



Summer training program specification

A- BASIC INFORMATION

1- Program title: Bachelor degree in Veterinary Medical Science. (B.v.sc).

2- Program type: single

3- Departments:

- Department of Anatomy and Embryology.
- Department of Cytology and Histology.
- Department of Physiology.
- Department of Biochemistry.
- Department of Animal Wealth development.
- Department of Pharmacology.
- Department of Pathology.
- Department of Parasitology.
- Department of Nutrition and Clinical Nutrition.
- Department of Bacteriology, Immunology and Mycology.
- Department of Virology.
- Department of Forensic Medicine.
- Department of Food Hygiene and control.
- Department of Clinical Pathology.
- Department of Fish Diseases and Management.
- Department of Animal Medicine.
- Department of Veterinary Surgery, Anesthesiology and Radiology.
- Department of Theriogeneology.
- Department of Hygiene and preventive Medicine.
- Department of Poultry Diseases.



External Institutions:

1-Faculty of Science:

- Department of Physics “Biophysics”.
- Department of Chemistry “General Chemistry” organic and inorganic chemistry.
- Department of Zoology “Biology”.

2-Faculty of computer and information:

- Department of “Computer Science”.

3- Faculty of Low (Tanta University):

- Department of Human rights.

4-Coordinator: Prof. Dr. Shawky Abdel Hady Mahmoud Vice dean of Education and Student Affairs.

5- Last date of program approval: Decision of Faculty Council number (1) in 18/9/2016

B: PROFESSIONAL INFORMATION

1- Program aims:

Training program aims of the Faculty of Veterinary Medicine, University of Kafrelsheikh are:

- a) Completes the educational program according to faculty by law article number 9 and 9R.
- b) To increase professional experience and employment opportunities.
- c) Improving the relation between the faculty and the surrounding societies.

By the end of the program, graduates who have diligently attended class and their externship, studied, and practiced their skills should have the skills to seek entry-level employment as veterinary doctor (Veterinarian).

2- Intended Learning outcomes (ILOs)

a) Knowledge and understanding:

- 1) Recognize the fundamental of normal and abnormal microscopic and macroscopic anatomy of different animal body systems.
- 2) Discuss the physiology and biochemistry of different organs and the principles of clinical laboratory diagnosis by using advanced techniques for different diseases affecting animals, birds and fish.
- 3) Identify various animal and birds' production, nutrition and environmental housing and hygiene control measures.



- 4) List the microorganisms and parasites of veterinary importance.
- 5) Identify the most common hazards associated with meat, milk and their by-products.
- 6) Discuss scientifically different affections of biological, physical and chemical causes in different farm animals, birds, rabbit and fish and the lines of veterinary prescription.

b) Intellectual skills:

- 1) Differentiate the normal and abnormal microscopic and macroscopic picture of different tissues in animals, birds and fish to provide a full review of most salient points in them from applied and comparative points of view.
- 2) Estimate the different metabolic pathways.
- 3) Standup thinking for how to deal with and manage animal production and nutritional problems to achieve maximal profits.
- 4) Capable to correlate between the diseases and its etiology.
- 5) Able to interpret the relationship between the parasite and micro-organisms and clinical observation.
- 6) Interpret of drug-drug interaction panorama in the veterinary field as well as differentiate the actual cause(s) of intoxication among farm animals.
- 7) Able to differentiate between different diseases and select suitable treatment and preventive measures for animal, birds, rabbits and fish.
- 8) Get able to analyze infertility problems and overcome them.
- 9) Make judgments about quality of meat, milk and their by-products and their suitability to consumption.
- 10) Differentiate various surgical problems in farm and pet animals under field conditions.
- 11) Capable to investigate the hygienic problems in the farm to provide suitable control measures.
- 12) Capable to interpret the laboratory results to reach the final diagnosis.

c) Professional and practical skills:

By the end of the tanning program the student should be able to:

- c.1) Detect the different animal body organs on live animals.
- c.2) Perform the microscopical investigations to identify different tissues among animal species.



