## ACADEMIC PROGRAMMES

### B.V.Sc. Courses:

<table>
<thead>
<tr>
<th>Course no.</th>
<th>Title of course</th>
<th>Credit hrs</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMD-411</td>
<td>Veterinary Clinical Medicine-I (General &amp; Systemic)</td>
<td>2+1</td>
<td>VII</td>
</tr>
<tr>
<td>VMD-412</td>
<td>Veterinary Preventive Medicine -I (Bacterial, Fungal &amp; Rickettsial Diseases)</td>
<td>2+0</td>
<td>VII</td>
</tr>
<tr>
<td>VMD-421</td>
<td>Veterinary Clinical Medicine -II (Metabolic &amp; Deficiency Diseases)</td>
<td>2+0</td>
<td>VIII</td>
</tr>
<tr>
<td>VMD-422</td>
<td>Veterinary Preventive Medicine –II (Viral &amp; Parasitic Diseases)</td>
<td>2+0</td>
<td>VIII</td>
</tr>
<tr>
<td>VMD-511</td>
<td>Animal Welfare, Ethics &amp; Jurisprudence</td>
<td>2+0</td>
<td>IX</td>
</tr>
<tr>
<td>VMD-512</td>
<td>Zoo/Wild Animal Breeding, Management, Nutrition and Healthcare (To be taught jointly with AGB, LPM, ANN, VPP and VSR)</td>
<td>1+1</td>
<td>IX</td>
</tr>
<tr>
<td>VMD-513</td>
<td>Pet Animal Breeding, Management Nutrition-and 'Health Care (To be taught jointly with AGB, LPM, ANN, VPP and VSR) Associated with the teaching of VPP-312</td>
<td>1+1</td>
<td>IX</td>
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<td></td>
<td><strong>Total Credits</strong></td>
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</table>

### Syllabus of

#### Semester- VII

**Veterinary Clinical Medicine-I**
(General & Systemic)

**VMD-411**

**Credit Hours 2+1=3**

**Theory**

History and scope of Veterinary Medicine, Concept of animal diseases. Concepts of diagnosis, differential diagnosis and prognosis. General systemic, states, hyperthermia, hypothermia, fever, septicemia, toxemia, shock and dehydration. Aetiology, clinical manifestations, diagnosis, differential diagnosis, treatment prevention and control of the following diseases of cattle,- buffalo sheep/goat

Practical

Clinical examination and diagnosis: Methods of clinical examination of individual ailing animals including history taking. Examination of animal inducting behaviour and general appearance: demeanour, voice, eating, drinking, defecation, urination, posture, gait condition of skin and body coats. Inspection of body: examination of head and neck, thorax, respiratory rates, rhythm, respiratory depth, type of respiration, cardiac sounds, chest symmetry, abdomen, external genitalia, mammary glands and limbs. Physical examination: temperature taking, palpation, percussion, auscultation. Examination of ears, eyes, conjunctiva, eye balls, mouth, submaxillary and other superficial lymph nodes, jugular furrow, oesophagus, trachea. Passing of stomach tube for locating obstruction if any. Examination of specific condition of thorax pneumothorax, haemothorax and hydrothorax Percussion/ auscultation of lung and cardiac areas. Examination of abdomen: ruminal mortility, consistency, microbial population and their motility in ruminal fluid, use of trochar and canula. Examination of liver and kidneys. Liver and kidney function tests.

Semester-VII

Veterinary Preventive Medicine-I
(Bacterial, Fungal & Rickettsial Diseases)

VMD-412 Credit Hours 2+0=2

Theory

Clinical manifestation, diagnosis, prevention and control of infectious diseases, namely mastitis, haemorrhagic septicaemia, brucellosis, tuberculosis, Jobne's disease. black quarter, tetanus, listeriosis, leptospirosis, campylobacteriosis, actinomycosis, actinobacillosis, enterotoxaemia, glanders, strangles, ulcerative lymphangitis, colibacillosis, fowl typhoid, putidurum disease, fowl cholera, avian mycoplasmosis, sphiachyætosësis, salmonellosis, swine erysipelas. Other important bacterial diseases of regional importance (e.g. contagious caprine pleuropneumonia, contagious bovine pleuropneumonia etc.). Bacterial diseases of bio terrorism Instance - anthrax, botulism etc. Chlamydosis, Q fever, anaplasmosis, Dermatophilosis, aspergillosis (brooders pneumonia), candidiasis, histoplasmosis, sporotrichosis, coccidiodomycosis, mycotoxicosis, etc.
Semester VIII

