

SEMESTER WISE DISTRIBUTION OF POSTGRADUATE COURSES



**AS PER REVISED AND RESTRUCTURED
SYLLABUS OF ICAR 2021**

M.V.Sc. and Ph.D.

NANAJI DESHMUKH VETERINARY SCIENCE UNIVERSITY

JABALPUR – 482004

NANAJI DESHMUKH VETERINARY SCIENCE UNIVERSITY, JABALPUR

Veterinary Anatomy

M.V.Sc. in Veterinary Anatomy

Course No.	Title of the course	Credit hours	Semester
ANA- 601	Comparative Osteology and Arthrology	1+2	I
ANA- 602	Comparative Splanchnology	2+2	II
ANA- 603	Myology, Angiology, Neurology and Aesthesiology of Ox	2+2	I
ANA -604	Gross, Histological and Histochemical Techniques	1+3	I
ANA -605	Clinical Anatomy	0+1	I
ANA -606	General Histology and Ultrastructure	1+1	I
ANA -607	Systemic Histology and Ultrastructure	3+1	II
ANA- 608	Developmental Anatomy	2+1	II
ANA –609	Wild life and Forensic Anatomy	1+0	II
ANA- 610	Master's Seminar	1+0	I / II
ANA – 611	Master's Research	0+30	I / II

Ph.D. in Veterinary Anatomy

Course No.	Title of the course	Credit hours	Semester
RPE- 700	Research and Publication Ethics*	1+1	I
ANA-701	Myology, Angiology, Neurology and Aesthesiology of Equine, Canine and Porcine	2+1	I
ANA-702	Principles and Applications of Biomechanics	1+0	I
ANA-703	Avian Anatomy	1+1	I
ANA-704	Neuroanatomy	2+1	I
ANA-705	Comparative Endocrine Anatomy	1+1	I
ANA-706	Theory and Application of Electron Microscopy	1+1	II
ANA-707	Histoenzymology and Immunocytochemistry	2+1	II
ANA-708	Applied Embryology and Teratology	1+ 1	II
ANA-709	Functional Veterinary Anatomy	1+0	II
ANA-710	Gross Anatomy of Laboratory Animals	1+1	I
ANA-711	Cross Sectional Anatomy of Ox	0+1	II
ANA-712	Animal Alternatives in Veterinary Anatomy	1+1	II
ANA- 713	Special Problem	0+2	II
ANA-714	Doctoral Seminar I	1+0	I
ANA-715	Doctoral Seminar II	1+0	II
ANA-716	Doctoral Research	0+75	I & II

*Core course

Veterinary Biochemistry

M.V.Sc. in Veterinary Biochemistry

COURSE NO.	TITLE OF THE COURSE	CREDIT HOURS	SEMESTER
BCT 601	Biophysical Chemistry	2 + 0	I
BCT 602	Biochemistry of Biomolecules	2 + 0	I
BCT 603	Enzymology	2 + 1	I
BCT 604	Analytical Techniques and Instrumentation in Biochemistry	1 + 1	II
BCT 605	Clinical Biochemistry of Animals	2 + 1	I
BCT 606	Intermediary Metabolism and Regulation	3 + 0	I
BCT 607	Molecular Biochemistry	2 + 1	II
BCT 608	Nutritional and Industrial Biochemistry	2 + 0	II
BCT 609	Endocrinology and Reproductive Biochemistry	2 + 0	II
BCT 610	Biochemistry of Ruminants and Wild Animals	1 + 1	II
BCT 611	Introduction to Bioinformatics and Computational Biology	1 + 1	II
BCT 612	Master's seminar	1+0	I / II
BCT 613	Master's research	0+30	I & II

Ph.D. in Veterinary Biochemistry

COURSE NO.	TITLE OF THE COURSE	CREDIT HOURS	SEMESTER
RPE 700*	Research and Publications Ethics	1 + 1	I
BCT 701	Applied Molecular Biochemistry and Systems Biology	2 + 1	II
BCT 702	Membrane Biochemistry	2 + 0	I
BCT 703	Recent trends in Enzymology	2 + 1	I
BCT 704	Diagnostic Techniques in Clinical Biochemistry	0 + 2	I
BCT 705	Recent Trends in Biochemical Techniques and Instrumentation	2 + 1	II
BCT 706	Developmental Biochemistry	2 + 0	I
BCT 707	Bioinformatics Tools in Biochemistry	1 + 1	II
BCT 708	Environmental and Toxicological Biochemistry	2 + 0	II
BCT 709	Biochemistry of Diseases and Disorders	2 + 0	I
BCT 710	Immuno-Biochemistry	2 + 0	II
BCT 711	Special Problem	0 + 2	II
BCT 712	Doctoral Seminar-I	1 + 0	I / II
BCT 713	Doctoral Seminar-II	1 + 0	I / II
BCT 714	Doctoral Research	0+75	I & II

*Core course

Veterinary Biotechnology

M.V.Sc. in Veterinary Biotechnology

Course Code	Course Title	Credit Hours	Semester
BTY 601	Basic and Applied Biotechnology	2+0	
BTY 602	Fundamentals of Cell Biology	2+0	
BTY 603	Molecular Biology and Genetic Engineering	2+0	
BTY 604	Animal Cell Culture–Principles and Applications	2+1	
BTY 605	Molecular Diagnostics	2+1	
BTY 606	Immunology Applied to Biotechnology	2+1	
BTY 607	Introduction to Bioinformatics	2+1	
BTY 608	Animal Genomics	2+1	
BTY 609	Techniques in Molecular Biology and Genetic Engineering	0+2	
BTY 610	Reproductive Biotechnology	2+1	
BTY 611	Masters Seminar	1+0	
BTY 612	Masters Research	0+30	I / II
			I & II