- c.3) Estimate of various physiological and biochemical components of body fluids in vitro.
 - c.4) Manipulate physically and chemically restraint of farm, pet animals and in a safe and human manner under field condition.
 - c.5) Perform pathological investigation to achieve a definitive diagnosis in farm animals, birds, rabbits and fish.
 - c.6) Diagnose and control the of parasitic and microbial infection.
 - c.7) Apply isolation and identification of different microorganisms and parasites using different modern laboratory technique.
 - c.8) Prepare of some prescription for veterinary use.
 - c.9) Select and use the most rapid and efficient antidote for the diagnosed poison.
 - c.10) Apply hygienic system in farm animals.
 - c.11) Gain the case history professionally for animals, birds and rabbit owners.
 - c.12) Diagnose, treat and prevent of infectious and non-infectious diseases among farm animals, birds, rabbits and fish.
 - c.13) Use different diagnostic methods as clinical and modern devices to treat the infertility and surgical problems in both male and female animals.
 - c.14) Formulate the suitable ration formulation for different animals, birds and fish according to their requirements.
 - c.15) Judge fitness for consumption and detection of residues in human food of animal source.
 - c.16) Build up a therapy program, preventive and control agenda for animal, birds, rabbits and fish.
- d) General and transferable skills**
- d.1) Add the language term and expression of veterinary field.
 - d.2) Communication with owners.
 - d.3) Write clinical reports efficiently.
 - d.4) Get the clinical and laboratory ethical performance in the veterinary field.
 - d.5) Self-confidence and leadership skills.
 - d.6) Creative thinking skills thought analysis of problems.

At the end of the training program, the graduate should have achieved the ILOs that mentioned previously.



3- Training structure and contents:

a- Duration of the program: 6 months

b- Training program structure:

According to the article (9): laws and regulation for undergraduate students, Faculty of Veterinary Medicine, University Kafrelshiek.

"The students have to finalize a field and clinical training after the final examination of the 2nd, 3rd and 4th grading years for 6 months during the summer vacation. It classified into 3 periods two months following the 2nd, 3rd and 4th years in laboratories of the faculty, animal research institute, slaughterhouses, governmental clinics and hospitals and clinical conveys under supervision of the faculty academic staff and their assistants, and the staff in the location of the training.

The faculty council determines the students group; their distribution and the training location. The general supervision of the training is nominated by the faculty dean and the vice dean for the education and students affairs.

The training program is divided into internal and external training.

3. b. i- Number of hours per week per grade:

level	Duration by month	Total hours	Type of training
2 nd	Two	416	<ul style="list-style-type: none">• Internal for one month• External for one month
3 rd	Two	416	<ul style="list-style-type: none">• Internal for one month• External for one month
4 th	Two	416	<ul style="list-style-type: none">• Internal for one month• External for one month
Total	Six	1248	

3. b .ii- Practical/ field training: 1248 hours in summer months at rate 8 hours/ day represent 21.9%.



C- Content and skills:

Dep./ course	Skills that student should acquire
Anatomy and Embryology	<ul style="list-style-type: none"> The students had the ability to deal with different aspects concerning the clinical anatomy of the various regions of the animal body
Cytology and Histology	<ul style="list-style-type: none"> The students must have a moderate background of the basic histological techniques, be independently able to obtain and process tissue specimens and finally to prepare, stain and examine histological sections with special reference dealing with the different types of the body tissue.
Biochemistry	<ul style="list-style-type: none"> Students should gain the essential practical skills in the laboratory test for metabolic disorders and basic molecular techniques.
Physiology	<ul style="list-style-type: none"> Provide the undergraduate student with the advanced veterinary medical knowledge and skills essential for physiology and necessary for further training and practice in the field of physiology.
Animal behavior and management	<ul style="list-style-type: none"> Perform physical examination of animals for signs of health. Write a report about soundness of animals. Write a certificate about imported and exported animals. Read a pedigree in farmed animals. Assess and advice about animal management and reproductive efficiency. Gain skillfully and appropriately use new information in the field of animal behavior. Utilize appropriate safety procedures to protect clients and co-workers. Scan the actual etiological factors which can induce behavioral disorders in animals. Solve the different behavioral vices in horse, cattle, buffalo, camel, sheep and goat.
Animal production	<ul style="list-style-type: none"> Follow up the dairy, beef, sheep and poultry activities in production farms. Improve the performance of dairy, beef, sheep and poultry projects.



Dep./ course	Skills that student should acquire
pathology	<ul style="list-style-type: none">• The students had the ability to sampling, trimming, processing different tissue specimens.• The students had the ability to make post mortem examination, sampling, processing, and interpret different tissue specimens.
Veterinary pharmacology	<ul style="list-style-type: none">• The students had the ability to treat different diseased conditions affecting body systems, treatment of different infective agents in animals and poultry and treatment of different toxicity cases. Moreover, to choose the most safe and effective antiseptics and disinfectants. In addition, to determine the antibiotics sensitivity test, minimal inhibitory concentration and LD50 of drugs.
Nutrition and Clinical Nutrition	<ul style="list-style-type: none">• The students had the ability to deal with different nutritional practices such as applied ration formulation, feed mills, feed mill Evaluation, malnutrition diseases, and clinical nutrition for different animals, poultry, and fish species.
Clinical Pathology	<ul style="list-style-type: none">• Students will learn practical skills and techniques directly relevant to essential laboratory equipment, essential laboratory procedures and reading a report and correlating between laboratory data to get correct diagnosis.
Fish Diseases and Management	<ul style="list-style-type: none">• Show the species of fish and shellfish in common aquaculture production and their position in the market place.• Equip with specialized skills of laboratory and field sample collection and processes, and practical sampling of water quality parameter.• Perform emergency care to fish.• Use appropriate safety procedures to protect themselves and co-workers.• Write a communication report, direct data presentation.
Theriogeneology	<ul style="list-style-type: none">• The students had the ability to deal with different animal species under field conditions dealing with animal owner, understanding the field languages, diagnosis, differential diagnosis, and prognosis and outline the principles of special obstetrical and gynaecological interventions.



