

Academic:

1. Degree Offered –UG, PG, PhD

Title of degree:

Duration:

Eligibility Criteria:

Intake Capacity:

Opportunities:

2. Academic Regulations:

UG , PG, PhD (VCI, ICAR, IV, V Dean's and Corrigendum) – PDF Copies

3. Admissions:

UG, PG, PhD

List of Admitted Students – First Year to Final Year (Veterinary Year wise / Fishery and Dairy Semester wise) :

Sr. No.	Name of Student	Enrl. No.	Email Address	Name of Advisor
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4. Course offered :: UG, PG , PhD - Semester / Year wise

- List of UG Courses (B.V.Sc &AH) As per latest MSVE Guidelines) , B.Tech. (D.T.) and B.F.Sc as per ICAR – V Deans Committee – 2016.
- List of UG Courses (B.V.Sc & AH) As per latest MSVE Guidelines)- **Department of Veterinary Medicine**

Sr No	Course No.	Title	Credit	Course offered in the Year
1	VMD (4+1)	Veterinary Medicine	4 + 1=5	FOURTH (One & half Year)

- List of PG Courses (MVSc)-**Department of Veterinary Medicine**

Sr No	Course No .	Title	Credit	Semester
1	VMD 501	Ruminant Medicine- Internal	3+0=3	I
2	VMD 511	Clinical Diagnostic Techniques	0+2=2	I
3	VMD 516	Clinical Practice-I	0+3=3	I
4	VMD 509	Zoo, Wild and Laboratory Animal Medicine	1+0=1	I
5	VMD 503	Equine Medicine	2+0=2	I
6	VMD 508	Avian and Swine Medicine	2+0=2	I
7	VMD 502	Ruminant Medicine- Infectious	3+0=3	II
8	VMD 504	Canine and Feline Medicine-I	2+0=2	II

9	VMD 517	Clinical Practice-II	0+3=3	II
10	VMD 506	Metabolic and Endocrine Diseases, Nutritional Deficiencies and Diseases of Mammary Gland	2+0=2	II
11	VMD 510	Toxicology and Forensic Medicine	1+0=1	II
12	VMD 512	Emergency Medicine	0+2=2	II
13	VMD 514	Oncology and Ethno-veterinary Medicine	1+0=1	II
14	VMD 515	Animal Disease Investigation and Biosecurity	1+1=2	II
15	VMD 505	Canine and Feline Medicine-II	2+0=2	III
16	VMD 513	Diagnosis of Veterinary Infectious Diseases	0+1=1	III
17	VMD 591	Master's Seminar	1+0=1	III
18	VMD 507	Paediatrics and Geriatrics	2+0=2	III
19	VMD 599	Master's Research	0+30=30	IV

➤ List of PG Courses (Ph.D. Regular) -**Department of Veterinary Medicine**

Sr No	Course No.	Title	Credit	Semester
1	VMD 601	Farm Animal Gastroenterology	2+0=2	I
2	VMD 605	Herd Health Management	2+1=3	I
3	VMD 606	Canine and Feline Gastroenterology	2+0=2	I
4	VMD 609	Dermatology and Endocrinology	1+0=1	I
5	VMD 614	Emerging and Re-emerging Animal Diseases	2+0=2	I
6	VMD 616	Clinical Practice-I	0+2=2	I
7	VMD 602	Farm Animal Cardiopulmonary and Urinary System Diseases	2+0=2	II
8	VMD 603	Farm Animal Neurological and Musculo-skeletal System Diseases	1+0=1	II
9	VMD 604	Farm Animal Neonatology	1+0=1	II
10	VMD 607	Advances in Neurological and Musculoskeletal System	1+0=1	II
11	VMD 608	Canine and Feline Cardiopulmonary and Urinary System Diseases	1+0=1	II
12	VMD 610	Canine and Feline Eye and Ear Diseases	1+0=1	II
13	VMD 612	Metabolic and Nutritional Deficiency Diseases	2+0=2	II
14	VMD 617	Clinical Practice-II	0+2=2	II
15	VMD 611	Veterinary Diagnostics	0+2=2	III
16	VMD 613	Emergency and Critical Care Medicine	1+1=2	III
17	VMD 615	Prevention and Control of Infectious Diseases of Ruminants	2+0=2	III
18	VMD 618	Clinical Practice-III	0+2=2	III
19	VMD 691	Doctoral Seminar- I	1+0=1	III
20	VMD 692	Doctoral Seminar- II	1+0=1	III

➤ List of PG Courses (Ph.D. In-service) -**Department of Veterinary Medicine**

Sr No	Course No.	Title	Credit	Semester
1	VMD 601	Farm Animal Gastroenterology	2+0=2	I
2	VMD 605	Herd Health Management	2+1=3	I
3	VMD 606	Canine and Feline Gastroenterology	2+0=2	I
4	VMD 609	Dermatology and Endocrinology	1+0=1	I
5	VMD 614	Emerging and Re-emerging Animal Diseases	2+0=2	I

6	VMD 616	Clinical Practice-I	0+2=2	I
7	VMD 602	Farm Animal Cardiopulmonary and Urinary System Diseases	2+0=2	II
8	VMD 603	Farm Animal Neurological and Musculo-skeletal System Diseases	1+0=1	II
9	VMD 604	Farm Animal Neonatology	1+0=1	II
10	VMD 607	Advances in Neurological and Musculoskeletal System	1+0=1	II
11	VMD 608	Canine and Feline Cardiopulmonary and Urinary System Diseases	1+0=1	II
12	VMD 617	Clinical Practice-II	0+2=2	II
13	VMD 611	Veterinary Diagnostics	0+2=2	III
14	VMD 613	Emergency and Critical Care Medicine	1+1=2	III
15	VMD 615	Prevention and Control of Infectious Diseases of Ruminants	2+0=2	III
16	VMD 618	Clinical Practice-III	0+2=2	III
17	VMD 610	Canine and Feline Eye and Ear Diseases	1+0=1	IV
18	VMD 612	Metabolic and Nutritional Deficiency Diseases	2+0=2	IV
19	VMD 691	Doctoral Seminar- I	1+0=1	IV
20	VMD 692	Doctoral Seminar- II	1+0=1	IV

5. Lecture Schedule – UG, PG , PhD - Theory / Practical Schedule – Approved by BoS – Subject wise

LECTURE SCHEDULE (MSVE-2016)

Degree: B.V.Sc. & A.H.

Subject: Veterinary Medicine

Credit Hours : 4 + 1 =5

Year: IV

Theory			
Sr. No.	Unit No.	Lecture No.	Topic to be covered
Paper I			
General			
1.	1	1	History and scope of Veterinary Medicine
2.		2	Concept of animal diseases. Concept of diagnosis, differential diagnosis, treatment and prognosis.
3.		3	Estimates of diseases (Incidence, prevalence, Morbidity, Mortality, Case fatality), Patterns of disease (Sporadic, Endemic, Epidemic & Pandemic)
4.		4	Disease monitoring and Surveillance
5.		5	Herd health and Quarantine

6.		6	Hyperthermia and Hypothermia
7.		7	Fever
8.		8	Toxemia and Septicemia
9.		9	Shock
10.		10	Dehydration
11.		11	Allergy, Anaphylaxis
12.		12	Oedema, Coma
13.		13	Diagnosis and treatment of HCN, Nitrate and Oxalate poisoning
14.		14	Diagnosis and treatment of Snake bite, pesticide and urea poisoning
15.		15	Diagnosis and treatment of Lead, Mercury and Arsenic poisoning
16.		16	Diagnosis and treatment of rodenticide, Chocolate, Grape, Lilly, & Paracetamol poisonings in dogs.
Systemic diseases			
Etiology, clinical manifestations, diagnosis, differential diagnosis, treatment, prevention and control of the following diseases of cattle, buffalo, sheep, goat, horse, pig, dog, cat and poultry			
		Diseases of Digestive System	
17.		1	Stomatitis, Parotitis
18.		2	Pharyngitis, Pharyngeal paralysis
19.		3	Oesophagitis, megaesophagus, achalasia of oesophagus (in brief) & Choke (in detail)
20.		4	Gastritis (in detail), Gastric ulcers and Gastric dilatation (in brief)
21.		5	Enteritis (in detail), Irritable Bowel Syndrome (IBS) and Colitis (in brief)
22.		6	Colic
23.		7	Simple Indigestion
24.		8	Acid and Alkaline Indigestion
25.		9	Bloat
26.		10	Peritonitis including Traumatic reticuloperitonitis
27.		11	Diaphragmatic hernia and Vagal indigestion
28.		12	Abomasal Displacement, Abomasitis, Omasal impaction and Intestinal obstruction (in brief)
	2	Affections of Liver and pancreas	
29.		13	Hepatitis, Hepatic encephalopathy & Cirrhosis
30.		14	Jaundice and Ascites
31.		15	Pancreatitis, Exocrine pancreatic insufficiency
		Diseases of Respiratory System	
32.		16	Rhinitis, Laryngitis and Epistaxis
33.		17	Bronchitis and Pneumonia
34.		18	Pulmonary Emphysema and Pneumothorax
35.		19	Pleurisy and Hydrothorax
		Diseases of Cardiovascular System	
36.		20	Acute heart failure, Peripheral circulatory failure
37.		21	Congestive Heart Failure (CHF)
38.		22	Pericarditis, Myocarditis and cardiomyopathy, Endocarditis
		Diseases of Urinary System	
39.		23	Nephritis, Renal failure
40.		24-25	Urolithiasis, Cystitis and Urethritis

		Diseases of Nervous System	
41.		26	Encephalitis, Meningitis
42.		27	Epilepsy, Paralysis
43.		28	Polioencephalomalacia, Space occupying lesions(SOL), Brain injury, Vestibular disease, Horner's syndrome (in brief)
		Diseases of Musculoskeletal System	
44.		29-30	Arthritis, Myositis including eosinophilic myositis, Osteomyelitis, osteoarthritis
		Diseases of haemopoietic and Lymphatic System	
45.		31	Anemia
46.		32	Leukemia, Purpura haemorrhagica, Disseminated Intravascular Coagulation (DIC) (in brief)
47.		33	Lymphosarcoma, Lymphangitis and Lymphadenitis
		Diseases of Skin	
48.		34	Alopecia, Pityriasis, Hyperkeratosis, Parakeratosis, Impetigo, Pachyderma, Pyoderma (in brief)
49.		35	Urticaria, Eczema, Canine Atopic dermatitis
50.		36	Photosensitization, Dermatitis
		Diseases of Sense organs	
51.		37	Conjunctivitis, Keratitis and Otitis
		Emergency Medicine and Critical Care	
52.		38	Recognition of emergencies, Type of emergencies,
53.		39	ABC support, TRIAGE in farm and in companion animals
54.		40	Application of emergency care procedures for resuscitation of critically ill patients
Metabolic and Deficiency Disorders			
Etiology, clinical findings, diagnosis, differential diagnosis, treatment, prevention and control of following diseases of cattle, buffalo, sheep, goat, horse, pig, poultry and pet animals			
55.	3	1	Introduction, Compton metabolic profile test
56.		2	Parturient Paresis (Milk fever)
57.		3	Acute parturient hypocalcaemia in goat, sheep and sow
58.		4	Lactation tetany in mares and eclampsia in bitches
59.		5	Downer's Cow syndrome
60.		6	Ketosis
61.		7	Fat cow syndrome and Pregnancy toxemia
62.		8	Lactation tetany, Hypomagnesemia in cattle and buffalo
63.		9	Nutritional haemoglobinuria
64.		10	Azoturia in equines
65.		11	Hypothyroidism (In detail) and Hyperthyroidism (In brief)
66.		12	Diabetes mellitus(In detail), Diabetes insipidus (In brief)
67.		13	Cushing syndrome
68.			Addison's disease and Gout
69.		14-15	Diseases caused by deficiency of calcium, phosphorus and magnesium (Rickets, Osteomalacia, Osteodystrophia fibrosa)
70.		16-19	Diagnosis and management of Diseases caused by deficiency of iron, iodine, copper, cobalt, zinc, selenium and manganese
71.		20-21	Diseases caused by deficiency of fat and water soluble vitamins (Vitamins A, D, E, K, B complex and C)
72.		22-23	Diseases of neonates- Naval ill, calf diarrhoea, pneumonia, fading puppy syndrome, Neonatal hypoglycaemia and List of common congenital anomalies.