Veterinary Clinical Medicine -II
(Metabolic & Deficiency Diseases)

VMD-421 Credit Hour 2+0=2

Theory


Semester- VIII

Veterinary Preventive Medicine-II
(Viral & Parasitic Diseases)

VMD-422 Credit Hours 2+0=2

Theory

broochitis, coeneurosis, trichomonosis, blood protozoan infections (trypanosomosis, theileriosis, babesiosis etc.), canine eperythrozoon infection, coccidiosis.

Semester- IX

Animal Welfare, Ethics and Jurisprudence

VMD-511

Credit Hours 2+0=2

Theory


Semester- IX

Zoo/Wild animal Breeding, Nutrition, Management and Health Care

VMD-512

Credit Hours 1+1=2

Theory

Taxonomy of various genera of wild/zoo animals of India along with their descriptions. Ethology of wild life species. Basic principles of habitat and housing of various classes of wild and zoo animals. Population dynamics of wild animals, effective population size of wild animals in captivity/zoo/natural habitats. Planned
breeding of wild animals. Controlled breeding and assisted reproduction. Breeding for conservation of wild animals. Feeding habits, feeds and feeding schedules of zoo animals. Nutrient requirements of wild animals, Diet formulation and feeding of various age groups, sick and geriatric animals. Restrain, capture, handling, physical examination and transport of wild and zoo animals. Principles of anaesthesia, anaesthetics, chemicals of restraining, common surgical Interventions. Capture myopathy. Principles of zoo hygiene, public health problems arising from zoos. Prevention, control and treatment of infectious, parasitic, nutritional and metabolic diseases in zoo and wild animals. Acts and Rules related to Zoo and wild animals. National and international organisations and institutions interlinked to wild and zoo animals - rote and functioning.

**Practical**

Visit of nearby wild life sanctuary/zoo/wild animal centres to study the care and management, restraint, examinations, administration of medicines etc. in zoo animals. To study the housing, feeds and feeding schedule of zoo animals. To study the implementation of various Acts and Rules related to Zoo animals care and management Post mortem examination of wild and zoo animals. Handling, processing and interpretation of pathological materials from zoo and wild animals. Attending to common surgical interventions on zoo and wild animals. Planning for balanced feeding. Diet charts, preparation of balanced diet for new bone, growing and sick animals as oral and intravenous feeds. Preparation of modified diet under selected conditions. Hygienic preparation, preservation and storage of foods. (This course shall be taught jointly with the Departments of Livestock Production Management, Animal Nutrition, Animal Genetics and Breeding, Veterinary Pathology, and Veterinary Surgery and Radiology)

**Semester- IX**

**Pet/ Animal Breeding, Management, Nutrition and Health Care**

**VMD- 513**

**Credit Hours 1+1= 2**

**Theory**

Breeds of dogs- international pedigree breeds and those commonly seen in India. Pedigree sheet and major breed traits. Detection of oestrus and Breeding of dogs. Selecting a breed to keep, selection of a pup. Feeding of dogs- nutritional requirements of important breeds and different age groups. Management of dogs-kennels, care of pups and pregnant bitch. Dog shows-preparation for the shows, kennel clubs, important characters for judgment. Whelping. Utility of dogs- guarding, defense, patrolling, riot control, scouting, espionage, mine detection, tracking, guiding, hunting, races, retrieving, rescue, and other uses. Principles of training of dogs. Common diseases affecting dogs (bacterial, viral, parasitic, fungal, nutritional etc.) - their clinical manifestations,

**Practical**


Common breeds of cats, handling, restraint, examination, medication and surgical intervention in cats and kittens.

Identification of common pet birds. Handling of pet birds, their examination and administration of medicines.

(This course shall be offered jointly by the Departments of Veterinary Medicine, Livestock Production Management, Animal Nutrition. Animal Genetics and Breeding. Veterinary Pathology, and Veterinary Surgery and Radiology).

**Reference Books**

Degree programme offered

The Division of Veterinary Medicine is offering M.V.Sc. and Ph.D. (Veterinary Medicine) programme.

