THAI NGUYEN UNIVERSITY
UNIVERSITY OF AGRICULTURE AND FORESTRY

THE SOCIALIST REPUBLIC OF VIET NAM
Independence – Freedom - Happiness

CURRICULUM DESCRIPTION BACHELOR IN VETERINARY MEDICINE

(Followed/To be enclosed/ by the Decision No. 984/QĐ-ĐT dated July 23rd, 2018 issued by Rector of Thai Nguyen University of Agriculture and Forestry)

I. Curriculum description

1. Curriculum introduction

Curriculum of bachelor in veterinary medicine is adjusted in 2018 with the aim to train bachelors of veterinary medicine who have highly professional skill, good health, good ethics to respond to social demand.

This program is built and improved to respond to the requirements of employers. The subjects in the program are taught by the lecturers who have high qualification (PhD) in the Facullty of Animal Science and Veterinary Medicine.

The faculty of Animal Science and Veterinary Medicine is constantly improving and developing material facilities, educational and research activities to respond to the social demand in the fiels of animal science and veterinary medicine. The faculty animal science and veterinary medicine has been providing and building comprehensive educational invironment which includes theorical and practical sections to encourage the acitive and creative learning.

2. Thông tin chung về chương trình đào tạo General infomation

Curriculum title	Veterinary medicine
Major code	7640101
Awarding body	Thai Nguyen university of Agriculture and forestry - Thai Nguyen university
Dilopma	Bachelor in verterinary medicine
Level	Undergraduate
Credit total	151
Forms of training	Full time
Time of training	5 years
Candidates	- Candidates who are high school students and have national prizes, international prizes will be offered admission directly - Learners will be selected from high to low based on high school graduation results admistered by MOET

	- Enrollment range: The whole country
Grading scales	10
Graduating conditions	- Number of credits: 151 Credits - Overal score of course is at least 2.0 - Having a certification of physical education and national defence education - Having certificates in English proficiency and information computing
Job postion	- Working position: technical staff, researchers in the fields of Veterinary Medicine - Working place: Farms, production and trading of verterinary materials, veterinary drug, Viet Nam Department of aninal health, Regional of animal health office, Veterinary medicine control; Animal quarantine station; Agricultural services center…
Postgraduate studing	Graduates can study in Master program and Doctoral program at universities in the country or overseas
We refed some curriculums of other universities when build this curriculum	- Advanced education program of Veterinary medicine - Nong Lam University – Ho Chi Minh - Veterinary tranining program (common training program) – Nong Lam University – Ho Chi Minh - Veterinary tranining program – Viet Nam national university of agricultrue - Veterinary tranining program – Adelaide university – Australia. - Veterinary medicine tranining program – University of the Philippine
Upgraded time of curriculum description	July, 2018

3. Training program goal

3.1. General goal

The goals of the veterinary medicine tranning program are to train learners about knowledge and skills which help to undertake job positions in the fields of husbandry and veterinary medicine. Students after graduation have the ability to enroll postgraduate or to do the research in this field

3.2. Objectives

The training program have some specific objectives below

Program objective 1 (PO1): Having a healthy, good political and ethical qualities

PO2:Applying well the basic and profesional knowledge in the fields of husbandry and veterinary medicne

PO3:Applying proficiently professional knowledge and skills to solve the problems in reality production.

PO4: Being able to develop learning capacities, creativity thinking to contribuite new ideas, new techniques for jobs

PO5: Having comunication skills, independent-self working skills, teamwork skills; being able to grasp social demand to develop their jobs

4. Expected learning outcome (ELOs)

The training program is designed to ensure that after graduation students, they have the abilities in

ELO1: Understanding and applying basic principles of Marxism-Leninism; the revolutionary way of the Communist Party of Vietnam; Ho Chi Minh Thought in profesional reality and life.

ELO2: Applying the basic knowledge in the fields of natural sciences, social sciences to correspond with veterinary medicine field.

ELO3: Applying well basic knowledge to organize protecting livestock's health and applying in reality production

ELO4: : Applying well professionalknowledge and using modern techniques in diagnosis, prevention and treatment in animal's diseases.

ELO5: Applying about the knowledge of business, marketing to organize, manage production and start up in the professional field.

ELO6: Being able to give ideas and doing the research in the field of veterinary medicine

ELO7: Performing proficiently in clinical examination and collectional necrospy sample, veterinary hygiene inspection and slaughter control

ELO8: Performing non-clinical eaxamination techniques anf using modern techniques in preventation, treatment and controlling diseases in animal

ELO9: Performing proficiently prescribing, selection, using vaccines, medicines and pharmaceutical chemistries to prevent, treat disaese in livestocks

ELO10: Being able to give professional consult, transfer of science and technology in the field of veterinary medicine.

ELO 11: Being able to manage, trade and produce in field of verterinary medicine

ELO12: Applying information technology to organize, production manage, advertise product and to start-up.

ELO 13: Having communitive, prenstation, bargaining skills, effective independent- self working and team-working. English is level is at least B1.

ELO14: Having seriuos working attitude, , having professional ethics and performing animal welfare .

