PROGRAM SPECIFICATION

Faculty of Veterinary Medicine
Beni-Suef University

2015 - 2016

Contents

Program Specification (2015-2016)

University: Beni-Suef University, Egypt.

Faculty: Faculty of Veterinary Medicine.

Departments: The Faculty contains 19 scientific departments.

A- Basic Information:

1- Program Title: Bachelor in Veterinary Medical Sciences (BVSc.).

2- Program Type: Single.

3- Department: The Faculty contains **19** Scientific Departments which are:

1- Anatomy and Embryology.	**11- Nutrition and clinical nutrition.**
2- Histology.	**12- Surgery.**
3- Biochemistry.	**13- Clinical Pathology.**
4- Physiology.	**14- Veterinary medicine.**
5- Animal hygiene, animal behavior and management and zoonosis.	**15- Fish diseases and management.**
	16- Forensic medicine and toxicology.
6- Pathology.	**17- Food hygiene.**
7- Virology.	**18- Poultry.**
8- Parasitology.	**19- Theriogenology.**
9- Pharmacology.	
10- Bacteriology, immunology, and mycology.	

There are additional 7 courses offered to the students by departments from outside the faculty and one subject offered by a staff member from the faculty which are:

1- Chemistry *(Department of Chemistry, Faculty of Science, Beni-Suef University).*
2- Biology *(Department of Animal Biology, Faculty of Science, Beni-Suef University).*
3- Biostatistics and Computer Sciences *(Department of Statistics, Faculty of Science, Beni-Suef University).*
4- Biophysics *(Department of Physics, Faculty of Science, Beni-Suef University).*
5- Genetics and Genetic Engineering *(Department of Genetics, Faculty of Agriculture, Beni-Suef University).*
6- Animal Production and Breeding *(Department of Animal Production, Faculty of Agriculture, Beni-Suef University).*
7- Economy *(Department of Economy, Faculty of Economy and Political Sciences, Beni-Suef University).*
8- English and Veterinary Terminology *(A staff member from Faculty of Veterinary Medicine, Beni-Suef University).*

Program Coordinator: Dr.

External evaluator (s): Prof. Dr. / University:

Date of program specifications approval: / / 2015

B- Professional Information:

The National Academic Reference Standards specified by the Sector Committee of Veterinary higher education are taken as benchmarks to the Academic standards of the faculty program.

1- Overall aims of the program:

- **Veterinary science** is the study, diagnosis, treatment and prevention of disease in animals whether in individuals or in groups.
- The **BVSc.** program is designed in a research rich environment to achieve the knowledge, philosophy, professional and technical skills such that the graduate feels confident to practice the art and science of the Veterinary Medicine and which prepares students for the profession that anticipates life-long learning and continuing professional development.
- The ***Faculty of Veterinary Medicine, Beni-Suef University, Egypt*** is preparing students to meet the requirements of Quality Assurance Agency for Higher Education and enable graduated veterinarians to achieve the objectives of the Veterinary profession which are:

1.1- Provide graduates with professional and good veterinary practices to be competent and participate efficiently in the labor market.

1.2- Apply the appropriate knowledge and professional skills with positive attitudes and behaviors to gain the best health and productivity of the animal, fish and poultry wealth.

1.3- Prepare research planes for solving field problems like epidemics and reproductive disorders.

1.4- Apply the concepts and technology of research in various areas of veterinary medical science.

1.5- Communicate effectively and skillfully that emphasizes the influential role of the veterinarian in the community and awareness to preserve the health of humans and animals

1.6- Improve reproduction in native breed animals, poultry and fishes.

1.7- Improve the quality of public health through controlling the zoonotic diseases.

1.8- Control various epidemics and endemic diseases through correct rapid diagnosis and perform planes for controlling.

1.9- Recognize the steps for preparation of vaccines against viruses, bacteria and internal parasites

1.10- Ensure self-sufficiency in animal, poultry and fishes proteins and by-products.

1.11- Apply the principles of international ethics and the legal framework for medical practices.

1.12- Make a commitment to continuous improvement, keep up with the latest performance standards of the profession of Veterinary Medicine influential and efficiency and the ability to win the trust of the community.

1.13- Improve the ability for continuous learning skills.

2- Intended Learning Outcomes (ILOs):

a- Knowledge and understanding:

By the end of this program, the veterinary graduate must have the ability to:

a1- Determine the basic knowledge in the biological sciences, chemistry, biophysics, veterinary genetics and genetic engineering, biostatistics, computer science as well as the veterinary terminology.

a2- Declare the basics of normal animal behavior, care and breeding, the veterinary economy and how to keep animals, poultry and fish healthy.

a3- Describe the developmental stages, gross and microscopic structure and function of tissues, organs and systems in different animal species.

a4- Explain the basics of physiological and biochemical functions of different organs and metabolic processes based on the molecular bases of structural and functional features and metabolism of bio-molecules.

a5- Describe the characteristic features of different causes of animal diseases and determination of their evolution with their gross and microscopic changes beside the laboratory diagnosis.

a6- Identify the principles of microbiology, classification, isolation and identification as well as the pathogeneses and immune responses of viruses, bacteria and fungi.

a7- Identify the veterinary drugs; sources, structures, mode of action, therapeutic uses on different body systems and etiologic agents, pharmacokinetic and pharmacodynamic and the impact effect of drug residues on human and animal health and the quality control in the pharmaceutical practices.

a8- Define the principles of pathology, pathogeneses, macro- and microscopic appearance

of diseased tissues and pathological processes in different body systems.

a9- Define the rules of animal welfare and production and the health preservation of food producing animals, pets, wildlife, poultry and fish.

a10- Explain the principles of nutrition and its practices for healthy and diseased animals.

a11- Classify the public and private epidemiological pattern of animal diseases and the more influential immune measures.

a12- Explain the basics, theories and knowledge in forensic medicine and toxicology, animal medicine, clinical pathology, obstetrics and veterinary surgery.

a13- Recognize the appropriate clinical approach for diagnosis, treatment and prevention of internal medical disorders and infectious diseases of animals, poultry and fish.

a14- Clarify the concepts related to fish and poultry management, diseases, and hygiene.

a15- Recognize the different procedures of animal sedation and anesthesia, approach of surgical intervention and safe use of diagnostic imaging.

a16- Explain the gynecological and reproductive disorders of farm and pet animals and the importance and application of artificial insemination.