Ph.D. in Veterinary Biotechnology

Course Code	Course Title	Credit Hours	Semester
RPE 700	Research and Publication Ethics*	1+1	I
BTY 701	Genetic Engineering	1+2	
BTY 702	Functional Genomics and Proteomics	3+0	
BTY 703	Advances in Cell and Molecular Biology	2+0	
BTY 704	Diagnostic Platform	1+1	
BTY 705	Gene Manipulation and Genome Editing	2+0	
BTY 706	Trends in Vaccinology	2+1	
BTY 707	Advances in Bioinformatics	1+1	
BTY 708	Advances in Reproductive Biotechnology	2+1	
BTY 709	Advances in Animal Cell Culture	2+1	
BTY710	Industrial Biotechnology	2+1	
BTY 711	Rumen and Feed Biotechnology	2 +1	
BTY 712	Doctorate Seminar-I	1+0	I / II
BTY 713	Doctorate Seminar-II	1+0	I / II
BTY 714	Doctorate Research	0+70	I & II

*compulsory Major course for Doctorate programme.

Veterinary Extension Education

M.V.Sc. in Veterinary Extension Education

Course Code	Course Title	Credit Hours	Semester
EXT 601	Development Perspectives of Extension Education	2+1	I
EXT 602	Communication for Livestock Development	1+1	I
EXT 603	Diffusion and Adoption of Innovations	2+1	I
EXT 604	Programme Planning and Evaluation	1+1	I
EXT 605	Research Methodology	2+1	II
EXT 606	Social Psychology and Group Dynamics	1+1	I
EXT 607	Livestock Entrepreneurship	1+2	II
EXT 608	Human Resource Management in Animal Husbandry Sector	1+1	II
EXT 609	Gender Empowerment and Livestock Development	1+0	II
EXT 610	Farm Journalism	1+1	II
SSS 600	Statistics for Social Sciences	2+1	I
EXT 611	Masters Seminar	1+0	I/II
EXT 612	Masters Research	0+30	I & II

Ph.D. in Veterinary Extension Education

Course Code	Course Title	Credit Hours	Semester
RPE 700	Research and Publication Ethics	1+1 #	I
EXT 701	Organizational Leadership and Management	2+0	I
EXT 702	Recent Trends in Research Techniques in Social Sciences	2+1	I
EXT 703	Training for Development	1+1	I
EXT 704	Policies and Regulations in Livestock Sector	1+0	II
EXT 705	Educational Technology	2+1	II
EXT 706	Dynamics of Social Change	2+0	II
EXT 707	Monitoring and Evaluation of Livestock Development Programmes	2+1	I
EXT 708	Theory Constructions in Social Sciences	1+0	I
EXT 709	Facilitation for Development	2+1	II
EXT 710	Managing Extension Organizations	2+1	I
EXT 711	Doctoral Seminar-I	1+0	I/II
EXT 712	Doctoral seminar-II	1+0	I/II
EXT 713	Doctoral Research	0+75	I & II

Mandatory Major course for all Ph D students.

Veterinary Physiology

M.V.Sc. in Veterinary Physiology

Course Code	Course Title	Credit Hours	Semester
VPY 601	Physiology of Digestion	2+1	II
VPY 602	Cardiovascular and Respiratory Physiology	2+1	I
VPY 603	Renal Physiology and Body Fluid dynamics	2+1	I
VPY 604	Haematology	2+1	I
VPY 605	Growth and Environmental Physiology	2+0	II
VPY 606	Physiology of Animal Reproduction	2+1	II
VPY 607	Clinical Physiology	1+1	I
VPY 608	Neuromuscular Physiology	2+0	I
VPY 609	Endocrinology of Domestic Animals	2+0	II
VPY 610	Instrumentation and Research Techniques in Veterinary Physiology	0+2	II
VPY 611	Physiology of Wild Life	1+0	II
VPY 612	Masters Seminar	1+0	I / II
VPY 613	Masters Research	0+30	I & II

Ph.D. in Veterinary Physiology

Course Code	Course Title	Credit Hours	Semester
RPE 700	Research and Publication Ethics*	1+1	I
VPY 701	Applied physiology of body fluids and electrolytes	2+1	I
VPY 702	Physiology of animal behaviour	2+0	II
VPY 703	Recent trends in ruminant digestion	2+1	I
VPY 704	Recent trends in neuroendocrinology	2+1	I
VPY 705	Myophysiology and kinesiology	2+0	II
VPY 706	Avian physiology	2+1	I
VPY 707	Physiology of lactation	2+1	II
VPY 708	Recent trends in environmental physiology and growth	2+1	II
VPY 709	Cellular and molecular physiology	2+0	II
VPY 710	Recent trends in immuno-physiology	2+1	I
VPY 711	Physiology of stress	2+0	II
VPY 712	Recent trends in reproductive physiology	2+1	II
VPY 713	Doctorate Seminar-I	1+0	I/II
VPY 714	Doctorate Seminar-II	1+0	I/II
VPY 715	Doctorate Research	0+75	I & II

*Compulsory Major course for Doctorate programme. The other 10 credits can be registered from remaining 700 Series courses listed above.