A. Master’s Degree Programme (M.V.Sc. - Veterinary Medicine)

It is a two year full time degree programme spread over four semesters. The annual intake capacity of the programme is 7 out of which 2 seats are under self financed category.

Syllabus

- As per course curriculum of BSMA, there were 16 courses of 29 credit hours in Division of Clinical Medicine & Jurisprudence and 13 courses of 29 credit hours in Division of Veterinary Epidemiology and Preventive Medicine and after combining the courses of Clinical and Preventive Medicine (deleting epidemiology courses) 19 courses of 34 credit hours are proposed in Veterinary Medicine.

- Courses pertaining to Preventive and Clinical Veterinary Medicine, are combined for each species to include internal as well infectious diseases

- New courses entitled “Veterinary Neonatology & Paediatrics” and “Clinical Nutrition of Sick Animals” have been designed.

M.V.Sc. Courses

<table>
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<tr>
<th>Course No</th>
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<th>Credit hrs</th>
<th>Semester</th>
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<tbody>
<tr>
<td>VMD-601</td>
<td>Ruminant Medicine- I</td>
<td>3+0</td>
<td>I</td>
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<tr>
<td>VMD-602</td>
<td>Ruminant Medicine- II</td>
<td>3+0</td>
<td>II</td>
</tr>
<tr>
<td>VMD-603</td>
<td>Production and Deficiency Disorders</td>
<td>2+0</td>
<td>I</td>
</tr>
<tr>
<td>VMD-604</td>
<td>Canine &amp; Feline Medicine- I</td>
<td>2+0</td>
<td>I</td>
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<tr>
<td>VMD-605</td>
<td>Canine &amp; Feline Medicine- II</td>
<td>2+0</td>
<td>II</td>
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<tr>
<td>VMD-606</td>
<td>Equine Medicine</td>
<td>2+0</td>
<td>II</td>
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<tr>
<td>VMD-607</td>
<td>Veterinary Neonatology &amp; Paediatrics</td>
<td>2+0</td>
<td>I</td>
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<tr>
<td>VMD-608</td>
<td>Avian Medicine</td>
<td>1+0</td>
<td>II</td>
</tr>
<tr>
<td>VMD-609</td>
<td>Swine, Yak and Camel Medicine (Diseases of Animal Species of regional importance)</td>
<td>1+0</td>
<td>II</td>
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<td>Course Title</td>
<td>Credits</td>
<td>Term</td>
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<tr>
<td>VMD-610</td>
<td>Zoo, Wild &amp; Laboratory Animal Medicine</td>
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<td>I</td>
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<tr>
<td>VMD-611</td>
<td>Clinical Diagnostic Techniques</td>
<td>0+2</td>
<td>II</td>
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<tr>
<td>VMD-612</td>
<td>Veterinary Emergency Medicine</td>
<td>1+1</td>
<td>I</td>
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<tr>
<td>VMD-613</td>
<td>Diseases of Animals caused by Toxicants</td>
<td>1+0</td>
<td>II</td>
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<tr>
<td>VMD-614</td>
<td>Clinical Nutrition of Sick Animals</td>
<td>1+0</td>
<td>II</td>
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<tr>
<td>VMD-615</td>
<td>Veterinary Jurisprudence and Animal Welfare</td>
<td>1+0</td>
<td>I</td>
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<tr>
<td>VMD-617</td>
<td>Clinical Practice- I</td>
<td>0+3</td>
<td>I</td>
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<tr>
<td>VMD-618</td>
<td>Clinical Practice- II</td>
<td>0+3</td>
<td>II</td>
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<tr>
<td>VMD-691</td>
<td>Masters Seminar</td>
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<td>I &amp; II</td>
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<td>VMD-699</td>
<td>Masters Research</td>
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<td><strong>Total</strong></td>
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</table>

**Essential courses (credit hours 24):** VMD 601, 602, 603, 604, 605, 606, 607, 611, 617, 618

**Syllabus of**

**VMD 601**  
**Ruminant Medicine - I**  
3+0

**Objective**
To study the internal and infectious (bacterial, fungal, chlamydia and rickettsial) diseases of bovine, sheep and goat.

**Theory**

**UNIT I**
General systemic states. Diagnosis, treatment and control of internal diseases of digestive, urinary, respiratory and nervous system.

