

Mahanakorn University of Technology
Veterinary Medicine Curriculum (2003 Edition)
Course Description (Translation from the Thai Version)

Curriculum Structure

1. General Education Course	39	credits
1.1 Humanities and Social Sciences Subject group	9	credits
1.2 Language Subject group	12	credits
1.3 Sciences and Mathematics Subject group	18	credits
2. Professional Education Course	202	credits
2.1 Profession Subject group	196	credits
2.1.1 Basic Profession Subjects	11	credits
2.1.2 Animal Husbandry Subjects	32	credits
2.1.3 Preclinic Subjects	53	credits
2.1.4 Clinic Subjects	100	credits
2.1.4.1 Compulsory Subjects	76	credits
2.1.4.2 Prescribed Elective Subjects	24	credits
2.2 Specific Elective Subject group	6	credits
3. Free Elective Subjects	6	credits
	Total	247
		credits



1. General Education Course

1.1 Humanities and Social Sciences Subject group

Code	Subject	Credit (Lecture – Practice)
SOHU 0008	Society and Government	3(3-0)
Prerequisite :	-	
	Study Social Coexistence, Social Regulation Structure, Social Disciplines, Social Dominance, Government Theories and Practices, Impacts on Society Members, Evolution of Governance, Social Laws.	
SOHU 0009	General Psychology	3(3-0)
Prerequisite :	-	
	Definition and background of Psychology, Psychology Method, Principles of Genetics, Psychology and Personality Development and Perception Process, Perceptions, Awareness, Motivation Principle, Emotion, Biological Development, Classical Method of Adjustment, Instrumental Method of Adjustment, Learning, Remembrance, Forgetting, Principle of Personality Development, Intelligence, Creativity, Psychology and Social System, Intention Adjustment.	
SOHU 0027	Social Skills Development for career	3(3-0)
Prerequisite :	-	
	Meaning provided Desirable personnel in modern organizations; importance of Personality and personality development; Etiquette and Thai culture ; Human relation and organizational communication ; Morality, ethics and professional ethics; Leadership, thinking; Job Application; Job Letter; Cover Letter; Resume; Job Interview	
SOHU 0025	Society and Communication	3(3-0)
Prerequisite :	-	
	Importance of communication to society, economics, and politics; Principles and theories of communication; Personal communication; Organizational communication; Business communication; Marketing communication; Intercultural communication.	



Code	Subject	Credit (Lecture – Practice)
SOHU 0031	Communication Skills	3(3-0)

Prerequisite : -

History and evolution of communication; Communication process and communication skills development through verbal language i.e. listening, speaking, and writing and non-verbal language i.e. body language decoding; Observation of emotions and feelings; Communication psychology; Communication barriers; Effective communication; Multimedia presentation techniques; Semiotics process; New media influencing communication in business society, culture and information society

SOHU 0002	Society and Economics	3(3-0)
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Prerequisite : -

Economic Theory, Development of Economic Theory, Microeconomics and Macro Economics, Economics and Social Structure, Economics and Social Members, Economics Change, Development of Economics.

SOHU 0012	Thai Culture	3(3-0)
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Prerequisite : -

Definition of Culture, Evolution of Culture from The Past to Present, Way of Life and Norms, Thai Custom, Tradition and Culture Affecting Personality Development, Personality and Social Manner, Thai Culture from Urban and Rural Communities, Culture and Language and National Security.

SOHU 0022	Information Literacy	3(3-0)
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Prerequisite : -

Study skills and life in campus; Learning styles; Learning techniques; Test taking techniques; Information and knowledge retrieval; Reference books; Academic report writing; Senior project writing; Citation and citation writing.

SOHU 0026	Language for Communication	3(3-0)
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Prerequisite : -

General information about the use of Thai language: Skill of Thai language; listening, speaking, reading and writing for the accurate communication. Study the use of Thai grammar from the activities to link all four skills.



Code	Subject	Credit (Lecture – Practice)
SOHU 0003	Man and Society	3(3-0)

Prerequisite : -

Sociology and Anthropology; Characteristics of Sociology; Social organization; Socialization; Social institutions; Social changes; Thai Society; Human and education; Information and knowledge retrieval; Academic report writing; Academic Presentation, Human and Career, Job Application; Project Writing; Leadership, Communication in the workplace; Labour law; Constitutional law

SOHU 0014	Labour Relations and Society	3(3-0)
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Prerequisite : -

General knowledge about labour law, economics and society; History of labour law in Thailand; Significant and practical methods of labour protection law; Safety, occupational health and working environment; Thai and international labour standards; Labour relations law, Collective bargaining, Roles of employer's organization and employee's organization; Promotion of good labour relations; Labour court procedures; Worker's compensation law; Social security law.