Animal Reproduction Gynaecology and Obstetrics

M.V.Sc. in Animal Reproduction Gynaecology and Obstetrics

Course Code	Course Title	Credit Hours	Semester
VGO 501	General Gynaecology*	2+1	I
VGO 502	Female Infertility in Farm Animals*	2+1	II
VGO 503	Veterinary Obstetrics*	2+1	I
VGO 504	Andrology and Male Infertility*	2+1	II
VGO 505	Semen Preservation and Artificial Insemination	2+1	II
VGO 506	Basics of Reproductive Biotechnology*	2+1	II
VGO 507	Clinical Practice-I*	0+3	I
VGO 508	Clinical Practice-II*	0+3	II
VGO 509	Canine and Feline Reproduction	2+1	I
VGO 510	Caprine and Ovine Reproduction	2+1	II
VGO 511	Equine Reproduction	2+1	I
VGO 512	Camel Reproduction	2+1	II
VGO 513	Elephant Reproduction	2+1	I
VGO 514	Wild and Zoo Animal Reproduction	2+1	II
VGO 515	Porcine Reproduction	2+1	I
VGO 516	Ultrasonography In Animal Reproduction	1+2	I
VGO 590	Special Problem	0+1	I/II
VGO 591	Master's Seminar	1+0	I/II
VGO 599	Master's Research	30	I & II

*Core Courses

Ph.D. in Animal Reproduction Gynaecology and Obstetrics

Course Code	Course Title	Credit Hours	Semester
VGO 601	Advances in Gynaecology and Infertility* Management	2+1	I
VGO 602	Advances in Veterinary Obstetrics	1+1	I
VGO 603	Advances in Andrology and Male Infertility*	2+1	II
VGO 604	Reproductive Biotechnology	1+1	II
VGO 605	Semenology	1+1	II
VGO 606	Clinical Practice-I*	0+3	I
VGO 607	Clinical Practice-II*	0+3	II
VGO 690	Special Problem	0+2	I / II
VGO 691	Doctoral Seminar-I	1+0	I / II
VGO 692	Doctoral Seminar-II	1+0	I / II
VGO 699	Doctoral Research	75	I & II

*Core Courses

Veterinary Surgery and Radiology

M.V.Sc. in Veterinary Surgery and Radiology

Course Code	Course Title	Credit Hours	Semester
VSR 501	Clinical Practice-I*	0+3	I
VSR 502	Clinical Practice-II*	0+3	II
VSR 503	Principles of Surgery*	2+1	I
VSR 504	Anaesthesia And Analgesia*	2+1	I
VSR 505	Diagnostic Imaging Techniques*	2+1	II
VSR 506	Soft Tissue Surgery	2+1	II
VSR 507	Orthopaedic Surgery*	2+1	II
VSR 508	Anaesthesia of Zoo, Wild, Exotic and Laboratory Animals	1+1	I
VSR 509	Urogenital Surgery	1+1	II
VSR 510	Ophthalmology	1+1	II
VSR 511	Dentistry and Oral Surgery	1+1	I
VSR 512	Camel Surgery	1+1	I
VSR 513	Elephant Surgery	1+1	I
VSR 587	Clinical Case Conference	0+1	II
VSR 588	Special Problem in Radiology	0+2	II
VSR 589	Special Problem in Anaesthesia	0+2	I
VSR 590	Special Problem in Surgery	0+2	II
VSR 591	Masters Seminar	1+0	I / II
VSR 599	Masters Research	0+30	I & II

*Core Courses

Ph.D. in Veterinary Surgery and Radiology

Course Code	Course Title	Credit Hours	Semester
VSR 601	Clinical Practice-I*	0+2	I
VSR 602	Clinical Practice-II*	0+2	II
VSR 603	Clinical Practice-III*	0+2	I
VSR 604	Cardiovascular Surgery	2+1	II
VSR 605	Advances in Anaesthesiology	2+1	I
VSR 606	Advances in Radiology	2+1	I
VSR 607	Advances in Diagnostic Imaging Techniques	2+1	II
VSR 608	Advances in Orthopaedics	2+1	II
VSR 609	Neurosurgery	2+1	II
VSR 610	Reconstructive and Regenerative Surgery	1+1	I
VSR 611	Advances in Soft Tissue Surgery	2+1	I
VSR 612	Advances in Ophthalmology	1+1	II
VSR 613	Surgical Oncology	1+1	I
VSR 687	Clinical Case Conference*	0+1	II
VSR 688	Special Problem in Diagnostic Imaging	0+2	II
VSR 689	Special Problem in Anaesthesia	0+2	I
VSR 690	Special Problem in Surgery	0+2	II
VSR 691	Doctoral Seminar-I	2+0	I / II
VSR 692	Doctoral Seminar-II	2+0	I / II
VSR 699	Doctoral Research	0+75	I & II