73.		24	Brief introduction of alternative or integrated or ethno-veterinary medicine in animal disease management
Zoo and Wild Animal Medicine			
74.	4	1	Principles of zoo hygiene, public health problems arising from zoos.
75.		2-5	Prevention, control and treatment of infectious bacterial diseases in zoo and wild animals including exotic birds viz Anthrax, HS, BQ, Listeriosis, Leptopirosis, JD, TB, Glanders, Strangles, Tetanus, Fowl typhoid, Pullorum disease, Fowl Cholera, Salmonellosis, Mycoplasmosis and Psitaccosis
75.		6-10	Prevention, control and treatment of viral diseases in zoo and wild animals including exotic birds viz. FMD, PPR, Pox, Equine Influenza, Equine Infectious Anaemia, Rabies, Canine Distemper, Infectious Canine Hepatitis, Canine Parvo virus, Canine Corona virus, Herpes Virus in monkeys, Feline Panleucopenia, Feline calcivirus. Feline Rhiontracheitis, Marek’S disease, Ranikhet disease , Infectious Bronchitis, Infectious Bursal Disease, Avian Leukosis and Kyasanur Forest Disease
76.		11-12	Prevention, control and treatment of fungal, protozoan and parasitic diseases in zoo and wild animals including exotic birds viz. Aspergillosis, Dermatophytosis, Trypanosomiasis, Babesiosis, Theileriosis, Anaplasmosis, Amoebiasis, Giardiasis, Coccidiosis, Roundworms, Tapeworms and Scabies/Mange
77.		13-14	Prevention, control and treatment of nutritional and metabolic diseases in zoo and wild animals including exotic birds viz. Rickets, Osteodystrophia fibrosa, deficiency of Ca, P, Mg. Essential amino acids, Iron, Iodine, Copper, Zinc, Manganese and vitamins
78.		15	Acts and Rules related to Zoo and wild animals (Wild life protection Act-1972 (53 of 1972), The Wild Life (Transactions and Taxidermy) Rules,1973, The Wild Life (stock declaration) central Rules,1973, The Wild Life (Protection) Rules,1995, Recognition of Zoo Rules-1992 & 2013)
79.		16	National and international organizations and institutions interlinked to wild and zoo animals- role and functioning.
Paper II			
Bacterial, Fungal and Rickettsial Diseases			
80.	5	1-2	Mastitis
81.		3	Hemorrhagic septicemia
82.		4	Brucellosis
83.		5	Tuberculosis
84.		6	Johne’s disease
85.		7	Listeriosis
86.		8	Leptospirosis
87.		9	Compylobacteriosis Bordetellosis
88.		10	Actinomycosis Actinobacillosis
89.		11	Glanders
90.		12	Strangles Ulcerative lymphangitis
91.		13	Colibacillosis
92.		14	Fowl typhoid Pullorum disease
93.		15	Fowl cholera Avian mycoplasmosis
94.		16	Spirochaetosis

95.		17	Salmonellosis
96.		18	Swine Erysipeleas
97.		19	Other important diseases of regional importance – CCPP
			Other important diseases of regional importance – CBPP
98.		20	Anthrax (Bacterial Diseases of Bioterrorism Importance)
99.		21-24	Clostridial infection (Black quarter, Tetanus, Enterotoxaemia, Botulism)
100.		25	Ehrlichiosis
101.		26	Chlamydiosis
			Q fever
102.		27	Anaplasmosis,
103.		28	Dermatophilosis
			Aspergillosis (Brooder pneumonia)
			Candidiosis
104.		29	Histoplasmosis
			Sporotrichosis
105.		30	Coccidioidomycosis
106.	31	Mycotoxicosis	
107.	32	Rhinosporidiosis	
		Dermatophytosis	
Viral and Parasitic Diseases			
108.	6	1	Foot and Mouth Disease
109.		2	Rinderpest
			Peste des petits ruminants
110.		3	Bovine Viral Diarrhoea
111.		4	Bovine Malignant Catarrh
112.		5	Infectious Bovine Rhinotracheitis
113.		6	Ephemeral fever
114.		7	Blue Tongue
			Sheep & Goat Pox
115.		8	Classic swine fever
116.		9	Rabies
117.		10	Equine influenza
118.		11	Equine infectious anemia
119.			Equine rhinopneumonitis
		12	Canine distemper
120.		13	Infectious canine hepatitis
121.		14	Canine parvoviral disease
122.		15	Corona virus infection
			Adeno-virus infection
123.		16	Feline rhinotracheitis
			Feline pan leucopenia
			Feline infectious peritonitis
124.		17	Avian influenza
125.		18	New castle(Ranikhet) disease
126.		19	Marek’s disease
			Avian leucosis
127.		20	Infectious bronchitis
			Infectious laryngotracheitis,
128.		21	Avian encephalomyelitis
			Fowl pox
			Chicken reo virus
129.		22	Infectious bursal disease

			Chicken infectious anemia
			Inclusion body hepatitis-hydropericardium syndrome
130.		23	Other emerging and exotoc viral diseases of global importance
131.		24-25	Trematodes (Amphistomosis, Fasciola hepatica, Schistosomiasis)
132.		26	Cestodes (Tapeworm infestation - Cysticercosis, Echinococcosis, Coenurosis)
133.		27-28	Nematodes (Gastrointestinal nematodiasis, Ascariasis, Verminous Bronchitis, Haemonchosis)
134.		29-31	Protozoan infections (Babesiosis, Theileriosis, Trypanosomosis)
135.		32	External parasites of clinical importance
Jurisprudence, Ethics and Animal Welfare			
136.	7	1	Legal duties of Veterinarians,
137.		2	Evidence, evidence procedure in court of law.
138.		3	Common offences (Mischief, Cruelty, Bestiality) against animals and laws related to these offences
139.		4	Examination of living and dead animals in criminal cases.
140.		5	Cruelty to animals and Prevention of Cruelty of Animals Act, 1960 (59 of 1960)
141.		6	Legal aspects of : Examination of animals for soundness
142.		7	Legal aspects of : examination of injuries
143.		8	Legal aspects of : post mortem examination
144.		9	Causes of sudden death in animals
145.		10	Collection and dispatch of materials for chemical examination
146.		11	Detection of frauds- doping , alteration of description, bishoping
147.		12	Frauds in the sale of livestock products (Milk, Ghee & meat)
148.		13	Cattle slaughter (The Maharashtra Animal Preservation Act, 1976 Amended on 2 nd March 2015)
149.		14	Laws related to medicine (Drugs and cosmetics Act, 1940, The Drugs and cosmetics Rules, 1945, Dangerous drugs Act,1930)
150.		15	Provincial Acts relating to animals (The Maharashtra Keeping and Movement of Cattle in Urban areas (Control) Act, No.45 of 1976 and Bombay Animal Contagious Diseases Control Act, 1948)
151.		16-17	Central Acts relating to animals (The Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009. No. 27, Glanders & Farcy Act. 1899 (13 of 1899), Dourine Act 1910(5 of 1910),The Cattle Trespass Act, 1871)
152.		18	Laws relating to offences - affecting public health (Indian Penal code 1860 Sections 268 to 294, Biomedical Waste Management and Handling Rules,1998)
153.		19	Laws relating to poison (The poisons Act No. 12 of 1919) and adulteration of drugs (The Drugs and Cosmetics Act, 1940)
154.		20	The Livestock importation Act, 1898
155.		21	Liability and insurance
156.		22	Code of conduct and ethics for Veterinarians – the regulations made under Indian Veterinary council Act, 1984
157.		23	Animal welfare organizations and its role in animal welfare and its welfare assessment, behaviour and animal welfare- AWBI
158.		24	Principles and philosophy of animal welfare (4 R principles)
159.		25	Animal welfare ethics, assessing welfare in practice
160.		26	Improving animal welfare through legislation and incentives –
161.		27	Assessment of physiological, behavioural, disease and production measures of animal welfare

162.		28	Environment enrichment, euthanasia, welfare of animals used in education, research (Animal experimentation Act) and Transportation, Religion and animal welfare
163.		29	Protection and Welfare of performing, working animals, companion and pet animals
164.		30	Human and animal welfare conflict, human–animal interactions
165.		31	Veterinary disaster management (animal welfare during natural calamities and disaster management)
166.		32	Economics and animal welfare and veterinarians as animal welfare educators
PRACTICAL SCHEDULE			
Paper I			
Sr. No.	Unit	Practical schedule	Topic
General			
1.	1	1-2	Collection of history and general clinical examination.
2.		3	Collection, preservation, packing and dispatch of samples from clinical cases.
3.		4	Nasogastric and Orogastric intubation in animals.
4.		5	Oxygen therapy in Veterinary practice.
5.		6	Gastric and Peritoneal lavage.
6.		7	Collection and examination of Cerebrospinal fluid.
7.		8	Blood transfusion.
Systemic Diseases			
8.	2	1	Methods of Medication and adverse drug reactions
9.		2	Special examination of cardiovascular system.
10.		3	Examination of Urinary System.
11.		4	Special examination of Respiratory system
12.		5	Special examination of gastrointestinal system.
13.		6	ECG, Echocardiography.
14.		7	Ultrasonography, Endoscopy.
15.		8	Special examination of sense organs - Examination of Eye and Ear.
16.		9	Collection and Examination of Peritoneal fluid.
17.			Peritoneal Dialysis and Haemodialysis.
18.		10	Neurological examination in Animals.
19.		11	Lymph node biopsy, bone marrow aspirate and Liver biopsy.
20.		12	Disease Estimation.
Zoo and Wild Animal Medicine			
21.	3	1	Management and restraint of zoo and exotic animals
22.		2	Drug delivery in zoo and wild animals
23.		3	Visit to Zoo or Sanctuary.
24.		4	Examination of veterolegal cases.
PAPER II			
Part: I			
Bacterial, Fungal and Rickettsial Diseases			
25.	4	1	Tuberculin testing in animals
26.		2	Johnin testing in animals

27.		3	Mallein testing in horses
28.		4	Demonstration of RBPT, STAT and MRT on clinical samples for diagnosis of brucellosis in animals
29.		5	Advanced and molecular test for diagnosis of brucellosis in animals
30.		6	Physical evaluation of milk for mastitis
31.		7	Demonstration of chemical tests for diagnosis of mastitis
32.		8	Practical approaches in disease outbreak investigation
Part: II			
33.		9	Collection of clinical samples from animals
34.		10	Preservation and dispatch of clinical samples
35.		11	Practical approach for control of infectious diseases
36.		12	Staining techniques for bacteria and fungus
37.	4	13	Application of serology techniques on clinical samples for disease diagnosis
38.		14	Application of molecular techniques on clinical samples for disease diagnosis
39.		15	Lateral flow assay/ dot ELISA and list of Pen side diagnostic tests available for infectious diseases
40.		16	Dark field microscopy
Part: III			
Viral and Parasitic Diseases			
41.		17	Examination of skin scrapings for presence of parasites and fungus
42.		18	Fecal examination-I (Demonstration of trematodal and cestodal eggs)
43.		19	Fecal examination-II(demonstration of nematodal eggs and coccidial sporocyst)
44.		20	Examination of blood for parasites-I viz. theleria, babesia, anaplasma, etc.
45.	5	21	Examination of blood for parasites-II viz. trypanosoma, microfilaria, etc
46.		22	Demonstration and examination of lymph node aspirate
47.		23	Application of serological techniques on clinical samples for viral and parasitic diseases
48.		24	Application of molecular techniques on clinical samples for viral and parasitic diseases

Lecture Schedule – M.V.Sc. – Veterinary Medicine

M.V.Sc. Veterinary Medicine

Lecture Schedule

Course No.: VMD 501

Credits:3+0=3

Course title: Ruminant Medicine-Internal

Course Objectives: Internal diseases of Digestive, Respiratory, Urinary, Cardiovascular, Blood and blood forming organs, Nervous, Musculoskeletal system, Skin, eye and ear of bovine, Sheep, and goat.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Examination of alimentary tract and abdomen	1
2-3	Diseases of the buccal cavity and related organs including pharynx, oesophagus	2
4-5	Reticulo-ruminal fermentative disorders (simple indigestion, impaction, ruminal lactic acidosis, alkalosis)	2
6-7	Primary and secondary bloat, diaphragmatic hernia	2

8-9	Traumatic reticulo-peritonitis, vagal indigestion syndrome, generalised peritonitis vagal indigestion syndrome, generalised peritonitis and omasal impaction	2
10-11	Diseases of abomasum (impaction, displacements)	2
12-13	(Acute and chronic diarrhoea), hemorrhagic diarrhea	2
14-15	Intestinal obstructive disorders (intussusception, volvulus), strangulation	2
16	Caecal dilatation and volvulus	1
17	Manifestations of liver and biliary diseases	1
18	Focal and diffuse diseases of liver, fatty liver syndrome	1
19-20	Principle of treatment of respiratory diseases, respiratory insufficiency, anoxias, diseases of nasal cavity, sinuses, diseases of larynx and trachea	2
21-22	Epistaxis, hemoptysis, congestion and edema of lungs, hydro and Hemothorax	2
23-24	Pneumonias and pleuritis	2
25	Manifestations and principles of treatment in uro-genital system; rupture, paralysis	1
26	Infections of urinary bladder	1
27-28	Urolithiasis, nephritis and renal failure, nephrosis	2
29-30	Hemolytic uremic like syndrome, uremia and neoplasms of urinary tract	2
31	Examination of cardiac system and special examination of heart (ECG, echocardiography disorders)	1
32	Principal manifestations of cardiovascular diseases	1
33	Congenital cardiac diseases, Myocarditis	1
34-35	Cardiomyopathy, endocarditis, pericarditis	2
36-37	Phlebitis, thrombosis, anemia, lymphangitis, lymphadenopathies and thrombocytopenia, lymphosarcoma	2
38	Principles of nervous dysfunctions, clinical manifestation SOL special examination	1
39-40	Localization of lesion in brain and spinal cord	2
41-42	Cortical diseases, brain abscess, SOL, meningitis, diseases of brainstem, cerebellar diseases	2
43-44	Spinal cord compression, peripheral nerve paralysis, Horner Syndrome, facial nerve paralysis	2
45	Principle manifestations and special examination of musculoskeletal system	1
46-48	Foot lameness, arthritis, osteodystrophies, degenerative joint disease and nutritional deficiency diseases affecting musculoskeletal system	3
49	Diseases of eyes, neoplasms of eyes	1
50	Conjunctivitis, keratitis, uveitis	1
51-52	Diseases of pinna, otitis media, otitis externa	2
53-54	Skin diseases: folliculitis, furunculosis, and skin neoplasms, skin tumors 1	2

Suggested Books

- Bradford Smith, David Van Metre, Nicola Pusterla. 2019. Large Animal Internal Medicine. 6th Edition, Mosby.
- Neil V Anderson, 1992. Veterinary Gastroenterology. 2nd Revised edition, Lea and Febiger, USA.
- Simon F Peek, Thomas J Divers. 2018. Rebhun's Diseases of Dairy Cattle. 3rd Edition, Elsevier's.
- Research and Review Papers in Current Journals.