SOHU 0008	Society and Government	3(3-0)
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Prerequisite : -

Evolution of Thai government from the past to the present; Democratic form of government with the King as Head of State; Characteristics of constitutional law; Rights, liberty and civic duties of Thai people; Independent organizations; Human rights; Problems of corruption and preventive solutions

SOHU 0021	Industrial Psychology	3(3-0)
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Prerequisite : -

Fundamentals of industrial psychology; Individual differences in the workplace; Human behaviors in organization; Values; Attitudes and job satisfaction; Motivation; Morale in business industry; Organizational communication; Human relations; Leadership; Environment and mental health problems in factories; Appropriate working behaviors; Industrial morality and ethics



Code	Subject	Credit (Lecture – Practice)
SOHU 0034	Sport Skill Development and Health	3(3-0)
Prerequisite : -		
History, benefits and fundamentals of sports and sports skills; Rules and regulations in sports; Safety in sports; Sports virtue and sportsmanship; Exercise principles for health promotion; Nutrition and health for quality of life development; Practice in various kinds of sports such as badminton, volleyball, petanque, tennis, football, boxing, Thai boxing.		
SOHU 0020	Logic	3(3-0)

Note No course description for Elective Subjects or Extracurriculum subjects available.



1.2 Language Subject group

Code	Subject	Credit (Lecture – Practice)
ENG 0105	Communication English I	3(3-0)
Prerequisite :	-	
	Study and practice of basic English with the assistance of English grammar. Topics are integrated with listening, reading, speaking and writing skills. Self-access learning and practice are assigned as parts of the course.	
ENG 0106	Communication English II	3(3-0)
Prerequisite :	ENG 0105 Communication English I	
	Study and practice of more advance English with the assistance of English grammar. Topics are integrated with listening, reading, speaking and writing skills. Self-access learning and practice are assigned as parts of the course.	
ENG 0107	Communication English III	3(3-0)
Prerequisite :	ENG 0105 Communication English I, ENG 0106 Communication English II	
	This course focuses on developing the English listening, reading, speaking and writing skills. Study English grammar from the activities integrated 4 skills.	
ENG 0108	Communication English IV	3(3-0)
Prerequisite :	ENG 0105 Communication English I, ENG 0106 Communication English II, ENG 0107 Communication English III	
	This course focuses on developing the English listening, reading, speaking and writing skills. Study English grammar from the activities integrated 4 skills.	



1.3 Sciences and Mathematics Subject group

Code	Subject	Credit (Lecture – Practice)
CHEM 0110	General Chemistry	4(3-3)
Prerequisite :	-	
	Definition; Atom and atomic mass; Chemical formula; Chemical bonding; Chemical equation; Chemical equilibrium; Gaseous; Chemical kinetics; Oxidation reaction; Electrochemistry; Thermochemistry; Chemical reaction; Acids and Bases; Basic of Organic chemistry	
CHEM 0111	Organic Chemistry	4(3-3)
Prerequisite :	-	
	Chemical bonding, Functional groups and naming; Some important organic compounds; Electron localization; Resonance; Spectroscopy; Chemical reaction	
PHYS 0100	General Physics	3 (3-0)
Prerequisite :	-	
	Measure and Measure unit, Single and double axis motion, Dynamic of particles, work and energy, Energy conservation and Linear momentum, Collision of particles, Rotational kinetics, Rotational dynamics, Angular momentum conservation, Equal oscillation, Oscillation, Mass gravity, Statics and Thermodynamics, Gas kinematics theory, Entropy and Second Law of Thermodynamics	
PHYS 0192	General Physics Laboratory	1 (0-3)
Prerequisite :	-	
	Conduct experiment to understand the content of PHYS 0100	
STAT 0116	Elementary Applied Statistics	3(3-0)
Prerequisite :	-	
	Statistical methods; measures of central tendency and dispersion; probability; random variable; discrete probability distributions; continuous probability distributions; sampling distributions; estimation; hypothesis testing; simple regression and correlation; elementary experimental designs; elementary analysis of variance.	
BUCP 0101	Introduction to computer and information science	3(3-0)
Prerequisite :	-	



Introduction to computer and information sciences is the study of history and development of computer sciences and the use of information science and utilities including data management and fundamental data searching.



