Veterinary Medicine Program

Detailed First Year

Semester 1 (399 Hours)

1. Chemistry (CHIM) - 54 Hours
Scientific Content:
- Atomic structure and matter components
- Chemical bonds
- Organic chemistry nomenclature
- Isomerism and stereoisomerism
- Chemical thermodynamics
- Chemical equilibria

Time Distribution:
- Lectures: 42 hours (including 8 hours personal work)
- Practical work: 6 hours
- Tutorials: 6 hours

2. Cytophysiology (CYTOP) - 45 Hours
Scientific Content:
- Prokaryotic and eukaryotic cells
- Extracellular matrix and cytoskeleton
- Plasma membrane
- Endomembrane system
- Nucleus and cell division

Time Distribution:
- Lectures: 30 hours (including 6 hours personal work)
- Tutorials: 15 hours

3. Biochemistry (BIOCH) - 60 Hours
Scientific Content:
- Carbohydrates
- Lipids
- Amino acids and proteins
- Enzymology

Time Distribution:
- Lectures: 45 hours (including 9 hours personal work)
- Tutorials: 10 hours
- Practical work: 5 hours

4. Animal Histology 1 (HIST 1) - 45 Hours
Scientific Content:
- Epithelial tissues
- Muscle tissues

- Connective tissues
- Nervous tissue

Time Distribution:
- Lectures: 30 hours (including 4 hours personal work)
- Practical work: 15 hours

5. Zoology (ZOOL) - 45 Hours
Scientific Content:
- Fishes
- Mollusks
- Crustaceans
- Mammals
- Birds
- Reptiles

Time Distribution:
- Lectures: 30 hours (including 6 hours personal work)
- Practical work: 15 hours

6. Animal Ethnology (ETHNO A) - 45 Hours
Scientific Content:
- Fundamentals of animal production
- Ethnic classification of animals
- Animal identification
- Bovine ethnology

Time Distribution:
- Lectures: 30 hours (including 6 hours personal work)
- Tutorials: 7 hours
- Practical work: 8 hours

7. Anatomy 1 (ANAT 1) - 45 Hours
Scientific Content:
- Basic anatomical concepts
- Osteology
- Arthrology

Time Distribution:
- Lectures: 30 hours (including 6 hours personal work)
- Practical work: 15 hours

8. Genetics (GEN) - 45 Hours
Scientific Content:
- Mendelian genetics
- Molecular genetics
- Cytogenetics

Time Distribution:
- Lectures: 30 hours (including 6 hours personal work)

- Tutorials: 11 hours
- Practical work: 4 hours

9. Foreign Language 1 (LE 1) - 15 Hours
Scientific Content:
- Veterinary medical terminology
- Analysis of scientific terms

Time Distribution:
- Lectures: 15 hours

Semester 2 (374 Hours)

1. Cytophysiology (CYTOP) - 45 Hours**
Scientific Content:
- Cellular energetics
- Cellular respiration
- Muscle fibers
- Neurotransmission
- Cellular immunity
- Aging and cell death

Time Distribution:
- Lectures: 30 hours (including 6 hours personal work)
- Tutorials: 15 hours

2. Biophysics (BIOPH) - 42 Hours
Scientific Content:
- Geometrical optics
- Radiation
- Fluid mechanics
- Sound waves

Time Distribution:
- Lectures: 30 hours (including 6 hours personal work)
- Tutorials: 12 hours

3. Anatomy 1 (ANAT 1) - 45 Hours
Scientific Content:
- Myology

Time Distribution:
- Lectures: 30 hours (including 6 hours personal work)
- Practical work: 15 hours

4. Biochemistry (BIOCH) - 60 Hours
Scientific Content:
- Carbohydrate metabolism
- Bioenergetics
- Lipid metabolism

- Protein metabolism

Time Distribution:
- Lectures: 45 hours (including 9 hours personal work)
- Tutorials: 10 hours
- Practical work: 5 hours

5. Molecular Biology (BIOMOL) - 32 Hours
Scientific Content:
- Genetic engineering tools
- Molecular biology techniques
- Cloning vectors
- Genomics

Time Distribution:
- Lectures: 20 hours (including 4 hours personal work)
- Tutorials: 4 hours
- Practical work: 8 hours

6. Physiology 1 (PHY 1) - 60 Hours
Scientific Content:
- Internal environment physiology
- Cardiovascular physiology
- Respiratory physiology
- Renal physiology
- Thermoregulation
- Endocrinology

Time Distribution:
- Lectures: 45 hours (including 9 hours personal work)
- Tutorials: 15 hours