*Core Courses

Veterinary Medicine

M.V.Sc. in Veterinary Medicine

Course No.	Course Title	Credit Hrs.	Semester
VMD 501*	Ruminant Medicine-internal	3+0	I
VMD 502*	Ruminant Medicine-infectious	3+0	II
VMD 503	Equine Medicine	2+0	I
VMD 504*	Canine and Feline Medicine-I	2+0	I
VMD 505*	Canine and Feline Medicine-II	2+0	II
VMD 506	Metabolic and Endocrine Diseases, Nutritional Deficiencies and Diseases of Mammary Gland	2+0	II
VMD 507	Pediatrics and Geriatrics	2+0	I
VMD 508	Avian and Swine Medicine	2+0	II
VMD 509	Zoo, Wild and Laboratory Animal Medicine	1+0	I
VMD 510	Toxicology and Forensic Medicine	1+0	II
VMD 511*	Clinical Diagnostic Techniques	0+2	I
VMD 512	Emergency Medicine	0+2	II
VMD 513*	Diagnosis of Veterinary Infectious Diseases	0+1	II
VMD 514	Oncology and Ethno-veterinary Medicine	1+0	II
VMD 515	Animal Disease Investigation and Biosecurity	1+1	I
VMD 516*	Clinical Practice-I	0+3	I
VMD 517*	Clinical Practice-II	0+3	II
VMD 591	Master's Seminar	1+0	I /II
VMD 599	Master's Research	0+30	I/II

*Core Courses

Ph.D. in Veterinary Medicine

Course No.	Course Title	Credit Hrs.	Semester
VMD 601	Farm Animal Gastroenterology	2+0	I
VMD 602	Farm Animal Cardiopulmonary and Urinary System Diseases	2+0	II
VMD 603	Farm Animal Neurological and Musculo-skeletal System Diseases	1+0	I
VMD 604	Farm Animal Neonatology	1+0	II
VMD 605	Herd Health Management	2+1	I
VMD 606	Canine and Feline Gastroenterology	2+0	II
VMD 607	Advances in Neurological and Musculoskeletal System Diseases of Canine and Feline	1+0	I
VMD 608	Canine and Feline Cardiopulmonary and Urinary System Diseases	1+0	II
VMD 609	Dermatology and Endocrinology	1+0	I
VMD 610	Canine and Feline Eye and Ear Diseases	1+0	II
VMD 611	Veterinary Diagnostics	0+2	I
VMD 612	Metabolic and Nutritional Deficiency Diseases	2+0	II
VMD 613	Emergency and Critical Care Medicine	1+1	I
VMD 614	Emerging and Re-emerging Animal Diseases	2+0	II
VMD 615	Prevention and Control of Infectious Diseases of Ruminants	2+0	I
VMD 616*	Clinical Practice-I	0+2	I
VMD 617*	Clinical Practice-II	0+2	II
VMD 618*	Clinical Practice-III	0+2	I
VMD 691	Doctoral Seminar-I	1+0	I /II
VMD 692	Doctoral Seminar-II	1+0	I/ II
VMD 699	Doctoral Research	75	I/II

*Core courses

Veterinary Microbiology

M.V.Sc. in Veterinary Microbiology

Course Code	Course Title	Credit Hours	Semester
VMC 501	General Bacteriology*	2+1	I
VMC 502	Systematic Veterinary Bacteriology	2+1	II
VMC 503	General Virology*	2+1	I
VMC 504	Systematic Veterinary Virology	2+1	II
VMC 505	Principles of Veterinary Immunology*	2+1	I
VMC 506	Veterinary Mycology*	1+1	II
VMC 507	Vaccinology	2+0	I
VMC 508	Techniques in Microbiology	0+2	II
VMC 509	Techniques in Molecular Microbiology	1+2	I
VMC 510	Molecular Immunology	1+1	II
VMC 511	Mucosal Immunology	1+0	I
VMC 512	Introduction to Microbial Bio-informatics	1+0	II
VMC 591	Master's Seminar*	1+0	I/II
VMC 599	Master's Research	0+30	I/II

*Core Courses

Ph.D. in Veterinary Microbiology

Course Code	Course Title	Credit Hours	Semester
CPE-RPE 600	Research and Publication Ethics #	2+0	I
VMC 601	Advances in Veterinary Bacteriology*	2+1	I
VMC 602	Advances in Veterinary Mycology	2+1	I
VMC 603	Bacterial Genetics	2+0	I
VMC 604	Microbial Toxins	2+1	II
VMC 605	Bacterial Pathogenesis	2+0	II
VMC 606	Advances in Veterinary Virology*	2+1	I
VMC 607	Molecular Viral Pathogenesis	2+1	II
VMC 608	Structure Function Relationship of DNA and RNA Viruses	2+0	I
VMC 609	Oncogenic Viruses	2+0	I
VMC 610	Slow Viral Infections and Prions	1+0	I
VMC 611	Advances in Veterinary Immunology*	2+1	II
VMC 612	Cytokines and Chemokines	2+ 0	I
VMC 613	Immunoregulation	1+0	I
VMC 614	Advances in Vaccinology	2+0	II
VMC 615	Current topics in Infection and Immunity	2+0	II
VMC 616	Veterinary Microbial Biotechnology	2+1	II
VMC 690	Special Problem	0+1	II
VMC 691	Doctoral Seminar-I*	1+0	I/II
VMC 692	Doctoral Seminar-II*	1+0	I/II
VMC 699	Doctoral Research	0+75	I/II