2. Professional Education Course

2.1 Profession Subject group

2.1.1 Basic Profession Subjects

Code	Subject	Credit (Lecture – Practice)
VMGN 0110	Genetics	3(3-0)
Prerequisite : - Principle of hereditary; The breeds of animals; Breeding of animals; Breeding selection between and within population		
VMCB 0100	Cell Biology	3(3-0)
Prerequisite : - Cell biology is the study of introduction of cellular biology, molecular components of cell and cellular metabolism, techniques/methods for study of cells, components of cellular composition and plasma membrane, cellular cytoplasm and components of nucleus and gene, molecular biology of cells and physiology of cells.		
VMCZ 0110	Comparative Zoology	5(3-6)
Prerequisite : - Comparative zoology is the study of comparative anatomy of vertebrates, relationship of the body system of representative animals in each family, evolution of fundamental vertebrates e.g. fishes, frogs and rabbits.		

2.1.2 Animal Husbandry Subjects

Code	Subject	Credit (Lecture – Practice)
VMAH 0221	Animal nutrition	3(3-0)
Prerequisite : - Study of the animal digestive system; nutritional absorption of non – Ruminant animals (poultry and swine) and small – large Ruminants; Energy sharing and food mixing, Nutrition fact, Appropriate feeding standard for animal growth		



Code	Subject	Credit (Lecture – Practice)
VMAH 0211	Field Practice on Animal Husbandry I	1(0-3)
Prerequisite : -		
Field practice on Animal husbandry provides the students fully practical field-works related to the animal production in the government or private – sectors.		
VMAH 0222	Feed and Feeding	3(3-0)
Prerequisite : -		
Study of feed compositions, nutritional absorption and nutritional utilization, classifications and qualification of feeds, feedstuffs feed additives, evaluation of feeds, feeding standards and ration formulation as well as the feed manufacturing and feed quality.		
VMAH 0213	Management of Livestock farming	3(3-0)
Prerequisite : -		
Study livestock farm management, dairy cattle work, the use of machinery, animal feed storage planning, table of water management in housing and waste water disposal.		
VMAH 0214	Genetic Improvement of Livestock	3(3-0)
Prerequisite : -		
Genetic selection; Breeding and breed selection for cattle, buffaloes, pigs and poultry.		
VMAH 0215	Pasture Management	3(3-0)
Prerequisite : -		
Nature and problems of grassland development, Physiology of growth, Efficiency of Changing to animal production to support grassland development in tropical and surrounding area, the consideration of biological function of grazing system.		
VMAH 0216	Poultry Production	3(3-0)
Prerequisite : -		
Increase products and layer breeder chicken, pullets, gobbler, ducks, gooses and partridge.		



Code	Subject	Credit (Lecture – Practice)
VMAH 0217	Swine Production	3(3-0)
Prerequisite:	-	
	Breeding, feeding and management in pigs, Genetic selection of male and female pig, Disease and parasite in pigs.	
VMAH 0218	Dairy Production	3(3-0)
Prerequisite:	-	
	General knowledge of increase dairy cattle products and emphasizes on practical principle of dairy cattle caring, nutrition and feeding, milk collection, breeding and health of dairy cattle.	
VMAH 0219	Beef Production	3(3-0)
Prerequisite:	-	
	Study theories and practical principles of increasing beef cattle products, management, feeding management, relationship between beef cattle and grassland, housing for beef cattle, animal breeding and disease control, equipments and tools of beef cattle caring.	
VMAH 0220	Principles of Aquaculture	3(3-0)
Prerequisite:	-	
	Principles and history of commercial aquatic animal production; water quality; aquaculture equipments; Farm management; Pandemic and Epidemic diseases; Diseases prevention; Feed and feeding; Some important techniques used in aquatic animal production	
VMAH 0312	Field Practice on Animal Husbandry II	1(0-3)
Prerequisite :	VMAH0211 Field Practice on Animal Husbandry I	
	Field practice on Animal husbandry provides the students practical field-works related to the animal production in the government or private-sectors.	