**UNIT II**
Etiology, epidemiology, pathogenesis, diagnosis, treatment and control of bacterial, chlamydia and rickettsial diseases.

**Suggested Readings**
VMD 602 Ruminant Medicine - II 3+0

Objective
To study the internal and infectious (viral, parasitic, mycoplasma and prions) diseases of bovine, sheep and goats.

Theory
UNIT I
Diagnosis, treatment and control of internal diseases of cardiovascular system, blood and blood forming organs, musculoskeletal system, skin, eye and ear.

UNIT II
Etiology, epidemiology, pathogenesis, diagnosis, treatment and control of viral, parasitic, mycoplasma and prions diseases.

Suggested Readings


VMD-603 Production and Deficiency Disorders 2+0

Objective
Study of metabolic, production and mammary gland diseases of dairy animals.

Theory
UNIT I
General aspects, production diseases (parturient paresis, downer cow syndrome, ketosis, post-parturient haemoglobinuria, hypomagnesemic tetany, pregnancy toxaemia), rheumatism-like syndrome in buffaloes, Deficiency diseases (calcium, phosphorus, and vitamins), Deficiency diseases (iron, copper, cobalt, zinc, manganese, iodine, vitamin E and selenium).

UNIT II
Review of gross structure of the bovine mammary glands; physiology of lactation; types and pathogenesis of mastitis; defense mechanisms of bovine mammary glands; diagnostic tests; epidemiology, treatment and control of mastitis caused by contagious, environmental and opportunistic pathogens; specific and non-specific
viral lesions of teats and udder; teat stenosis; udder oedema; galactorrhagia, galactogogue; agalactia, heifer mastitis; mastitis-metritis syndrome.

Suggested Readings


Research & Review Papers in current Journals.

**VMD 604 Canine and Feline Medicine -I** 2+0

Objective
To study the internal and infectious (bacterial, parasitic, protozoal and rickettsial) diseases of dog and cat.

Theory
UNIT I

General systemic states and diagnosis, treatment and control of internal diseases of digestive system, liver and pancreas, cardiovascular system, blood and blood-forming organs and respiratory system. Specific needs of canine and felines, pet psychology, pet behavior and adaptation needs.

UNIT II

Etiology, epidemiology, pathogenesis, diagnosis, treatment and control of bacterial parasitic, protozoal, and rickettsial diseases.

Suggested Books


**VMD 605 Canine and Feline Medicine -II** 2+0

Objective
To study the internal and infectious (viral and fungal) diseases of dog and cat.

UNIT-I
Diagnosis, treatment and control of internal diseases of urogenital and nervous systems, musculoskeletal system, skin and endocrine system.

UNIT II

Etiology, epidemiology, pathogenesis, diagnosis, treatment and control of viral and fungal diseases.

Suggested Readings


VMD-606       Equine Medicine       2+0

Objective

To study the internal and infectious diseases of equines.

Theory

UNIT I

General systemic states. Diagnosis, treatment and control of internal diseases of gastrointestinal system, respiratory, musculoskeletal systems, urinary and nervous systems, skin, cardiovascular system, blood and blood forming organs,. Production diseases.

UNIT II

Etiology, epidemiology, pathogenesis, diagnosis, treatment and control of bacterial, parasitic, protozoal, rickettsial viral and fungal diseases.

Suggested Readings


Objectives

Study of diseases of non-infectious and infectious origin in neonates of farm and companion animals.

UNIT I

Perinatal management, perinatal adaptation, neonatal health, asphyxia, resuscitation, physical examination of the neonate, perinatal and neonatal mortality, colostrum and its substitutes, milk and milk replacers, manifestations of disease.

UNIT II

Immunization for neonates, fluid replacement therapy and nutritional support, blood and serum transfusion, antimicrobial therapy neonatal diarrhoea.

UNIT III

Various internal and infectious diseases of viral, bacterial, mycoplasmal, and parasitic origin, diseases acquired from dam, congenital disorders, metabolic disorders, nutritional deficiencies, chemical and plant poisoning, miscellaneous conditions (hyperthermia, hypothermia, starvation, arthritis), management of shock and other emergencies, detection and correction of failure of passive transfer of immunity.

Books Recommended


Research & Review Papers in current Journals.

Objective

To study the internal and infectious diseases of poultry and pet birds.