* Core courses, # Compulsory course

Veterinary Pathology

M.V.Sc. in Veterinary Pathology

Course Code	Course Title	Credit Hours	Semester
VPL 501	General Pathology*	2+1	I
VPL 502	Techniques in Pathology*	0+2	I
VPL 503	Animal Oncology	1+1	I
VPL 504	Clinical Pathology*	1+1	I
VPL 505	Necropsy Procedures and Interpretations*	1+1	II
VPL 506	Necropsy Conference*	0+1	II
VPL 507	Systemic Pathology*	2+1	I
VPL 508	Pathology of Infectious Diseases of Domestic Animals*	2+1	II
VPL 509	Toxicopathology	2+1	I
VPL 510	Avian Pathology*	2+1	II
VPL 511	Pathology of Wild/ Zoo and Aquatic Animal Diseases	2+1	II
VPL 512	Pathology of Laboratory Animal Diseases	2+1	II
VPL 591	Master's Seminar*	1+0	I/II
VPL 599	Master's Research	30	I/II

*Core Courses

Ph.D. in Veterinary Pathology (VPL)

Course Code	Course Title	Credit Hours	Semester
CPE-RPE 600	Research and Publication Ethics [#]	2+0	I
VPL 601	Molecular and Ultrastructural Basis of Cell Injury*	2+1	I
VPL 602	Molecular Basis of Inflammation	1+1	I
VPL 603	Molecular Basis of Neoplasia	1+1	II
VPL 604	Immunopathology*	2+1	I
VPL 605	Advances in Diagnostic Pathology	1+2	II
VPL 606	Pathology of Nutritional and Metabolic Disturbances	2+1	II
VPL 607	Pathology of Important Emerging and Re-Emerging Diseases of Pets and Livestock	2+1	I
VPL 608	Research Methodology in Pathology*	1+0	II
VPL 609	Necropsy Conference I*	0+1	II
VPL 690	Special Problem	0+1	II
VPL 691	Doctoral Seminar-I*	1+0	I/II
VPL 692	Doctoral Seminar-II*	1+0	I/II
VPL 699	Doctoral Research	75	I/II

*Core courses, [#]Compulsory course

Veterinary Parasitology

M.V.Sc. in Veterinary Parasitology

Course Code	Course Title	Credit Hours	Semester
VPA 501	Platyhelminthes-I*	1+1	I
VPA 502	Platyhelminthes-II*	1+1	I
VPA 503	Nemathelminthes and Acanthocephala*	2+1	I
VPA 504	Arthropod Parasites*	2+1	II
VPA 505	Parasitic Protozoa*	2+1	I
VPA 506	Diagnostic Parasitology	0+2	II
VPA 507	Clinical Parasitology	1+1	II
VPA 508	Management of Parasitic Diseases	1+1	II
VPA 509	Immunoparasitology	2+1	II
VPA 510	Parasitic Zoonoses	2+0	I
VPA 511	Parasites of Wildlife	1+1	II
VPA 591	Master's Seminar*	1+0	I/II
VPA 599	Master Research	30	I/II

*Core Courses

Ph.D. in Veterinary Parasitology

Course Code	Course Title	Credits Hours	Semester
CPE-RPE 600	Research and Publication Ethics #	2+0	I
VPA 601	Advances in Helminthology-I	2+1	I
VPA 602	Advances in Helminthology-II	2+1	I
VPA 603	Entomology and Acarology	2+1	II
VPA 604	Advances in Protozoology	2+1	I
VPA 605	Immunology of Parasitic Diseases*	1+2	I
VPA 606	Molecular Diagnostics and Vaccine Development in Parasitology*	2+1	II
VPA 607	Host Parasite Interactions	2+0	I
VPA 608	<i>In-vitro</i> Cultivation of Parasites	1+2	II
VPA 609	Emerging and Re-Emerging Parasitic Diseases	2+0	II
VPA 610	Biology and Ecology of Parasites	3+0	II
VPA 611	Molecular Veterinary Parasitology	2+0	II
VPA 612	Parasite Epidemiology *	2+0	I
VPA 690	Special Problem	0+1	II
VPA 691	Doctoral Seminar-I *	1+0	I/II
VPA 692	Doctoral Seminar-II*	1+0	I/II
VPA 699	Doctoral Research	75	I/II

*Core courses, # Compulsory course

Veterinary Public Health and Epidemiology

M.V.Sc. in Veterinary Public Health and Epidemiology

Course Code	Course Title	Credit Hours	Semester
VPE 501	Concepts in Veterinary Public Health and One Health*	2+0	I
VPE 502	Zoonoses-I*	2+1	I
VPE 503	Zoonoses-II*	2+1	II
VPE 504	Principles of Epidemiology*	2+1	I
VPE 505	Hygiene and Safety of Foods of Animal and Aquatic Origin*	2+1	II
VPE 506	Food-borne Infections and Intoxications	2+1	II
VPE 507	Food Safety Standards, and Regulations	2+1	I
VPE 508	Environmental Hygiene and Safety	2+1	I
VPE 509	Applied Epidemiology	2+1	II
VPE 510	Biosecurity, Bioterrorism and Disaster Management	2+0	II
VPE 511	Laboratory Techniques in Veterinary Public Health*	0+3	II
VPE 591	Master's seminar*	0+1	I/II
VPE 599	Master's research	30	I/II