7. Embryology (EMBR) - 45 Hours
Scientific Content:
- Gametogenesis
- Embryonic development
- Fetal membranes
- Organogenesis

Time Distribution:
- Lectures: 30 hours (including 6 hours personal work)
- Practical work: 15 hours

8. Ethology & Animal Welfare (EBE) - 30 Hours**
Scientific Content:
- Fundamentals of ethology
- Animal welfare
- Animal welfare legislation

Time Distribution:
- Lectures: 25 hours (including 4 hours personal work)
- Practical work: 5 hours
9. Foreign Language 2 (LE 2) - 15 Hours
Scientific Content:
- Scientific terminology construction
- Medical terminology analysis

Time Distribution:
- Lectures: 15 hours

Annual Total: 773 Hours

Teaching Methodology

- Lectures: Theoretical foundations
- Tutorials (TD): Problem-solving sessions
- Practical Work (TP): Laboratory and field applications
- E-learning: Online resources and virtual labs

Evaluation System
Continuous Assessment (20-30%):
- Quizzes
- Case studies
- Practical reports

Final Exams (60-70%):
- Written tests
- Practical exams
- Oral presentations

Grading Scale:
- Excellent: 16-20
- Very Good: 14-15.99
- Good: 12-13.99
- Pass: 10-11.99
- Fail: Below 10

Learning Outcomes

By the end of the second year, students will be able to:
1. Demonstrate comprehensive knowledge of veterinary anatomy and physiology
2. Perform basic diagnostic laboratory techniques
3. Apply principles of animal nutrition and genetics
4. Analyze livestock production systems
5. Utilize biostatistical methods in research
6. Communicate scientific information effectively

Resources
- Laboratories: Fully equipped for histology, microbiology, and physiology

- Library: Access to veterinary journals and databases
- Farm Facilities: For practical animal husbandry training

Quality Assurance

- Regular curriculum reviews
- Student feedback mechanisms
- Accreditation by national veterinary education bodies

Veterinary Sciences - Second Year

Detailed Second Year

Semester 1 (425 hours)

1. General Bacteriology (BACT-G) - 45h
   - Structure, metabolism and genetics of bacteria
   - Pathogenic mechanisms and antimicrobial resistance
   - Practical lab techniques in bacterial identification

2. General Virology (VIR-G) - 30h
   - Viral structure and classification
   - Viral replication cycles
   - Diagnostic virology methods

3. Immuno-Vaccinology (IMV) - 30h
   - Immune system components
   - Antigen-antibody interactions
   - Vaccine development and mechanisms

4. Special Histology (HIST-S) - 45h
   - Microscopic anatomy of organ systems
   - Comparative histology across species
   - Histological staining techniques

5. Anatomy 2 (ANAT 2) - 45h
   - Cardiovascular and nervous systems
   - Splanchnology (digestive, respiratory, urogenital)
   - Comparative anatomy

6. Physiology 2 (PHYSIO 2) - 60h
   - Neurophysiology and muscle function
   - Digestive physiology
   - Endocrine regulation

7. Reproductive Physiology (PHYREP) - 45h
   - Reproductive cycles
   - Hormonal control
   - Breeding techniques

8. Special Ethnology (ETHNO-S) - 45h
   - Breed standards
   - Zootechnical indices
   - Animal husbandry practices

9. Animal Nutrition (ALIM) - 60h
   - Feed composition
   - Digestive processes
   - Metabolic utilization
10. Internship (STG) - 20h

- Clinical observation
- Basic veterinary procedures

Second Semester (380 hours)

1. Advanced Anatomy (ANAT 2) - 45h
   - Angiology (blood vessels)
   - Lymphatic system
   - Neuroanatomy

2. Advanced Reproductive Physiology (PHYREP) - 45h
   - Gametogenesis
   - Fertilization
   - Pregnancy and parturition

3. Applied Animal Nutrition (ALIM) - 60h
   - Feed analysis
   - Ration formulation
   - Nutritional disorders

4. Livestock Production (EPA) - 60h
   - Dairy production
   - Meat production
   - Wool production

5. Genetic Improvement (AGB) - 60h
   - Selection methods
   - Biotechnology applications
   - Breeding programs

6. Biostatistics (BIOSTAT) - 60h
   - Data analysis
   - Statistical tests
   - Research methodology

7. Scientific English (ANG) - 20h
   - Literature review
   - Scientific writing
   - Presentation skills

8. Bioinformatics (BIOINF) - 30h
   - Genomic analysis
   - Sequence alignment
   - Database mining

Annual Total: 805 Hours

Teaching Methodology

- Lectures: Theoretical foundations
- Tutorials (TD): Problem-solving sessions
- Practical Work (TP): Laboratory and field applications
- E-learning: Online resources and virtual labs