ELO15: Having to understand about general social problems, professional laws

5. The matrix link between program objectives (POs) and expected learning outcomes (ELOs)

POs	Expected learning outcomes (ELOs)														
	Knowledge						Skill							Attitude	
	Foudation		Basic	Profession			Profession						Soft		
	ELO 1	ELO 2	ELO 3	ElO 4	El O5	El O6	El O7	El O8	El O9	ElO 10	ElO 11	ElO 12	ElO 13	ElO 14	ElO 15
PO1	x													x	
PO2		x	x	x	x	x									
PO3							x	x	x	x	x	x			
PO4															x
PO5													x		

6. The matrix link between the development of knowledge, skills and competence levels of expected learning outcomes of the training program

THE MATRIX LINK BETWEEN THE DEVELOPMENT OF KNOWLEDGE, SKILLs AND COMPETENCE LEVELS OF EXPECTED LEARNING OUTCOMES OF THE TRAINING PROGRAM

List	Courses	ELOs														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Phylosophy of Marxism-Leninism	a	c	-	-	-	-	-	-	-	-	-	-	b	b	b
2	Political economics	a	c	-	-	-	-	-	-	-	-	-	-	b	b	b
3	Scientific socialism	a	c	-	-	-	-	-	-	-	-	-	-	b	b	b
4	Ho Chi Minh's thought	a	a	-	-	-	-	-	-	-	-	-	-	a	a	a
5	History of Vietnamese Communist Party	a	a	-	-	-	-	-	-	-	-	-	-	a	a	a
6	Chemistry	-	c	b	-	-	-	-	-	-	-	-	-	-	-	c
7	Biology	-	b	b	-	-	-	-	-	-	-	-	-	-	-	c

List	Courses	ELOs														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
8	General Sociology	-	b	-	-	-	-	-	-	-	-	-	-	a	a	b
9	Physics	-	a	a	a	b	c	c	c	c	b	b	c	a	a	b
10	Mathematics	c	a	b	-	c	c	-	-	-	-	c	a	a	a	b
11	English 1	-	-	-	-	-	-	-	-	-	-	-	c	c	-	-
12	English 2	-	-	-	-	-	-	-	-	-	-	-	c	b	-	-
13	English 3	-	-	-	-	-	-	-	-	-	-	-	c	a	-	-
14	General Informatics	-	-	-	-	-	-	-	-	-	-	-	b	b	c	-
15	Probability and Statistics	c	a	-	-	c	c	c	-	-	c	c	b	a	a	a
16	Management science	-	-	-	-	-	-	-	-	c	c	c	a	-	-	-
17	General microorganism	-	-	b	b	c	b	c	-	c	c	c	-	c	b	c
18	Environmental Ecology	c	c	-	-	-	c	c	c	-	-	-	-	-	b	a
19	Vietnam Economic Geography	b	c	-	-	-	c	c	c	-	-	-	-	-	b	a
20	State and Law	c	b	b	-	-	-	-	-	-	-	-	-	-	b	c
21	Environmental Pollution	b	c	-	-	-	c	c	c	-	-	-	-	-	b	a
22	Molecular Biology	-	c	-	-	-	c	c	c	-	-	-	-	-	b	a
23	Scientific Approach Methodology	-	-	-	-	-	-	-	-	c	c	c	a	-	b	-
24	Works Safety and Hygiene	-	-	-	-	-	-	-	-	-	-	-	a	a	a	-
25	Athletic sport	-	-	-	-	-	-	-	-	-	-	-	-	a	a	a
26	Volleyball	-	-	-	-	-	-	-	-	-	-	-	-	a	a	a
27	Badminton	-	-	-	-	-	-	-	-	-	-	-	-	a	a	a
28	Sepatakraw	-	-	-	-	-	-	-	-	-	-	-	-	a	a	a
29	Kung fu	-	-	-	-	-	-	-	-	-	-	-	-	a	a	a
30	Basketball	-	-	-	-	-	-	-	-	-	-	-	-	a	a	a
31	Football	-	-	-	-	-	-	-	-	-	-	-	-	a	a	a
32	Scietific animal’s body	-	c	a	b	-	c	c	c	c	c	c	c	b	a	b
33	Animal Physiobiology-biochemistry	-	-	a	b	c	b	c	b	b	b	b	c	b	a	b
34	Animal nutrition and feed	-	-	a	b	c	b	a	c	c	c	b	c	c	b	b
35	Veterinary pharmacology	-	c	a	b	b	b	-	-	a	b	b	c	b	a	b
36	Veterinary disease	-	-	b	a	c	c	a	b	b	b	c	c	c	a	b