2.1.3 Preclinic Subjects

Code	Subject	Credit (Lecture – Practice)
VMPC 0210	Veterinary Anatomy I	5(3-6)
	Prerequisite : VMCZ0110 Comparative Zoology	
	Veterinary gross anatomy I is the study of anatomy of dogs, cats, pigs, ruminants and perissodactyla (horse) etc. The course includes the following systems: locomotive system (bone, muscle, joint), digestive system, gastrointestinal system, urinary system, reproductive system, circulatory and lymphatic system, nervous system, endocrine system, organs of special sense and integumentary system.	
VMPC 0220	Veterinary Histology I	2(1-3)
	Prerequisite : VMCZ 0110 Comparative Zoology	
	Veterinary histology I is the study of structure and function of normal cells and basic tissues using light and electron microscopes. The course includes the study of cell origin and differentiation, cell and tissue morphology as well as function.	
VMPC 0230	Veterinary Embryo	2(1-3)
	Prerequisite : VMCZ0110 comparative zoology	
	Veterinary embryology is the study of the vertebrate development after fertilization of male and female gametes, process of fertilization until the formation of tissue layers, organogenesis and organ differentiation, maternal-fetal relationship during pregnancy, characters of placenta types, placental implantation and fetal positioning in uterus of various animal species, including teratogenesis and fetal congenital anomalies.	
VMPC 0240	Veterinary Physiology I	5(4-3)
	Prerequisite : CHEM 0110 General chemistry, CHEM 0111 organic chemistry, VMCB 0100 cell Biology	
	Veterinary physiology I is the study of mechanism and function of cells and organ systems including nervous, muscular, cardiovascular, respiratory as well as body fluid and blood.	



Code	Subject	Credit (Lecture – Practice)
VMPC 0311	Veterinary Anatomy II	5(3-6)

Prerequisite : VMPC 0210 Veterinary Anatomy I

Veterinary gross anatomy II is the study of the comparative anatomy of different types of animals for medical and surgical application. The course included anatomy of small animals such as dogs and cats; ruminants such as goats, sheep, cattle and buffaloes; pigs; perissodactyla such as horses, donkey and mules as well as avian species such as chickens and ducks; Important anatomy for clinical practice; Interpretation of the X-ray, Ultrasound, CT-scan, Endoscope

VMPC 0321	Veterinary Histology II	3(2-3)
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Prerequisite : VMPC 0220 Veterinary Histology I

Veterinary histology II is the study of the normal component of tissues composing the organ in the system and comparison of the tissues observed by light microscope and electron microscope, differentiation and function of cells, tissues and organs in the body system.

VMPC 0341	Veterinary Physiology II	5(4-3)
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Prerequisite : CHEM 0110 General chemistry, CHEM 0111 organic chemistry, VMCB 0100 cell Biology

Veterinary physiology II is the study of mechanism and function of cells and organ systems including digestive, urinary, endocrine and reproductive system as well as mammary gland &lactation -and acid-base balance.

VMPC 0343	Veterinary Biochemistry	3(1-3)
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Prerequisite : CHEM 0111 organic chemistry, CHEM 0110 General chemistry

Structure; Property; Synthesis and Metabolism of carbohydrates, lipids, proteins, and nucleic acids; Detection of some minerals in animal body and in food; Milk hygiene; Milk composition; Food digestion in young animals

VMPC 0344	Restraint in Animals	1(0-3)
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Prerequisite: -

Study to restrain the animals for controlling, prevention and treatment



Code	Subject	Credit (Lecture – Practice)
VMPC 0350	Veterinary General Pathology	4(3-3)
	Prerequisite : VMPC 0220 Veterinary Histology I, VMPC 0321 Veterinary Histology II	
	Veterinary General Pathology is the study of Cellular and Tissue degeneration including tumor cells and diagnosis	
VPMPC 0360	Veterinary Bacteriology	3(2-3)
	Prerequisite : VMCZ 0110 Comparative Zoology, VMCB 0100 Cell Biology	
	Veterinary Bacteriology is the study of classification of bacteria, their morphology and general physiology, preparation of culture media, culture, isolation and identification as well as the pathogenesis and mycoplasma in animals.	
VMPC 0361	Field Practice on Veterinary Pre-clinic	1(0-3)
	Prerequisite : VMPC 0360 Veterinary Bacteriology	
	Laboratory and field trip to the actual location of Pre-clinic in government and private organization.	
VMPC 0371	Veterinary Helminthology	4(3-3)
	Prerequisite : VMCB 0100 Cell Biology	
	Classification and biology of roundworm and flat worm morphology and characteristic; Life cycle and pathogenesis in animals, examining, controlling, prevention and treatment.	
VMPC 0372	Veterinary Protozoology	3(2-3)
	Prerequisite : VMCB 0100 Cell Biology	
	Classification and biology of Protozoa, Pathogenic Protozoa, Morphology and Characteristic, Life cycle and pathogenesis in animals, examining, controlling, prevention and treatment.	
VMPC 0373	Veterinary Entomology	3(2-3)
	Prerequisite : VMCB 0100 Cell Biology	
	Classification and biology of insects, Characteristic and structure, Life cycle and pathogenesis in animals, examining, controlling, prevention and treatment.	



