal laboratory animals, fowl, water fowl and Turkey.		

Course Name: Animal and poultry breeding	**Credit hours**	
Code number: **AWD.225**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Management of commercial poultry breeders; light regime for open and closed poultry house system; principles of quail & ostrich production; Duck, Gees and Turkey production; Rabbit production; fish production.		

Course Name: **Biochemistry (D)**	**Credit hours**	
Code number: **BMB.226**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Molecular biology and protein metabolism.		

Course Name: **Histology of poultry and fish (D)**	**Credit hours**	
Code number: **HIS.227**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Comparative histology of different system in poultry and fish		

Course Name: **Anatomy (D)**	**Credit hours**	
Code number: **ANE.228**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Respiratory system, nervous system, special Embryology, skull anatomy and dissection of head and neck		

Level three

Course Name: **General and systemic pharmacology**	**Credit hours**	
Code number: **PHM.311**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: General pharmacology; Autonomic nervous system; central nervous system, Autocoids; Growth promoters; Metabolism.		

Course Name: **Virology (A)**	**Credit hours**	
Code number: **VIR.312**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Nature, structure, biology morphology and ecology of viruses; physical and chemical properties of viruses; classification of viruses affecting animal and human ; molecular study of viral host cell interaction; Tropism; pathogenesis and mechanisms of viral replication; specific and non- specific immune defense host mechanisms (humeral and /or cellular) to the virus; the role of IFN; Viral immune		

pathogenesis; Defense to viral infection; viral Vaccinology.

Course Name: **General pathology**	**Credit hours**	
Code number: **PAT.313**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Definitions and historical aspects of pathology. Cellular base for disease. Etiology of diseases. Circulatory disturbances and degenerations. Disturbances of development and growth of cells. Inflammation, immunological disorders, regeneration and repair. Neoplasia.		

Course Name: **General bacteriology, immunology and mycology**	**Credit hours**	
Code number: **BIM.314**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Bacterial morphology and bacterial growth; Bacterial physiology bacterial mutation and metabolic products; pathogenicity and virulence infection and anti-chemotherapeutics. Fungi classification; nutrition and reproduction of fungi; Fungi diagnosis; antifungal drugs; mycotoxins. Yeasts (classification and identification). Molds (dermatophytes, aspergillus, zygomycetes); Dimorphic fungi. Immunology: Definitions and terminology; innate immunity antigen; acquired and humoral immunity; complement system antigen and antibody. Reaction; Hypersensitivity; immunology of tumors and their markers; immunology of transplantation and histocompatibility; immune- prophylaxis.		

Course Name: **parasitology (A)**	**Credit hours**

Code number: **PAR.315**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Introductions; Helminthology (trematodes, custodies and nematodes); general character, morphological character, life cycle, pathogenesis of the parasites; general study of mollusks and their role in the transmission of parasitic disease. Control of mollusks. Fish parasites (protozoa, cestodes, nematodes & trematodes), morphological characters, life cycle, public health importance and methods of control.		

Course Name: Animal, poultry and fish nutrition and malnutrition diseases(A)	**Credit hours**	
Code number: **NCN.316**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Principles of nutrition and vet. Dietetics; chemical composition and evaluation of feed stuffs; assimilation and utilization of nutrients. Nutrient's inadequacy; feeding standards and nutrients requirements. Applied nutrition for maintenance. Poultry, rabbits, fish and other aquatic animals. Classification of feedstuffs; feed supplements & additives. Feed processing. Commercial feeds and feed laws.		

Course Name: **Milk and Milk products control, Hygiene, safety and Technology (A)**	**Credit hours**	
Code number: **FHC.317**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Physical properties of milk; chemical composition; chemical examination; adulteration of milk sanitary and bacteriological examination of milk; milk enzymes; Microorganisms associated with milk, sources of contamination normal fermentation, taints and abnormal condition of milk; milk residues; milk borne diseases, clean milk production; changes in milk due to mastitis; Heat treatment of		

milk; sanitizinig milk utensils and dairy equipment.