List	Courses	ELOs														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	diagnosis															
37	Veterinary Microorganism	-	-	b	a	-	b	b	b	c	b	-	c	a	a	b
38	Immunology of veterinary	-	-	a	a	b	a	b	b	b	a	b	b	b	b	b
39	Veterinary Epidemionogy	-	-	b	b	-	c	b	b	-	c	-	b	b	a	a
40	Veterinary pathology	-	-	b	b	c	a	a	a	c	b	-	c	b	a	b
41	Genetics – breed livestocck	-	-	b	c	c	b	c	c	c	c	-	c	b	b	b
42	Animal Reproductional technology	-	-	b	c	b	b	c	-	-	c	-	b	b	b	b
43	Veterinary Toxicology	-	c	a	a	-	b	b	b	b	b	c	-	c	b	c
44	Diagnostic imaging	-	c	b	a	c	c	a	a	b	c	c	c	c	a	b
45	Practice of veterinary clinical examination	-	-	b	b	c	b	a	a	b	c	c	c	c	a	b
46	Practice of non - veterinary clinical examination	-	-	-	a	-	b	-	a	-	b	-	c	b	a	b
47	Veterinary infectiuos disease	-	-	a	a	b	b	a	b	a	a	c	b	a	a	b
48	Parasite and veterinary parasitology	-	-	a	a	b	b	a	b	a	a	c	b	b	b	c
49	Veterinary Internal Desease	-	-	a	a	b	c	b	b	b	b	b	c	b	a	a
50	Veterinary Surgery diseases	-	-	a	a	b	b	b	b	a	b	b	c	b	a	b
51	Veterinary obstetrical diseases	-	-	a	a	b	c	a	a	a	b	b	c	a	a	b
52	Diseases in dogs and cats	-	-	a	a	b	c	a	a	a	b	b	c	b	a	b
53	Preparation and inspecting of veterinary drugs	-	c	b	c	-	c	-	-	c	c	b	b	b	a	b
54	Animal welfare and professional laws	-	-	c	-	b	-	-	-	-	-	a	b	-	a	a
55	Hygiene in animal	c	b	c	b	-	c	b	b	c	b	-	c	b	a	b
56	Aquatic diseases	-	-	a	b	b	a	b	c	a	a	b	c	b	a	c
57	One health in veterinary medicine	-	-	a	b	b	c	c	c	c	c	c	c	b	a	a

List	Courses	ELOs														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
58	Scientific research smethod	-	b	b	b	-	a	-	c	-	b	-	-	c	a	b
59	Vaccine production technology and using	-	-	a	a	c	c	-	c	a	b	c	-	b	a	b
60	Vệ sinh an toàn thực phẩm Food safety and hygence	-	c	a	c	c	b	b	-	-	c	c	-	b	b	b
61	Wild animal diseases	-	-	a	a	-	c	-	b	a	-	-	-	b	a	b
62	Animal production quarantine	-	a	b	-	-	b	a	-	-	c	c	-	b	a	a
63	Zoonosis	-	-	a	a	b	b	b	b	b	a	a	b	b	b	a
64	Nutritional disease	-	-	a	a	b	c	b	b	b	b	b	c	b	a	b
65	Valuable and rare animal disease	-	-	a	a	b	b	a	a	a	a	a	b	b	a	a
66	Veterinary acupuncture	-	-	b	b	-	c	b	c	c	b	-	c	c	b	c
67	Environmental and animal husbandry waste management	c	c	c	b	-	c	b	b	b	b	-	c	b	a	b
68	Using biotechology in veteriary medicine	-	c	c	a	c	b	b	a	b	c	c	c	b	a	b
69	Farm administer	-	b	b		B	b	-	-	-	-	B	b	c	b	b
70	Practice in veterinary Surgery	-	-	b	a	b	c	a	a	a	b	b	b	b	a	b
71	Practice in veterinary Surgery - obstetric	-	-	b	a	b	c	a	a	a	b	b	b	b	a	b
72	Practice in clinic and non-clinic in aquatic disease	-	-	a	a	c	b	a	a	b	c	b	c	c	a	c
73	Practice surgery – obstetric in pets	-	-	b	a	b	b	a	a	a	b	b	b	a	a	a
74	Practice grooming in pets	-	-	b	b	b	b	-	-	b	b	-	b	b	a	a
75	Practice to diagnose and treat diseases in pets	-	-	b	a	b	b	a	a	a	b	b	b	a	a	a
76	Practice to take care and instruct pets	-	-	a	a	b	b	a	a	a	b	c	b	b	a	a
77	Professional animal husbandry	b	b	a	b	c	b	b	a	a	a	b	c	c	a	b

List	Courses	ELOs														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
78	Maketing	-	-	-	-	b	-	-	-	-	-	c	-	c	c	-
79	Transaction and bargaining in business	-	-	-	-	b	-	-	-	-	-	b	b	a	b	b
80	Business start up	-	-	c	-	a	-	-	-	-	-	-	a	b	c	a
81	Value chain analysis	-	-	-	-	b		-	-	-	-	-	-	-	b	-
82	Using Blockchain technology in agriculture	-	-	-	-	a	-	-	-	-	-	b	b	-	b	b
83	Building and development name trade	-	-	-	-	b	-	-	-	-	-	c	b	b	b	c
84	Business admistration	-	-	-	-	a	-	-	-	-	-	a	c	-	-	b
85	Preservation and processing of agricultural products	-	-	-	-	c	-	c	-	-	-	-	-	-	-	-
86	Agroforestry system															
87	Food Technology	-	-	-	b	c	-	c	-	-	-	-	c	-	c	c
88	Bio Biorisk Management	-	-	-	b	a	-	-	-	-	-	c	-	b	b	b
89	Professional crop sciene	-	-	-	-	-	-	-	-	-	-	-	-	c	-	-
90	Environmental technology	-	-	b	-	a	c	-	-	-	-	-	-	-	c	c
91	Visiting veterinary drug factory, farm and veterinary hospital	-	-	-	-	-	-	c	c	-	-	-	-	-	c	a
92	Vaccination on field trip	-	-	b	b	c	c	a	b	a	b	c	c	c	a	b
93	Epidemic management and vetrinary practice in poultry farms	c	c	a	a	c	c	b	b	a	a	b	c	c	a	a
94	Epidemic management and vetrinary practice in swine farms	c	c	a	a	c	c	b	b	a	a	b	c	c	a	a
95	Epidemic management and vetrinary practice in ruminant farms	c	c	a	a	c	c	b	b	a	a	b	c	c	a	a
96	Field practice for thesis															
97	Basic technical manipulation in laboratory	-	c	c	b	-	c	a	b	-	b	-	-	-	a	b
98	Using epidemic	-	-	c	b	-	c	-	b	-	c	-	b	b	b	b