Course No.: VMD 502

Credits:3+0=3

Course title: Ruminant Medicine-Infectious

Course Objectives: Bacterial, fungal, chlamydial, viral, parasitic, mycoplasmal, prions and rickettsial diseases of bovine, sheep, and goat.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Principles of prevention and control of infectious diseases 1	1
2	Anthrax	1
3	Brucellosis	1
4	Mastitis	1
5	Foot rot/ Joint ill	1
6	Black quarter/ Braxy	1
7	Tetanus	1
8	Enterotoxemia	1
9	Bacillary haemoglobinuria	1
10	Botulism	1
11	Colibacillosis	1
12	Pasteurellosis/ Hemorrhagic septicemia	1
13	Tuberculosis	1
14	Paratuberculosis	1
15	Listeriosis	1
16	Leptospirosis	1
17	Actinomycosis/ Actinobacillosis	1
18	Ringworm	1
19-21	Systemic mycotic infections (Aspergillosis, candidiasis, histoplasmosis, sporotrichosis, coccidioidomycosis, mycotoxicosis)	3
22	Dermatophilosis	1
23	Campylobacteriosis	1
24	Salmonellosis	1
25	Contagious bovine pleuropneumonia	1
26	Contagious agalactia	1
27	Anaplasmosis	1
28-29	Chlamydiosis, Q fever, ehrlichiosis	2
30	Blue tongue	1
31	Sheep and goat pox	1
32	Peste des petits ruminants	1
33	Scrapie, louping ill	1
34	Maedi, visna, jagaskiae disease	1
35	Rift valley fever	1
36	Rinderpest	1
37	Bovine viral diarrhea	1
38	Malignant catarrhal fever	1
39	Infectious bovine rhinotracheitis	1
40	Enzootic bovine leucosis	1
41	Ephemeral fever	1
42	Foot and mouth disease	1
43	Rabies	1
44	Principles of control of parasitic diseases	1
45	Amphistomosis	1
46	Fascioliosis	1
47-48	Gastrointestinal nematodiasis, schistosomosis	2
49	Echinococcosis, tapeworm (cysticercosis)	1
50	Verminous bronchitis, coenurosis	1
51-52	Trypanosomosis, babesiosis	2
53-54	Theileriosis, hepatozoonosis	2

Suggested Books

- Dairy Herd Health. 2012. MJ Green, Andrew J. Bradley. CABI Publishing.
- Merck's Veterinary Manual K. 2016. Susan E Aiello, Michael A Moses. (11th Edition). Merck Sharp and Dohme
- Veterinary Medicine 2016. Peter Constable, Kenneth W Hinchcliff, Stanley Done, Walter
- Gruenberg. 11th Edition. Saunders Ltd.
- Research and Review Papers in Current Journals.

Course No.: VMD 503

Credits:2+0=2

Course title: Equine Medicine

Course Objectives: Internal and infectious diseases of Equines

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Manifestations and principles of treatment of gastrointestinal diseases	1
2	Diseases of the buccal cavity (dental diseases, stomatitis) and oesophagus,	1
3	Gastric dilation and rupture, gastro-duodenal ulceration	1
4-5	Diseases of the intestine (colic, duodenitis-proximal jejunitis, acute and chronic diarrhea	2
6	Diseases of liver (Acute and chronic hepatitis)	1
7-8	Diseases of the pericardium, myocardium and endocardium	2
9	Cardiac arrhythmias, thrombosis	1
10	Purpura haemorrhagica, immune-mediated thrombocytopenia of the neonates, neonatal isoerythrolysis	1
11-12	Manifestations and principles of treatment in respiratory disorders, Epistaxis, Sinusitis, ethmoidal hematoma, Guttural pouch diseases -guttural pouch tympany/ empyema/ mycosis, pharyngitis, recurrent laryngeal neuropathy	2
13-14	Pneumonia and pleuropneumonia, foal pneumonia, Pulmonary congestion and edema	2
15	Inflammatory airway disease	1
16	Recurrent airway obstruction, Tracheal collapse	1
17	Manifestations and principles of treatment of urinary system diseases, Acute and chronic renal failure and Neoplasms of urinary tract.	1
18	Rupture of urinary bladder, Paralysis, urolithiasis, Urinary tract infections	1
19	Principal manifestations of musculoskeletal diseases, Laminitis, Inflammatory Myopathy, Exertional Myopathies/ Tying up syndrome, myositis,	1
20	Hyperkalemic periodic paralysis, narcolepsy, Myotonia	1
21	Nutritional deficiency diseases affecting musculoskeletal system, Osteodystrophies	1
22	Viral encephalitis, meningio-encephalitis	1
23	Facial nerve paralysis, radial nerve paralysis, sciatic nerve paralysis, femoral nerve paralysis, polyneuritis equi (cauda equine neuritis)	1
24	Intracarotid drug injection. Trauma to brain and cranial nerves, Brain abscess,	1
25	Peripheral vestibular disease, Temporo-hyoid osteoarthropathy, Ataxia (sorghum toxicity, spinal abscesses),	1
26	Bacterial dermatitis (Dermatophilosis, furunculosis, cellulitis, ulcerative	1

	lymphangitis, fistulous withers, bacterial psuedomycosis (hotryomycosis)	
27	Viral skin diseases	1
28-29	Allergic dermatitis: Culicoides hypersensitivity, eosinophilic granuloma, anhidrosis, equine sarcoidosis	2
30	Fungal skin diseases, Cutaneous eczema, Cutaneous acne. Cutaneous pustular dermatitis, Candidiasis, Histoplasmosis, Coccidioidomycosis and dermatophytosis.	1
31	Parasitic skin diseases- habronemiasis, onchocerciasis	1
32	Bacterial, fungal and viral keratitis. Equine recurrent uveitis, Uveitis, Ocular neoplasia,	1
33	Trypanosomiasis/ dourine, Babesiosis,	1
34	Parasitic pneumonia and setariasis.	1
35-36	Strangles, equine influenza, Equine herpes virus infection, Potomac horse fever, Equine infectious anaemia	2

Suggested Books:

- Equine Internal Medicine, 2017. Stephen Reed, Warwick Bayly, Debra Sellon, 4th Edition. Elsevier, Saunders
- Large Animal Internal Medicine. 2019. Bradford Smith, David Van Metre, Nicola Pusterla. 6th Edition, Mosby
- Research and Review Papers in Current Journals.

Course No.: VMD 504

Credits:2+0=2

Course title: Canine and Feline Medicine-I

Course Objectives: Internal (digestive, liver, pancreas, cardiovascular, blood and blood forming organs) and infectious (bacterial, parasitic and protozoal) diseases of dogs and cats.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1-2	Diagnostic approach to common manifestations of disease: Vomiting, acute diarrhea, Chronic diarrhea, Syncope, Anemia, Jaundice, Fever, Weight loss, Edema, Dyspnoea, coughing and nasal discharge.	02
3	Disorders of Oral cavity, Pharynx and Oesophagus,	1
4-5	Common Disorders of Stomach- Acute Gastritis, Chronic gastritis, Gastric dilatation, Volvulus, Tumors of the stomach	2
6-8	Disorders of Small Intestine- Intussusception, Acute enteritis, Chronic enteritis, Inflammatory bowel disease, Gastric and Intestinal foreign bodies	2
9	Disorders of Large Intestine- Colitis, Diseases of rectum and anal sac	1
10	Peritonitis	1
11-12	Diagnostic approach to manifestations of hepato-biliary diseases	1
13-14	Hepato-biliary diseases of dogs and cats -Acute hepatitis, Chronic hepatitis, Diseases of gall bladder, Cholangitis, Vascular liver diseases, Extra hepatic biliary system	2
15-16	Exocrine pancreatic disorders of dogs and cats- Acute pancreatitis and Exocrine pancreatic insufficiency	2

17	Diagnostic approach to manifestations of hemo-lymphatic disorders	1
18	Disorders of hematopoietic system -Anemia, Coagulopathies, Immune mediated diseases	2
19-20	Disorders of lymphatic system -Lymphangitis, Lymphadenopathies	2
21	Neoplastic diseases of hemo-lymphatic system	1
22-24	Diagnostic approach to manifestations of cardiac diseases- Examination of cardiac system and special examination of heart (ECG, Echocardiography, Holter and markers for diagnosis of cardiac disorders)	2
25	Congenital heart diseases	1
26	Congenital heart diseases, Dilated cardiomyopathy	1
27-28	Acquired valvular diseases, myocardial and pericardial diseases	1
29	Endocardiosis, Cardiac arrhythmias	1
30-31	Behaviour disorders of canine and feline -Pet psychology, Pet behaviour, Adaptation needs and Behavioural medicine	1
32	Polysystemic protozoal infection of dogs and cats (Hepatozoonosis, babesiosis, trypanosomiasis, neosporosis, toxoplasmosis, Giardiasis, Coccidiosis/ Isosporosis, Neosporosis)	1
33	Polysystemic rickettsial diseases of dogs and cats (Ehrlichiosis, lyme disease and rocky mountain spotted fever)	1
34-35	Important bacterial diseases of canine and feline (Leptospirosis, tetanus, brucellosis and kennel cough)	2
36	Endoparasitic infestation of dogs and cats- (Ancylostomiasis, Dirofilariasis)	1

Suggested Books

- *Small Animal Internal Medicine* 2013. Nelson and Couto, 5th edition, Elsevier Mosby, St. Louis, Missouri
- *Text book of Veterinary Internal Medicine* 2001. Part I and II, Ettinger and Feldman, 7th Edition, Publisher: Saunders
- *Small Animal Medical Diagnosis* 2009. MD Lorenz, TM Neer and PL Demars, 3rd Edition, Wiley Blackwell, Iowa, USA.
- Research and Review Papers in Current Journals

Course No.: VMD 505

Credits:2+0=2

Course Title: Canine and Feline Medicine-II

Course Objectives: Internal (respiratory, nervous, urogenital, musculoskeletal, eye, ear and skin) and infectious (viral and fungal) diseases of dogs and cats.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Principles of therapeutic management of respiratory tract disorders Clinical manifestations of upper and lower respiratory tract disorders	1
2-3	Diagnostic approach to diseases of nasal cavity, Canine infectious tracheobronchitis, chronic bronchitis in dogs. feline bronchitis.	2
4-5	Pneumonia (viral, bacterial, fungal), pulmonary neoplasia, pulmonary edema, pulmonary congestion (Acute pneumonia, Chronic pneumonia)	2
6	Diagnostic approach to pleural effusions, Feline asthma, Neoplasms of respiratory tract	1
7	Manifestations and principles of treatment of Urinary tract infections	1

8	Acute and chronic renal failure	1
9	Manifestations and principles of treatment of Nephritis, Nephrosis, Pyelonephritis	1
10	Disorders of micturition- Diagnostic approach to Urinary incontinence, Hematuria, Urolithiasis	1
11	Neoplasms of urinary tract	1
12	Neurological manifestations of systemic diseases	1
13	Diagnostic approach to seizures, ataxia, paresis, Coma and paralysis	1
14-15	Inflammatory brain disorders (bacterial, viral, protozoal, mycotic, parasitic)	2
16	Diseases of spinal cord (osteomyelitis, intervertebral disc disease)	1
17-18	Disorder of peripheral nerves (developmental and congenital disorders, metabolic and toxic disorders, inflammatory and immune mediated neuropathies)	2
19	Vestibular diseases and toxins affecting nervous system.	1
20	Joint diseases of dogs and cats (Non inflammatory and inflammatory)- Osteodystrophy and Osteomyelitis	1
21-22	Disorders of muscles (inflammatory myopathies, bacterial, parasitic, immune mediated, degenerative and inherited myopathies, congenital)	2
23	Diseases of ears (otitis externa, interna, media), neoplasms, principles of treatment of otitic infections	1
24-26	Skin (endocrinopathies, bacterial, parasitic, fungal skin disorders, nutritional disorders related to skin)- Primary and Secondary Hyperparathyroidism, Auto immune diseases of skin, Dermatophytosis, Dermatomycosis, Demodicosis, Scabies, Myiasis	3
27	Alopecia, atopy, flea allergy dermatitis, Common pyodermas	1
28	Diagnostic cytology of skin lesions, treatment and control measures	1
29	Eyes (diseases of eye lids, keratitis, conjunctivitis, uveitis, glaucoma, acute blindness, neoplasms of eye)	1
30-32	Viral diseases of dogs (Canine parvo viral gastroenteritis, canine distemper, corona virus infection, Infectious hepatitis, Infectious trachebronchitis, canine herpes virus and rabies)	3
33-34	Viral diseases of cats (Feline panleukopenia, feline infectious peritonitis, feline leukemia virus, feline immunodeficiency virus)	2
35	Fungal diseases of dogs and cats-Blastomycosis, Histoplasmosis, Sporotrichosis, and coccidioidomycosis.	1
36	Vaccination schedule of dogs and cats	1

Suggested books

- *Small Animal Internal Medicine* 2013. by Nelson RW and Couto, CG 5th edition, Elsevier Mosby, St. Louis Missouri
- *Text book of Veterinary Internal Medicine* 2010. by Ettinger and Feldman, 7th Edition, Publisher: Saunders
- Research and Review Papers in Current Journals.