Course Name: **Special pharmacology**	**Credit hours**	
Code number: **PHM.321**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Cardiovascular system; respiratory system; Digestive system; Reproductive system, Drugs acting on skin and eye; chemotherapy (Sulphonamides, antiviral, anthelmintics, antiseptics and disinfectants, antiprotozoal drugs); clinical pharmacology; insecticides.		

Course Name: **Virology (B)**	**Credit hours**	
Code number: **VIR.322**	**Lectures**	**Practical**
Prerequisite courses	2	1(2)
Course contents: Viral groups including the families and the selected viruses of significant importance to animals (cattle, buffalo, sheep, goats, equines, poultry, rabbits, fish, pet and wild animals) and their public health significance among human population covering taxonomy, antigenicity, epidemiology, diagnosis and control.		

Course Name: **pathology** (B)	**Credit hours**	
Code number: **PAT.323**	**Lectures**	**Practical**
Prerequisite courses:- **PAT.223**	1	1(2)
Course contents: Pathology of disease affecting skin and its appendages ; the musculoskeletal		

system; the respiratory system; the cardio-vascular system; the hemic and lymphatic system; the digestive system/ The urinary system; the genital system; the nervous system and organs of special sense; pathology of important infectious and non- infectious disease of domestic animals.

Course Name: **Special Bacteriology**	**Credit hours**	
Code number: **BIM.324**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Gram positive cocci; Gram positive bacilli ; Gram positive coccobacilli Gram negative occobacilli; gram negative cocci gram negative bacilli special bacteria.		

Course Name: **Parasitology (B)**	**Credit hours**	
Code number: **PAR.325**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Protozoology (structure, function and classification of protozoa; morpho biological characters and diagnosis). Entomology (Anatomy and function of arthropods of medical and veterinary importance, classification, transmission of diseases, life cycle, their role in transmitting disease to animals and man); Control of arthropods.		

Course Name: **Animal, poultry and fish nutrition and malnutrition diseases(B)**	**Credit hours**

Code number: **NCN.326**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Nutrient's requirements and applied nutrition for pre-ruminants; beef and dairy animlas; sheep & Goats; camels equines pet and lab. Animals. Nutrition as related to metabolic disorders & reproduction. Mal-nutritional and food –borne illnesses. Nutrition- infectious diseases inter-relationships. Therapeutic nutrition.		

course Name: **Milk and Milk products control, Hygiene, safety and Technolgy (B)**	**Credit hours**	
Code number: **FHS.327**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Properties of fats & oils; Sampling , physical constants; chemical constants; specific test for fats and oils; adulteration of butter with fats & oils, margarine & concentrated margarine, Eggs; formation & structure of egg, chemical composition, nutritive value, egg faults, preservation of eggs, diseases transmitted through eggs, microbiological examination of eggs, antimicrobial defense mechanisms in eggs. Dairy technology & preservation of cream, butter & ghee, cheese, fermented milk, concentrated milk, powder, infant's food and ice0 cream.		

Level four

Course Name: **General Medicine (A)**	**Credit hours**	
Code number: **MID.411**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(3)
Course contents: Clinical examination for reaching diagnosis general systemic states, principles of therapeutics/ clinical practice Field diagnostic tests, interpretation of the different		

tests in connection with clinical finding and treatment in diseased animals.

Course Name: **Forensic medicine and Veterinary Regulations**	**Credit hours**	
Code number: **FMT.412**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Identification; Death; wounds asphyxia; thermal injuries; forensic toxicology medico legal law and medical ethics and veterinary regulations.		

Course Name: **Veterinary Epidemiology**	**Credit hours**	
Code number: **HVC.413**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Definitions; uses; types components; patterns; disease determinates; transmission and maintenance of disease; sources and reservoir infection; source of data; data storage and retrieval; measures of disease occurrence; general principles for the control of infectious diseases.		