List	Courses	ELOs														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	management software															
99	Clinical examination, prevention and treatment disease skills at veterinary infirmary	-	-	a	a	b	c	a	a	a	b	b	c	b	a	a
100	Productive planning and using trading in veterinary drugs management software	-	-	-	b	b	-	-	-	-	-	-	a	b	b	a
101	Veterinary clinical examination skills (field trip)	-	-	b	b	c	b	a	a	b	c	c	c	c	a	b

7. Methods of teaching and learning, assessement methods

7.1. Methods of teaching and learning

7.1.1. Teaching methods

Each subjects in training program are taught by difference teaching methods such as: presentaion, seminar, case study, discussion, teamwork, practice…. Presentation method is used in theorical knowledge section to help students have undersatanding clearly about theorical content

Giving excercise method is used in exercise knowledge section. The method object is applying the theoory to slove and explan case study in reality that relate to subject and major. One other hand, this method helps students having teamworking skills, having ability self-control and responsibility improvement lifelong learning .

Discussion method is applied in seminar knowledge section. The object of this method which practise students at presentaion skill, discussion skill, self-study skill, teamworking skill. This method helps students having teamworking skills, having ability self-control and responsibility improvement lifelong learning .

Practicc method is used in practical section with object that practise experiment skill in animal to hepl students checking the theorical knowledge and provement professional skill

7.1.2. Teaching quality improvement

- The cirriculum is reviewed perodical 2 years to adjust meeting the stakeholder requirements

- In each semester, the division constructs the schedule lecturer's class attendence, especially young teachers to discussion and sharing knowledge and teaching methods, in order to improve teachers' capacity.

- All of subject in cirriculum are colleted feedback from students about the ethical quality, pedagogical style, responsibilities of the lecturer.

8.2. Assessement method

8.2.1. Assessement form and score weighting

- Using 10 scale score for all of course.

8.2.2. Assessement criterias and scale score (Rubric)

The example: Assessment matrix description for course learning outcomes and criterias of course: Veterinary internal medicine

Assessment matrix description for CLOs

CLOs	Attendance	Mid-term exam	Final exam
	(20%)	(30%)	(50%)
CLO1	X	X	X
CLO2	X	X	X
CLO3	X	X	X
CLO4	X	X	X
CLO5	X	X	X
CLO6	X	X	X
CLO7	X	X	X
CLO8	X	X	X
CLO9	X	X	X
CLO10	X		X
CLO11	X		X
CLO12	X		X
CLO13	X		X
CLO14	X	X	X
CLO15	X	X	X

Assessement rubric: scale score: 10

Overal score = (attendence * 0.2) + (mid-exam*0.3) + (Final- exam*0.5)

***** Attendence score (weighting 0.2) = (Rubic1*0.5) + (Rubic 2* 0.5)

Rubric 1: Attendant assessment (20%)

Criteria	Weighting	Excellent	Good	Average	Below	Weak < 4,0

	(%)	(8,5 – 10)	(7,0 – 8,4)	(5,5 – 6,9)	Average (4,0 – 5,4)	
Attend theorytical and disscusion al sessions	60%	Attend theorytical and disscusional sessions fully.	Attend 90-99% theorytical and disscusional sessions	Attend 86-89% theorytical and disscusional sessions	Attend 80-85% theorytical and disscusional sessions	Attend below 80% theorytical and disscusional sessions
Attitude in participatin g theoretical, practical hours and discussion	40%	Students express ardently, Very proficiently practical skills of practical lessons, Voluntee to answer the questions, the answers are well	Students express, proficiently practical skills of practical lessons, voluntee to answer fairly well the questions	Students express rarely, have practical skills of practical lessons, Students answer when lecturer asks. The answer is not good	Students do not express, and do not answer the question, Lack of practical skills of lessons. Students answer when teacher ask	Students do not express, and do not answer the question. Do not have practical skills of lessons

Rubric 2: Topical assignmen assessment

Criteria	Weighting (%)	Excellent (8,5 – 10)	Good (7,0 – 8,4)	Average (5,5 – 6,9)	Below Average (4,0 – 5,4)	Weak < 4,0
Topical assignmen 1	50	Fully present and correct the content, topic and related contents contribute to expanding knowledge of the topic	Fully present and correct the content, topic Present clearly, easy to understand,	Fully present the content as requiered, some contents are not correct Present readable,	Lack of some contents as requiered by the topic. Present not fluently, does not focus on	Present inappropriate content as required by the topic, or the content is too sketchy, does not provide