Theory

UNIT I
Diseases due to deficiency of vitamins (vitamins A, B complex, C, D, K); minerals (calcium, phosphorus, manganese, zinc) and sodium chloride, Miscellaneous diseases conditions, vices (cage layer fatigue, blue comb disease, beak necrosis, round heart disease, kerato-conjunctivitis, ascites, urolithiasis, fatty liver, kidney hemorrhagic syndrome, heat stroke, cannibalism, vent picking).

UNIT II

Bacterial diseases: *Escherichia coli* and Salmonella infections, coryza, fowl cholera, gangrenous dermatitis, mycoplasmosis, CRD. Viral diseases: Newcastle disease, infectious bursal disease, Marek’s disease, infectious bronchitis, inclusion body hepatitis, hydro-pericardium syndrome, avian pox, infectious laryngo-tracheitis, avian influenza, lymphoid leucosis, avian encephalomyelitis, infectious bronchitis. Fungal and parasitic diseases: aspergillosis, candidiosis, favus, mycotoxicosis, coccidiosis, roundworm and tape worm infestations, vaccination schedule etc.

UNIT III

Application of different diagnostic techniques for diagnosis and therapeutic management of systemic and infectious diseases of pet birds.

Suggested Readings


**VMD 609**

**Swine, Yak and Camel Medicine**

1+0

**Objective**

To study the internal and infectious diseases of swine, yak and camel.

**Theory**

UNIT I

General systemic states. Diseases of digestive, cardiovascular, respiratory, urogenital, nervous, skin and endocrine system.

UNIT-II
Etiology, epidemiology, pathogenesis, diagnosis, treatment and control of bacterial, parasitic, protozoal, rickettsial viral and fungal diseases.

**Suggested Readings**


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**VMD 610**

**Zoo, Wild and Laboratory Animal Medicine**

1+0

**Objective**

Study of diseases and health management of zoo, wild and laboratory animals.

**Theory**

UNIT I

Etiology, symptoms, diagnosis and management of diseases of zoo, wild, laboratory and exotic animals.

UNIT II

Restraint, feeding, behaviour and management of zoo, wild and laboratory and exotic animals.

**Suggested Readings**


VMD 611  Clinical Diagnostic Techniques  0+2

Objective
Study the diagnostic protocols and procedures for various diseases of farm and pet animals.

Practical

UNIT I
Clinical tests and their interpretation related to diseases of alimentary tract, liver, cardiovascular system, blood and blood-forming organs of various species of animals.

UNIT II
Clinical tests and their interpretation related to respiratory, urinary, nervous, endocrine, musculoskeletal and integumentary systems of various species of animals.

UNIT III
Application of various serological and immunological diagnostic tests for diagnosis of infectious diseases of farm and pet animals

Suggested Readings
Deborah C. Silverstein & Kate Hopper 2009. Small animal critical care medicine. Saunders Elsevier

VMD 612  Veterinary Emergency Medicine  1+1

Objective
Diagnosis and therapeutic management of various medical emergencies in farm and companion animals.

Theory
Diagnosis and therapeutic management of various emergencies of cardiovascular, respiratory, gastrointestinal, urinary and nervous systems, Diagnosis and therapeutic management of various emergencies of toxicities, sting bites and burns of farm and companion animals.

Practical
Monitoring critical ill patient, application of emergency care procedures for resuscitation of critically ill patient

**Suggested Reading**


**VMD 613**  
**Diseases of Animals Caused by Toxicants**  
**1+0**

**Objective**

Study of diseases caused by various toxicants in domestic and companion animals.

**Theory**

**UNIT I**

Diseases caused by physical agents and poisoning of organic and inorganic compounds. Diseases caused by farm chemicals and phytotoxins

**UNIT II**

Diseases caused by mycotoxins and zootoxins, Diseases caused by poisonous plants, snake and insect bites.

**Suggested Readings**


**VMD 614**  
**Clinical Nutrition of Sick Animals**  
**1+0**

**Objective**

To study the nutritional management of sick animals.

**Theory**

**UNIT I**

Nutritional management of sick animals (cattle, horse, dog and cat) in diseases of digestive, urinary, cardiopulmonary and endocrine systems.

**UNIT II**
Feeding of geriatric patients, parenteral nutrition of sick animals and use of nutraceuticals

**Suggested Readings**


Selected articles from journals.