Course Name: **Clinical pathology** (A)	**Credit hours**	
Code number: **CPA.414**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Clinical hematology; abnormalities in blood hemostasis; case studies.		

Abnormalities of inorganic and organic constituents of blood & acid base balance clinical urology; clinical enterology case studies.

Course Name: **Animal, poultry, fish Hygiene and Environmental (A)**	**Credit hours**	
Code number: **HVC.415**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Water (resources, pollution, improvement, treatment, hygienic requirement, water quality standard); Air (Requirements, pollution, macro and microclimate, air born infection, ventilation) ; soil (types, pollution and prevention, soil born infection); Animal and poultry housing.		

Course Name: **Special pathology** (C)	**Credit hours**	
Code number: **PAT.416**	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Pathology of disease affecting different body system in case of different microbial , viral , mycotic and parasitic diseases		

Course Name: **General Surgery** (A)	**Credit hours**	
Code number: **SUR.417**	**Lectures**	**Practical**
Prerequisite courses	1	1(3)

Course contents: Asepsis and antisepsis; suturing injections; inflammation abscess; sinus and Fistula; necrosis and Gangrene; Ulcers; burns phlegmon, bones; joints, muscles; tendons bursae; nerves vessels; tumors and cysts wounds; Hemorrhage.

Course Name: **Gynecology (A)**	**Credit hours**	
Code number: 418	**Lectures**	**Practical**
Prerequisite courses:-	1	1(3)
Course contents: Reproductive Pattern & fertility: Control of reproduction: Infertility in Farm animals. Reproductive management		

Course Name: **Special Medicine (B)**	**Credit hours**	
Code number:	**Lectures**	**Practical**
Prerequisite courses:-	1	1(3)
Course contents: Disease of Musculo–skeletal system; digestive, respiratory and cardiovascular systems; the blood and blood forming elements diseases, the nervous, urinary and dermal systems diseases; clinical signs, treatment and control in different farm animals. Diseases caused by physical agents. Metabolic disorders and deficiency disease.		

Course Name: **Toxicology**	**Credit hours**	
Code number:	**Lectures**	**Practical**

Prerequisite courses:-	2	1(2)
Course contents: General toxicology; toxic kinetic and toxic dynamics; clinical toxicology; antidotes, analytical toxicology; toxicity of pesticides; toxicity of heavy metals; mycotoxins; animal poisons; poisonous plants; radiation toxicity; environmental toxicology; toxic gases Role of nano- particles in toxicology field.		

Course Name: **Clinical pathology** (B)	**Credit hours**	
Code number: **CPA.423**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Clinical hematology; abnormalities in blood hemostasis; case studies. Abnormalities of inorganic and organic constituents of blood & acid base balance clinical urology; clinical enterology case studies.		

Course Name: **Andrology**	**Credit hours**	
Code number: **TGA.424**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(3)
Course contents: Reproductive physiology, male sexual behavior. Semen biology, male infertility and sire selection. Diseases causing abortion		

Course Name: **Animals, poultry , Fish Hygiene and Environment (B)**	**Credit hours**

Code number: **HVC.425**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Control of contagious diseases; Eradication of external parasites; transportation of animals; Disposal and utilization of animal & poultry wastes; biosecurity ; stress and animal health; fish farming and aquaculture hygiene.		

Course Name: **Pathology (D)**	**Credit hours**	
Code number: 426	**Lectures**	**Practical**
Prerequisite courses:-	1	1(2)
Course contents: Pathology of viral diseases of farm animals, equines, poultry, pets and fish , pathology of mycotic diseases of farm animals, equines, poultry, pets and fish.		