a17- Determine the concepts of surveillance of communicable and zoonotic diseases so as to apply the appropriate preventive and the exact procedures of the veterinary quarantine.

a18- Clarify the principles of public health, which includes the safety of food from animal origin and common diseases transmitted from animals to humans.

a19- Declare the legal principles, moral rules, veterinary stipulations, regulations and ethics appropriate competent for animal health and food.

b- Intellectual skills:

By the end of this program, the veterinary graduate must have the ability to:

b1- Coordinate the knowledge of the biological sciences, chemistry, biophysics, veterinary genetics and genetic engineering, biostatistics, computer science as well as the veterinary terminology in veterinary practices.

b2- Correlate the anatomical and histological structures to the function of the body organs in different animal species in relation to the interactions between biomolecules, their metabolism and functions.

b3- Assess the management program and detect mis-management factors and behavior as well as nutritional problems affecting animal health and production.

b4- Determine the interrelationship between pathogens, host and environment and appraise the drug action and uses in relation to body organs, pathogenesis and drug dynamics.

b5- Interpret the abnormal changes in different animal and poultry tissues, mechanisms and pathological diagnosis and differential diagnosis.

b6- Analyze the clinical and laboratory data of diseased animals to figure out the most appropriate medical approach.

b7- Formulate a balanced ration for livestock, poultry and fish in health and disease.

b8- Interpret on the obtained results of imaging techniques for the purpose of diagnosis, possible surgical interference and therapy.

b9- Judge the safety and quality of food and processed products of animal origin.

b10- Predict the probable causes of murders, poisoning and accidents of animals.

b11- Assess the gynecological and reproductive disorders of female and male animals.

b12- Evaluate risk assessment of hygienic conditions related to animals, poultry and fish breeding.

b13- Diagnose the problems in a logical and skilled way, with ability to differentiate between these problems to gain access to the most appropriate solutions and administration to the clinical problems.

c- Professional and practical skills:

The acquired skills of the overall courses in addition to the extramural activities will enable the veterinary graduate to perform the appropriate professional and practical skills with different animal species, poultry and fish and by the end of this program, the veterinary graduate must have the ability to:

c1- Apply all acquired knowledge and concepts in practice skillfully.

c2- Handle and restrain animals during the examination in correct, safe and humanitarian way.

c3- Differentiate between the normal and abnormal gross and microscopic structures of animal, fish and poultry diseases.

c4- Obtain the accurate and relevant case history, whether individual or collective animal groups and its environment.

c5- Perform a thorough clinical examination of the diseased cases and collect, preserve and transport the appropriate samples for standard laboratory techniques.

c6- Choose the clinical and laboratory diagnostic methods and explain its findings and apply the most appropriate treatment based on the logical approach.

c7- Interpret the laboratory findings with integration of these results with the clinical information.

c8- Assess the status of animal care and nutrition under the normal and pathological conditions and reproductive efficiency and be able to advice on appropriate husbandry and feeding.

c9- Write a report on the health and safety of food of animal origin for human consumption

c10- Assess the reproductive efficiency of an animal or a group of animals and advise on reproductive management including obstetrical problems.

c11- Use the recent information efficiently and keep pace with the skill of knowledge of animal medicine and current therapeutic options.

c12- Provide solutions with evidences for the problems existing in the veterinary medicine field.

c13- Administer appropriate treatment for different diseases in individual or groups of animals., as well as provide emergency care for all types of animals.

c14- Use proper safety measurements to protect workers in animal farms.

c15- Reduce the risk of contamination, cross infection and predisposing factors leading to the accumulation of pathogens in veterinary premises and in the field.

c16- use the gained skills of imaging techniques, surgical procedures and anesthetic protocols to perform safe surgical intervention.

c17- Demonstrate the veterinary public health issues and the procedures to follow with notifyable and zoonotic diseases.

c18- Perform ante-mortum inspection and be able to recognize conditions affecting the quality and safety of animal products. Carry out meat inspection and be able to judge suitability of meat, milk, fish, poultry and eggs for human consumption.

c19- Judge the appropriate time for euthanasia and/or carcass disposal.

c20- Apply safe and economic ways of handling animal byproducts.

c21- Perform a basic gross postmortem examination and safely sample tissues and record findings.

c22- Identify the probable causes of murder, poisoning and accidents of animals.

d- General and transferable skills:

By the end of this program, the veterinary graduate must have the ability to:

d1- Work under pressure and/or contradictory condition.

d2- Work in a multidisciplinary team.

d3- Research for modern information technology as well as the application of the principles of self-learning.

d4- Regulate and control tasks and resources.

d5- Communicate effectively and non-verbally.

d6- Utilize computers and internet skills.

3- Academic standards:

3a- External references for standards:

- The Academic Reference Standards for the award of the Bachelor degree in Veterinary Medical Ssciences (BVSc.) as well as the attributes and capabilities of the graduates were based essentially on the National Academic Reference Standards (NARS) published by the National Authority for Quality Assurance and Accreditation of Education (2009) for Veterinary Medicine.
- Professional role of the graduate and engagement in the environmental problem of the surrounding society given in the following points:

1- The graduate is proactive in ensuring the currency and relevance of knowledge and skills.

2- The graduate is well qualified to maintain and promote animal, birds and fish in a healthy condition.

3- Increasing animal, birds and fish productivity and performance.

4- The graduate will demonstrate the ability of accurate diagnosis, treatment, and prevention of disease and injury as well as their impact on animals.

5- The graduate will maintain human health in the context of disease transmission from animal or animal products to man.

6- The graduate is equipped to understand primary research techniques and critical evaluation.

Attributes of the Graduates of Veterinary Medicine

The graduate must be able to:

1.1. Demonstrate the proper application of the professional knowledge and skills with positive attitudes and behavior towards better health and productivity of livestock, poultry and fish resources.

1.2. Be committed to continuous enhancement, coping with the most recent effective and efficient performance standards of the veterinary profession, and gaining community confidence.

1.3. Apply research concepts and technologies in different fields of veterinary sciences.

1.4. Express proper evaluation capacity and uncover curiosity.

1.5. Consider life-long learning skills.

1.6. Apply international ethical and legal frame of medical practice-code

1.7. Show satisfactory interpersonal and communication skills confirming the sensitive role of the veterinarian in society and disseminating the awareness of maintaining animal and human health.

3b- Comparison of provision to external references:

- The Academic standards and intended learning outcomes (ILOs) of the faculty program have been setup to comply with the intended professional outcome of veterinary graduate as stated by the **Sector Committee of Veterinary Higher Education**. The ILOs fulfill the requirements stated in the mission of the faculty.