		Present attractive, clearly, easy to understand, focus on the content, creative in presentation method, receive interested questions. Fully answer the questions clearly and appropriately Show the collaboration among team members clearly. There are distributed duties among them	focus on the content Answer above >70% - 80% of questions and logical Show the collaboration among team members clearly. There are distributed duties among them but not reasonable	difficult to follow, does not focus on the content Answer above >50% - 70% of questions Have the collaboration among team members but not clearly	the content and attract the audience. Answer 30%- 50% of questions Do not have the collaboration among team members, only one or some members prepare the presentation	necessary information. Present too sketchy, the audience cannot understand the content. Answer any question The presentation was taken out from other sources, not directly compiled
Topical assignmen 2	50	Assessements are the same too topic 1				

* ***Mid-exam (weighting 0.3) =*** *Rubric 3 x 0.6 + Rubric 4 x 0.4*

Rubric 3: Mid-Term exam assessment

Criteria	**Weighting (%)**	**Excellent (8,5 – 10)**	**Good (7,0 – 8,4)**	**Average (5,5 – 6,9)**	**Below Average (4,0 – 5,4)**	**Weak < 4,0**
Answer multiple choice questions	100	According to mark scale in answer	According to mark scale in answer	According to mark scale in answer	According to mark scale in answer	According to mark scale in answer

Or: essay exam: understanding and applying the course knowledge to construct or slove the requirements	100	To have a thorough grasp of basic knowledge CLO1, CLO2, CLO3. To Apply fluently knowledge to slove the requirements	To grasp of basic knowledge CLO1, CLO2, CLO3. To Apply knowledge to slove the requirements	To grasp afew basic knowledge CLO1, CLO2, CLO3. Be able to knowledge to slove the requirements	To grasp afew basic knowledge CLO1, CLO2, CLO3. Be able to knowledge to slove some of requirements. The answers are not clear	Do not grasp of the subject's knowledge CLO1, CLO2, CLO3 Do not apply the knowledge to answer the questions

Rubric 4: Thực hành Practical assessment

Criteria	**Weighting (%)**	**Excellent (8,5 – 10)**	**Good (7,0 – 8,4)**	**Average (5,5 – 6,9)**	**Below Average (4,0 – 5,4)**	**Weak < 4,0**
Practice 1	50	- Present the required content fully, correctly; give more extra information of experience. - Very proficiently practical skills of related topics. Show creativeness, practice well in antisepsis	- Present the required content fully, correctly; give more extra information of experience - Very proficiently practical skills of related topics. Practise well in antisepsis	- Present the required content fully, correctly - Have practical skills of related topics. Practice in antisepsis	- Present inadequately some required content of the topic - Lack of practical skills of related topics. Practice in antisepsis	- Present incorrectly some required content; or the content is not enough. - Do not have practical skills of related topics. Do not practical in antisepsis
Practice 2	50	Assessements are the same too practice 1				

**** Final exam score (weight 0.5)*** **=** Rubric 5 *1

Criteria	Weighting (%)	Excellent (8,5 – 10)	Good (7,0 – 8,4)	Average (5,5 – 6,9)	Below Average (4,0 – 5,4)	Weak < 4,0
Essay exam: understanding and applying the course knowledge to construct or slove the requirements	100	To accumulate fully the basic knowledge of subject. To apply fluently the knowledge to answer the questions	To accumulate fully the basic knowledge of subject. To apply the knowledge to answer the questions	To accumulate the basic knowledge of subject. Be able to apply the knowledge to answer the some of questions	To be able to retain afew subject's knowledge. To apply the kowledge in answers the questions but its not enough	Be not able to retain of subject's knowledge. Do not have ability to apply the knowledge in answer the question
Answer multiple choice questions	100	According to mark scale in answer	According to mark scale in answer	According to mark scale in answer	According to mark scale in answer	According to mark scale in answer

II. Training program description

1. Training program structrure

The number of credits: 168 credits

(Without of national defense education and physical education)

CONTENT	No. of credits
FOUNDATION KNOWLEDGE	**43**
1. Compulsory subjects	**39**
2. Selective subjects	**4**
3. Physical education (excluding cumulative credits)	**3**
4. Defense education (excluding cumulative credits)	165 hours
PROFESSIONAL KNOWLEGDE	**106**
Professional Knowlegde	**38**

1. Compulsory subjects	23
2. Selective subjects	15
Professional knowledge	**41**
1. Compulsory subjects	16
2. Selective subjects	25
EXTRAL KNOWLEDGE	**10**
1. Compulsory subjects	4
2. Selective subjects	6
PROFESSIONAL PRACTICE AND FIELD PRACTICE FOR THESIS	**9**
1. Compulsory subjects	4
2. Selective subjects	5
Thesis	**10**
Skilled Practice	**8**

2. Training program contents

List	Subject	Tên tiếng Anh	Credit point	Theorical hours	Practical hours	Course Code
A. Kiến thức giáo dục đại cương		**Foundation knowledge**	**43**			
I. Các học phần bắt buộc		**Compulsory subjects**	**39**			
a) Lý luận chính trị		***Polictice Science***	**11**			
1	Triết học Mác -Lênin	Marxist-Leninist philosophy	3	45	-	MLP131
2	Kinh tế chính trị	Marxist-Leninist political ecomomy	2	30	-	MLE122
3	Chủ nghĩa xã hội khoa học	Science socialism	2	30	-	SCS 123
4	Tư tưởng Hồ Chí Minh	Ho Chi Minh's Ideology	2	30	-	HCM124
5	Lịch sử Đảng Cộng sản Việt Nam	History of the Vietnamese Communist Party	2	30	-	HCP125
b) Ngoại ngữ, Tin học, Khoa học tự nhiên, xã hội			***28***			