Course Name: Anesthesiology and diagnostic imaging	**Credit hours**	
Code number: 427	**Lectures**	**Practical**
Prerequisite courses:-	1	1(3)
Course contents: Preanesthetic; local regional and general anesthetics; diagnostic imaging; radiography, sonography and oilier techniques and Endoscopy.		

Level five

Course Name: **Special Medicine (c)**	**Credit hours**

Code number: **MID.511**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(3)
Course contents: Diseases of Musculo- skeletal system, digestive, respiratory and cardiovascular systems; the bold and blood forming elements, the nervous, urinary and dermal systems diseases: clinical signs, diagnosis, treatment and control in pet animals.		

Course Name: Zoonoses (A)	**Credit hours**	
Code number: **ZON.512**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(3)
Course contents: Technical terms used in zoonoses; classification of zoonoses; bacterial diseases, mycotic diseases. Viral diseases, Rickettsial diseases: parasitic diseases (protozoal, trematodiasis, nematodiasis, cestodiasis), arthropod infestation); Rodent control.		

Course Name: **Infectious diseases (A)**	**Credit hours**	
Code number: **MID.513**	**Lectures**	**Practical**
Prerequisite courses:- -	2	1(3)
Course contents: Infectious diseases of large ruminants (cattle, buffaloes and camels): Viral, Bacterial, Fungal and Parasitic diseases.		

Course Name: **Special Surgery**	**Credit hours**	
Code number: **SUR.514**	**Lectures**	**Practical**

Prerequisite courses:-	2	1(3)
Course contents: Digestive system; Respiratory system; urinary system reproductive. System udder and teat; Ear; Horns Special affections.		

Course Name: **Obstetric**	**Credit hours**	
Code number: **TGA.515**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(3)
Course contents: Obstetrics: physiology of pregnancy normal birth normal puerperium Dystocia pathology of puerperium. Abnormalities in pregnancy		

Course Name: **Poultry and Rabbit diseases(A)**	**Credit hours**	
Code number: **PRD.516**	**Lectures**	**Practical**
Prerequisite courses:- -	2	1(3)
Course contents: Avian & rabbit diseases caused by viral and mycotic agents; Nutritional deficiency diseases (definition causes, transmission, signs, lesions, diagnosis, control and prevention).		

Course Name: **Aquatic animals medicine (Management and aquaculture) (A)**	**Credit hours**	
Code number: **AQM.517**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Aquatic animals classification; system of fish management; plan of fish farm and management of fishponds; fish management with ducks, in floating cages and in rice field; problems in fish farms and their control; fish care during transportation; Anatomy and physiological function of fish organs;		

Course Name: **Meat and meat products control, Hygiene, safety and Technology (A)**	**Credit hours**	
Code number: **FHC.518**	**Lectures**	**Practical**
Prerequisite courses:- -	2	1(2)
Course contents: The food animals; meat composition and quality; ante-mortem inspection, slaughtering, dressing, postmortem inspection & pathological changes; metabolic diseases & nutritional deficiencies; infections & parasitic diseases; Meat adulteration; Meat laws; legislations & standards & quality assurance.		

Course Name: **Zoonoses** (B)	**Credit hours**	
Code number: **ZON.521**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(3)
Course contents: parasitic diseases (protozoal, trematodiasis, nematodiasis, cestodiasis), arthropod infestation); Rodent control.		

Course Name: **Infectious diseases (B)**	**Credit hours**	
Code number: **MID.522**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(3)
Course contents: Infectious diseases of small ruminants, equines, pet animals and swine; viral, bacterial, Fungal and parasitic diseases.		