Evaluation System

Continuous Assessment (20-30%):
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- Case studies
- Practical reports

Final Exams (60-70%):
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Resources
- Laboratories: Fully equipped for histology, microbiology, and physiology
- Library: Access to veterinary journals and databases
- Farm Facilities: For practical animal husbandry training

Quality Assurance

- Regular curriculum reviews
- Student feedback mechanisms
- Accreditation by national veterinary education bodies

This program provides the essential foundation for advanced veterinary studies and professional practice, combining rigorous academic training with hands-on experience.

Veterinary Sciences - Third Year

Detailed Third Year

Semester I (310 Hours)

1. Physiopathology
   - Hours: 45 (39 lectures, 6 tutorials)
   - Content: Study of pathological mechanisms of organ dysfunction, including stress, shock, thermoregulation disorders, water-electrolyte imbalances, acid-base disorders, blood clotting diseases, and anemia.
   - Assessment: 70% exam, 30% continuous assessment.

2. Poultry Farming (Aviculture)
   - Hours: 50 (40 lectures, 10 practicals)
   - Content: Poultry farming techniques, types of farming, health management, prevention, economic and environmental impact.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

3. General Parasitology
   - Hours: 45 (35 lectures, 10 practicals)
   - Content: Classification of parasites, life cycles, effects on hosts, diagnostic and treatment methods.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

4. Special Bacteriology
   - Hours: 50 (40 lectures, 10 practicals)
   - Content: Study of pathogenic bacteria in animals, diagnostic methods, and antibiotic resistance.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

5. Pharmacology
   - Hours: 45 (33 lectures, 12 practicals)
   - Content: Basics of pharmacology, drug kinetics, drug interactions, medications used in animal treatment.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

6. Clinical Semiology
   - Hours: 45 (30 lectures, 15 practicals)
   - Content: Clinical examination techniques, disease diagnosis based on clinical signs.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

7. Wildlife and New Companion Animals (NAC)
   - Hours: 30 (20 lectures, 10 tutorials)
   - Content: Study of wildlife and new companion animals, handling techniques, common diseases.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

Semester II (355 Hours)

1. Physiopathology
   - Hours: 45 (39 lectures, 6 tutorials)
   - Content: Disorders of the heart, kidneys, respiratory system, digestive system, endocrine system, and nervous system.
   - Assessment: 70% exam, 30% continuous assessment.

2. Small-Scale Farming (Petits élevages)
   - Hours: 40 (30 lectures, 10 practicals)
   - Content: Rabbit farming, beekeeping, fish farming.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

3. General Parasitology
   - Hours: 45 (35 lectures, 10 practicals)
   - Content: Detailed study of insects and external parasites.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

4. Epidemiology
   - Hours: 30 (20 lectures, 10 tutorials)
   - Content**: Study of disease spread, control methods, design of epidemiological studies.
   - Assessment: 70% exam, 30% continuous assessment.

5. Pharmacology
   - Hours: 45 (33 lectures, 12 practicals)
   - Content: Anti-parasitic drugs, antifungals, anti-inflammatory drugs.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

6. Pathological Anatomy
   - Hours: 45 (33 lectures, 12 practicals)
   - Content: Study of pathological changes in tissues, disease diagnosis based on histological examination.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

7. Special Virology
   - Hours: 30 (20 lectures, 10 practicals)
   - Content: Study of viruses causing diseases in animals, diagnostic and control methods.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

8. Immunopathology
   - Hours: 30 (20 lectures, 10 tutorials)
   - Content: Study of immune diseases, allergies, immunodeficiency.
   - Assessment: 70% exam, 30% continuous assessment.

9. Clinical Semiology
   - Hours: 45 (30 lectures, 15 practicals)
   - Content: Clinical examination of the digestive, urinary, and reproductive systems.
   - Assessment: 60% exam, 20% continuous assessment, 20% practicals.

Annual Total: 665 Hours

Teaching Methodology

- Lectures: Theoretical foundations
- Tutorials (TD): Problem-solving sessions
- Practical Work (TP): Laboratory and field applications
- E-learning: Online resources and virtual labs

Evaluation System

Continuous Assessment (20-30%):
- Quizzes
- Case studies
- Practical reports

Final Exams (60-70%):
- Written tests
- Practical exams
- Oral presentations