Dep./ course	Skills that student should acquire
Veterinary Surgery, Anesthesiology and Radiology	<ul style="list-style-type: none"> • Diagnosis and differential diagnosis of General and Special surgical problems. • Surgical management of General and Special surgical problems: • Control • Select the suitable anesthetic regimen • Non-surgical and surgical intervention. • post-operative care • Post-operative complications. • Prognosis of a surgical problem
Animal Medicine	<ul style="list-style-type: none"> • the students had the ability to deal with different animal species under field conditions dealing with animal owner, understanding the field languages, diagnosis, differential diagnosis, and prognosis and outline the principles of special methods for animal examination and diagnosis sequence with special attention for diagnosis of internal animal diseases, taking case history, examination of the animal and treatment of clinically diseased cases.
Infectious Diseases	<ul style="list-style-type: none"> • Skills of diagnosis, differential diagnosis and control of infectious diseases in different animal species. • Practical approach to schedules of vaccination against infectious diseases (designing and application). • Practical application of the official programs for eradication of bovine tuberculosis and brucellosis. • Designing of the strategies of periodical mass treatment against endemic parasitic diseases.
Bird and Rabbit Medicine	<ul style="list-style-type: none"> • The students had the ability to deal with different avian species under field conditions dealing with the owner, understanding the field languages, diagnosis, differential diagnosis, and prognosis and outline the principles of treatment of poultry and rabbits diseases.
Animal and Birds hygiene	<ul style="list-style-type: none"> • The students had the ability to deal with different animal species under field conditions dealing with animal owner, understanding the field languages, and outline the principles of combating external parasites.



Dep./ course	Skills that student should acquire
<p>Food Hygiene and control</p>	<ul style="list-style-type: none"> • Student should understand the basic concepts about food microbiology, safety and quality of milk and its products, gain the ability to perform different microbiological procedures, and get the basic knowledge about food safety ensuring programs like HACCP and ISO. • The students had the ability to deal with different various sectors in the meat hygiene field, including slaughterhouses, refrigerators, places for sale of meat and meat factories. <p>Master a wide range of training skills on the different processes in these facilities and their role in meat hygiene control.</p> <ul style="list-style-type: none"> • Apply scientific training methods of the quality and safety of meat in these sectors.
<p>Bacteriology, Immunology and Mycology</p>	<ul style="list-style-type: none"> • The students had the ability to deal with different clinical samples from poultry suffering from Infectious diseases in laboratory of Bacteriology, Mycology and Immunology, understanding the sample transportation, processing, direct laboratory diagnostic techniques.
<p>Parasitology</p>	<ul style="list-style-type: none"> • The training program aimed to produce trained veterinary students: <ul style="list-style-type: none"> - Able to deal with the broad spectrum of specimens and problems encountered in general veterinary parasitology. - Acquire skills and competence in a particular species sufficient to lead a diagnostic team in this area if required.
<p>Virology</p>	<ul style="list-style-type: none"> • The students had the ability to deal with laboratory diagnosis of different viral diseases by isolation of viruses, serological tests and molecular based techniques, also students became able to deal with equipment of sterilization and tissue culture techniques and how to prepare samples derived from infected animals and birds for detection of viruses.
<p>Forensic medicine and Toxicology</p>	<ul style="list-style-type: none"> • At the end of this course, the students have the ability to: <ul style="list-style-type: none"> - Deal with toxicology cases under field conditions. - Outline the broad principles of experimental toxicology. - Perform the required laboratory forensic analysis.