Course No.: VMD 506

Credits:2+0=2

Course title: Metabolic and Endocrine Diseases, Nutritional Deficiencies and Diseases of Mammary Gland

Course Objectives: Study of diagnosis, management and control of metabolic, endocrine, nutritional and mammary gland diseases.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	General aspects of production diseases and metabolic profile test	1
2	Parturient Paresis in dairy animals- etiology, pathogenesis, diagnosis, prevention and therapeutic management	1
3-4	Downer cow syndrome and lactation tetany of mares	2

5	Ketosis, sub-clinical ketosis and fatty liver syndrome	1
6	Peri-parturient hemoglobinuria in dairy animals	1
7	Hypomagnesemic tetany in cattle	1
8	Pregnancy toxemia in sheep	1
9	Eclampsia in bitches- etiology, pathogenesis, diagnosis, prevention and therapeutic management	1
10	Acute hypokalemia and transit recumbency of ruminants	1
11	Equine hyperlipidemia, steatitis and neonatal hypoglycaemia	1
12	Deficiencies of energy and protein	1
13	Iodine deficiency disorders of ruminants	1
14	Copper deficiency diseases of ruminants	1
15	Diseases associated with deficiency of zinc and manganese	1
16	Diseases associated with deficiency of iron and cobalt	1
17	Vitamin E and Selenium deficiency	1
18	Diseases associated with deficiency of vitamin B complex	1
19	Diseases associated with deficiencies of vitamin A and K	1
20-21	Rickets, Osteoporosis and osteodystrophy fibrosa	2
22	Diabetes mellitus in dogs	1
23	Diabetes insipidus in dogs	1
24	Hypothyroidism and hyperthyroidism in dogs	1
25	Hypoadrenocorticism and Hyperadrenocorticism in dogs	1
26	Anaomy of the mammary glands, physiology of lactation and congenital abnormalities of udder and teats	1
27-28	Physical and chemical tests for detection of mastitis	2
29	Detection and identification of pathogenic bacteria in milk	1
30-31	Epidemiology, treatment and control of mastitis caused by contagious, environment and opportunistic pathogens	2
32	Specific and non-specific viral lesions of teats and udder	1
33	Teat stenosis, udder edema, galactorrhagia, galactagogue, agalactia	1
34-35	Heifer and goat mastitis, mastitis-metritis-agalactia in sows	2
36	Public health importance of mastitis	1

Suggested Reading

- Veterinary Medicine (2007). A textbook of diseases of cattle, horses, sheep, pigs and goats by OM Radostitis, CC Gay, KW Hinchcliff and DC Constable, 10th edition, Saunders
- Clinical Endocrinology of Companion Animals (2013). Ed. J. Rand, 1st Edition by Jacquie Rand, Ellen Behrend, Danielle Gunn-Moore, Michelle Campbell Ward, Wiley Blackwell
- Research and Review Papers in Current Journals

Course No.: VMD 507

Credits:2+0=2

Course title: Paediatrics and Geriatrics

Course Objectives: Study of non-infectious and infectious diseases of neonates and geriatric animals.

Lecture Schedule

Lecture No.	Topics	No. of lectures
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1	Perinatal adaptation, neonatal health, asphyxia and resuscitation	1
2	Physical examination of the neonate, disease manifestation, supportive care of the abnormal newborn	1
3	Failure of passive transfer of immunity and its management.	1
4	Paediatric pharmacology	1
5	Fluid replacement therapy	1
6-7	Immunization of neonates, nutritional support, blood and serum Transfusion	2
8	Distended and painful abdomen, bloat	1
9	Respiratory distress in the neonates	1
10-11	Viral diseases of pups, foals and calves	2
12-13	Bacterial diseases of pups, foals and calves	2
14	Neonatal isoerythrolysis in foals, pups and kittens	1
15	Congenital abnormalities of pups, foals and calves	1
16	Peri-natal care and diseases of the newborn	1
17	Non-infectious diseases of pups	1
18– 20	Metabolic disorders, nutritional deficiencies, miscellaneous conditions (hypothermia, hyperthermia, starvation)	3
21	Care, management and treatment of sick puppies	1
22	Guidelines for care of geriatric dogs	1
23	Neuromuscular dysfunctions in geriatric dogs	1
24	Common eye and ear affections in older canine and feline patients	1
25	Hepatic and pancreatic disorders in older dogs and cats	1
26	Paresis and/or depressed mentation	1
27	Urinary system diseases in geriatric dogs and cats	1
28-29	Endocrine and metabolic disorders in geriatric patients	2
30-31	Respiratory diseases in older dogs and cats	2
32-33	Cardiac disorders in geriatric dogs and cats	2
34	Cancer therapy in geriatric patients	1
35	Skeletal disorders in geriatric patients	1
36	Behaviour disorders in geriatric dogs	1

Suggested Readings

- *Equine Paediatric Medicine*. 2018. WV Bernard, BS Barr, 2nd edition, CRC Press.
- *Treatment and Care of the Geriatric Veterinary Patients* 2017. Mary Gardne and Dani McVety, Wiley-Blackwell.
- *Small Animal Paediatrics* 2011. Michael E. Peterson and Michelle Anne Kutzler, Elsevier.
- Research and Review Papers in Current Journals

Course No.: VMD 508

Credits: 2+0=2

Course Title: Avian and Swine Medicine

Course Objectives: Recent concepts in non-infectious and infectious diseases of avian species and pigs.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	General handling, sample collection and medication in various Avian Spps.	1
2	Etio-pathogenesis, symptomatology, diagnosis and treatment of diseases due to riboflavin deficiency in poultry	1
3	Encephalomalacia (Crazy chick disease)	1
4	Rickets and calcium deficiency in poultry	1
5	Fatty liver and kidney syndrome	1
6	Manganese and zinc deficiency in poultry	1
7	Colibacillosis (including peritonitis in layers and salpingitis)	1
8	Fowl cholera	1
9	Yolk sac infection and omphalitis	1
10	Salmonellosis and mycoplasmosis in poultry	1
11	Infectious bursal disease (Gumboro disease) and Inclusion body hepatitis	1
12	Infectious laryngotracheitis and infectious bronchitis	1
13	Newcastle disease and Marek's disease (including transient paralysis)	1
14	Egg drop syndrome 76 (127 adenovirus/BC14 infection)	1
15	Lymphoid leukosis and other leukoses	1
16	Parasitic diseases (Ascariasis and coccidiosis)	1
17	Miscellaneous poultry diseases (cage layer fatigue, cannibalism, moult and prolapse of oviduct)	1
18	General handling, physical examination and sample collection in pigs	1
19-20	Mineral deficiency diseases in pigs (Calcium, phosphorus, iron, copper and zinc)	2
21-22	Vitamin deficiency diseases in pigs (vitamin A, D, E, K, riboflavin and niacin)	2
23	Swine influenza	1
24	Swine fever (African and classical)	1
25	Swine Pox	1
26	Vesicular exanthema and vesicular stomatitis	1
27	Swine dysentery (scours) and transmissible gastro-enteritis (TGE)	1
28	Streptococcal meningitis	1
29	Porcine reproductive and respiratory syndrome (PRRS)	1
30	Pneumonia in pigs	1
31	Glasser's disease and greasy pig disease	1
32-33	Swine erysipelas and mange	2
34-35	Foot and Mouth disease (FMD) and brucellosis	2
36	New and emerging diseases (Nipah virus)	1

Suggested Poultry Books

- *Diseases of Poultry*. 2013. DE Swayne, JR Glisson, LR McDougald, LK Nolan, DL Suarez, and VL Nair. 13th Edition, Wiley-Blackwell.
- *Diseases of poultry and their control*. 2001. R. Chandra, VDP Rao, JC Gomez-Villamandos, SK Shukla and PS Banerjee. 1st edition, International book distributing Co., Lucknow, India. 2001.
- Research and Review Papers in Current Journals.

Suggested Swine Books

- *Diseases of Swine*. 2012. JJ Zimmerman, LA Karriker, A Ramirez, KJ Schwartz and GW. Stevenson. 12th edition, Wiley-Blackwell.
- *Diseases of Swine* 2006. BE Straw, JJ Zimmerman, SD Allaire and DJ Taylor. 9th edition, Blackwell Publishing.
- Research and Review Papers in Current Journals.

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Course No.: VMD 509

Credits:1+0=1

Course title: Zoo, Wild and Laboratory Animal Medicine

Course Objectives: Study of diagnosis, management and control of Zoo, wild and laboratory animals.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Taxonomy of various genera of wild/ zoo animals of India along with their descriptions.	1
2	Basic principles of habitat and housing of various classes of wild and zoo animals.	1
3-4	Nutrient requirements, feeding habits and feeds of zoo, wild and laboratory animals.	2
5	Diet formulation and feeding of various age groups, sick and geriatric animals.	1
6	Post mortem examination, handling, processing and interpretation of pathological materials from zoo and wild animals.	1
7	Breeding for conservation of wild animals.	1
8	Population dynamics of wild animals, effective population size of wild animals in captivity/ zoo/ natural habitats.	1
9-10	Restrain, capture, handling, physical examination and transport of wild and zoo animals.	2
11-12	Principles of anesthesia, anesthetics, chemicals of restraining, common surgical Interventions; Capture myopathy.	2
13-14	Acts and Rules related to zoo and wild animals.	2
15	Principles of zoo hygiene, public health problems arising from zoos.	1
16-17	Prevention, control and treatment of infectious, parasitic, nutritional and metabolic diseases in zoo and wild animals.	2
18	Prevention, control and treatment of infectious, parasitic, nutritional and metabolic diseases of laboratory animals.	1

Suggested Books

- *Wild Mammals in Captivity: Principles and Techniques for Zoo Management* (2010). 2nd ed. - Kleiman, DG, University of Chicago Press
- *Zoo and Wild Animal Medicine Current Therapy* (2007). 6th ed. -C Fowler, ME
- *Zoo Animal and Wildlife Immobilization and Anesthesia* (2014). 2nd Ed.-C West, D Heard. N Caulkett, Wiley Blackwell
- Research and Review Papers in Current Journals

Course No.: VMD 510

Credits:1+0=1

Course title: Toxicology and Forensic Medicine

Course Objectives: Study of diseases caused by physical, chemical, other toxicants in domestic animals and animal welfare issues.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Lead poisoning	1
2	Arsenic and selenium poisoning	1
3	Fluoride and copper toxicity	1
4	Diseases associated with physical agents	1
5	Chlorinated hydrocarbons, organophosphorus compounds and carbamate poisoning	1
6-7	Nitrate nitrite poisoning, cyanide and urea poisoning	2
8	Poisoning by mycotoxins and important phytotoxins	1
9	Snakebite poisoning, Bee stings	1
10	Examination of blood stains	1
11	The vetero-legal wounds, causes of death from wounds	1
12-13	Post-mortem examination of vetero-legal case, submission of specimens in suspected cases of poisoning	2
14	Collection and submission of specimens for histo-pathological examination and various modern techniques for diagnosis of vetero-legal cases	1
15	Common frauds in the sale of livestock and livestock products	1
16	Common offenses against animals in India	1
17	Laws related to animal welfare in India	1
18	Functioning of Animal Welfare Board	1