*Core courses

Ph.D. in Veterinary Public Health and Epidemiology

Course Code	Course Title	Credit Hours	Semester
CPE-RPE 600	Research and Publication Ethics #	2+0	I
VPE 601	Advances in Veterinary Public Health and Epidemiology*	2+1	I
VPE 602	Emerging, Re-emerging Zoonoses and One Health*	2+1	I
VPE 603	Advances in Food Safety and Quality Control of Foods of Animals / Aquatic origin*	2+1	II
VPE 604	Biosecurity and Occupational Health Safety	2+1	I
VPE 605	Recent Concepts in Epidemiology and Disease Forecasting	2+1	I
VPE 606	Risk Analysis and Predictive Modelling	2+1	II
VPE 607	Advances in Environmental Hygiene	2+1	II
VPE 608	Herd Health Management and Disease Economics	2+1	I
VPE 609	Epidemiology of Trans-boundary, Non-infectious and	2+1	II
VPE 610	Ecology and Animal/ Human Health	2+0	I
VPE 611	Diagnostic Approaches in Epidemiology	2+1	I
VPE 612	Surveys, Surveillance and Data Management	2+1	II
VPE 613	Research Methodology and Publication Ethics in VPE*	2+0	II
VPE 690	Special Problem	0+1	II
VPE 691	Doctoral Seminar-I*	0+1	I/II
VPE 692	Doctoral Seminar-II*	0+1	I/II
VPE 699	Doctoral Research	75	I/II

*Core Courses, #Compulsory course

Veterinary Pharmacology and Toxicology

M.V.Sc. in Veterinary Pharmacology and Toxicology

Course Code	Course Title	Credit Hours	Semester
VPT 501	Concepts of Pharmacology, Drug Design and Development*	2+0	I
VPT 502	Autonomic and Autacoid Pharmacology*	2+1	I
VPT 503	CNS Pharmacology	2+1	I
VPT 504	Digestive and Respiratory Pharmacology	2+1	I
VPT 505	Cardiovascular and Urinary System Pharmacology	2+0	I
VPT 506	Endocrine and Reproductive Pharmacology	2+1	I
VPT 507	Chemotherapy*	2+1	II
VPT 508	Toxicology of Xenobiotics*	2+1	II
VPT 509	Toxinology	2+1	II
VPT 510	Pharmacological Techniques*	0+2	II
VPT 511	Techniques in Toxicology*	0+2	II
VPT 512	Ethnopharmacology	1+1	II
VPT 513	Fundamentals of Pharmacokinetics	1+1	II
VPT 591	Master's Seminar*	1+0	I/II
VPT 599	Master's Research	30	I/II

*Core courses

Ph.D. in Veterinary Pharmacology and Toxicology

Course Code	Course Title	Credit Hours	Semester
CPE-RPE 600	Research and Publication Ethics #	2+0	I
VPT 601	Molecular Pharmacology*	3+0	I
VPT 602	Advances in Autacoid Pharmacology	1+0	I
VPT 603	Pharmacology of Herbal Drugs	2+1	I
VPT 604	Biotransformation of Xenobiotics	2+0	I
VPT 605	Clinical Pharmacology and Pharmacokinetics*	2+1	I
VPT 606	Pharmacogenomics	2+0	I
VPT 607	Immunopharmacology and Immunotoxicology	2+0	II
VPT 608	Molecular Toxicology	3+0	II
VPT 609	Clinical Toxicology*	2+1	II
VPT 610	Ecotoxicology	3+0	II
VPT 611	Regulatory Toxicology	2+1	II
VPT 690	Special Problem	0+1	II
VPT 691	Doctoral Seminar I*	1+0	I/II
VPT 692	Doctoral Seminar II*	1+0	I/II
VPT 699	Doctoral Research	75	I/II

*Core courses

Animal Genetics and Breeding

M.V.Sc. in Animal Genetics and Breeding

Course Code	Course Title	Credit Hours	Semester
AGB 601*	Animal Cytogenetics and Immunogenetics I	2+1	I
AGB 602*	Molecular Genetics I	2+1	I
AGB 603*	Population and Quantitative Genetics	2+1	I
AGB 604*	Selection Method and Breeding System	2+1	I
AGB 605*	Biometrical Genetics I	2+1	II
AGB 606	Conservation of Animal Genetics Resources	2+0	II
AGB 607	Cattle and Buffalo Breeding	2+1	II
AGB 608	Sheep and Goat Breeding	2+0	I
AGB 609	Poultry Breeding	2+1	II
AGB 610*	Laboratory Animal and Rabbit Breeding	2+0	II
AGB 611	Swine Breeding	1+0	II
AGB 612	Pet Animal Breeding (Dogs and Cats)	1+0	II
AGB 613	Wild Animal Genetics and Breeding	1+0	I
AGB 614	Equine Breeding	1+0	I
AGB 615	Camel Breeding	1+0	I
AGB 616	Yak and Mithun Breeding	1+0	I
AGB 617	Statistical Methods in Animal Breeding	2+1	II
AGB 691	Seminar	1+0	I/II
AGB 699	Research	30	I & II

*Core Courses

Ph.D. in Animal Genetics and Breeding

Course Code	Course Title	Credit Hours	Semester
AGB 701*	Molecular Genetics II	2+0	I
AGB 702*	Trends in Animal Breeding	2+0	I
AGB 703*	Biometrical Genetics II	2+1	II
AGB 704*	Advances in Selection Methodology	2+1	II
AGB 705	Bioinformatics in Animal Breeding	1+1	I
AGB 706	Animal Cytogenetics and Immunogenetics II	2+0	I
AGB 707	Statistical Software in Animal Breeding	1+1	II
AGB 791	Seminar I	1+0	I/II
AGB 792	Seminar II	1+0	I/II
AGB 799	Research	75	I & II

