UNIVERSITY OF NIGERIA, NSUKKA FACULTY OF VETERINARY MEDICINE DEPARTMENT OF VETERINARY MEDICINE POST GRADUATE PROGRAMMES

PHILOSOPHY

In keeping with the philosophy of University of Nigeria, the postgraduate programme of the Department of Veterinary Medicine emphasizes the production of graduates specialized and advanced in the aetiology, pathogenesis, clinical signs, diagnosis, prevention, treatment and control of infectious and non-infectious diseases of domestic, aquatic, laboratory and wide animals.

OBJECTIVES

The postgraduate programmes are carefully designed to comprehensively equip the students with both theoretical and practical knowledge required to function effectively and successfully as Veterinary physicians with strong clinical orientation, to effectively grapple with the challenges of modern clinical practice. The students are exposed to in-depth and current knowledge in the areas of equine medicine, ruminant medicine, porcine medicine, canine medicine, feline medicine and avian medicine.

SCOPE

The M.Sc degree programme shall be pursued in the mode of course work to be examined in written papers together with research work to be presented in a project report, where course work predominates over research and constitutes not less than two-third $(\frac{2}{3})$ of the total credit units.

The Doctor of Philosophy (Ph.D) programme shall normally be pursued by comprehensive research to be embodied in a thesis. In addition, the candidate shall register for faculty-based courses and seminars. Post graduate research will be carried out in the student's chosen area of specialization.

ADMISSION REQUIREMENTS

M.Sc Programme

The candidate must possess a good Doctor of Veterinary Medicine (DVM) degree from a recognized Veterinary Council of Nigeria-accredited/approved University.

Ph.D Programme

The candidate must possess a good Master's degree in Veterinary Medicine from the University of Nigeria, Nsukka or a recognized university, with a minimum CGPA of 3.0/4.0 or 3.5/5.0 or 60%.

AREAS OF SPECIZATION

The areas of specialization in the department are as follows:

- i. Avian Medicine
- ii. Ruminant Medicine
- iii. Small Animal Medicine
- iv. Swine Medicine
- v. Equine Medicine
- vi. Fish Medicine
- vii. Laboratory and Wildlife Medicine
- viii. Ethnoveterinary Medicine

DURATION OF PROGRAMMES

M.Sc

Full-time A minimum of 3 semesters

A maximum of 5 semesters

Part-time A minimum of 5 semesters

A maximum of 8 semesters

Ph.D

Full-time A minimum of 6 semesters

A maximum of 10 semesters

Part-time A minimum of 8 semesters

A maximum of 12 semesters

REQUIREMENTS FOR GRADUATION

M.Sc PROGRAMME

To be awarded the M.Sc degree, a student must have taken and passed the following:

- i. All M.Sc students are expected to register and take four compulsory faculty-based courses with a total credit unit of 14 and one compulsory post graduate course (PGC 601) Research Methodology and Application of ICT in Research (3 credit units).
- ii. In all cases, M.Sc students must write and submit to the department a Project Report duly supervised by an approved higher degree supervisor whose qualifications are not below Ph.D. Such a project must be sent to an external examiner nominate by the department and appointed by senate for that purpose.
- iii. Other departmental courses as recommended for the student by the Supervisor/Department based on the student's area of specialization shall constitute a minimum of 16 units. The compulsory and required courses must be selected from the approved list.

Ph.D PROGRAMME

To graduate, all Ph.D students must register, take and pass all faculty-based courses totaling 30 credit units, and the postgraduate school-based course. Synopsis and Grant writing (3 credit units). Every Ph.D candidate must submit a thesis on a chosen and approved topic, supervised by an approved supervisor whose qualification is not below Ph.D and who is not lower than a senior lecturer in rank.

The Ph.D thesis must be defended before an External Examiner duly nominated for that purpose and appointed by the senate.