Code	Subject	Credit (Lecture – Practice)
VMPC 0380	Veterinary General Pharmacology	4(3-3)
Prerequisite : VMPC0343 Veterinary Biochemistry		
Pharmacology including pharmacokinetics and pharmacodynamic of drugs used in veterinary medicine; Mechanism of drug action; Criteria of drug selection and chemotherapy		

2.1.4 Clinic Subjects

2.1.4.1 Compulsory Subjects

Code	Subject	Credit (Lecture – Practice)
VMCN 0451	Special Veterinary Clinical Pathology	4(3-3)
Prerequisite : all subject from Pre-clinic course		
Veterinary pathology is the study of pathological changes in each body system of domestic animals; Necropsy protocol and some important techniques; Diagnosis by the carcass examination; Pathological techniques for diagnosis		
VMCN 0452	Veterinary Clinical Pathology	3(2-3)
Prerequisite : all subject from Pre-clinic course		
Veterinary Clinical Pathology is the study of basic veterinary clinical laboratory for helping in diagnosis including hematology, urinalysis, fecal examination, serum biochemistry, CSF examination		
VMCN 0461	Veterinary Clinical Mycology	2(1-3)
Prerequisite : all subject from Pre-clinic course.		
Veterinary mycology is the study of classification of virulent fungi in humans and animals, morphology physiology, culture, isolation and identification as well as pathogenicity of fungi, toxic fungi, mycotoxin, disease and clinical signs caused by mycotoxin, control and prevention from mycotoxin and basic molecular technique.		
VMCN 0462	Veterinary Clinical Immunology	3(2-3)
Prerequisite : all subject from Pre-clinic course.		
Veterinary Clinical immunology is the study of Veterinary Immunology and Serology; Allergy reaction; Mechanisms of host immune response to the pathogens and parasites; Detection; Immunological techniques for disease diagnosis in animals		



Code	Subject	Credit (Lecture – Practice)
VMCN 0463	Veterinary Clinical Virology	3(2-3)
Prerequisite : all subject from Pre-clinic course.		
Veterinary virology is the study of identification of virus, their characteristics, general qualification and preparation of viral culture, methods for vital amplification, pathogenicity and pathogenic virus in animals. Viral culture and identification		
VMCN 0464	Veterinary Principle of Medicine and Surgery	1(0-3)
Prerequisite : all subject from Pre-clinic course.		
Principle of Medicine for diagnosis the diseases in animals; Protocols, Techniques and Equipments used for general physical examination; Principle and technique for Surgery; Principle of animal anesthesia		
VMCN 0471	Clinic for Aquatic Animals	5(4-3)
Prerequisite : All subject from pre-clinic course.		
Aquatic animal clinic is the study of diagnostic methods and technique, prevention, hygiene and treatment of diseases in aquatic animals e.g. fishes, shrimps and other aquatic animals. The course will provide laboratory practice and field practice in diseases diagnosis and treatment of aquatic animals. Field practice as mobile clinic is included.		
VMCN 0472	Clinic for wild life	4(3-3)
Prerequisite : All subject from pre-clinic course.		
Wildlife clinic is the study of wildlife diseases including metabolic diseases; nutritional disease; mycoplasma and viral diseases; parasitic diseases; bacterial diseases and diseases required surgical treatment. Field practice as mobile clinic is included.		
VMCN 0482	Veterinary Clinical Pharmacology and Therapeutics	2(1-3)
Prerequisite : All subject from pre-clinic course.		
Veterinary clinical pharmacology is the study of drugs used in clinical therapy; Anthelmintic drugs; Drug action; Drug interaction; Adverse effect of drugs; Systemic drug selection and dosage in each disease condition in several animal species; Prescription; Prescription writing		