*Core courses

Animal Nutrition

M.V.Sc. in Animal Nutrition

Course Code	Course Title	Credit Hours	Semester
ANN 601*	Nutritional Biochemistry	1+0	I
ANN 602*	Energy and Protein Nutrition	2+0	I
ANN 603*	Minerals and Vitamin Nutrition and Feed Additives	2+1	I
ANN 604*	Feed and Fodder Technology	1+1	I
ANN 605*	Ruminant Nutrition	2+1	II
ANN 606*	Non-Ruminant Nutrition	2+1	II
ANN 607*	Research Methodology in Animal Nutrition	0+2	I
ANN 608	Companion Animal Nutrition	1+0	II
ANN 609	Nutrition of Laboratory, Wild and Zoo Animals	2+1	II
ANN 610	Non-Conventional Feed Resources	1+1	I
ANN 611	Introductory Clinical Nutrition	1+0	I
ANN 612	Rumen Biotechnology	1+0	II
ANN 691	Seminar	1+0	I / II
ANN 699	Research	30	I & II

*Core course

Ph.D. in Animal Nutrition

Course Code	Course Title	Credit Hours	Semester
ANN 701*	Modern Concepts in Feeding of Ruminants	2+0	I
ANN 702*	Forages in Animal Nutrition	1+0	I
ANN 703*	Recent Concepts in Feeding of Non-Ruminants	1+0	II
ANN 704*	Advances in Rumen Metabolism	1+1	I
ANN 705*	Advances in Mineral and Vitamin Nutrition	2+0	I
ANN 706*	Advanced Clinical Nutrition	1+1	II
ANN 707	Advanced Techniques in Nutritional Research	1+1	I
ANN 708	Advances in Feed Technology	1+0	II
ANN 709	Toxicants and Anti-Metabolites in Animal Nutrition	1+0	II
ANN 710	Nutrigenomics in Animal Nutrition	1+0	II
ANN 711	Equine Nutrition	1+0	II
ANN 791	Seminar-I	1+0	I / II
ANN 792	Seminar-II	1+0	I / II
ANN 799	Research	75	I & II

*Core courses

Livestock Production and Management

M.V.Sc. in Livestock Production and Management

Course Code	Course Title	Credit Hours	Semester
LPM 601*	Cattle and Buffalo Production Management	2+1	I
LPM 602*	Sheep and Goat Production Management	2+1	II
LPM 603*	Swine Production Management	1+1	I
LPM 604*	Climatology and Livestock Production	1+1	I
LPM 605*	Behaviour and Welfare of Farm Animals	1+1	II
LPM 606*	Equine Production Management	1+1	II
LPM 607*	Companion Animal Production Management	1+1	II
LPM 608	Farm Hygiene and Waste Management	1+1	I
LPM 609	Integrated Livestock Farming Systems	1+1	II
LPM 610	Management and Conservation of Wild and Zoo Animals	1+1	II
LPM 611	Laboratory Animal Production Management	1+1	I
LPM 612	Livestock Business Management	1+1	I
LPM 613	Livestock Farm Machinery Management	0+2	I
LPM 614	Poultry Farm and Hatchery Management	1+1	II
LPM 615	Regional Animal Production Management	1+1	I
LPM 691	Seminar	1+0	I/II
LPM 699	Research	30	I/II

*Core courses

Ph.D. in Livestock Production and Management

Course Code	Course Title	Credit Hours	Semester
LPM 701*	Recent Developments in Large Ruminants	2+1	I
LPM 702*	Recent Developments in Small Ruminants	2+1	I
LPM 703*	Recent Developments in Swine Production Management	1+1	II
LPM 704*	Livestock and Environment	1+0	I
LPM 705*	Organic Livestock Production	1+0	II
LPM 706	Recent Developments in Welfare of Farm Animals	1+0	II
LPM 707	Entrepreneurship in Livestock Production	1+1	I
LPM 708	Precision Livestock Farming	1+1	II
LPM 709	Recent Developments in Poultry Production Management	2+1	I
LPM 791	Seminar-I	1+0	I/II
LPM 792	Seminar-II	1+0	I/II
LPM 799	Research	75	I/II

*Core course

Livestock Products Technology

M.V.Sc. in Livestock Products Technology

Course No.	Course Title	Credits Hours	Semester
LPT 601*	Abattoir Practices and Meat Plant Operations	2+1	I
LPT 602*	Fresh Meat Technology	1+1	I
LPT 603*	Processing and Preservation of Meat	2+1	I
LPT 604*	Processing of Milk and Milk Products	1+1	I
LPT 605*	Packaging and Marketing of Livestock Products	1+1	II
LPT 606*	Microbiology and Quality Control of Livestock Products	1+1	II
LPT 607*	Slaughterhouse By-products Technology	1+1	II
LPT 608	In-Plant Training	0+2	I
LPT 609	Egg and Egg Products Technology	1+1	II
LPT 610	Market Milk Processing and Dairy Plant Practices	1+1	I
LPT 611	Processing and Marketing of Wool	1+1	II
LPT 612	Biotechnology of Foods of Animal Origin	1+1	II
LPT 613	Fish and Fish Products Technology	1+1	II
LPT 691	Seminar	1+0	I/II
LPT 699	Research	30	I/II