LIST OF APPROVED SUPERVISORS

Professors/Readers

1. Professor B.M. Anene DVM, M.Sc, Ph.D, FCVSN (Small Animal Internal

Medicine)

2. Professor E.I. Ugochukwu DVM, M.Phil, Ph.D (Ruminant Medicine and Veterinary

Clinics)

Senior Lecturers

1. Dr. N.E. Nweze DVM, M.Sc, Ph.D (Equine Medicine and Ethnoveterinary

Medicine)

2. Dr. O.N. Okoroafor DVM, M.Sc, Ph.D, FCVSN (Avian Medicine)

3. Dr. V. Omeje DVM, M.Sc, Ph.D, Ph.D (Fish Medicine)

JOB OPPURTUNITIES

Successful graduates of the postgraduate programmes of the Department may be employed by the following:

- i. Universities and other Higher Institutions of Learning as Lecturers and /or Research staff.
- ii. Research Institutes officers in relevant sections and Departments.
- iii. Federal/State ministries as veterinary consultants involved in disease prevention, control and in epideminology.
- iv. Private establishment such as drug companies, poultry farms, dairy farms, cattle ranches and piggery farms, banks, insurance companies and oil companies.
- v. Self-employment Our postgraduate are so well trained that they can be self-employed.
- vi. Armed forces and Law enforcement agencies such as the Police Force, Customs, Immigrations, National Drug Law Enforcement Agency, Road Safety etc.

Compulsory Faculty-based Courses for M.Sc Programme

First semester

Course No.	<u>Title</u>	<u>Units</u>
FVM 701	Research Methods and Scientific Writing	3
Second Semo	ester	
Course No.	<u>Title</u>	<u>Units</u>
FVM 702	Biometerics and Computer Application	3
FVM 796	Research Project Final Seminar	2
FVM 790	Research Project	6
	Total	14
Compulsory	post graduate course	
Course No.	<u>Title</u>	<u>Units</u>
PGC 601	Research Methodology and Application in ICT in Reasearch	3
Department	al courses	
First semeste	er	
Course No.	<u>Title</u>	<u>Units</u>
VMD 701	Advanced Diagnostic Medicine	3
VMD 703	Advanced Veterinary Internal Medicine	3
VMD 705	Advanced Veterinary Clinics and Farm Practice	3
VMD 707	General Medicine	3
VMD 711	Advanced Equine Medicine	3
VMD 713	Companion Animals Medicine	3
VMD 715	Food Animal Medicine	3
	Total	21

Second semester

Course No.	<u>Title</u>		<u>Units</u>
VMD 712	Advanced Avian Medicine and Aquatic Medicine		3
VMD 714	Advanced Zoo and Wildlife Medicine		3
VMD 716	Laboratory Animal Medicine		3
VMD 718	Enthoveterinary Medicine		3
VMD 702	Principles and Methods of Preventive Medicine		3
VMD 704	Disease Surveillance and Reporting		3
VMD 706	Vaccine Production and Application		3
		Total	21

Doctor of Philosophy (Ph.D) Degree Programme

All Ph.D students must register and take the following faculty-based courses totaling 33 credit units.

Course No.	<u>Title</u>		<u>Units</u>
PGC 701	Synopsis and Grant Writing		3
FVM 895	Ph.D Research Project Proposal Seminar		3
FVM 896	Ph.D Research Project Progress Report Seminar		3
FVM 897	Ph.D Research Project Final Seminar		3
FVM 890	Thesis		24
		Total	33 units

COURSE DESCRIPTION FOR THE MASTER OF SCIENCE PROGRAMME

Compulsory Faculty-Based Courses

FVM 701 Research Methods and Scientific Writing (3 units)

Definitions, value and philosophy of research. Type of studies/research. Choice of research topic. Definition of background of study, statement of problem, research questions, objectives and hypotheses. Research design, sampling, sourcing, collation and analysis of data. Presentation and

interpretation of results. Technical report writing. Critique of published papers. Presentation of research findings.

FVM 702 Biometrics and Computer Applications

(3 units)

Definitions and value of biometry in scientific research. Variability and normal distribution. Probability, binomial and Poisson distributions. Populations and sampling. Testing differences between means. Student t-test, Chi-square, Correlation and Regression analysis, Analysis of variance. Other relevant statistics. Basics of computer appreciation. Software packages relevant to scientific and veterinary medical research and their uses. Presentation of scientific reports.

FVM 796 Research Project Final Seminar

(2 units)

Final seminar on M.Sc research project highlighting background of the study, statement of problem, objectives of the study, methods used in carrying out the study and analysis of data generated, results, discussion of the results and recommendations arising from the findings of the study.

FVM 790 Research Project

(3 units)

Research project in the student's area of study, leading to a project report that shall be examined by an External Examiner.