Suggested Reading

- Veterinary Toxicology (2014). SK Garg, CBS Publishers
- Veterinary Medicine (2017). A textbook of diseases of cattle, horses, sheep, pigs and goat by Constable et al., 11th edition, Saunders
- Animal Welfare Ethics and Jurisprudence (2014). Kirti Dua, 1st edition, Kalyani Publishers
- Veterinary Jurisprudence (2015). SN Sharma, AK Gahlot and RK Tanwar, 7th edition NBS publisher and distributor
- Research and Review Papers in Current Journals

Course No.: VMD 511

Credits:0+2=2

Course Title: Clinical Diagnostic Techniques

Course Objectives: To impart training on diagnostic procedures for various diseases of farm and companion animals and their interpretations

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Endoscopy in small animals	1
2	Endoscopic examination of URT in ruminants and equines	1
3-4	Tracheobronchial lavage in ruminants, horses and dogs	2
5-6	Thoracocentesis in dogs, cattle/buffalo and horses	2
7	Peritoneal fluid collection and examination in dogs, cattle, buffalo and horse	1
8	Cystocentesis in dogs and urine examination	1
9	Electrocardiography in dogs and its interpretation	1
10	Electrocardiography in large animals and its interpretation	1
11	Techniques in ocular examination	1
12	Cerebrospinal fluid collection and examination	1
13	Dermatological examination	1
14-15	Collection of biopsy samples (Skin and liver)	2
16	Diagnosis tests in mastitis	1
17	Nasogastric/ orogastric intubation in large animals	1
18-19	Echocardiography in large and small animals	2
20	Liver function tests and their interpretation	1
21	Pericardiocentesis in large and small animals	1
22	Urinary Catheterization in male and female dogs	1
23	Urinary Catheterization in a cattle/ buffalo and a mare	1
24	Renal function tests and their interpretation	1
25	Arterial blood collection and interpretation of acid base and blood gas analysis	1
26	Diagnostic tests in ear affections	1
27	Physical and special examination of musculoskeletal system	1
28-29	Neurological examination in small and large animals	2
30-31	Bone marrow collection in small and large animals	2
32-33	Ultrasonography of chest and abdomen in large animal disease diagnosis	2
34-36	CT, MRI, Pulse Oximetry, Radioimmune assay, Nuclear Medicine	3

Suggested Books

- Large Animal Internal Medicine. 2015. Bradford P. Smith, 5th Edition, Mosby Elsevier.
- Small Animal Clinical Techniques. 2010. Susan M. Taylor, Saunders Elsevier.
- Handbook of Veterinary Neurology. 2010. Michael D. Lorenz, Joan R. Coates and Marc Kent, 5th Edition, Saunders Elsevier.
- Handbook of Equine Respiratory Endoscopy. 2007. Safia Barakzai, First Edition, Saunders Elsevier.
- Manual of Canine and Feline Cardiology. 2008. Larry P. Tilley, Francis W.K. Smith Jr., M.A. Oyama and M.M. Sleeper, 4th Edition, Saunders Elsevier.
- Research and Review Papers in Current Journals.

Course No.: VMD 512

Credits:0+2=2

Course title: Emergency Medicine

Course Objectives: Diagnosis and management of common emergencies in animals

Lecture Schedule

Lecture No.	Topics	No. of lectures
1.	Triage and stabilization of critical ill patient	1
2.	Cardiopulmonary resuscitation (CPR) in dogs	1
3.	Oxygen therapy in dogs	1
4-5	Gastrointestinal decompression in large and small animals	2
6	Management of Acute respiratory distress syndrome in small animals	1
7-8	Trans-thoracic drainage of pleural effusions in large and small animals	2
9-10	Trans-thoracic drainage of pericardial effusions in large and small animals	2
11	Intra-osseous fluid administration in pups	1
12-14	Management of gastrointestinal emergencies; gastric lavage, pain management	3
15	Endotracheal intubation in dogs	1
16	Clinical examination and therapeutic management of status epilepticus in small animals	1
17	Management of the shock patient	1
18-19	Blood transfusion in small and large animals	2
20-21	Enteral nutrition in horse and dog	2
22-24	Management of metabolic emergencies (Addison's disease, Diabetic ketoacidosis, Eclampsia, etc.)	3
25-26	Management of acute renal failure	2
27-28	Diagnosis and management of cardiac arrhythmias	2
29	Acute obstructive colic and its management	1
30-31	Poisons and toxins	2
32-33	Urinary tract emergencies	2
34	Ocular emergencies	1
35-36	Neurological emergencies	2

Suggested Books

- Kirk and Bistner's Handbook of Veterinary Procedures and Emergency Treatment. 2012. Richard B. Ford and Elisa Mazaferro, 9th Edition, Saunders Elsevier.
- Blackwell's Five Minute Veterinary Consult Clinical Companion, Small Animal Emergency and Critical Care. 2010. Mazzaferro, M. E. 1st Edition, (Wiley Blackwell)
- Equine Emergencies Treatment and Procedures. 2008. Orsini J.A. and Divers T.J., 3rd Edition, Saunders Elsevier.
- Research and Review Papers in Current Journals

Course No.: VMD 513

Credits:0+1=1

Course title: Diagnosis of Veterinary Infectious Diseases

Course Objectives: Concepts and diagnostic tests in veterinary infectious diseases

Lecture Schedule

Lecture No.	Topics	No. of lectures
1.	Techniques of random/ probability sampling and using survey tool box software for random selection of villages/ animals from a state population	1
2.	Sources of data and collection of animal health information using passive data and active surveillance	1

3.	Significance of sensitivity and specificity of a diagnostic test and false positive/ negative reactions of a particular test	1
4-5	Diagnosis of mastitis by BTB card, SLS paddle test, electrical conductivity meter and somatic cell count.	2
6-7	Inoculation of sample on culture media, and isolation/ identification of the organism	2
8	Culture sensitivity tests on milk and other body fluids	1
9	Collection and examination of samples for fungal infections	1
10	Preparation of blood smear for protozoan and rickettsial disease examination	1
11	Examination of parasitic eggs and along with their identification points including McMaster egg counting technique	1
12	Collection and/ or examination of skin scrapings for mites, ticks, lice or fleas	1
13-14	Screening tests for animal infectious diseases, including TB, JD, glanders and brucellosis	2
15	Enzyme linked immune-sorbant assay (ELISA): direct, indirect and competitive	1
16-17	Use of Polymerase chain reaction (PCR) in animal disease diagnosis and its types	2
18	Molecular epidemiology tools to study strain variation including RFLP, PCR-RFLP, etc.	1

Suggested Reading

- **Veterinary Epidemiology (2018). Michael Thrusfield, Robert Christley. Wiley-Blackwell**
- Veterinary Epidemiologic Research. (2003). Ian Dohoo, Wayne Martin and Henryk Stryhn, AVC Inc., Charlottetown.
- Diseases of Animals: Diagnosis and Management (2013). Singh, Bhoj and Somvanshi, R. Indian Veterinary Research Institute
- Veterinarian's Guide to the Laboratory Diagnosis of Infectious Diseases (1986). Gordon R. Carter. Veterinary Medicine Publishing Company
- Research and Review Papers in Current Journals.

Course No.: VMD 514

Credits:1+0=1

Course title: Oncology and Ethno-Veterinary Medicine

Course Objectives: Study of diagnosis and management of tumors, natural remedies and alternative systems of medicine.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Introduction to tumors	1
2	Conventional and advanced diagnostic techniques for diagnosis of tumors	1
3	Basic and advancements in chemotherapy and radiation therapy for tumors	1
4	Immune therapy and other miscellaneous therapy for cancer patients	1
5	Principles of nutrition and management of chronic pain in cancer patients	1
6	Tumor associated with gastrointestinal tract	1
7	Tumors associated with liver and spleen	1
8	Tumors associated with endocrine system and urinary system	1
9	Tumors associated with skin, subcutaneous tissues, eyes and ears	1
10	Tumors associated with haemopoietic and respiratory systems	1
11-12	Principles of herbal medicines and their use in treating animal diseases	2
13-14	Principles of homeopathic medicines and their use in treating animal diseases	2
15	Application of acupuncture in the management of animal diseases	1
16	Physiotherapy and laser therapy in animal diseases	1

17	Common nutraceutical ingredients (prebiotics, probiotics, synbiotics, enzymes and antibacterial alternatives.	1
18	Use of nutraceuticals in prevention and treatment of various animal diseases	1

Suggested Books

- *BSAVA Manual of Canine and Feline Oncology* by Dobson, Jane M. and Lascelles, B Duncan X. 3rd Ed., BSAVA.
- *Veterinary Herbal Medicine* by SG Wynn and BJ Fougere. 1st Ed., Mosby Elsevier.
- *Textbook of Veterinary Homeopathy*, by J Saxton and P Gregory. Beaconsfield Publishers, Beaconsfield
- *Complementary and Alternative Veterinary Medicine* by Narda G Robinson In: Merck Veterinary Manual. 11th Ed., Wiley.
- *Nutraceuticals in Veterinary Medicine* by, Ramesh C Gupta, Ajay Srivastava and Rajiv Lall. 1st Ed., 2019 Springer.
- Research and Review Papers in Current Journals.

Course No.: VMD 515

Credits:1+1=2

Course title: Animal Disease Investigation and Biosecurity

Course Objectives: Concepts in investigation of infectious diseases and their prevention.

Lecture Schedule

Lecture No.	Topics	No. of lectures
Theory		
1.	Investigation and diagnosis of dead animals and poultry	1
2.	Investigation and diagnosis of live animals and poultry	1
3.	Point source epidemics and propagating epidemics	1
4.	Collection, preservation and transport of material in the face of disease outbreak	1
5.	Processing of material in the laboratory for diagnosis	1
6.	Recording and analysis of epidemiological data	1
7.	Establishing working hypothesis	1
8.	Formulating and advising and / or implementing treatment, control and prevention strategies	1
9.	Definition and related concepts of Biosecurity, principles and basic components of Biosecurity, physical operational elements of Biosecurity	1
10.	Routes of entry and transmission dynamics of pathogens	1
11.	Shedding pattern of pathogens by infected animals and their survival in the environment	1
12-13	Protection of susceptible animals, interruption of pathways of transmission	2
14	Role of disinfection to break cycle on infection, sterilization, fumigation and disinfection methods	1
15	Disinfectants and its classification; microbial resistance to disinfectants, risk assessment and its management	1
16-17	Principles of Biosecurity for laboratory animal house, Biosecurity in research laboratories, Biosecurity measures for collection of specimen from wild animals	2

18	Vaccines-success stories of disease eradication through vaccination	1
Practical		
1 - 3	Isolation and identification of field isolates and vaccine strains by conventional, immunoassays and molecular techniques	3
4 – 5	Outbreak investigation of infectious diseases in livestock and poultry in the field /organized livestock farms	2
6-7	Outbreak investigation of toxicological conditions in livestock and poultry in the field/ organized livestock farms	2
8-9	Practical use of disinfectants in destruction of microbes in the laboratory and under field conditions	2
10	Determination of efficacy / phenol coefficient of commonly used disinfectants	1
11	Approaches in animal disease control and eradication	1
12	Preliminary steps to control animal disease outbreaks	1
13	Types of vaccines- conventional and recombinants	1
14-15	Vaccination schedule in cattle, sheep and goats	2
16	Vaccination schedule in horse and pigs	1
17	Vaccination schedule of pets including dogs and cats	1
18	Vaccination schedule of poultry including layers and broilers	1

Suggested books:

- History of the Surveillance and Control of Transmissible Animal Diseases (2003). Jean Blancou, OIE
- Veterinary Epidemiology (2018). Michael Thrusfield, Robert Christley, Wiley-Blackwell
- Biosecurity in Animal Production and Veterinary Medicine (2018). Jeroen Dewulf, Filip Van Immerseel. From Principles to Practice, AMSTERDAM University Press
- Research and Review Papers in Current Journals

Course No.: VMD 516

Credits:0+3=3

Course title: Clinical Practice-I

Course Objectives: Application of the theoretical concepts in practice.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1-8	Diagnostic and therapeutic protocol application,	08
9-13	specimen collection,	05
14-23	examination and management of sick farm and companion animals,	10
24-33	use of diagnostic techniques for diagnosis of medicinal cases,	10
34-41	acquaintance with different equipment,	08
42-45	client management, public relations, code of conduct,	04
46-49	hospital management,	04
50-51	disaster management	02
52-54	database management and maintenance of case records,	03

Note: This course shall be conducted in Veterinary Clinical Complex (VCC), where students shall participate in diagnosis and treatment of diseased animals

Course No.: VMD 517

Credits:0+3=3

Course title: Clinical Practice-II

Course Objectives: Application of the theoretical concepts in practice.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1-10	Diagnostic and therapeutic protocol application,	10
11-13	specimen collection,	03
14-20	examination and management of sick farm and companion animals,	07
21-28	use of diagnostic techniques for diagnosis of medicinal cases,	08
29-38	acquaintance with different equipment,	10
39-41	client management, public relations, code of conduct,	03
42-45	hospital management,	04
46-49	disaster management	04
50-54	database management and maintenance of case records,	05