6	Hóa học	Chemistry	4	50	20	CHE141
7	Sinh học	Biology	3	40	10	GBI121
8	Xã hội học đại cương	General Sociology	2	30	0	GSO121
9	Vật lý	Physics	2	30	0	PHY121
10	Toán cao cấp	Mathematics	2	30	0	MAT121
11	Tiếng Anh 1	English 1	3	45	0	ENG131
12	Tiếng Anh 2	English 2	3	45	0	ENG132
13	Tiếng Anh 3	English 3	3	45	0	ENG133
14	Tin học đại cương	General Informatics	3	15	120	GIN131
15	Xác suất - Thống kê	Probability and Statistics	3	45	0	PST131
II. Các học phần tự chọn (tích lũy đủ 4 TC)		**Self Selection Subjects**	**4**			
16	Khoa học quản lý	Management Science	2	30	0	MEC121
17	Vi sinh vật đại cương	General Microbiology	2	24	12	GMI121
18	Sinh thái môi trường	Environmental Ecology	2	30	0	EEC121
19	Địa lý kinh tế Việt Nam	Vietnam Economic Geography	2	30	0	VEG121
20	Nhà nước và pháp luật	State and Law	2	30	0	SLA121
21	Ô nhiễm Môi trường	Environmental Pollution	2	30	0	EPO121
22	Sinh học phân tử	Molecular Biology	2	30	0	MBI121
23	Phương pháp tiếp cận khoa học	Scientific Approach Methodology	2	30	0	SAM121
24	An toàn lao động	Works Safety and Hygiene	2	30	0	WSH121
III. Giáo dục thể chất*		**Physical Education**	**3**	0	30	PHE111+ PHE112+ PHE113
25	Điền kinh		1	0	30	
26	Bóng chuyền		1	0	30	
27	Cầu lông		1	0	30	
28	Cầu mây		1	0	30	
29	Võ		1	0	30	
30	Bóng rổ		1	0	30	
31	Bóng đá		1	0	30	

IV. Giáo dục quốc phòng*		**National Defense Education**	**165**			
B. Kiến thức giáo dục chuyên nghiệp		**Professional Education Knowlegde**				
I. Kiến thức cơ sở ngành		**Basic Knowledge**	**38**			
a) Các học phần bắt buộc		**Obligatory Subjects**	**23**			
32	Cơ thể học động vật	Animal Anatomy and Histology	5	65	20	AAH251
33	Sinh hóa - Sinh lý động vật	Animal Biochemistry - Physiology	5	65	20	ABP251
34	Dinh dưỡng và thức ăn chăn nuôi	Animal Feed and Nutrition	4	52	16	AFN241
35	Dược lý học thú y	Veterinary Pharmacology	3	39	12	VPH231
36	Chẩn đoán bệnh thú y	Veterinary Disease Diagnosis	3	39	12	VDD231
37	Vi sinh vật thú y	Veterinary Microbiology	3	39	12	VMI231
b) Các học phần tự chọn (tích lũy đủ 15 TC)		**Optional Subjects (the accomplishment of 15 credits is required)**	**15**			
38	Miễn dịch học thú y	Veterinary Immunology	3	45		VIM231
39	Dịch tễ học thú y	Veterinary Epidemionogy	2	30		VEP221
40	Bệnh lý học thú y	Vererinary Pathophysiology	3	39	12	VPA231
41	Di truyền - Giống vật nuôi	Animal Breeding and Genetics	3	37	16	ABG231
42	Công nghệ sinh sản	Reproductive Technology	2	26	8	RTE221
43	Độc chất học thú y	Veterinary Toxicology	2	30		VTO221

44	Chẩn đoán hình ảnh	Imaging Diagnosis	3	45		IDI231
45	Thực hành Chẩn đoán lâm sàng thú y	Practice in Veterinary Clinical Diagnosis	3	0	90	VCD231
46	Thực hành Chẩn đoán phi lâm sàng thú y	Practice in Veterinary Laboratory Diagnosis	3	0	90	VLD231
II. Kiến thức ngành		**Specialized Knowledge**	**41**			
a) Các học phần bắt buộc		**Obligatory Subjects**	**16**			
47	Bệnh truyền nhiễm thú y	Veterinary Infectious Diseases	4	52	16	VID341
48	Ký sinh trùng và bệnh ký sinh trùng thú y	Parasite and veterinary parasitology	3	37	16	PVP331
49	Bệnh nội khoa thú y	Veterinary Internal Diseases	3	39	12	IND331
50	Ngoại khoa thú y	Veterinary External Diseases	3	39	12	VED331
51	Sản khoa thú y	Veterinary Obstetrics	3	39	12	VOB331
b) Các học phần tự chọn (tích lũy đủ 25 TC)		**Optional Subjects (the accomplishment of 25 credits is required)**	**25**			
52	Bệnh ở chó mèo	Diseases in Dogs and Cats	2	24	12	DDC331
53	Bào chế và kiểm nghiệm thuốc thú y	Produce and Inspection Veterinary medicine	3	41	8	PIV331
54	Phúc lợi động vật và Luật chuyên ngành	Animal Welfare and Specialized Law	2	30		AWS321
55	Vệ sinh gia súc	Animal Hygiene	2	30		AHY321
56	Bệnh ở động vật thủy sản	Diseases in Aquatic Animals	3	39	12	DAA331
57	Một sức khỏe trong Thú y	One Health in Veterinary Medicine	2	24	12	OHV321
58	Phương pháp nghiên cứu khoa học	Method of Scientific Research	2	30		MSR321