4- External references for standard (Benchmark):

Not applicable

5- Curriculum Structure and Contents:

5a- Program duration: Five academic years (10 semesters).

5b- Program structure:

No. of hours per week: For all levels

	Lectures: 161			Lab. /Exercise: 149			Total: 310
	First semester	Second semester	Total	First semester	Second semester	Total	
Level 1:	15	14	29	14	16	30	59
Level 2:	17	17	34	12	13	25	59
Level 3:	16	18	34	16	12	28	62
Level 4:	15	15	30	16	16	32	62
Level 5:	17	17	34	17	17	34	68

- **No. of hours of basic and basic veterinary sciences courses:** No. 95 hours/week = 30.64 %
- **No. of hours of Pre-clinical sciences courses:** No. 110 hours/week = 35.48 %
- **No. of hours of Clinical sciences courses:** No. 102 hours/week = 32.90%
- **No. of hours of courses of social sciences and humanities:** No. 2 hours/week = 0.64 %

Practical/Field Training: (3 levels)

- **Level 1:** 240 hrs (2 months) after the 3rd academic year.
- **Level 2:** 240 hrs (2 months) after the 4th academic year.
- **Level 3:** 240 hrs (2 months) after the 5th academic year.

- The Practical/Field training aims to develop and provide veterinary students with the scientific and field skills and introduce them to the various field problems of the veterinary practices and teach them how to overcome them.
- Training is under the full supervision of the education and students affairs sector at the faculty of Veterinary Medicine, Beni-Suef University and in coordination with the different scientific departments that perform the training for these three academic years. Also a cooperation between the education and students affairs sector and environmental services and community development sector in the college in organizing the following:

1- Scientific and field visits to different factories producing animals' feedstuff, meat products, dairy products, Veterinary drugs and pharmaceutical factories.

2. Field visits to various poultry, fish, beef and dairy farms.

3- Organization of Veterinary therapeutic convoys in cooperation with the Veterinary Medicine Directorate in Beni-Suef governorate and various provinces all over the country.

Program of Practical Training and Field Visits:

Third academic year	Fourth academic year	Fifth academic year
Department	**Department**	**Department**
Pathology	Clinical pathology	Theriogenology
Parasitology	Surgery	Surgery
Bacteriology	Forensic medicine	Zoonosis
Virology	Milk hygiene	Animal hygiene
Pharmacology	Theriogenology	Poultry diseases
Nutrition	Fish disease	Meat hygiene
	Pathology	Infectious diseases
	Internal medicine	Internal medicine

5c- Program courses:

(Refer to course specification documents)

FIRST ACADEMIC YEAR:

First semester				Second semester			
Course code	Course Title	No. of hours/week		Course code	Course Title	No. of hours/week	
		Lecture	Lab.			Lecture	Lab.
S1-ANAT	General Anatomy & Embryology	2	3	S1-ANAT	Special Anatomy & Embryology	2	3
S1-HIST	General cytology & histology	3	3	S1-HIST	Special cytology & histology	3	3
S1-ENGL	English language and expressions	2	-	S1-CHEM	General chemistry (physics & organic)	4	4
S1-BIOL	Biology	4	4	S1-PHYSC	Biophysics	2	4
S1-GENE	Genetics & genetic engineering	4	4	S1-STAT	Biostatistics & computer sciences	3	2
Total hours/week		15	14	Total hours/week		14	16

SECOND ACADEMIC YEAR:

First semester				Second semester			
Course code	Course Title	No. of hours/week		Course code	Course Title	No. of hours/week	
		Lecture	Lab.			Lecture	Lab.
S2-ANAT	General Anatomy (comparative &applied)	3	3	S2-ANAT	Special Anatomy (comparative &applied)	3	3
S2-PHYSL	General physiology	4	3	S2-PHYSL	Special physiology	4	3
S2-BIOC	Biochemistry & chemistry of nutrition	4	2	S2-BIOC	Biochemistry & chemistry of nutrition	4	3
S2-PROD	Animal breeding and production (A)	3	2	S2-PROD	Animal breeding and production (B)	3	2
S2-BEHA	General animal & poultry behavior and management	3	2	S2-BEHA	special animal & poultry behavior and management	2	2
Total hours/week		17	12	Total hours/week		17	13

THIRD ACADEMIC YEAR:

First semester				Second semester			
Course code	Course Title	No. of hours/week		Course code	Course Title	No. of hours/week	
		Lecture	Lab.			Lecture	Lab.
S3-FEED	Nutrition and clinical nutrition	3	2	S3-FEED	Nutrition and clinical nutrition	3	2
S3-PATH	General pathology	3	2	S3-PATH	General pathology (A)	3	2
S3-PHAR	General veterinary pharmacology	3	2	S3-PHAR	Special veterinary pharmacology	3	2
S3-MICR	General bacteriology, immunology & mycology	2	3	S3-MICR	Special bacteriology, immunology & mycology	2	3
S3-PARA	General parasitology	3	3	S3-PARA	Special parasitology	3	3
S3-VIRO	Virology	2	4	S3-ECON	Economy and farm management	4	-
Total hours/week		16	16	Total hours/week		18	12

FOURTH ACADEMIC YEAR:

First semester				Second semester			
Course code	Course Title	No. of hours/week		Course code	Course Title	No. of hours/week	
		Lecture	Lab.			Lecture	Lab.
S4-PATH	Special pathology (B)	2	2	S4-PATH	Special pathology (C)	2	2
S4-INMD	General internal medicine (A)	2	2	S4-INMD	General internal medicine (B)	2	2
S4-SURG	General surgery	2	2	S4-SURG	Anesthesiology	2	2
S4-THER	Gynecology	2	2	S4-THER	Andrology	2	2
S4-FOMD	Forensic medicine and toxicology (A)	2	2	S4-FOMD	Forensic medicine and toxicology (B)	2	2
S3-MIHG	Milk hygiene & milk products (A)	3	2	S3-MIHG	Milk hygiene & milk products (B)	3	2
S4-ICTH	Fish diseases & management	2	4	S4-CPAT	Clinical pathology	2	-4
Total hours/week		15	16	Total hours/week		15	16

FIFTH ACADEMIC YEAR:

First semester				Second semester			
Course code	Course Title	No. of hours/week		Course code	Course Title	No. of hours/week	
		Lecture	Lab.			Lecture	Lab.
S5-INMD	Special internal medicine (A)	2	2	S5-INMD	Special internal medicine (B)	2	2
S5-SURG	Special surgery (systemic)	2	2	S5-SURG	Special surgery (limbs & radiology)	2	2
S5-THER	Obstetrics	2	2	S5-THER	Artificial insemination	2	2
S5-INFD	Infectious diseases (A)	2	3	S5-INFD	Infectious diseases (B)	2	3
S5-PRDS	Poultry and rabbit diseases (A)	2	3	S5-PRDS	Poultry and rabbit diseases (B)	2	3
S5-MEHG	Meat hygiene and meat products (A)	2	3	S5-MEHG	Meat hygiene and meat products (B)	2	3
S5-ANHG	Animal, poultry and environment hygiene	3	2	S5-ANHG	Animal, poultry and environment hygiene	3	-2
S5-ZOON	Zoonotic diseases	2	-	S5-ZOON	Zoonotic diseases	2	-
Total hours/week		17	17	Total hours/week		17	17

5d- Courses contents:

(Refer to course specification documents)

Course code	Course Title	Course contents
1- First Academic Year		
S1-ANAT	**General Anatomy and Embryology**	1. Introduction and technical anatomical terminology, 2. General osteology, 3. General Arthrology, 4. General embryology, 5. Special Arthrology, 6. Bones of the thoracic limb of different domestic animals, 7. Dissection of the equine thoracic limb, 8. Bones of the pelvic limb of different domestic animals.
	Special Anatomy & Embryology	1. Gross anatomy of animals' respiratory system, 2. Gross anatomy of equine cardiovascular system except head and neck, 3. Fowl anatomy, 4. Fish anatomy, 5. Dissection of the equine pelvic limb, 6. Dissection of the equine thorax.
S1-HIST	**General cytology & histology**	1. Introduction and histological terminology, 2. Histological techniques, 3. Epithelial tissue, 4. Connective tissue, 5. Blood and hematopoietic tissue, 6. Muscular tissue, 7. Nervous tissue, 8. Nervous system, 9. Immunity and lymphatic tissue.
	Special cytology & histology	1. Cardiovascular system, 2. Respiratory system, 3. Urinary system, 4. Male genital system, 5. Female genital system, 6. Digestive system, 7. Endocrine system, 8. Skin and mammary gland, 9. Sense organs,
S1-ENGL	**English language and expressions**	1-Verbs, 2- Nouns, 3- Pronouns, 4- Articles, 5- Preposition, 6- contractions, 7 Capitalization and Punctuation 8- Gerund, 9- Formal letters, 10 General rules, 11 Conjunctions, 12 Medical terminology, 13- Comprehension
S1-BIOL	**Biology**	1- Plant physiology (Cytoplasm and colloidal systems - Diffusion and osmosis-Enzymes - Respiration and photosynthesis), 2- Systematic botany (Principles of plant systematic-Classification and characterization of plant kingdoms), 3- Chordates (Introduction and general characters of Chordates- Classification of phylum Chordate-Classification of Subphylum Vertebrata), 4- Invertebrate zoology, Entomology (Taxonomy and classification - External and internal anatomy of insects-Development and metamorphosis of insects).
S1-PHYSC	**Biophysics**	1- Electric and magnetic, 2- Gluss' law, 3- Electric potential, 4- Capacitation, 5- Current and resistance, 6- The magnetic field, 7- Ampere's law, 8- Farady's law of induction.

S1-GENE	**Genetics & genetic engineering**	1- Introduction of genetics and evolution, 2- The genetic material, 3- Structural organization of the genetic material in the chromosomes, 4- Sources of variation in organisms, 5- Functions of genetic material, 6- Gene expression, 7- Extra-chromosomal inheritance, 8- Differentiation and development, 9- Genetic engineering, 10- Tissue culture and gene transfer in plant.
S1-CHEM	**General chemistry (physics & organic)**	1- Organic chemistry (General principles of organic chemistry and alkanes-Alkenes and Alkynes-Alcohols and Ethers-Aldehydes and ketones- Saturated monocarboxylic acids- Monocarboxylic acid derivatives- Amines, amino acids and proteins-Carbohydrates), 2- Physical chemistry (Concept of mole -Stoichemistry- Gases- Dalton's law- Thermochemistry-Hess's law- Intermolecular forces- Solutions- Colligative properties), 3-Analytical chemistry(Atom components-Electronic configuration- Quantum numbers and shielding effect).
S1-STAT	**Biostatistics & computer sciences**	1- Elements of probability, random, variables-mathematical expectation, 2- Binomial, Poisson, hypergeometric distributions, 3- Normal distribution and normal approximation to the binomial, 4- Samples and populations and sampling distribution of some statistics, 5- Point and interval estimations, 6- Confidence interval for population mean, difference between two means and variance and proportion, 7- Tests of hypotheses and tests concerning means, difference between two means and variance, 8- Goodness of fit test and contingency tables.

2- Second Academic Year

S2-ANAT	**General Anatomy (Comparative)**	1. Development of the digestive system, 2. Gross anatomy of the digestive system, 3. Development of the urogenital system, 4. Gross anatomy of the urinary system, 5. Gross anatomy of the male genital system, 6. Gross anatomy of the female genital system, 7. Lumbar, sacral and caudal vertebrae of domestic animals, 8. Dissection of the equine abdomen, 9. Dissection of the equine pelvis.
	Special Anatomy (Comparative & applied)	1. Development of the nervous system, 2. Gross anatomy of the equine nervous system, 3. Blood supply of equine head and neck, 4. Gross anatomy of ox lymphatic system, 5. Gross anatomy of the eyes, 6. Gross anatomical Features of equine head, 7. Applied anatomy.
S2-PHYSL	**General physiology**	1- Cell physiology, 2- Blood and tissue fluids, 3- Cardiovascular system, 4- Physiology of respiratory system, 5-Physiology of excretory system, 6- Fish Physiology, 7- Physiology of nervous system
	Special physiology	1-Nerve Physiology, 2- Muscle Physiology, 3- Endocrinology, 4- Physiology of male reproduction, 5-Physiology of female reproduction, 6-Physiology of digestive system, 7-Metabolism and body temperature regulation, 8- Poultry physiology