Note: This course shall be conducted in Veterinary Clinical Complex (VCC), where students shall participate in diagnosis and treatment of diseased animals

Ph.D. in Veterinary Medicine

Lecture Schedule – Ph.D. – Veterinary Medicine

Course No.: VMD 601

Credits:2+0=2

Course Title: Farm Animal Gastroenterology

Course Objectives: Study of contemporary advancements in farm animal gastroenterology

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Physical examination in gastrointestinal disease diagnostic strategies and initial plan in assessment of gastrointestinal function	1
2	Imaging techniques for the gastrointestinal system radiography of the gastrointestinal system veterinary nuclear medicine	1
3	Clinical pharmacology of the gastrointestinal tract	1
4	Principles of fluid therapy in cattle, horse, pig, sheep and goat	1
5	Diseases of the buccal cavity and related organs including pharynx, oesophagus	1
6-7	Reticulo-ruminal disorders – recent concepts in fermentative disorders-simple indigestion, impaction, ruminal lactic acidosis, alkalosis	2
8	Primary and secondary bloat- diagnosis	1
9-10	Traumatic reticulo-peritonitis, vagal indigestion syndrome, generalised peritonitis, omasal impaction and abdominal distension	2
11	Diseases of abomasum (impaction, displacements, ulcers)	1
12	Intestinal disorders (intussusception, volvulus), strangulation, caecal dilatation and volvulus in ruminants.	1
13	Diseases of bovine liver	1
14	Diarrhea in cattle and small ruminants	1
15-17	Bacterial and viral diseases: Campylobacteriosis, intestinal chlamydial infections salmonellosis, tyzzer's disease infectious disease involving gut such as RP, BVD, FMD, actinomycosis, actinobacillosis	3
18	Protozoal diseases: Coccidiosis, cryptosporidiosis	1
19	Gastrointestinal parasites of pigs Ascaris spp, Oesophagostomum, stomach worms, Strongyloides sp, Trichuris sp	1
20-21	Gastrointestinal parasites of horses Gastrophilus, habronema, oxyuris, parascaris, large strongyles, small strongyles, strongyloides, tapeworms, trichostrongylus	2
22-23	Gastrointestinal Parasites of cattle Cooperia, bunostomum, strongyloides, nematodirus, toxocara, oesophagostomum, chabertia, trichuris, tapeworms	2
24-25	Gastrointestinal parasites of sheep and goats Haemonchus, ostertagia, and trichostrongylus, intestinal trichostrongylosis, nematodirus, oesophagostomum, chabertia, strongyloides, trichuris, tapeworms	2
26-27	Gastrointestinal diseases – Horse and Pigs	2
28	Dysphagia in horses	1
29-31	Diseases of stomach: GIT ulceration, gastric dilation, impaction, gastric parasitism in horses and pigs	3
32-33	Diseases causing equine colic such as anterior enteritis, small intestine strangulation, intestine impaction. Protocol and management of equine colic	2
34	Obstructive intestinal diseases in horse	1
35	Chronic weight loss without diarrhea, pain or icterus in horse	1
36	Swine dysentery, hog cholera	1

Suggested Books

- Equine Internal Medicine. 2017. Stephen Reed, Warwick Bayly and Debra Sellon, 4th Edition, Elsevier, Saunders.
- Large Animal Internal Medicine. 2019. Bradford Smith, David Van Metre and Nicola Pusterla, 6th Edition, Mosby
- Rebhun's Diseases of Dairy Cattle. 2018. Simon F Peek and Thomas J Divers, 3rd Edition, Elsevier
- Veterinary Gastroenterology. 1992. Neil V. Anderson, 2nd revised edition, Lea and Febiger, USA.
- Research and Review Papers in Current Journals.

Course No.: VMD 602

Credits:2+0=2

Course title: Farm Animal Cardiopulmonary and Urinary System Diseases

Course Objectives: Advances in diseases of cardio-pulmonary and urinary diseases

Lecture Schedule

Lecture No.	Topics	No. of lectures
1.	Evaluation of patient with respiratory signs	1
2.	Diagnostic aids in evaluation of respiratory line	1
3.	Retropharyngeal lymph node abscessation in horses	1
4-5	Pharyngeal affections in horses and Pharyngeal trauma in ruminants	2
6	Diseases of guttural pouch in horses	1
7	Laryngeal granuloma, abscess, edema	1
8	Tracheal collapse and stenosis in farm animals	1
9	Ethmoid hematoma in horses, diseases of paranasal sinuses in farm animals	1
10	Disorders of equine soft palate	1
11	Bacterial pneumonia and pleuropneumonia in adult horses	1
12	Pneumonia in foals	1
13	Pulmonary edema and smoke inhalation	1
14	Recurrent airway obstruction in horses	1
15	Inflammatory airway disease in horses	1
16	Epistaxis and Exercise induced pulmonary hemorrhage in horses	1
17	Bronchopneumonia and interstitial pneumonia in ruminants	1
18	Hypersensitivity and metastatic pneumonia	1
19	Progressive viral pneumonia of sheep and goats	1
20-21	Pleuritis and pleural effusions, pneumothorax and lung tumors	2
22	Viral pneumonia of sheep	1
23	Congenital cardiac diseases	1
24	Pericardial diseases	1
25	Myocardial diseases	1
26	Endocardial diseases	1
27	Cardiac arrhythmias	1
28	Anaemia	1
29	Bleeding disorders	1
30	Renal failure in horses	1
31-32	Urinary incontinence and urethral obstruction in equine and bovine	2
33	Polyuria and polydypsia in horses, urinary system disorders in the foal	1
34	Ulcerative posthitis and vulvitis in small ruminants	1
35-36	Bacterial pyelonephritis and urinary tract infection, leptospirosis	2

Suggested Books

- Large Animal Internal Medicine. 2019. Bradford Smith, David Van Metre and Nicola Pusterla, 6th Edition, Mosby
- Veterinary Medicine: A textbook of the diseases of cattle, horses, sheep, pigs and goats by Otto M Radostits, Clive C Gay, Kenneth W Hinchcliff and Peter D Constable. 10th Edition. Saunders
- Rebhun's Diseases of Dairy Cattle. 2018. Simon F Peek, Thomas and J Divers, 3rd Edition, Elsevier
- Research and Review Papers in Current Journals.

Course No.: VMD 603

Credits:1+0=1

Course title: Farm Animal Neurological and Musculo-skeletal System Diseases

Course Objectives: Study of recent advances in diseases of neurological and musculoskeletal systems

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Neurological examination in bovine and equine patients; Localization of lesions in nervous system	1
2	Disease of brain stem in equines and bovines	1
3	Diseases producing cortical signs in equines and bovines	1
4	Diseases of spinal cord and Peripheral neuropathies	1
5-6	Viral/ Prions encephalopathies: Equine herpes virus, Eastern/ Western equine encephalopathies, Bovine Spongiform Encephalopathy, etc.	2
7	Parasitic thromboembolism and Equine Protozoal encephalomyelitis	1
8	Encephalomalacia, Narcolepsy and Hyperkalemic periodic paralysis	1
9	Diagnostic approach to musculoskeletal abnormalities	1
10	Diseases of Muscle tone; Muscle Cramping	1
11	Non exertional Rhabdomyolysis in Horses: Inflammatory myopathies, nutritional, toxic and traumatic rhabdomyolysis	1
12-13	Exertional Myopathies in Horses: Congenital, acquired and metabolic Disorders	2
14-15	Osteochondrosis, Septic (Infectious) arthritis osteomyelitis, osteoarthritis, laminitis in horse	2
16-17	Bovine foot lameness: Characteristics of lameness, metabolic and infectious causes and conformation defects	2
18	Nutrition and Lameness, Claw trimming and foot baths	1

Suggested Books

- Bovine Laminitis and Lameness. 2007. Paul R Greenough, First Edition, Saunders Elsevier.
- Large Animal Internal Medicine. 2019. Bradford Smith, David Van Metre, Nicola Pusterla, 6th Edition, Mosby
- Handbook of Veterinary Neurology. 2010. Michael D Lorenz, Joan R Coates and Marc Kent, 5th Edition, Saunders Elsevier.
- Equine Internal Medicine. 2004. Stephen M Reed, Warwick M Bayly and Debra C Sellon, 2nd Edition, Saunders Elsevier.
- Research and Review Papers in Current Journals.

Course No.: VMD 604

Credits:1+0=1

Course Title: Farm Animal Neonatology

Course Objectives: Study of recent advances in care and disease management of equine and ruminant neonates

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Advances in management during perinatal adaption period	1
2-3	Manifestations of neonatal diseases in calves	2
4-5	Manifestations of neonatal diseases in foals	2
6-7	Manifestations of neonatal diseases in lambs and kids	2
8-9	Neonatal infection and sepsis	2
10-11	Advances in diagnostic procedures in neonates	2
12-13	Advances in intensive care of management of critically ill neonates	2
14-15	Advances in chemotherapeutic management of neonatal diseases	2
16-17	Vaccination and maternal antibody interference	2
18	Advances in management of orphan neonates	1

Suggested Books

- Equine Pediatric Medicine. 2018.W V Bernard, BS Barr, 2nd edition, CRC Press
- Practical Lambing and Lamb Care. 2018. N Sargison, JP Crilly and A Hopker, 4th edition, Wiley Blackwell
- Equine Neonatal Medicine. 2006. MR Paradis, 1st edition, Saunders
- Bovine Neonatology. 2009. Veterinary Clinics of North America: Food Animal Practice. 1st Edition, Saunders
- Research and Review Papers in Current Journals.

Course No.: VMD 605

Credits:2+1=3

Course title: Herd Health Management

Course Objectives: Recent concepts in herd health management

Lecture Schedule

Lecture No.	Topics	No. of lectures
Theory		
1-2	General principles of herd health management	2
3-4	Factors to be considered for successful implementation of herd health program	2
5-6	Interaction between health and production	2
7	Monitoring young stock health	1
8	Targets for young stock rearing and dairy cow culling	1
9	Disease Control in rearing periods	1
10-11	Herd Medicine and Population health	2
12-13	Herd nutrition for optimum health	2
14-15	Recent concepts on herd management of bacterial diseases	2
16-17	Recent concepts on herd management of viral diseases	2
18-19	Recent concepts on herd management of parasitic diseases	2
20-21	Recent concepts on herd management of fungal diseases	2
22	Recent concepts on herd management of rickettsial diseases	1
23	Herd management of metabolic diseases	1
24	Herd management of deficiency diseases	1
25	Biosecurity and infection control	1
26	Herd and flock immunity	1
27	Quality management of herd health	1
28	Control of infectious diseases in the herd	1
29	Herd health economics	1

30-31	Importance and steps of record keeping	2
32-33	Control of lameness	2
34-36	Diagnosis and control of mastitis and enhancement of milk quality	3
Practical		
1	Recent advances in calf management and diseases	1
2	Appropriate animal housing	1
3	Epidemiological investigations for problem identification at farm	1
4	Farm Biosecurity	1
5	Recent advances in disinfection of farm sheds and other equipments	1
6	Stress control of farm animals with respect to environmental and production stress	1
7	Record keeping	1
8	Recent advances in disease testing (TB, JD, Brucellosis, Mastitis)	1
9-10	Routine Farm Procedures	2
11	Herd vaccination	1
12	Ecto and endoparasitism: Principles and latest control trends	1
13	Recent advances in mastitis control	1
14	Recent advances in lameness control	1
15-16	Establishment of farm laboratory	2
17-18	Use of medicines and food safety	2

Suggested books:

- Dairy Herd Health (2012): MJ Green and Andrew J. Bradley, CABI Publishing
- Herd Health: Food, Animal, Production, Medicine (1994). OM Radostits, KE Leslie, J. Fetrow and WB Saunders
- Veterinary Epidemiology (2018). MachaelThrusfield, Robert Christley, Wiley-Blackwell
- The keys to Herd Health (2006). Jerry Brunetti, Acres, USA.
- Herd Health and Production Management in Dairy Practice (2003). Arie Brand. International Book Distributing Company
- Research and Review Papers in Current Journals

Course No.: VMD 606

Credits:2+0=2

Course title: Canine and Feline Gastroenterology

Course Objectives: Study of advancements in canine and feline gastroenterology

Lecture Schedule

Lecture No.	Topics	No. of lectures
1-2	Introduction to gastrointestinal function and microbiota	2
3-4	Diagnostic approach to anorexia, abdominal pain and vomiting	2
5-6	Approach to clinical signs of diarrhea, constipation and tenesmus	2
7-8	Diagnostic and therapeutic approach to hematochezia and melena	2
9-10	Diagnostic approach to hepato-biliary diseases and pancreatic diseases, coagulopathy, icterus, ascites and hepatoencephalopathy	2
11	Approach to clinical signs of weight loss and cachexia	1
12-13	Nutritional approach to gastrointestinal disease management	2
14	Pharmacological approach to gastrointestinal disease: antiemetic, antidiarrhoeal and cytoprotective agents	1

15	Pharmacological approach to gastrointestinal disease: antimicrobial and anthelmintic agents	1
16	Pharmacological approach to gastrointestinal disease: prokinetics, probiotics and laxatives	1
17	Chemotherapy and immunosuppressive drugs in gastrointesinal disease	1
18	Dentistry and diseases of oropharynx	1
19	Diagnostic evaluation and diseases of esophagus	1
20-21	Gastric diseases: Gastritis, ulceration, neoplasia and dysmotility	2
22-23	Advances in treatment and management of Small intestinal diseases	2
24-25	Diagnostic approach and management of inflammatory bowel disease (IBD), Ulcerative colitis, bacterial, parasitic and fungal infections of large intestine	2
26-27	Diagnostic evaluation and treatment of diseases of anorectum	2
28-29	Diagnostic evaluation and common affections of pancreas	2
30-32	Liver: Parenchymal, neoplastic, metabolic and biliary disorders	3
33-34	Breed related gastrointestinal disorders	2
35-36	Behaviour and gastrointestinal disease	2

Suggested books

- *Canine and Feline Gastroenterology*. 2013. RJ Washabau and MJ Day, Elsevier Mosby, St.Louis Missouri
- *Text Book of Veterinary Internal Medicine*. 2001. Part I and II, Ettinger and Feldman, 7th Edition, Saunders
- Restructured and Revised Syllabi of Post-graduate Programmes Vol. 3
- *Small Animal Medical Diagnosis*. 2009. MD Lorenz, TM. Neer and PL Demars, 3rd Edition, Willey Blackwell, Iowa, USA.
- Research and Review Papers in Current Journals.