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**VMD 615 Veterinary Jurisprudence and Animal Welfare 1+0**

**Objective**

Study of various aspects of veterinary jurisprudence and animal welfare.

**Theory**

UNIT I

Veterolegal aspects of ante mortem and post mortem examination.

UNIT II

Examination of wounds, blood, offenses, frauds in sale of animals and their products, animal cruelty and welfare. DNA analysis, Study of common laws related to veterolegal aspects.

**Suggested Readings**


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**VMD 616 Biosecurity Practices in Disease Prevention 1+0**

**Objective**

To study the application of various biosecurity measures for disease prevention.

**Theory**

UNIT I

Definition and principles of biosecurity, shedding of pathogens by infected animals, their survival in the environment, routes of entry and transmission of pathogens. Protection of susceptible animals, interruption of pathways of transmission, role of disinfection to break cycle of infection.

UNIT II
Chemical disinfectants, microbial resistance to disinfectants, physical methods of disinfection and sterilization. Biosecurity measures for collection of specimen from wild animals. Vaccines- success stories of disease eradication through vaccination.

**Suggested Readings**


**Objective**

Application of diagnostic and therapeutic protocols in practice

**Practical**

Diagnostic and therapeutic protocol application, sample collection, examination and management of sick farm and companion animals, Case presentations.

Note: This course shall be conducted in TVCC (Faculty Clinics), where students shall participate in diagnosis and treatment of diseased animals.

**VMD 618 Clinical Practice - II 0+3**

**Objective**

Application of diagnostic and therapeutic protocols in practice

**Practical**

Diagnostic and therapeutic protocol application, sample collection, examination and management of sick farm and companion animals, Case presentations.

Note: This course shall be conducted in TVCC (Faculty Clinics), where students shall participate in diagnosis and treatment of diseased animals.

**Doctoral degree programme (Ph.D.)**

It is three year full time degree programme spread over six semesters. The annual intake capacity of the programme is 2.

**Syllabus**

- As per BSMA guideline there were 16 courses of 38 credit hours in Epidemiology and Preventive Medicine and 14 courses of 29 credit hours in Clinical Veterinary Medicine. After combining Preventive and Clinical Veterinary Medicine courses, 19 courses of 27 credit hours have been proposed.

- Courses have been designed systemwise for farm and companion animals
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<th>Credit hrs.</th>
<th>Semester</th>
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<tr>
<td>VMD-701</td>
<td>Advances in farm animal gastroenterology</td>
<td>2+0</td>
<td>I</td>
</tr>
<tr>
<td>VMD-702</td>
<td>Advances in farm animal neurological, dermatological and musculoskeletal system diseases</td>
<td>1+0</td>
<td>II</td>
</tr>
<tr>
<td>VMD-703</td>
<td>Advances in farm animal cardiopulmonary and urological system diseases</td>
<td>1+0</td>
<td>I</td>
</tr>
<tr>
<td>VMD-704</td>
<td>Advances in farm animal neonatology &amp; pediatrics</td>
<td>1+0</td>
<td>II</td>
</tr>
<tr>
<td>VMD-705</td>
<td>Advances in production diseases</td>
<td>2+0</td>
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<tr>
<td>VMD-706</td>
<td>Herd health medicine</td>
<td>1+1</td>
<td>II</td>
</tr>
<tr>
<td>VMD-707</td>
<td>Advances in equine medicine</td>
<td>1+0</td>
<td>II</td>
</tr>
<tr>
<td>VMD-708</td>
<td>Advances in emerging and re-emerging infectious diseases of animals</td>
<td>2+0</td>
<td>II</td>
</tr>
<tr>
<td>VMD-709</td>
<td>Advances in canine &amp; feline gastroenterology</td>
<td>1+0</td>
<td>I</td>
</tr>
<tr>
<td>VMD-710</td>
<td>Advances in canine &amp; feline diseases of eye, ear, nervous and musculoskeletal system</td>
<td>2+0</td>
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<tr>
<td>VMD-711</td>
<td>Advances in canine &amp; feline cardiopulmonary and urological diseases</td>
<td>1+0</td>
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<tr>
<td>VMD-712</td>
<td>Advances in canine &amp; feline dermatology and endocrinology</td>
<td>1+0</td>
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<tr>
<td>VMD-713</td>
<td>Advances in canine &amp; feline neonatology and paediatrics</td>
<td>1+0</td>
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<td>VMD-714</td>
<td>Critical care</td>
<td>1+0</td>
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<td>VMD-715</td>
<td>Advanced clinical practice- I</td>
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<td>VMD-716</td>
<td>Advanced clinical practice- II</td>
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<td>II</td>
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<td>VMD-790</td>
<td>Special problem</td>
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<td>I &amp; II</td>
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<td>VMD-791</td>
<td>Doctoral seminar- I</td>
<td>1+0</td>
<td>I &amp; II</td>
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<td>1+0</td>
<td>I &amp; II</td>
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VMD 701  Advances in Farm Animal Gastroenterology  2+0