The program of summer training as follows:

The article 9 and 9R of the law stated that:

- A. 2nd academic year, training will extended for 2 months, 8 hours a day which equal 416 training hours, in the laboratories of the departments of 1st and 2nd academic years and other field application.
- B. 3rd academic year training will extended for 2 months, 8 hours a day which equal 416 training hours, at the laboratories of third academic year, central laboratory and Animal Health research institutes, other vet. Laboratories, pharmaceutical and feed factories.
- C. 4th academic year training will extended for 2 months, 8 hours a day which equal 416 training hours at the laboratories of departments of 4th and 5th academic year, animals farms, veterinary clinics, vet. Med. authorities (vet. Clinics, slaughter houses, vet. Quarantine, food control, general veterinary hygiene, animal, poultry and fish frames, and other field application in addition to convey.

4- Teaching and training:

- 1- The summer practical / training program includes a variety of teaching and training approaches for different intended training objective, including sessions; practical skills include laboratory class & clinical practice, clinical conveys and field trips.
- 2- The students were divided into small groups in internal training and to other sub groups in clinical training convey and make a round for each department.

5- Assessments:

- I- According to the articles (9 and 9R): by the laws and regulation for undergraduate students, Faculty of Veterinary Medicine, University of Kafrelsheikh (2014) which was modified at 3/9/2015

The article 9R of the law stated that:

- A. The faculty council upon the suggestions of the scientific departments will determine the specifications of the training program and the intended learning outcomes according to the goals of the education program
- B. B-Student's assessment will be done at the end of each training period according to the attendance and follow up card and a final oral examination according to the approval of the faculty council. The grades of the training will not be added to the students total grade count.



- C. C-Students who did not attend the training or who had failed will repeat the training period with the new students according to the approval of the faculty council.
- D. The students will not granted the bachelor degree except after completing the training program with success according to the approval of the faculty council.
- E. The university council upon the suggestions of the faculty council will decide the beginning and finishing of the training program and the method of dividing the students or the training places, formulation of the general supervise and the specialized supervisor for the preparation and the execution.
- II- The training program depends on variant actions for assessment according to the nature of training.
- 1- Follow-up card and attendance.
 - 2- Final Oral exam.

III- Weight of assessment:-

1. Second academic year

Assessment	Total allocated Marks
Follow- up card and student attendance	60 (50%)
Oral exam	60 (50%)
Total/ percentage	120 (100%)

The total 120 degrees are divided on the 6 courses (*Anatomy, Histology, Biochemistry, Physiology, Animal behavior and Animal production*) as 20 degrees for each (10 degrees for Follow- up card and student attendance, 10 degrees for oral exam).

2. Third academic year

Assessment	Total allocated Marks
Follow- up card and student attendance	70 (50%)
Oral exam	70 (50%)
Total / percentage	140 (100%)



The total 90 degrees are divided as following:

140 degrees for 7 courses (*Pathology, Bacteriology and Mycology, Pharmacology, Virology, Parasitology and Nutrition and Genetics*) as 20 degrees for each (10 degrees for Follow- up card and student attendance, 10 degrees for oral exam).

3. Fourth academic year

Assessment	Total allocated Marks
Follow- up card and student attendance	120 (50%)
Oral exam	120 (50%)
Total / percentage	240 (100%)

The total 240 degrees are divided as following:

240 degrees divided by 12 courses (*Theriogeneology, Surgery, animal medicine, Infectious diseases, Poultry and rabbit Diseases, and Hygiene, preventive Medicine, Health control on milk and milk byproduct, Health control on meat and meat by products, Fish diseases and management, clinical pathology and forensic medicine and Toxicology*) 20 degrees for each (10 degrees for Follow- up card and student attendance, 10 degrees for oral exam).

IV- Assessment schedules

Time of Assessments	Time
Follow-up card and attendance.	Along the whole period of training
Oral exam	I- By the end of the corresponding period of training (according to article 9 and 9R from the Laws and regulations for undergraduate students, Faculty of veterinary medicine, University of Kafrelshiek (2014) which was modified at (2015)



6- Student support:

- 1- The student offer transportation facilities (whenever possible).
- 2- The right to choose the nearest laboratory and clinic to his home.

7- Training Program Admission Requirements

The student should finish the academic grading year related to the period of training.

8- Regulation for progression and program completion.

The student passes if he assures attending for the program. This is according to the article (9) and (9R): Laws and regulations for undergraduate students, Faculty of Veterinary Medicine, University of Kafrelsheikh (2014 and was modified at (2015) otherwise not pass.

The student is offered an authorized certificate from the faculty after succeeding in the final summer training exams, indicating his passing the summer training program period (6 months) successfully.

9- Evaluation of program intended training outcomes:

Evaluator	Tool	Sample
1- Participant students	Questionnaires and open discussion	
2- Stakeholder	Questionnaires and open discussion	

PROGRAM COORDINATOR AND DEAN

Prof. Dr. Shawky Abdel Hady Mahmoud