59	Công nghệ sản xuất và sử dụng văc xin	Vaccine Application and Production Technology	2	30		VAP321
60	Vệ sinh an toàn thực phẩm	Food safety and Hygence	2	30		FSH321
61	Bệnh ở động vật hoang dã	Wildlife Diseases	2	30		WDI331
62	Kiểm nghiệm thú sản	Animal Products Inspection	3	39	12	API331
63	Bệnh truyền lây giữa động vật và người	Zoonosis	3	45		ZOO331
64	Bệnh dinh dưỡng	Nutritious Diseases	3	45		NDI331
65	Bệnh ong tằm và động vật quý hiếm	Diseases on Silkworm, Bee and Rare Animals	2	30		DSB321
66	Châm cứu chữa bệnh vật nuôi	Acupuncture for Treatment in Animals	3	45		ATA331
67	Quản lý môi trường và chất thải chăn nuôi	Animal Wast Management and The Environment	3	45		WME331
68	Công nghệ sinh học ứng dụng trong Thú y	Application of Biotechnology in Veterinary Medicine	3	45		ABV331
69	Quản trị trang trại	Farm Management	3	45		FMA331
70	Thực hành Phẫu thuật ngoại khoa Thú y	Advanced Practice in Veterinary Surgery	3		90	PVS331
71	Thực hành Ngoại - Sản thú y	Practice in Veterinary Surgery - Obstetrics	3		90	PSO331
72	Thực hành chẩn đoán - xét nghiệm bệnh ở động vật thủy sản	Diagnosis and Testing Practice of Diseases on Aquatic Animals	3		90	PDA331
73	Thực hành Ngoại - Sản thú cưng	Practice in Surgery - Obstetrics for Pets	2		60	SOP321
74	Thực hành Spa thú cưng	Pet Spa Practice	2		60	PSP321

75	Thực hành Chẩn đoán và điều trị bệnh cho thú cưng	Advanced Practice in Diagnosis and Treatment for Pets	2		60	DTP321
76	Thực hành Chăm sóc, và huấn luyện thú cưng	Caring and Training Practice for Pets	2		60	CTP321
III. Kiến thức bổ trợ		**Supplemental Knowledge**	**10**			
a) Các học phần bắt buộc		**Obligatory Subjects**	**4**			
77	Chăn nuôi chuyên khoa	Specialized Husbandry	4	52	16	SHU441
b) Các học phần tự chọn (tích lũy đủ 6 TC)		**Optional Subjects (the accomplishment of 6 credits is required)**	**6**			
78	Marketing	Marketing	3	45		MAR431
79	Giao dịch và đàm phán trong kinh doanh	Business Communication and Negotiation	3	45		BCN431
80	Khởi sự kinh doanh	Entrepreneurship	3	45		ENT431
81	Phân tích Chuỗi giá trị	Value Chain Analysis	3	45		VCA431
82	Ứng dụng Blockchain trong nông nghiệp	Blockchain Application in Agribusiness	3	45		BAA431
83	Xây dựng và phát triển thương hiệu sản phẩm	Brand Creation and Development	3	45		BCD431
84	Quản trị doanh nghiệp	Business Administration	3	45		BAD431
85	Bảo quản và chế biến nông sản	Preservation and Processing of Agricultural Products	3	45		PPA431
86	Hệ thống nông lâm kết hợp	Agroforestry System	3	45		ASY431
87	Công nghệ thực phẩm	Food Technology	3	45		FTE431
88	Quản lý nguy cơ sinh học	Biological Risk Management	3	45		BRM431
89	Trồng trọt chuyên khoa	Specialized	3	45		SCU431

		Cultivation				
90	Công nghệ môi trường	Environmental Technology	3	45		ETE431
V.	**Kiến tập và Thực tập nghề nghiệp**	**Professional Internship**	**9**		**540**	
a)	**Học phần bắt buộc**	**Professional Internship (Required)**	**4**			
91	Tham quan nhà máy sản xuất thuốc thú y, trang trại và bệnh viện thú y	Field trip study: Visiting veterinary medicine factory, farm and veterinary hospital	1		60	FTS511
92	Tiêm phòng chống dịch	Vaccination for Disease Prevention and Control	3		180	VDP531
b)	**Các học phần tự chọn (tích lũy đủ 5 TC)**	**Professional Internship (Optional, the accomplishment of 5 credits is required)**	**5**			
93	Quản lý dịch bệnh và thực hành thú y tại trại gia cầm	Disease Management and Veterinary Practice in Poultry Farm	5		300	DMP551
94	Quản lý dịch bệnh và thực hành thú y tại trại lợn	Disease Management and Veterinary Practice in Pig Farm	5		300	DMP552
95	Quản lý dịch bệnh và thực hành thú y tại trang trại gia súc nhai lại	Disease Management and Veterinary Practice in Ruminant Farm	5		300	DMP553
96	**Thực tập tốt nghiệp**	**Veterynary Medicince Thesis**	**10**		**600**	VMT7101
VI. Rèn nghề		**Professional skill Practice**	**8**		**480**	