Code	Subject	Credit (Lecture – Practice)
VMCN 0483	Veterinary Clinical Toxicology	2(2-0)
Prerequisite : All subject from pre-clinic course.		
Veterinary clinical toxicology is the study of characteristic of toxin related to animals, source of toxin from plants, animals and chemical agents etc. Mechanism of toxicity, clinical sign, diagnosis, prognosis, prevention and treatment of diseases caused by toxins in animals are included.		
VMCN 0490	Veterinary Public Health	3(2-3)
Prerequisite : All subject from pre-clinic course.		
Veterinary Public Health is the study of Veterinary epidemiology; Zoonoses; Environment hygiene; Management of public health in the community		
VMCN 0491	Food Hygiene	4(3-3)
Prerequisite : All subject from pre-clinic course.		
Food hygiene is the study of food quality control including meat inspection, milk hygiene, hygiene in the slaughterhouse, control of the tap water quality, fish hygiene and food technology.		
VMCN 0492	Veterinary Jurisprudence	1(1-0)
Prerequisite : All subject from pre-clinic course.		
Veterinary jurisprudence is the study of Veterinary Ethics, Rules and related laws including the law for prevention the transmission diseases, the law for controlling the veterinarian in animal therapy; the law for controlling the quality of animal food and drug etc.		
VMCN 0493	Veterinary Research Methodology	3(3-0)
Prerequisite : All subject from pre-clinic course.		
Veterinary research methodology is the study of definition and importance of researches, basic researches principle, methodology and reference searching technique in veterinary research		
VMCN 0510	Clinic for cattle, Buffaloes and small Ruminants	6(4-6)
Prerequisite : All subject from pre-clinic course.		
Ruminant clinic is the study of principle medicine for diagnosis, the diseases occur in body area and body system of cattle, buffaloes, goats and sheep, especially the methods, techniques and equipments use in the physical examination, demonstration of the clinical diagnosis, medical treatment and surgical treatment. Example: hoof disease, hoof surgery, horn surgery, stomach operation, cattle-bull, goat and male sheep castration by vasectomy or orchiectomy. Field practice as mobile clinic is included.		



Code	Subject	Credit (Lecture – Practice)
VMCN 0520	Clinic for obstetrics and Gynecology, Artificial Insemination and Andrology of Animals	6(3-9)

Prerequisite : All subject from pre-clinic course.

Obstetric gynecology and animal reproduction clinic is the study of demonstration and clinical practice in cattle, buffaloes, small artiodactyls and small domestic animals, general and special operative obstetric delivery, medical and surgical treatment including pregnancy diagnosis, managing dystocia, cesarean section, mammary gland disease, artificial insemination, disease of male genital organ, semen examination technique, andrology and mobile clinic.

VMCN 0530	Clinic for Horses	6(4-6)
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Prerequisite : All subject from pre-clinic course.

Equine clinic is the study of principle medicine for equine disease diagnosis, methods, techniques and equipments for general physical examination, medical record, necropsy, interpretation from clinical signs, laboratory diagnosis in healthy and sick animals, medical and surgical diseases, demonstration and clinical practice, horseshoe wearing, lameness diagnosis and treatment especially diseases of joints and ligaments, hoof disease and mobile clinic.

VMCN 0540	Clinic for Swine	6(4-6)
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Prerequisite : All subject from pre-clinic course.

Swine clinic is the study of principle medicine for swine disease diagnosis, methods, technique and equipment for general physical examination, medical record, necropsy, clinical sign interpretation, and laboratory diagnosis in healthy and sick animals, medical and surgical diseases, demonstration of general disease, treatment and disease of the reproductive system as well as the operative obstetric delivery and mobile clinic.

VMCN 0550	Clinic for Poultry	6(4-6)
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Prerequisite : All subject from pre-clinic course.

Poultry clinic is the study of principle medicine for poultry disease diagnosis, methods, technique and equipment for general physical examination, medical record, necropsy, clinical sign interpretation, laboratory diagnosis in healthy and sick animals, diseases in body part, demonstration and clinical practice for diagnosis especially laboratory diagnosis, semen injection technique, prevent and treatment of poultry diseases and mobile clinic.