Compulsory Postgraduate Course

PGC 601 Research Methodology and Application of ICT in Research (3 units)

In-dept research work aimed at acquiring full knowledge and presentations in scholarly writing of the concepts, issues, trends in the definition and development of the study area from African and Western perspectives. Major steps in research selection of problem, literature review, design, data collection, analysis and interpretation, conclusions. Studies of various designs, Historical, case studies, surveys, Descriptive, cross-sectional, experimental etc. Analysis, surveys and synthesis of conceptual and philosophical foundations of different disciples. Identification of research problems and development of research questions and or hypothesis. Detailed treatment of methods of collecting relevant research data and the format for presenting research results from designing a table of contents to referencing bibliography and appendix. Data analysis and results presentation in different disciplines using different analytical tools. Method of

project/dissertation writing. Application of appropriate advanced ICT tools relevant in every discipline for data gathering, analysis and result presentation. Essentials of spread sheets, internet technology, and internet search engines. All registered Master's degree students must attend a solution based interactive workshop to be organized by the school of post graduate studies for a practical demonstration and application of the knowledge acquired from the course, conducted by selected expects.

Departmental Courses

VMD 701 Advanced Diagnostic Medicine

(3 units)

Study of different techniques employed in the diagnosis of disease using specific instrumentation for general clinical examination, clinics and pathological diagnosis, treatment and control of some specific diseases affecting various systems of domestic and wild animals. Clinico-diagnostic study of cases as well as chemotherapeutic approach to cases.

VMD 703 Advanced Internal Medicine

(3 units)

The mechanism of disease production particularly on some selected disease entities will be taught. The rational approach to diagnosis in various domestic and pet animals as well as the effective application of chemotherapy on these diseases will be discussed. Also the application of epidemiological parameters in selected herds for effective interpretation and management of disease outbreaks of livestock and pet animals will be emphasized.

VMD 705 Veterinary Clinics and Farm Practice

(3 units)

The application of the theoretical and practical knowledge to diagnosis, treatment and prevention of diseases of pet and farm animals. Routine herd health visits. Candidate will be expected to attach or liaise with their supervisors during routine clinical duties. Candidate will be required to submit detailed clinical investigation of at least 20 attested clinical cases spanning two semesters. Candidates may be allowed to present one of such important cases as a seminar.

VMD 707 General Medicine

(3 units)

Study of different techniques employed in the diagnosis of diseases. General examination of patients and instrumentation. Methods of detailed examination of various body systems, namely-digestive, respiratory, urinary, musculoskeletal, cutaneous, cardiovascular and nervous systems.

Clinical diagnosis, clinico-pathological study, treatment and control of diseases affecting various systems of the body e.g. pneumonia, diarrhea, uremia etc. of domestic and wild animals.

VMD 711 Advanced Equine Medicine

(3 units)

Introduction, aetiology, symptoms, transmission, diagnosis, treatment and control of bacterial, parasitic, viral, rickettsial and mycotic diseases of equine species. Diseases caused by nutritional deficiency, special problems of equine species such as lameness, fracture etc. Special focus on the clinical diagnosis and clinico-pathological study of economically important diseases of equine in the tropics.

VMD 713 Companion Animal Medicine

(3 units)

Introduction, aetiology, symptoms, transmission, diagnosis, treatment and control of bacterial, parasitic, viral, rickettsial and mycotic diseases of small animals (dogs and cats). Diseases caused by non-infectious agents, metabolic and nutritional deficiency. Special focus on the clinical diagnosis and clinicopathological study of economically important diseases of companion animals in the tropics.

VMD 715 Food Animal Medicine

(3 units)

Introduction, aetiology, symptoms, transmission, diagnosis, treatment and control of bacterial, parasitic, viral, rickettsial and mycotic diseases of ruminats; diseases caused by nutritional deficiency and metabolic disorders. Clinical diagnosis and clinicopathological study of economically important diseases of food animals.

VMD 712 Advanced Avian and Aquatic Medicine

(3 units)

Introduction, aetiology, symptoms, transmission, diagnosis, treatment and control of bacterial, parasitic, viral, rickettsial and mycotic diseases of avian and aquatic species. Special emphasis on clinical diagnosis and clinicopathological study of economically important diseases of avian and aquatic species in the tropics.