S2-BIOC	**Biochemistry & che-mistry of nutrition**	1. Structure of the cell and cell biology, 2. Chemistry of carbohydrates, 3. Chemistry of proteins, 4. Chemistry of lipids, 5. Vitamins, 6. Enzymes, 7. Hormones.
	Biochemistry & chemistry of nutrition	1. Biological oxidation, 2. Metabolism of carbohydrates, 3. Metabolism of protein, 4. Metabolism of lipids, 5. Buffers antacids base balance, 6. Chemistry of blood and pigments, 7. Chemistry of urine, 8. Chemistry of milk.
S2-PROD	**Animal breeding and production (A)**	1- General principles of animal breeding, 2- Poultry breeding and production, 3- Rabbit breeding and production, 4- Fish breeding and production.
	Animal breeding and production (B)	1- Dairy cattle breeding and production, 2- Beef cattle breeding and production, 3- Sheep and goat breeding and production, 4- Equine breeding and production.
S2-BEHA	**General animal & poultry behavior and management**	1- General behavior, 2- Management and Behavior of Equines, 3- Management and Behavior of Cattle, 4-Management and behavior of Sheep & Goat, 5- Points of farm animals, 6- Manipulation and restraint of animals and casting of animals, 7- Stable management of animals and shoeing, 8- Practical Management Practices.
	Special animal & poultry behavior and management	1- Management and Behavior of Poultry, 2- Management and Behavior of Laboratory Animals, 3-Management and Behavior of Camel, 4- Management and behavior of Dogs, 5- Management and Behavior of Cats, 6- Dentition and Ageing of animals, 7- Signs of health, 8- Administration of medicine, 9- Behavioral anomalies and control.

3- Third Academic Year

S3-FEED	**Nutrition and clinical nutrition**	1- Introduction &composition of the animal body and its food, 2-Water and its metabolism, 3- Carbohydrates and their metabolism, 4- Proteins and their metabolism, 5- Lipids and their metabolism, 6- Minerals (6.1. Introduction, distribution, 6.2. Functions, 6.3. Deficiency, 6.4. Supplements), 7- Vitamins (7.1. Vitamin and animal health, 7.2. Fat-soluble vitamins, 7.3. Water-soluble vitamins), 8- Feed intake and factors affecting, 9- Classification of feedstuffs - Nutrition terms, 10- Concentrates, energy sources Deleterious factors in energy feeds, 11- Plant protein sources (Deleterious factors in plant protein sources), 12- Animal protein sources and deleterious factors.
	Nutrition and clinical nutrition	1- Digestibility of food, 2- Feeding standards and nutrient requirements for: (2.1. maintenance, 2.2.growth, 2.3. fattening, 2.4. reproduction &lactation, 2.5.work, 2.6.wool production), 3- Feeding of cattle & buffaloes, 4- Feeding of sheep & goats, 5- Feeding of poultry & rabbits, 6- Feed analysis & evaluation, 7- Green forages-hay making & silage, 8- Coarse roughages, 9- Feed additives, 10- Feeding standard & ration formulation.
S3-	**General**	1- Introduction to general pathology, 2-Disturbances in cell metabolism, 3-Disturbances of cell protein Lipid, carbohydrates

PATH	**pathology**	metabolism, -Disturbances in cell metabolism, Dist. Of minerals and pigment metabolism, Necrosis and apoptosis – gangrene, Disturbances in circulation: (congestion-edema-shock-hemorrhage),-Disturbances in circulation (thrombosis-embolism-infarction),Inflammation, Inflammation, (types of inflammation (inflammatory exudate, duration, sequelae & degeneration) Healing and repair, Hypersensitivity and immunodeficiency
	General pathology (A)	-Tumors, (Nomenclature, causes, classification -Benign and malignant epithelial and non-epithelial tumors) -Pathology of Digestive system (Oral cavity-Salivary glands), -Pathology of Digestive system, (Esophagus- Fore stomach- -Stomach- Intestine -Liver –peritoneum), -Pathology of Respiratory system, (Upper respiratory tract), -Pathology of Respiratory system (Lower respiratory tract), -Pathology of Cardiovascular system , -Pathology of Nervous system, -Pathology of Urinary system
S3-PHAR	**General veterinary pharmacology**	1- General pharmacology, 2- Drug affecting Autonomic Nervous System, 3- Drug affecting Central Nervous System, 4- Drug affecting Reproductive System, 5- Drug affecting Skin and Eye, 6- Drug affecting Urinary System, 7- Drug affecting Cardiovascular System, 8- Drug affecting Respiratory System, 9- Drug affecting digestive system, 10- Drug affecting hormones.
	Special veterinary pharmacology	1- Drugs affecting metabolism, 2- Antibiotics, 3- Sulfonamides, 4- Other antimicrobials, 5- Anthelmintic drugs, 6- Antifungal drugs, 7- Antiprotozoal drugs, 8- Disinfectants and antiseptics, 9- Antiviral drugs, 10- Antitubercular drugs, 11- Antitumor drugs, 12- Clinical pharmacology, 13- Drug toxicology, 14- Fish pharmacology.
S3-MICR	**General bacteriology, immunology & mycology**	1- Morphology and Classification of bacteria, 2- Bacterial growth cycle, arrangement and Structure, 3- Bacterial Reproduction and Metabolism, Relationships of the bacteria to the host and environment, Bacterial products (pigments, toxins), Bacterial infection and virulence, Koch's postulates and their exceptions, Gene expression (Transcription and Translation), Bacterial chromosome and plasmids, Mutations and mutagenic agents, Genetic engineering techniques and nucleic acid hybridization, Tissues and organs and cells of the immune system, Types and mechanisms of immunity, Antigen and Immunogenicity, Immunoglobulins, Cells cooperation for humeral and cell mediated immunity, Adjuvant, Hypersensitivity, Immunostimulants and immunosuppression, Structure of fungal cell and fungal colony, Fungal reproduction, Fungal growth and Fungal products, Classification of fungi, Identification of fungi, Microscopy, Bacterial Motility, Sterilization and disinfection, In-vitro antimicrobial sensitivity, Staining of bacteria, Bacteriological culture media, Cultivation and isolation of pure culture of bacteria, Tests for the identification of bacteria, Serological tests, Practical Immunology, Practical Mycology
	Special bacteriology,	1- Staphylococci, 2-Streptococci 3- Listeria, 4- F. Bacillaceae:(G. Bacillus) 5-G. Clostridium 6-Corynebacteria 7– Mycobacterium 8-Enterobacteriaceae (E. coli, Salmonella, Klebsiella, -Pasteurella –Brucella -Pseudomonas –Campylobacter