Code	Subject	Credit (Lecture – Practice)
VMCN 0560	Clinic for Small Animal and Radiology	6(4-6)
Prerequisite : All subject from pre-clinic course.		
Clinic for small animal and Radiology is the study of medical, laboratory and radiological diagnosis of diseases; Methods; Techniques and Equipments for general physical examination; History taking; Medical record; OPD card recording; Diagnosis; clinical sign observation; Laboratory result interpretation; Medical and surgical diseases; Infectious diseases; Anesthesiology; Soft tissue surgery in small animal including neutering, ovariohysterectomy and gastrointestinal surgery, cesarean section, limb amputation; Basic orthopedic; X-ray technique, radiation safety, animal positioning and interpretation of X-ray films		

2.1.4.2 Prescribed Elective Subjects

Code	Subject	Credit (Lecture – Practice)
VMCN 0611	Clinical Practice and Special Problems in Cattle, Buffaloes and Small Ruminants	4(0-12)
Prerequisite : All subject from pre-clinic course and VMCN0510 Clinic for cattle, Buffaloes and small Ruminants		
Clinical practice in cattle and buffaloes in the private cattle or buffalo farms or in the unit of department of livestock development for diagnosis, treatment of medical and surgical diseases.		
VMCN 0621 Clinical Practice and Special Problems in Obstetrics and Gynecology, Artificial Insemination and Andrology of Animals 4(0-12)		
Prerequisite : All subject from pre-clinic course and VMCN0520 Clinic for obstetrics and Gynecology Clinical practice in obstetrics and gynecology, andrology and artificial insemination in the private farm or the government unit.		
VMCN 0631 Clinical Practice and Special Problems in Equine 4(0-12)		
Prerequisite : All subject from pre-clinic course and VMCN0530 Clinic for Equine Clinical practice in the private horse farm or in the government unit including the diagnosis, treatment of Medical and surgical disease.		
VMCN 0641 Clinical Practice and Special Problems in Swine 4(0-12)		
Prerequisite : All subject from pre-clinic course and VMCN0540 Clinic for Swine Clinical practice in the private swine farm or in the government unit including the diagnosis, treatment of medical and surgical diseases and prevention of swine diseases.		



Code	Subject	Credit (Lecture – Practice)
VMCN 0651	Clinical Practice and Special Problems in Poultry	4(0-12)
Prerequisite : All subject from pre-clinic course and VMCN0550 Clinic for Poultry		
Clinical practice in the private poultry farm or in the government unit including the diagnosis, treatment of medical and surgical diseases and prevention of avian diseases especially poultry.		
VMCN 0661	Clinical Practice and Special Problems in Small animal and Radiology	4(0-12)
Prerequisite : All subject from pre-clinic course and VMCN0560 Clinic for small animal and Radiology		
Clinical practice in private small animal hospital or in the unit of government sector including the diagnosis, treatment of Medical and surgical disease, technique and interpretation in radiology		
VMCN 0691	Clinical Practice and Special Problems in Aquatic Animals	4(0-12)
Prerequisite : All subject from pre-clinic course and VMCN0580 Clinic for Aquatic Animals		
Clinical practice in the private aquatic animal farm or in the government unit including the diagnosis, treatment of medical and surgical diseases.		
VMCN 0692	Clinical Practice and Special Problems in Wildlife	4(0-12)
Prerequisite : All subject from pre-clinic course and VMCN0581 Clinic for Wildlife		
Clinical practice in the wildlife in the private zoo or in the government unit including the diagnosis, treatment of medical and surgical diseases.		
VMCN 0693	Clinical Practice and Special Problems in Veterinary Public Health	4(0-12)
Prerequisite : All subject from pre-clinic course and VMCN0490Clinic for Veterinary Public Health		
Clinical practice in Veterinary public health in the government unit, private sector, factory and slaughterhouse including Epidemiology; Zoonoses; Management of Environmental hygiene		

2.2 Specific Elective Subject group

Code	Subject	Credit (Lecture – Practice)
ACCT 0204	Management Accounting in Business	3(3-0)
BUSI 0226	Organization and Management in Business	3(3-0)
ECON 0211	Micro Economics in Business	3(3-0)
FINA 0201	Business Finance	3(3-0)

3. Free Elective Subjects

Note No course description for Elective Subjects or Extra-curriculum subjects available