VMD 714 Advanced Zoo and Wildlife Medicine

(3 units)

Important zoo and wildlife animal diseases will be taught. Instructions on some aspects of wildlife management will be provided. Laboratory courses will consist of demonstration in form

of field trip to zoos and/or game reserves. Candidate will also be required to present a detailed clinical review based on capture, restrain, examination and clinical procedures of wild and zoo animals.

VMD 716 Laboratory Animal Medicine

(3 units)

Laboratory animals and their value in research. Important disease of different laboratory animals-Aetiology, symptoms, transmission, diagnosis, treatment and control of important bacterial, parasitic, viral, rickettsial and mycotic diseases of major laboratory animals. Various management methods for the different laboratory animals and implications for their health. Standards for humane handling and use of laboratory animals for research. Misuse of laboratory animals.

VMD 718 Ethnoveterinary Medicine

(3 units)

The place of ethnoveterinary medicine in livestock and pet animal health delivery systems of pastoral and rural farmers in Africa. Source of drugs in ethnoveterinary medicine practices. Processing of ethnodrugs. Procedures for study and validation of traditional claims of efficacy of some ethnomedicine. Further drugs development from ethnomedicines.

VMD 702 Principles and Methods of Preventive Medicine

(3 units)

Curative versus preventive medicine. Concept of herd immunity. Criteria for assessing priorities in animal diseases control methods. Strategies for prevention and control of major diseases of livestock and poultry. Cost-benefit analysis of disease control strategies for prevention and control of major diseases of livestock and poultry.

VMD 704 Disease Surveillance and Reporting

(3 units)

Clarification and scheduling of diseases. Reporting and notification of relevant diseases (national and international). International surveillance systems. Development of national surveillance network and early warning systems. National data bank. Veterinary jurisprudence. Acts, regulations and orders relating to animal movements, importation and trade routes.

VMD 706 Vaccine Production and Application

(3 units)

History of vaccine production and specifically animal vaccine production in Nigeria. Vaccine quality control-tests of potency, safety and purity. Immunogenicity of modified live vaccines and inactivated vaccines. Egg-adapted and tissue culture origin vaccines. Vaccine storage and application. Vaccination breaks and failure. Planning vaccination campaigns. Animal vaccines in Nigeria.

COURSE DESCRIPTIONS FOR THE DOCTOR OF PHILOSOPHY PROGRAMME

FVM 895 Ph.D Research Project Proposal Seminar

(2 units)

Seminar on proposed Ph.D research project highlighting background of study, review of literature on current state of knowledge of the area of research, statement of problem, objectives of the study, proposed methodology and expected output/significance of the study.

FVM 896 Ph.D Research Project Progress Report Seminar (2 units)

Progress report seminar on the Ph.D research project highlighting background of study, statement of problem, objectives of the study, methods used so far in the study, results generated, challenges encountered, changes if any in the design of the study and general discussion of the future prospects of the study.

FVM 897 Ph.D Research Project Final Seminar (2 units)

Final seminar on the Ph.D research project highlighting background of study, statement of problem, objectives of the study, methods used in carrying out the study and analysis of the data generated, results, discussion of the results and recommendation arising from the findings of the study.

FVM 890 Thesis (24 units)

Doctor of philosophy research project in the student's area of study, under the guidance of am approved supervisor. The study must be original and the topic comprehensively researched. The output should contribute significantly to the existing body of knowledge in the area of study. The write-up (thesis) shall be examined by an External Examiner.

PGC 701 Synopsis and Grant writing

(3 units)

Identification of types and nature of grant writing, mining of grant application. Study of various grant application structure and contents and writing concept notes, detailed project description, budgeting and budget defence. Study of sample grant writings in various forms and writing of mock research and other grants. Identification of university of Nigeria synopsis structure requirements (Introduction, Methodology and Results). Determining the content of each subunit of the synopsis, steps in writing of synopsis from the dissertation/thesis document. Structural and language uses. Common errors in synopsis writing and strategies for avoiding them. The roles of the student and the supervisor in the production of a synopsis. Writing of mock synopsis. All registered Ph.D students must attend a solution-based interactive workshop to be organized by the school of post graduate studies for a practical demonstration and application of the knowledge acquired from the course conducted by selected experts.