	immunology & mycology	-Spirochaetes (Leptospira) -Mycoplasma – Chlamydia - Rickettsia 9-Fish pathogenic bacteria (Aeromonas, Vibrio, Edwardsiella). 10- Yeasts (Candida, Cryptococcus) 11-Moulds,Dermatophytes, Diphasic fungi, Mycotoxins.
S3-PARA	**General pararsitology**	1- Introduction to helminthology, 2- Class: Trematoda, 3- Class: Cestoda, 4- Class: Nematoda.
	Special parasitology	1- Introduction to veterinary entomology, 2- Class: insect, 3- Class Arachnida, 4- Introduction to veterinary Protozoa, 5- Phylum: Sarcomastigophora, 6- Phylum: Apicomplexa, 7- Phylum: Ciliophora, 8- Phylum: Sporozoa.
S3-VIRO	**Virology**	1. Introduction on viruses, 2. Physical and chemical properties of viruses, 3. Virus replication, 4. Virus pathogenesis, 5. Host resistance to viral infection, 7. Immunity against viral diseases, 8. Systemic virology, 9. Diagnostic virology: virus isolation and identification.
S3-ECON	**Economy and farm management**	1- Veterinary projects, 2- Veterinary public and private services, 3- Veterinary investment, 4- Veterinary economic issues, 5- Feasibility studies, 6- Financing means, 7- Marketing.

4- Fourth Academic Year

S4-PATH	**Special pathology (B)**	Pathology of Male genital system, Pathology of Female genital system, Pathology of Female genital system, Pathology of viral diseases (FMD, BPS, and VS), Pathology of viral diseases (CP, BVD and MD), Pathology of viral diseases (MCF, PI3, and IBR), Pathology of viral diseases (RVF and Ephemeral fever), Pathology of viral diseases (BT and Leucosis), Pathology of viral diseases, (BSE, and scrapie), Pathology of viral diseases, (Sheep Pox, Cow pox, LSD,COE and Papillomatosis), Pathology of viral diseases of equine, Pathology of viral diseases of equine, Pathology of viral diseases of canine and feline (Canine distemper and Rabies), Student's activities (Collect pathology specimens, Preparing pathology assays from the library and Sharing in department pathology rounds).
	Special pathology (C)	Tuberculosis, Paratuberculosis, Pseudotuberculosis, Actinomycosis, Actinobacillosis, Paratyphoid and Colibacillosis, Navel ill and Calf Diphtheria, Black leg, black dis, enterotoxaemia, malignant edema, Pulpy kidney, and Bacillary hemoglobinurea, Anthrax, Hemorrhagic septicemia, Hemorrhagic septecemia in sheep, Contagioue Bovine Pleuropneumonia, and Brucellosis, Vibriosis, Leptospirosis, and Listeriosis, Glanders, Strangles, and Oedematous skin diseases, Ulcerative lymphangitis and Epizootic lymphangitis Student's activities (Collect pathology specimens, Preparing pathology assays from the library and Sharing in department pathology rounds).
S4-ICTH	**Fish diseases and management**	1- Introduction, stress and its relation to diseases in fish, 2- Parasitic diseases of fish, 3- Bacterial diseases of Fish, 4- Mycotic diseases of fish, 5- Viral diseases of fish, 6- Regional anatomy and applied physiology of fish, 7- fish classification, 8- Fish

		necropsy, 9- Water quality examination, 10- Fish farming, 11- Natural and artificial propgation of cultured fish, 12- Clinical diagnosis of fish diseases 13- Laboratory diagnosis of fish diseases, 14- Prevention and control of fish diseases.
S4-INMD	**General internal medicine (A)**	1-General systemic states (Disturbances in body fluids, electrolytes and acid-base balance, disturbances in body temperature, toxemia, septicemia, viremia, shock, edema, pain, fluid therapy), 2-Diseases of respiratory system (principles of respiratory diseases, hypoxia, rhinitis, sinusitis, guttural pouch affection, laryngitis, trachitis, bronchitis, pneumonia, pleurisy), 3-Diseases of urinary system (principles of urinary system diseases, nephritis, hydronephrosis, urethritis, cystitis, urolithiasis, urethritis, urinary bladder incontinence), 4-Introduction and terminology to veterinary clinical examination, 5-The Methods of clinical examinations in Veterinary field (inspection, palpation, percussion, auscultation, ballottement, tactile percussion, auscultation percussion technique), 6-Preliminary clinical examination (Taking animal temperature, pulse, respiration, clinical examination of mucus membranes and lymph nodes).
	General internal medicine (B)	1-Diseases of digestive system of ruminants (principles of digestive tract disorders, stomatitis, parotitis, pharyngitis, pharyngeal obstruction, pharyngeal paralysis, esophagitis, choke, tympany, impaction, vagus indigestion, traumatic reticulopertonitis, abomasal displacement, abomasal ulcer, intestinal obstruction, hepatitis, hemorrhagic bowel syndrome), 2-Diseases of digestive system of equines (gastritis, gastric ulcers, gastric dilatation, intestinal obstruction, cecal impaction, peritonitis), 3- Special examination of the digestive tract (ultrasonography, rumen juice examination)
S4-SURG	**General surgery**	1. Introduction to anesthesia, 2. Local anesthesia, 3. Regional anesthesia, 4. preanesthetics, 5. General anesthesia, 6. Sepsis and antisepsis, 7. Hemorrhage, 8. Fluid therapy, 9. Wounds.
	Anesthesiology	1. Inflammation, 2. Necrosis, ulcers, and gangrene, 3. Burns and scalds, 4. Abscess, 5. Sinus and fistula, 6. Cysts and tumors, 7. Bone affections, 8. Joint affections, 9. Tendons and tendon sheath affections, 10. Affections of bursa, 11. Muscle affections, 12. Nerve and blood vessels affections.
S4-THER	**Gynecology**	1- Functional reproductive anatomy, 2- Endocrinology of reproduction in the female, 3- Estrous cycle, Estrus detection and synchronization, 4- Hormonal causes of infertility, 5- Environmental causes of infertility, 6- Congenital causes of infertility in mare and pets, 7- Infertility in Camels, 8- Pathological causes of infertility
	Andrology	1- Functional Reproductive anatomy of male animals, 2- Endocrinology of reproduction in the male, 3- impotentia eregenti (lack of sexual desire), 4- impotenia ceoundi (inability to copulate), 5- impotentia generandi (in ability to fertilize), 6-diseases causing abortion, 7- Infertility in stallion, 8- Infertility in male Camels, 9- Sire selection
S4-FOMD	**Forensic medicine and toxicology (A)**	1- General toxicology, 2-Toxicity evaluation tests, 3- Reproductive toxicity tests, 4- Teratology tests, 5- Irritants, 6-Corrosive poisons, 7- Mycotoxins & mycotoxicosis, 8- Pesticides Toxicology, 9- Plant poisons, 10- Animal poisons, 11-Gases & volatile poisons, 12- Eco toxicology, 13- Drug toxicity, 14- Necropsy protocol, 15- Veterinary analytical toxicology.