Objective
Study of contemporary advancements in farm animal gastroenterology

Theory
UNIT I
Advances in diagnosis, therapy and control of internal diseases of gastrointestinal system and associated organs.

UNIT II
Advances in diagnosis, therapy and control of infectious diseases related to gastrointestinal system

Suggested Readings
Selected articles from journals.

VMD 702  Advances in Farm Animal Neurological, Dermatological and Musculoskeletal System Diseases  1+0

Objective
Study of contemporary advancements in farm animal neurological, dermatological and musculoskeletal system diseases.

Theory
UNIT I
Advances in diagnosis, therapy and control of diseases of neurological, dermatological and musculoskeletal system of farm animals

UNIT II
Advances in diagnosis, therapy and control of infectious diseases related to neurological, dermatological and musculoskeletal system

Suggested Readings
Selected articles from journals.

VMD 703  Advances in Farm Animal Cardiopulmonary and Urological System Diseases  1+0

Objective
Study of contemporary advancements in farm animal cardiopulmonary and urological system diseases.
Theory

UNIT I

Advances in diagnosis, therapy and control of internal diseases of cardiopulmonary and urological system of farm animals

UNIT II

Advances in diagnosis, therapy and control of infectious diseases related to cardiopulmonary and urological system

Suggested Readings

Selected articles from journals.

VMD 704 Advances in Farm Animal Neonatology & Pediatrics 1+0

Objective

Study of contemporary advancements in farm animal neonatology & pediatrics

Theory

UNIT I

Advances in diagnosis, therapy and control of neonatal and pediatrics disorders of farm animals

UNIT II

Advances in diagnosis, therapy and control of infectious diseases related to neonates and pediatrics

Suggested Readings

Selected articles from journals.

VMD 705 Advances in Production Diseases 2+0

Objective

Study of recent advances in production diseases.

Theory

UNIT I

Latest advances in diagnosis, therapy and prophylaxis of metabolic diseases of farm and companion animals.
UNIT II

Latest advances in diagnosis, therapy and prophylaxis of nutritional diseases of farm and companion animals.

VMD 706 Herd Health Medicine 1+1

Objective

Adoption of holistic approach to address issues of herd health targeting production

Theory

UNIT I

An over-view of factors affecting the development of dairy industry in India, action plan for the development of dairying; the concepts of integrated multi-disciplinary approach in production medicine; components of a planned herd health programme; herd health programmes for improving productive performance

UNIT II

Designing a control programme for ecto and endo-parasites; antibiotics/chemicals residue prevention programme for protecting the consumers’ health; basic requirements for producing quality milk; interaction of milking equipment with udder health, evaluating the performance of milking system; analyzing and interpreting the farm records of production, reproduction and health

UNIT III

Handling of sick animals, the concept of closed herds for disease prevention; quarantine at farm level, Toxicities of fodders, vaccination programme; combating heat stress; review of common disease problems of dairy animals.

Practical

Hands-on training of the use of computer programmes for dairy health and production; tests for the detection of antibiotic residues in milk and meat; somatic cell counts and standard plate counts for evaluation of milk quality; drinking water analysis. Designing a herd health programmes for a dairy in a peri-urban setting.

Suggested Readings


Howard, J.L. 1993 Current Veterinary therapy III. Food Animal Practice W.B. Saunders Co., Philadelphia

Research & Review Papers in current Journals

VMD 707  Advances in Equine Medicine  1+0

Objective
Advances in internal and infectious diseases of equines.