Course Name: **Lameness**	**Credit hours**	
Code number: **SUR.523**	**Lectures**	**Practical**

Prerequisite courses:-	2	1(3)
Course contents: Lameness in different animals, treatment and surgical interference		

Course Name: **Artificial insemination and embryo transfer**	**Credit hours**	
Code number: **TGA.524**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(3)
Course contents: Artificial insemination techniques in different animals and methods of embryo transfer. Introduction of A.I. Semen collection and evaluation. Semen extension. The Frozen semen. Insemination technique. Physiology of spermatozoa in the female genital tract. Embryo transfer. In vitro embryo production (IVEP)		

Course Name: **Poultry and rabbit diseases (B)**	**Credit hours**	
Code number: **PRD.525**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(3)
Course contents: Avian & rabbit disease caused by bacterial and parasitic agents (Definition, causes, transmission, signs, lesions, diagnosis, control and prevention) Miscellaneous conditions and management problems; vaccination and vaccination problems.		

Course Name: **Aquatic animals medicine (Diseases) (B)**	**Credit hours**	
Code number: **AQM.526**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)

Course contents: endoparasitic and ectoparasitic metazoal disease. Technical terms for Aquatic animals' disease bacterial viral, mycotic and environmental diseases endoparasitic and ectoparasitic protozoal diseases; control of Aquatic animals' diseases.

Course Name: **Meat and Meat products control, Hygiene, Safety and Technology (B)**	**Credit hours**	
Code number: **FHC.527**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(2)
Course contents: Poultry hygiene & inspection; fish hygiene & inspection; meat microbiology; food borne illness; technology of meat preservation cooking methods; packing meat additives meat contaminants & toxic residues; animal by products & Biogas production; food safety risk assessment.		

Course Name: **Clinical applied Diagnosis & Animal Therapeutics and advanced approaches (Medicine & infectious Diseases)**	**Credit hours**	
Code number: **MID.528**	**Lectures**	**Practical**
Prerequisite courses:-	2	1(3)
Course contents: Different application of new diagnosis and treatment traits in farm animal cases. Application of new versions of vaccination		

General elective courses (GEC)

B. General Courses

1. Courses Required for the Award of the University Degree (University Compulsory Requirements)

English language	**Credit hours**	
Code number: **GCC.001**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Reading skills; reviewing, recognizing, perception, analysis, evaluation & comprehending. Writing skills/ thinking & itemizing points, choosing effective phrases, planning, preparing good sentences & better ones, comprehension and revising		

Societal Issues	**Credit hours**	
Code number: **GCC.002**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Announcing the students about the updated issues especially human rights and anti-corruptions, environmental, economic , public health and any other issues belongs to the Egyptian society		

Information Technology and communications	**Credit hours**	
Code number: **GCC.003**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Artificial intelligence definition, internet, data bases, virtual society , cloud and large data		

Professional Ethics	**Credit hours**	
Code number: **GCC.004**	**Lectures**	**Practical**
Prerequisite courses:-	1	-

Course contents: Medical and veterinary medical ethics. Professional laws and the syndicate rules in Egypt

Elective General Courses

Programing	**Credit hours**	
Code number: GEC.001	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Bases of programming in soft wares		

Intellectual property rights	**Credit hours**	
Code number: **GEC.002**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Intellectual Property Rights, Innovation, and Methods of Patent Registration		

Marketing and entrepreneurship	**Credit hours**	
Code number: **GEC.003**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Entrepreneurship Systems and Small Business Projects, and the Applications of Entrepreneurship Programs in the Field of Veterinary Projects		

Academic study skills	**Credit hours**	
Code number: **GEC.004**	**Lectures**	**Practical**
Prerequisite courses:-	1	-

Course contents: **"Skills Acquired Through Academic Study in the Field of Veterinary Medicine and Scientific Research."**

Egyptian Identity and personality	**Credit hours**	
Code number: **GEC.005**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: "The Concept and Nature of Egyptian Personality and Identity and Their Historical Dimensions – The Role of Ancient and Modern Egyptian History in Shaping National Identity – Egypt's Character and Its Regional and International Role."		