	Forensic medicine and toxicology (B)	1- Samples and sampling, 2- Identification, 3- Death, 4- postmortem changes, 5- Determination of animals types and sex by examination of bones, 6- Death from heat , cold ,starvation, 7- burns, 8- wounds, 9- Firearm wounds, 10- Examination of blood and seminal stains, 11- Asphyxia, 12- Differentiation between different types of animal hair, 13- Determination of animal types and age by examination of teeth, 14- criminal aboration, 15- Animal Doping, 16- Animal euthanasia, 17- serology and DNA typing, 18- Medico legal report.
S4- MIHG	**Milk hygiene & milk products (A)**	1- Introduction and biosynthesis of milk sampling, 2-Milk composition and its examination, 3-Physical properties, 4-Sanitary tests, 5-Detection of preservatives in milk, 6-Milk fermentation, 7-Detection of abnormal milk, 8-Sources of milk contamination and Factors affecting microbial growth, 9-Milk borne diseases, 10-Food poisoning, 11-Isolation of pathogenic M.Os, fecal pollution and indicators M.Os, 12-Residues in milk, 13-Clean milk production, 14-Heat treatment of milk, 15-Cleaning and sanitizing of milking equipment, 16- Milking machine installation
	Milk hygiene & milk products (B)	1- Cream and cream based products &examination, 2-Butter and related products & examination, 3-Cheese & examination, 4-Fermented milk products & examination, 5-Concentrated milk products & examination, 6-Milk powder & examination, 7-Ice cream and related products & examination, 8-Food preservation, 9-Quality assurance &HACCP. 10-Edible fats and oils, 11-Table egg hygiene.
S4- CPAT	**Clinical pathology**	1-Hematopoiesis, 2-Erythropoiesis and hemoglobin synthesis, 3-Anemia and other erythrocytes disorders, 74-Leucocytes disorders, 5-Coagulopathies, 6-Clinical enzymology, 7-Disturbance in liver function and serum Bilirubin, 8-Disturbance in renal function, 9-Disturbance in glucose metabolism, 10-Pancreatic function, 11-Muscular disorders, 12-Disturbance in mineral metabolism, 13-Disturbance in electrolytes metabolism.

5- Fifth Academic Year

S5- INFD	**Infectious diseases (A)**	1. Introduction of infectious diseases (Epidemiologic Triad, The chain of infection, An introduction to epidemiology, Maintenance of infection, and Principles of disease control). 2. Infectious diseases of newly born calves (Epizootiology of infectious diseases of newborns, Infectious diseases causing diarrhea in newborns, Calf pneumonia), 3. Infectious diseases causing abortion in cattle (Bacterial, mycotic and rickettsial diseases of cattle), 4. Viral diseases of cattle, 5. Parasitic diseases of cattle, 6. Infectious disease of camel.
	Infectious diseases (B)	1. Infectious diseases of sheep and goat (bacterial, viral and parasitic diseases), 2. Infectious diseases of equine (bacterial, viral and parasitic diseases), 3.Infectious diseases of pet animals (bacterial, viral and parasitic diseases).
S5- PODS	**Poultry and rabbit diseases (A)**	1. Bacterial diseases of poultry, 2. Mycotic diseases and mycotoxicosis in poultry, 3. Nutritional diseases of poultry, 4. Rabbit bacterial diseases, 5. Clinical and Postmortem examination, 6. Biosecurity & Medication in poultry, 7. Slides and clinical specimens, 8. Cases & field visits.

	Poultry and rabbit diseases (B)	1. Viral diseases of poultry, 2. Parasitic diseases of poultry, 3. Rabbit viral and parasitic diseases, 4. Miscellaneous diseases and vices of poultry, 5. Vaccines and vaccination schedules in poultry, 6. CRD, Enteric problems and problems of egg production, 7. Slides and clinical specimen.
S5-MEHG	**Meat hygiene and meat products (A)**	1- Food animals, 2-Abattoir, 3-Lymphatic system, 4-Identification of animal species, 5-Bacterial diseases, 6-Viral diseases, 7-Mycotic diseases, 8-Parasitic diseases, 9-Abnormal and general pathological conditions, 10-Affection of specific parts of the carcass, 11-Microbiology of meat, 12-Meat spoilage, 13-Food poisoning, 14-Hazard analysis critical control points (HACCP) system during meat production ,15-keeping quality of meat, 16-Chemical residues in meat, 17-Animal by-products.
	Meat hygiene and meat products (B)	1-Meat plant design and construction, 2-Control of hygienic measures, 3-Chemistry of meat, 4-Technology of meat products, 5-Application of HACCP system in meat processing plants, 6-Introduction to preservation of meat, Preservation by drying, 7-Preservation of meat by smoking, 8-Preservation of meat by radiation, 9-Preservation of meat by low temperature, 10-Preservation of meat by high temperature, 11-Food packaging, 12-Fish morphology, 13-Post-mortem changes in fish flesh, 14-Fish spoilage, 15-Seafood poisoning, 16-Fish processing, Fish products examination, 17-Poultry slaughterhouse construction, 18-Ante-mortem and post-mortem examination of poultry 19-Poultry affections, processing faults and laboratory examination.
S5-ANHG	**Animal, poultry and environment hygiene**	1-Introduction, 2-Air Hygiene, 3-Water Hygiene, 4-Soil Hygiene, 5- Disposal of Animal wastes, 6-Stress and animal health, 7-Housing of animals: (Introduction, Equines , Cattle, sheep,, poultry), 8- Poultry hygiene, 9- Case study and farm visit.
	Animal, poultry and environment hygiene	1- Epidemiology (Introduction, Uses, Basic epidemic theory, Epidemic curve, Outbreak investigation, Eradication, 2- Control of contagious diseases, 3- Disinfection of livestock farms, 4- Biosecurity, 5- Control of external parasites in livestock farms, 6- Aquaculture hygiene, 7- Hygienic disposal of animal mortalities, 8- Case report & Visit.
S5-INMD	**Special internal medicine (A)**	1- Diseases of cardiovascular system (Principles of circulatory failure , Manifestations of circulatory failure , Special examination of the cardiovascular system, Arrhythmias, Diseases of the heart, Diseases of the blood vessels), 2- Diseases of musculoskeletal system (Principal manifestations of musculoskeletal disease, Diseases of muscles, Diseases of bones, Diseases of joints, Congenital defects of muscles, bones and joints), 3- Diseases of metabolic disorders in farm animals (Milk fever, ketosis, fatty liver, hypomagnesaemia, hypo-phosphataemia, pregnancy toxemia, downer cow syndrome azoturia in equines), 4- Revision on clinical examination of farm animals, 5- Clinical examination card.
	Special internal medicine (B)	1- Diseases of nutritional deficiencies (Deficiencies of energy and protein, Diseases associated with deficiencies of mineral nutrients, Disease associated with deficiencies of fat-soluble vitamins, Diseases associated with deficiency of water-soluble