Course No.: VMD 607

Credits:1+0=1

Course Title: Advances in Neurological and Musculoskeletal System Diseases of Canine and Feline

Course Objectives: Study of recent advances in the field of neurological and musculoskeletal diseases

Lecture Schedule

Lecture No.	Topics	No. of lectures
1.	Classification and general diagnostic features of acquired myopathies in dogs and cats	1
2.	Developmental and genetic bone disorders	1
3.	Idiopathic bone disorders	1
4.	Metabolic, nutritional and endocrine bone disorders	1
5.	Neoplasms of bones	1
6-7	Focal brain diseases of rapid onset- idiopathic epilepsy, idiopathic vestibular disease, trigeminal neuropathy, idiopathic facial nerve paralysis	2
8	Brain diseases of intermediate onset- brain abscesses	1
9	Focal brain diseases of slow onset- Thiamine deficiency, hypoglycemia, poisons	1
10-11	Inflammatory brain disorders- viral, bacterial, protozoal and mycotic encephalitis	2
12	Inflammatory meningitis-granulomatous meningo-encephalitis, Pug encephalitis, rickettsial diseases	1
13	Metabolic diseases with neurological signs	1
14	Diseases affecting cervical spinal cord and brachial plexus	1
15-16	Diseases affecting thoraco-lumbar and lumbo-sacral segments of spinal cord	2
17	Inflammatory and immune mediated neuropathies	1
18	Metabolic and toxic causes affecting peripheral nerves dysfunctions	1

Suggested Books

- *Handbook of Veterinary Neurology*. 2011. MD Lorenz, JR Coates and Marc Kent 5th Edition. Elsevier Saunders
- *Textbook of Veterinary Internal Medicine: Diseases of the Dog and Cat*. 2010. Stephen J. Ettinger and Edward C. Feldman, Elsevier Saunders 7th Edition.
- *Veterinary Clinics of North America: Small Animal Practice*, Elsevier, Monthly
- Research and Review Papers in Current Journals.

Course No.: VMD 608

Credits:1+0=1

Course title: Canine and Feline Cardiopulmonary and Urinary System Diseases

Course Objectives: Advances in cardiopulmonary and urinary systems

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Pathophysiology of heart failure, Clinical manifestations of cardiac diseases	1
2-3	Diagnostic tests for cardiovascular system (radiography, electrocardiography and echocardiography)	2
4	Therapeutic management of heart failure	1
5	Cardiac arrhythmias and anti-arrhythmic therapy	1
6	Acquired valvular heart diseases (Degenerative atrioventricular valve diseases and infectious endocarditis)	1
7	Myocardial diseases of dogs and cats(Canine dilated cardiomyopathy, canine hypertrophic cardiomyopathy and feline cardiomyopathies)	1
8	Pericardial diseases and cardiac tumors, systemic arterial hypertension	1
9	Clinical evaluation of patient with respiratory diseases	1
10	Feline upper respiratory tract infections	1
11	Bacterial rhinitis, allergic rhinitis, nasal mycosis, nasal tumors, polyps in dogs and cats	1
12	Diseases of trachea (infectious tracheobronchitis, lungworms, tracheal hypoplasia and tracheal collapse), Canine and feline bronchitis	1
13-14	Pulmonary parenchymal diseases (infectious- viral, bacterial, protozoal, fungal and parasitic)	2
15	Pulmonary neoplasia, pulmonary edema, pleural effusions, pneumothorax	1
16	Clinical approach and laboratory evaluation of renal diseases, Glomerulonephritis, Urolithiasis	1
17	Acute and chronic renal failure	1
18	Canine and feline lower urinary tract disorders, Disorders of micturition, Neoplasms of urinary tract	1

Suggested Books

- *Small Animal Internal Medicine*. 2013. Nelson RW and Couto, CG ^{5th} edition, Elsevier Mosby, St. Louis Missouri
- *Text book of Veterinary Internal Medicine*. 2010. Ettinger and Feldman, ^{7th} Edition, Saunders
- Research and Review Papers in Current Journals.

Course No.: VMD 609

Credits:1+0=1

Course Title: Dermatology and Endocrinology

Course Objectives: Recent concepts in diagnosis, management and control of diseases of skin and endocrine organs

Lecture Schedule

Lecture No.	Topics	No. of lectures
1.	New trends in management of adrenal gland diseases in dogs and cats	1
2.	Hyperadrenocorticism (Pituitary pars intermedia dysfunction) in horses	1
3.	Primary hyperaldosteronism and pheochromocytoma in dogs and cats	1
4.	Advances in management of diabetes mellitus and diabetic ketoacidosis	1
5.	Equine metabolic syndrome/ Insulin resistance syndrome in horses	1
6.	Hypo and hyperthyroidism in dogs and cats	1
7.	Hypo and hypercalcemia in dogs and cats	1
8.	Hypsomatotropism and acromegaly in dogs	1
9.	Advances in management of diabetes Insipidus and polyuria/ polydipsia in Dogs and cats	1
10.	Advances in management of autoimmune disorders (different forms of pemphigus)	1
11.	Diagnosis, therapy and prevention of hypersensitivity disorders –Atopy, urticaria, milk allergy, vasculitis, contact dermatitis, culicoides hypersensitivity	1
12.	Diagnosis, therapy and prevention of bacterial skin dermatitis, dermatophillus, folliculitis, staphylococcal cellulitis, equine corynebacterial dermatitis	1
13-14	Diagnosis, therapy and prevention of fungal skin dermatitis, dermatophytosis, malassezzial dermatitis	2
15-16	Diagnosis, therapy and prevention of parasitic skin dermatitis-mange, culicoides hypersensitivity, onchocerciasis, stephanofilaria, cutaneous hebronemiasis	2
17	Diagnosis, therapy and prevention of viral diseases-warts, pox diseases	1
18	Advanced diagnosis of skin tumors	1

Suggested Books

- *Clinical Endocrinology of companion animals*. 2013. Ed. J Rand 1st Edition edt. by Jacquie Rand (Editor), Ellen Behrend (Editor), Danielle Gunn-Moore (Editor) and Michelle Campbell-Ward (Editor). Wiley-Blackwell.
- *Muller and Kirk's Small Animal Dermatology*. 2013. 8th Edition. Edited by WH Miller, CE Griffin and KL Campbell. Elsevier, St Louis, MO, USA,
- *Equine dermatology*. 2011. 2nd Edition edited by Danny W Scott and William H. Miller, Jr 2nd edition. Elsevier, St Louis, MO, USA.
- Research and Review Papers in Current Journals.

Course No.: VMD 610

Credits:1+0=1

Course title: Canine and Feline Eye and Ear Diseases

Course Objectives: Study of recent advances in eye and ear diseases of canine and feline

Lecture Schedule

Lecture No.	Topics	No. of lectures
1-2	Diseases of the eyelid and Conjunctiva	2
3-4	Diseases of the cornea and sclera	2
5-6	Disease of the lens, uvea: Glaucoma	2
7-8	Disease of the retina, choroid, and optic nerve	2
9	Disease of the Lacrimal apparatus	1
10	Diseases of the the Orbit	1
11-12	Neuro-ophthalmology	2
13	Tumors of eye	1
14	Otitis Externa	1
15	Diseases of the external ear canal and pinna	1
16-17	Otitis media and Otitis interna	2
18	Tumors of ear	1

Suggested Books

- *Veterinary Ophthalmology*. 2013. Kirk N Gellat, Brian C Gilger and Thomas J Kern, 5th edition. Wiley Blackwell,
- *Saunders Manual of Small Animal Practice*. 2016. SJ Birchard and RG Sherding, WB Saunders Company
- Research and Review Papers in Current Journals
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Course No.: VMD 611

Credits:0+2=2

Course title: Veterinary Diagnostics

Course Objectives: Study of recent advances in diagnostics

Lecture Schedule

Lecture No.	Topics	No. of lectures
1-2	i) Endoscopic procedures in small animals ii) Diagnostic aids and ancillary diagnostic tests in diseases of gastrointestinal system	2
3	Endoscopic examination of URT in ruminants	1
4	Endoscopic examination of URT in equines	1
5-6	Tracheo-bronchial lavage in ruminants, horses and dogs	2
7-8	Thoracocentesis in dogs, cattle/buffalo and horses	2
9-10	Electrocardiography in dogs and its interpretation/ Electrocardiographic diagnosis of arrhythmia in dogs	2
11	Electrocardiography in diagnosis of arrhythmias in horses and dairy animals	1
12-13	Cerebrospinal fluid collection, examination and diagnosis and clinical case study (5 animals)	2
14-15	Dermatological examination and case workup	2
16	Biopsy collection techniques and its application on clinical cases	1
17	Pericardiocentesis and drainage of effusions in large and small animals	1
18-19	Neurological examination in small and large animals	2
20-21	Techniques in ocular examination- cytology, ophthalmoscopy, measurement of intraocular pressure	2
22	Bone marrow collection and its application in diagnosis in small and large animals	1
23-24	Ultrasonography in various thoracic and abdominal affections in large animals	2
25	Ecocardiography in valvular and myocardial diseases in small animals	1
26	Ecocardiography in valvular and myocardial diseases in large animals	1

27	Liver function tests and their interpretation with case studies	1
28	Arterial blood collection and interpretation of acid base and blood gas analysis	1
29-30	Concepts and diagnostic tests in veterinary infectious diseases	2
31-32	ELISA and its types, molecular techniques and types of PCR	2
33-34	Molecular epidemiology tools including RFLP etc.	2
35-36	Molecular diagnostic techniques of fungal diseases, protozoan and rickettsial diseases	2

Suggested Books

- *Large Animal Internal Medicine*. 2019. Bradoford Smith, David Van Metre and Nicola Pusterla, 6th Edition, Mosby
- *Small Animal Clinical Techniques*. 2010. Susan M. Taylor, Saunders, Elsevier
- *Handbook of Veterinary neurology*. 2010. Michael D. Lorenz, Joan R. Coates and Marc Kent, 5th Edition, Saunders, Elsevier
- *Handbook of Equine Respiratory Endoscopy*. 2007. SafiaBarkzai, 5th Edition, Saunders, Elsevier
- *Manual of Canine and Feline Cardiology*. 2008. Larry P. Tilley, Francis WK Smith Jr., MA Oyama and MM Sleeper, 4th Edition Saunders, Elsevier
- *Diagnostic Techniques of Equine Medicine: A Textbook for students and practitioners describing diagnostic techniques applicable to the adult horse*. 2009. Frank GR Taylor, Tim J Brazil and Mark H Hillyer, 2nd Edition, Saunders, Elsevier
- Research and Review Papers in Current Journals.

Course No.: VMD 612

Credits:2+0=2

Course title: Metabolic and Nutritional Deficiency Diseases

Course Objectives: Recent Trends in diagnosis, management and control of metabolic and nutritional diseases.