Quality management systems	**Credit hours**	
Code number: **GEC.006**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: "Application of Quality Management Methods in Higher Educational Institutions		

Human Resource	**Credit hours**	
Code number: **GEC.007**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: **"Study of Human Resources and Methods of Their Development and Training to Serve the Egyptian Society"**		

Business commination	**Credit hours**	
Code number: **GEC.008**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Definitions of Public Relations and Their Applications in University Education and Veterinary Medicine		

Business administration	**Credit hours**	
Code number: **GEC.009**	**Lectures**	**practical**
Prerequisite courses:-	1	-
Course contents: Business Management Systems in Veterinary Medicine Projects and University Education Companies		

Leadership skills	**Credit hours**	
Code number: **GEC.0010**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Study of Leadership Styles and Management of Local and International Institutions		

First aid skills	**Credit hours**	
Code number: **GEC.011**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Identification of first aids and how to apply it in different emergency cases		

Communication skills	**Credit hours**	
Code number: **GEC.012**	**Lectures**	**Practical**
Prerequisite courses:-	1	-
Course contents: Study of Effective Communication Skills and Presentation of Various Scientific Topics		

Clinical elective courses (CEC)

Course Name: **Veterinary medical sports**	**Credit hours**	
Code number: CEC.001	**Lectures**	**Practical**
Prerequisite courses:-	1	2
Course contents: Training of horses for sports. Care about limbs and its affections. general body fitness		

Clinical and laboratory diagnosis in case of toxicity in animals and poultry	**Credit hours**	
Code number: CEC.002	**Lectures**	**Practical**
Prerequisite courses:-	1	2
Course contents: treatment of case of toxicity caused by different toxic agents		

Equine diagnostic Imaging	**Credit hours**	
Code number: CEC.003	**Lectures**	**Practical**
Prerequisite courses:-	1	2

Course contents:
Application of sonar, MRI, CT and radiology in equine diagnosis

Ultrasonography (Reproductive)	**Credit hours**	
Code number: CEC.004	**Lectures**	**Practical**
Prerequisite courses:-	1	2
Course contents: Application of sonar in pregnancy diagnosis and reproductive affections		

Course Name: Veterinary physiotherapy	**Credit hours**	
Code number: CEC.005	**Lectures**	**Practical**
Prerequisite courses:-	1	2
Course contents: Application of physiotherapy and Veterinary medical care in veterinary field		

Equine Orthopedic Surgery Sport- horse orthopedic diseases	**Credit hours**	
Code number:CEC.006	**Lectures**	**Practical**
Prerequisite courses:-	1	2
Course contents: Orthopedics surgery in equines		

Vaccination programs in ruminant	**Credit hours**	
Code number: CEC.007	**Lectures**	**Practical**
Prerequisite courses:-	1	2
Methods of Vaccination programs in ruminant in case of infectious diseases		

Clinical and laboratory diagnosis in reproductive diseases	**Credit hours**

Code number: CEC.008	**Lectures**	**Practical**
Prerequisite courses:-	1	2
clinical and laboratory diagnosis in reproductive diseases in farm animals		

Ophthalmology	**Credit hours**	
Code number: CEC.009	**Lectures**	**Practical**
Prerequisite courses:-	1	2
Course contents: Eye affections and dealing by surgery		

Poultry and rabbits clinical and laboratory diagnosis	**Credit hours**	
Code number: CEC.010	**Lectures**	**Practical**
Prerequisite courses:-	1	2
Course contents: Application of clinical and laboratory diagnosis in diseases of poultry and rabbits		

Vaccination programs in pets and equines	**Credit hours**	
Code number: CEC.011	**Lectures**	**Practical**
Prerequisite courses:-	1	2
Vaccination programs in pets and equines		

Clinical and laboratories diagnosis of Aquatic Animal diseases and basics of biosecurity in Fish Farm	**Credit hours**	
Code number: CEC.012	**Lectures**	**Practical**
Prerequisite courses:-	1	2
Course contents: Clinical and laboratories diagnosis of fish diseases and application of biosafety and biosecurity		