		vitamins), 2- Introduction to Veterinary dermatology and diseases of skin and hair in different animal species (Principles of treatment of diseases of the skin, Diseases of the epidermis and dermis, Granulomatous lesions of the skin, Congenital defects of the skin), 3- Introduction to Veterinary neurology and diseases of nervous system in animal species (Principles of nervous dysfunction, Clinical manifestations of disease of the nervous system, Special examination of the nervous system, Principles of treatment of diseases of the nervous system, Pathophysiological mechanisms of nervous system disease, diseases of the brain, Diseases of the spinal cord), 4- Clinical examination card, 5- Clinical cases.
S5-SURG	**Special surgery (systemic)**	1. Introduction to lameness, 2. Forelimb affections, 3. Hind limb affections, 4. Hoof affections, 5. Claw affections, 6. Introduction to radiology, 7. Radiology, 8. Ultrasonography.
	Special surgery (limbs & radiology)	1. Eye affections, 2. Cranial sinuses affections, 3. Ear and eye affections, 4. Teeth affections, 5. Digestive system affections, 6. Urinary system affections, 7. Genital system affections, 8. Hernia and abdominal, muscles affections, 9. Back and tail affections, 10. Udder and teat affections.
S5-THER	**Obstetrics**	1- Introduction, Gestation period, factors affecting its length, 2- Fetal fluids, fetal membranes and placenta, 3- Hormonal regulation of gestation, 4- Abnormalities of fertilization and placentation, 5- Affections of fetal membranes and fetal fluids, 6- Fetal abnormalities, 7- Intrauterine fetal death, 8- Affections of the dam during pregnancy, 9- Dystocia.
	Artificial insemination	1- semen collection from bulls, 2- semen collection from stallion, 3- semen collection boar, dog , camel and cook, 4- Macroscopical evaluation of semen, 5- Microscopical evaluation of semen, 6- laboratory evaluation of semen, 7- Semen metabolism, 8- Semen dilution, 9- Semen preservation, 10- Super ovulation, 11- Embryo transfer, 12- techniques of insemination and embryo transfer.
S5-ZOON	**Zoonotic diseases**	1- Introduction and epidemiology of zoonoses, 2- Bacterial Zoonoses, 3- Rodents and their control, 4- Bacterial food-poisoning, 5- Rickettsial Zoonoses, 6- Human diseases spread by animals.
	Zoonotic diseases	1- Viral Zoonoses, 2- Prion Diseases, 3- Parasitic Zoonoses (Nematodiases, Cestodiases, Trematodiases, Potozoal Zoonoses, Arthropod Zoonoses), 4- Mycotic Zoonoses.

6- Program admission requirements:

The faculty of Veterinary Medicine, Beni-Suef University, Egypt offers one program for secondary school students to obtain the bachelor degree in veterinary medical sciences.

Registration to the Faculty of Veterinary medicine requires the student to have the general Egyptian secondary education in **Science group** certificate or equivalent certificates or degrees approved by the Egyptian ministry of higher education with qualifying grades according to the guidelines put annually by the Ministry of higher education. The students must admit to the **general regulatory office** which distributes the students according to their total degrees to the entire faculties in database system relevant to the student choice.

7- Regulation for progression and program completion:

- Students must attend at least 75% of practical sessions. Students who fail to meet this minimal percent of attendance may be prevented from attending exam in this specific course.
- The student must obtain at least 50 % of the total degree to pass any course, and the degree of written exam must be not less than 30%.
- To progress to a higher academic year, students must pass in all courses or fail in two courses maximum.
- Students who fail in more than two courses repeat the year and retake the exams in the failed courses.
- Fifth year students who fail in two courses maximum are entitled to a make-up exam held in November before the beginning of the scholastic year.
- For students who present an acceptable excuse for absence in the final exam, the grades for continuous assessment are included within the total after the make-up exam.
- Students after the third year must achieve a non-scored threshold field-training summer courses.
- Students should also pass successfully all courses and attend the summer training before obtaining the bachelor degree.

- The final estimates of the student after successful passing of all program courses calculated on the cumulative bases for 5 year studying.
- **Estimated student success in the various courses and in general estimation as the following grades:**
  Excellent ≥ 85%
  Very good ≥ 75% - less than 85%
  Good ≥ 65% - less than 75%
  Fair ≥ 50% - less than 65%
  Weak ≥ 35% - less than 50%
  Very weak less than 30%

8 – Assessment of program intended learning outcomes.

Tool or method	ILOs
1. Written	Knowledge and understanding and Intellectual skills
2. Practical	Practical and professional skills
3. Student Activity	General and transferrable skills
4. Others	-

9- Program evaluation methods:

Evaluator	Tool	Sample
1- Senior students (final academic year students)	Questioners	100%
2- Alumni	Questioners	25%
3- Stakeholders (Employers)		
a- Farmers and owners	Questioners	25%
b- Veterinarians in veterinary clinics in villages of Beni-suef governorate	Questioners	25%
c- Veterinarians in the province of Vet. Med. in Beni-suef governorate		
d- staff and co-staff members who shared in field trips	Questioners	25%
	Questioners	25%
4- External Evaluator (s) (External Examiner (s)	Reports	
5- others		

Program coordinator

DEAN OF THE FACULTY

Prof Dr/ Magdy Fathy El-Kady

Date: / /