*Core courses

Ph.D. in Livestock Products Technology

Course No.	Course Title	Credit Hours	Semester
LPT 701*	Modern Abattoir Practices and Animal By-Products Technology	1+1	I
LPT 702*	Advances in Meat Production and Fresh Meat Technology	1+1	I
LPT 703*	Developments in Processed Meat Technology	1+1	I
LPT 704*	Current Trends in Processing of Milk And Milk Products	1+1	II
LPT 705	Biotechnological Techniques and Quality Control of Livestock Products	1+1	II
LPT 706	Ethnic and Organic Meat and Milk Products	1+1	I
LPT 707	Industrial and Entrepreneurial Training	0+2	I
LPT 708	Current Trends in Disposal and Utilization of Waste From Meat and Dairy Industry	1+1	II
LPT 709	Advances in Egg and Egg Products Technology	1+1	II
LPT 791	Seminar I	1+0	I/II
LPT 792	Seminar II	1+0	I/II
LPT 799	Research	75	I/II

*Core courses

Poultry Science

M.V.Sc. in Poultry Science

Course Code	Course Title	Credit Hours	Semester
PSC 601*	Poultry Breeding and Genetics	2+1	I
PSC 602*	Poultry Nutrition and Feeding	2+1	I
PSC 603*	Commercial Layer and Broiler Management	2+1	I
PSC 604*	Breeder Stock and Hatchery Management	2+1	II
PSC 605	Poultry Health and Biosecurity	2+1	I
PSC 606	Management of Other Avian Species	3+1	II
PSC 607*	Poultry Products Technology	2+1	II
PSC 608	Poultry Economics, Project Formulation and Marketing	2+1	I
PSC 609*	Physiology of Poultry Production	1+1	II
PSC 610	Commercial Poultry Nutrition	1+1	II
PSC 611	Poultry Welfare and Waste Management	2+0	II
PSC 691	Seminar	1+0	I / II
PSC 699	Research	30	I & II

*Core courses

Ph.D. in Poultry Science

Course Code	Course Title	Credit Hours	Semester
PSC 701*	Applied Poultry Nutrition	2+1	II
PSC 702*	Recent Trends in Commercial Poultry Production	2+1	I
PSC 703	Developments in Poultry Processing and Products Technology	2+1	II
PSC 704	Emerging Diseases of Poultry and Health Management	2+1	I
PSC 705	Applied Poultry Breeding	1+1	I
PSC 706	Poultry Economics, Marketing and Integration	2+1	I
PSC 707	Diversified Poultry Production	2+1	II
PSC 791	Seminar I	1+0	I / II
PSC 792	Seminar II	1+0	I / II
PSC 799	Research	75	I & II

*Core courses

School of Wildlife Forensic and Health

M.V.SC. in Wildlife Health Management

Course No.	Title of the course	Credit hours	Semester
WHM 601	Wild Animal Health Management and Diagnostics	2+1	I
WHM 602	Pathology and Medicine of Wildlife Diseases (Carnivore)	2+1	I
WHM 603	Pathology and Medicine of Wildlife Diseases (Herbivore)	2+1	II
WHM 604	Capture and Restraining of Wild Animals	2+1	II
WHM 605	Zoo Architecture	1+1	I
WHM 606	Wildlife Forensics and Protection Laws	2+1	II
WHM 607	Pathology and Medicine of Non-human Primate and Reptilian Diseases.	2+1	II
WHM 608	Disease Management of Pet and Wild Birds	1+1	I
WHM 609	Necropsy Procedures and Correlated Pathology	0+3	I
WHM 610	Computer Application in Wildlife Sciences	0+1	I
WHM 611	Nutritional Management in Captivity.	1+1	II
WHM 691	Masters Seminar	1+0	I/II
WHM 699	Masters research	20	I&II

Ph.D. in Wildlife Health Management

Course No.	Title of the course	Credit hours	Semester
WHM-701	Advances in Wildlife Health and Management	2+1	I
WHM-702	Management of Wildlife Diseases-I	1+1	I
WHM-703	Introduction to Wildlife Forensics	1+1	I
WHM-704	Wildlife Ethology	2+1	I
WHM-708	Wildlife Necropsy and Correlated Pathology	0+3	I
WHM -791	Seminar I	1+0	I
WHM-705	Advances in Wildlife Immobilization	2+1	II
WHM-706	Management of Wildlife Diseases-II	1+1	II
WHM-707	Molecular Techniques in Wildlife Forensics	0+2	II
WHM-709	Field Training on Wildlife Health	0+3	II
WHM -792	Seminar II	1+0	I/II
WHM-799	Research	0+45	I&II

COMMON COURSES

The following courses (one credit each) will be offered to all students undergoing Master's degree programme:

Course No.	Title of the course	Credit hours	Semester
PGS 501	Library and Information Services	0+1	I
PGS 502	Technical Writing and Communications Skills	0+1	I
PGS 503	Intellectual Property and its management in Agriculture	1+0	II
PGS 504	Basic Concepts in Laboratory Techniques	0+1	II
PGS 505	Agricultural Research, Research Ethics and Rural Development Programmes	1+0	I