Lecture Schedule

Lecture No.	Topics	No. of lectures
1.	Strategies for transition cow health management	1
2.	Latest trends in prevention and management of parturient paresis with special reference to calcium cyclers and DCAD	1
3-4	Current approach to diagnosis and management of downer cow syndrome and acute hypokalemia in cow	2
5	Lactation tetany and transit recumbency in mares	1
6	Update on diagnosis and management of hypomagnesemic tetany in calves	1
7-8	Recent trends in diagnosis and management of ketosis in dairy animals with special reference towards blood metabolites and genomic tools	2
9	Pregnancy toxemia in sheep and goats: current diagnosis and treatment strategies	1
10	Biomarkers of fatty liver syndrome in dairy cattle: Latest diagnosis and treatment protocols	1
11	Updates on Equine hyperlipidemia and steatitis	1
12	Neonatal hypoglycemia: Recent trends in diagnosis and management	1
13	Sub-acute ruminal acidosis (SARA) and low milk fat syndrome	1
14-15	Nutritional / parturient / periparturient hemoglobinuria	2
16	Recent trends in diagnosis and management of eclampsia in bitches	1
17	Exertional myopathies in horse	1
18	Nutritional secondary hyperparathyroidism (bighead, bran disease)	1
19-20	Recent trends in mineral supplementation in livestock with special reference to	2

	chelated and non-chelated supplements	
21	Diseases due to trace elements deficiency in dairy cattle	1
22	Oxidative stress during transition period: Role of various vitamins and minerals	1
23	Recent trends in feeding strategies during transition period for prevention of vitamin and mineral deficiencies	1
24	Update on importance of vitamin E and Selenium in transition cows	1
25	Disorders due to sodium and potassium deficiency	1
26	Canine diabetes mellitus: Update on diagnosis and management	1
27	Canine diabetes insipidus: Update on diagnosis and management	1
28	Hypothyroidism in canine: Recent trends in diagnosis and management	1
29	Obesity in pet animals: etio-pathogenesis, diagnosis and lifestyle management	1
30	Diagnostic tools and treatment protocols for hypo and hyperadrenocorticism in dogs	1
31	Recent trends in diagnosis, treatment and prevention of vitamin A deficiency diseases	1
32	Diseases due to thiamine deficiency (PEM)	1
33	Disorders due to vitamin K deficiency	1
34	Approaches towards diagnosis, treatment and prevention of riboflavin (vit. B12) deficiency in swine and poultry	1
35	Update on diagnosis, treatment and prevention strategies for niacin deficiency in swine and poultry	1
36	Diagnosis, management and prevention of pantothenic acid deficiency in swine and poultry	1

Suggested books:

- Veterinary Medicine (2007). OM Radostitis, CC Gay, KW Hinchcliff and DC Constable, 10th edition, Saunders.
- Large Animal Internal Medicine (2019). Bradford Smith, David Van Metre and Nicola Pusterla, 6th Edition, Mosby.
- Textbook of Preventive Medicine and Epidemiology (2010). RD Sharma, M. Kumar and MC Sharma, ICAR, New Delhi.
- Textbook of Veterinary Internal Medicine Expert Consult. (2016). SJ Ettinger, EC Feldman and E Cote, 8th Edition, Saunders-Elsevier.
- Research and Review Papers in Current Journals.

Course No.: VMD 613

Credits:1+1=2

Course title: Emergency and Critical Care Medicine

Course Objectives: Recent advancements in emergency medicine and critical care

Lecture Schedule

Lecture No.	Topics	No. of lectures
Theory		
1	Triage and stabilization of critical ill patient	1
2-3	Newer therapeutic approach in management of a shock patient	2
4-5	Advances in management of respiratory emergencies	2
6-7	Gastrointestinal emergencies in small and large animals	2
8-9	Management of metabolic emergencies (Addison's disease, Diabetic ketoacidosis, Eclampsia etc.) in small animals	2
10	Diagnosis and management of cardiac arrhythmias	1

11	Acute obstructive colic and its management	1
12-13	Poisoning and toxicosis in animals and its management	2
14	Urinary system emergencies	1
15	Ocular emergencies	1
16-17	Neurological emergencies	2
18	Pain assessment and its management	1
Practical's		
1.	Cardiopulmonary resuscitation (CPR) in dogs and monitoring of critical ill patient and oxygen therapy in dogs	1
2.	Gastrointestinal decompression in large and small animals	1
3.	Critical approach to acute respiratory distress syndrome in small animals	1
4.	Trans-thoracic drainage of pleural effusions in large animals	1
5.	Trans-thoracic drainage of pericardial effusions in large and small animals	1
6.	Intra-osseous fluid administration in pups	1
7.	Procedures for gastrointestinal emergencies in small animals	1
8.	Procedures for gastrointestinal emergencies in small animals	1
9.	Procedures for gastrointestinal emergencies in large animals	1
10.	Endotracheal intubation in dogs	1
11-12	Clinical examination and therapeutic management of status epilepticus in small animals	1
13	Case studies on GIT emergencies	1
14	Cases studies on respiratory emergencies	1
15	Case studies on cardiac emergencies	1
16	Case studies on hematological emergencies	1
17-18	Case studies on metabolic emergencies	1

Suggested books:

- Kirk and Bistner's Handbook of Veterinary Procedures and Emergency Treatment. 2012. Richard B. Ford and Elisa Mazaferro, 9th edition, Saunders Elsevier
- Blackwell's Five Minute Veterinary Consult Clinical Companion, Small Animal Emergency and Critical Care. 2010. Mazzaferro ME. 1st Edition (Wiley Blackwell)
- Equine Emergencies Treatment and Procedures. 2008. Orsini JA and Divers TJ, 3rd edition, Saunders Elsevier.
- Research and Review Papers in Current Journals.

Course No.: VMD 614

Credits:2+0=2

Course title: Emerging and Re-emerging Animal Diseases

Course Objectives: Study on emerging and re-emerging diseases of animals

Lecture Schedule

Lecture No.	Topics	No. of lectures
1-2	Definitions and concepts of emerging and re-emerging, exotic, enzootic and endemic diseases	2
3-4	General concepts of new animal diseases	2
5-6	Conditions for emergence of new animal diseases	2
7-8	General concepts for re-emergence of old animal diseases	2
9-11	Conditions for re-emergence of old animal diseases	3
12-13	Factors and determinants of emerging diseases	2

14-15	Effect of climate change on emergence of diseases	2
16-17	The role of wild life in the emergence and re-emergence of animal diseases	2
18-19	Microbial adaptation and change	2
20-21	Epidemiological processes involved in the emergence of vector-borne diseases	2
22	Tuberculosis	1
23	Foot and Mouth Disease	1
24	Haemorrhagic Septicemia	1
25	Bovine viral diarrhea	1
26	Anthrax	1
27	Peste des petits ruminants	1
28	Bluetongue	1
29	Swine flu	1
30	Swine fever	1
31	Paratuberculosis	1
32	Glanders	1
33-34	Equine diseases manifested by nervous symptoms	2
35-36	Equine infectious anemia and African horse sickness	2

Suggested Books

- Veterinary Epidemiology. 2018. Michael Thrusfield, Robert Christley. Wiley Blackwell
- Emerging Diseases of Animals. 2000. Corrie Brown and Carol Boli, ASM Press.
- Emerging and Re-emerging Infectious Diseases of Livestock. 2017. Jagadeesh Bayry. Springer
- Transboundary and Emerging Diseases of Animals. 2016. Anna RovidSpickler, James A Roth, Gayle Brown and Jane Galyon. Centre for Food Security and Public Health.
- Research and Review Papers in Current Journals.

Course No.: VMD 615

Credits:2+0=2

Course title: Prevention and Control of Infectious Diseases of Ruminants

Course Objectives: Recent concepts in prevention and control of infectious diseases of ruminants

Lecture Schedule

Lecture No.	Topics	No. of lectures
1	Advances in principles of prevention and control of infectious diseases	1
2	Anthrax as a biological weapon: strategies for its control in animals	1
3	Screening and control of Brucellosis in organized dairy farms	1
4	Diagnosis and management of Mastitis	1
5-6	Pathogenesis and symptomatology of clostridial infections	2
7	Pathogenesis and control of Colibacillosis	1
8	Recent advances in diagnosis and control of hemorrhagic septicaemia	1
9	Approaches in diagnosis of Tuberculosis	1
10	Paratuberculosis: differential diagnosis and control	1
11	Epidemiology, pathogenesis and diagnosis of Listeriosis	1
12	Pathogenesis and control of Leptospirosis in animals	1
13	Clinical presentation, differential diagnosis and treatment of Actinomycosis and Actinobacillosis	1
14-15	Advancement in diagnosis and treatment of dermatophytosis and other fungal infections	2
16	Differential diagnosis and control of campylobacteriosis	1
17	Latest advancement in Salmonellosis	1
18	Advancement in diagnosis and control of Mycoplasma infections	1
19	Latest trends in diagnosis and treatment of Anaplasma	1
20	Latest trends in diagnosis and control of Bluetongue	1
21	Recent advancement in management of sheep and goat pox	1
22	Recent literature on diagnosis and control of Peste des petits ruminants	1
23	Lessons to be learnt from eradication of Rinderpest	1
24	Recent advances in Bovine viral diarrhea and malignant catarrhal fever	1
25	Recent literature on Infectious bovine rhinotracheitis	1
26	Recent studies on clinical symptomatology and diagnosis of ephemeral fever	1
27	Advancements in diagnosis and control of Foot and Mouth Disease	1
28	Recent approaches in diagnosis and control of Rabies	1
29	Principles of control of parasitic diseases	1
30-31	Recent trends in clinical symptomatology, diagnosis and control of amphistomosis and fascioliosis	2
32	Recent approaches in control of major endoparasitic infestations	1
33-34	Recent advancements in diagnosis and control of trypanosomosis	2
35-36	Recent advancements in diagnosis and control of Babesiosis and Theileriosis	2

Suggested books:

- Merck Veterinary Manual K. 2016. Susan E Aiello and Michael A Moses, 11th Edition, Merck Sharp and Dohme
- Veterinary Medicine 2016. Peter Constable, Kenneth W Hinchcliff, Stanley Done and Walter Gruenberg, 11th Edition, Saunders Ltd.
- Dairy Herd Health. 2012. MJ Green and Andrew J Bradley. CABI Publishing
- Research and Review Papers in Current Journals.

Course No.: VMD 616

Credits:0+2=2

Course title: Clinical Practice-I

Course Objectives: Application of the theoretical concepts in practice

Lecture Schedule

Lecture No.	Topics	No. of lectures
1-6	Diagnostic and therapeutic protocol application	6
7-8	Specimen collection	2
9-16	Examination and management of sick farm and companion animals	8
17-20	Use of diagnostic techniques for diagnosis of medicinal cases	4
21-26	Acquaintance with different equipment	6
27	Client management, public relations, code of conduct	1
28-30	Hospital management	3
31-33	Disaster management	3
34-36	Database management and maintenance of case records	3

Note: This course shall be conducted in Veterinary Clinical Complex (VCC), where students shall participate in diagnosis and treatment of diseased animals.

Course No.: VMD 617

Credits:0+2=2

Course title: Clinical Practice-II

Course Objectives: Application of the theoretical concepts in practice

Lecture Schedule

Lecture No.	Topics	No. of lectures
1-6	Diagnostic and therapeutic protocol application	6
7-8	Specimen collection	2
9-16	Examination and management of sick farm and companion animals	8
17-20	Use of diagnostic techniques for diagnosis of medicinal cases	4
21-26	Acquaintance with different equipment	6
27-28	Client management, public relations, code of conduct	2
29-30	Hospital management	2
31-32	Disaster management	2
33-36	Database management and maintenance of case records	4

Note: This course shall be conducted in Veterinary Clinical Complex (VCC), where students shall participate in diagnosis and treatment of diseased animals.

Course No.: VMD 618

Credits:0+2=2

Course title: Clinical Practice-III

Course Objectives: Application of the theoretical concepts in practice

Lecture Schedule

Lecture No.	Topics	No. of lectures
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1-6	Diagnostic and therapeutic protocol application	6
7-8	Specimen collection	2
9-16	Examination and management of sick farm and companion animals	8
17-20	Use of diagnostic techniques for diagnosis of medicinal cases	4
21-26	Acquaintance with different equipment	6
27-29	Client management, public relations, code of conduct	3
30-31	Hospital management	2
32-33	Disaster management	2
34-36	Database management and maintenance of case records	2

Note: This course shall be conducted in the Veterinary Clinical Complex (VCC), where students shall participate in diagnosis and treatment of diseased animals.

6. Teaching Schedule :UG, PG , PhD - Prepared by – Course Teacher – Year wise / Course Wise

7. Academic Calendar – UG, PG, PhD -Year wise / Semester Wise

8. College Classes Time Table:UG, PG, PhD - Year wise / Semester Wise

TIME-TABLE (M.V.Sc III Semester)
Academic Year 2024-2025

Day/Time	10.30 - 12.30	12.30 -1.30	1.30-2.30	2.30 - 3.30	3.30 - 4.30
Monday			B	VMD - 505 (Dr. Pawalkar)	
Tuesday			R	VMD - 591 (Dr. Waghmare)	
Wednesday	VMD -513 (Dr. Pajai)		E	VMD - 505 (Dr. Pawalkar)	
Thursday			A		
Friday			K		

9. Examination Time Table – UG, PG , PhD - Semester / Year wise - Theory and Practical

10. Result –UG, PG , PhD - Semester Wise / Year Wise