Theory
UNIT I
Advances in diagnosis, treatment and control of internal diseases of gastrointestinal system, respiratory, musculoskeletal systems, urinary and nervous systems, skin, cardiovascular system, blood and blood forming organs.

UNIT II
Advances in pathogenesis, diagnosis, treatment and control of bacterial, parasitic, protozoal, rickettsial viral and fungal diseases.

Suggested Readings

VMD 708  Advances in Emerging and Re-Emerging Infectious Diseases Domestic of Animals  2+0

Objective
Study of contemporary advancements in emerging and re-emerging diseases of domestic animals and surveillance methods.

Theory
UNIT I
General concepts for emergence of new diseases and re-emergence of old diseases.

UNIT II
Epidemiology of globally and nationally important emerging/re-emerging diseases and designing of strategies for their prevention and control.

Suggested Readings
Selected articles from journals.

**VMD 709 Advances in Canine & Feline Gastroenterology 1+0**

**Objective**
Study of contemporary advancements in gastrointestinal system of canine & feline

**Theory**

UNIT I
Advances in diagnosis, therapy and control of internal diseases of gastrointestinal system and associated organs.

UNIT II
Advances in diagnosis, therapy and control of infectious diseases related to gastrointestinal system

**Suggested Readings**
Selected articles from journals.

**VMD 710 Advances in Canine & Feline Diseases of Eye, Ear, Nervous and Musculoskeletal System 2+0**

**Objective**
Study of contemporary advancements in canine & feline neurological and musculoskeletal system

**Theory**

UNIT I
Advances in diagnosis, therapy and control of internal diseases of neurological and musculoskeletal system of canine & feline

UNIT II
Advances in diagnosis, therapy and control of infectious diseases related to neurological and musculoskeletal system

**Suggested Readings**
Selected articles from journals.

**VMD 711 Advances in Canine & Feline Cardiopulmonary & Urological Diseases 1+0**

**Objective**
Study of contemporary advancements in canine & feline cardiopulmonary and urological system

**Theory**

UNIT I

Advances in diagnosis, therapy and control of internal diseases of cardiopulmonary and urological system of canine & feline

UNIT II

Advances in diagnosis, therapy and control of infectious diseases related to cardiopulmonary and urological system

**Suggested Readings**

Selected articles from journals.

**VMD 712 Advances in Canine & Feline Dermatology & Endocrinology**  
1+0

**Objective**

Study of contemporary advancements in canine & feline dermatology and endocrinology

**Theory**

UNIT I

Advances in diagnosis, therapy and control of internal diseases of skin and endocrine system of canine & feline

UNIT II

Advances in diagnosis, therapy and control of infectious diseases related to skin and endocrine system

**Suggested Readings**

Selected articles from journals.

**VMD 713 Advances in Canine & Feline Neonatology & Paediatrics**  
1+0

**Objective**

Study of contemporary advancements in canine & feline neonatology and paediatrics

**Theory**

UNIT I
Advances in diagnosis, therapy and control of neonatal diseases of canine & feline

UNIT II
Advances in diagnosis, therapy and control of infectious diseases related to neonates

Suggested Readings
Selected articles from journals.

VMD 714  Critical Care  1+0

Objective
To study the advances in life saving measures of critical cases in domestic animals.

Theory
UNIT I
Advances in structure and function of ICU. Common resuscitation measures, critical cases and transfusion therapy.

UNIT II
Advances in clinical and therapeutic management of various emergencies of farm and companion animals.

Suggested Readings
Selected articles from journals.

VMD 715  Advanced Clinical Practice – I  0+2

Objective
Application of the theoretical concepts in practice

Practical
Diagnostic and therapeutic protocol application, specimen collection, examination and management of sick farm and companion animals.

Note: This course shall be conducted in TVCC (Faculty Clinics) where students shall participate in diagnosis and treatment of diseased animals.

VMD 716  Advanced Clinical Practice – II  0+2

Objective
Application of the theoretical concepts in practice
Practical

Diagnostic and therapeutic protocol application, specimen collection, examination and management of sick farm and companion animals.

Note: This course shall be conducted in TVCC (Faculty Clinics), where students shall participate in diagnosis and treatment of diseased animals.

VMD 790        Special Problem        0+2

Objective

A short-term project work on some aspect of etio-pathogenesis, diagnosis and therapy of diseases of farm and companion animals.