97	Thao tác kỹ thuật cơ bản trong phòng thí nghiệm	Basic Laboratory Skills	2		120	BLS621
98	Sử dụng phần mềm quản lý dịch bệnh	The Use of Disease Management Softwares	1		60	UDM611
99	Kỹ năng chẩn đoán, phòng và trị bệnh cho vật nuôi tại Bệnh xá thú y	Diagnosis and Treatment for Animal in Veterinary Hospital Skills	1		60	VHS611
100	Lập kế hoạch sản xuất và sử dụng phần mềm quản lý, kinh doanh thuốc thú y	Planning production and use software management and trading veterinary drugs	1		60	PPU611
101	Kỹ năng chẩn đoán lâm sàng thú y	Veterinary Clinical Diagnostic Skills	3		180	VCS631
Tổng cộng		**Total**	**151**		**1344**	

- The subject of Physical education, national defense education and skill practice do not count into credit total of program

3. Training schedule

1. The first year

***. The first semester**

List	Subject	Credit point	Theorical hours	Practical hours
1	Physical education 1	1	0	30
2	Biology	3	40	10
3	Chemistry	4	50	20
4	Mathematics	2	30	0
5	English 1	3	45	0
6	General Sociology	2	30	0
	Total	**15**	**195**	**60**

*** Second semester**

List	Subject	Credit point	Theorical hours	Practical hours
1	Physical education 2	1	0	30

2	Physics	2	30	0
3	Phylosophy of Marxism-Leninism	3	45	0
4	English 2	3	45	0
5	Probability and Statistics	3	45	0
6	General Informatics	3	15	120
7	General microorganism	2	24	12
8	Field trip: Visiting veterinary drug factory, farm and veterinary hospital	1		60
	Total	**18**	**204**	**192**

2. 2nd year

*** 1st semester**

List	Subject	Credit point	Theorical hours	Practical hours
1	Physical education 3	1		30
2	English 3	3	45	0
3	Scietific animal's body (Anatomy and Histology)	5	65	20
4	Animal Physiobiology- biochemistry	5	65	20
5	Genetics – breed livestocck	3	37	16
6	Political economics	2	30	
7	Skill practice: Basic technical manipulation in laboratory	2		120
	Total	**21**	**242**	**206**

*** 2nd semester**

List	Subject	Credit point	Theorical hours	Practical hours
1	Veterinary Microorganism	3	39	12
2	Management science	2	30	0
3	Management science	4	52	16
4	Veterinary pharmacology	3	39	12
5	Immunology of veterinary	3	45	
6	Construct planning and using trading in veterinary drugs management software	1		60
7	Scientific socialism	2	30	
8	National defense education (146	-		

	credits = 5 weeks)			
	Total	**18**	**235**	**100**

2. 3rd year

*** 1st semester**

List	Subject	Credit point	Theorical hours	Practical hours
1	Veterinary Epidemionogy	2	30	
2	Vaccine production technology and using	2	30	
3	Veterinary disease diagnosis	3	39	12
4	Animal Reproductional technology	2	26	8
5	Veterinary pathology	3	39	12
6	Professional animal husbandry	4	52	16
7	Ho Chi Minh's thought	2	30	
8	Skill practice: Using epidemic management software	1		60
	Total	**19**	**246**	**108**

*** 2nd semester**

List	Subject	Credit point	Theorical hours	Practical hours
1	Veterinary infectiuos disease	4	52	16
2	Veterinary Surgery diseases	3	39	12
3	Veterinary obstetrical diseases	3	39	12
4	Parasite and veterinary parasitology	3	37	16
5	Field trip: Vaccination on field trip	3		180
6	History of Vietnamese Communist Party	2	30	
7	Skill practice: Clinical examination, prevention and treatment disease skills at veterinary infirmary	1		60
	Toltal	**19**	**197**	**296**

4. 4th year

1st semester:

List	Subject	Credit point	Theorical hours	Practical hours
1	Veterinary Internal Desease	3	39	12
2	Hygiene in animal	2	30	
3	Diseases in dogs and cats	2	24	12
4	Wild animal diseases	2	30	
5	Veterinary Toxicology	2	30	
6	Animal production quarantine	3	39	12
7	Veterinary clinical examination skills (field trip)	3		180
	Total	**17**	**192**	**216**

***2nd semester**

List	Subject	Credit point	Theorical hours	Practical hours
1	One health in veterinary medicine	2	24	12
2	Vetrinary pharmaceutic and products control	3	41	8
3	Scientific researching method	2	30	
4	Epidemic management and vetrinary practice in poultry farms	5		300
	Total	**12**	**95**	**320**

5. 5th year

1st sesmester:

List	Subject	Credit point	Theorical hours	Practical hours
1	Selective subjects 1 (extral knowledge)	3	15	30
2	Selective subjects 2 (extral knowledge)	3	15	30
3	Food safety and hygence	2	30	
4	Animal welfare and professional laws	2	30	

5	Aquatic diseases	3	39	12
	Total	**13**	**129**	**72**

2nd semester:

List	Subject	Credit point	Theorical hours	Practical hours
	Field trip for thesis	10		600
	Total	**10**	**0**	**600**

4. Program implementation instructions

a. The training program is implemented in accordance with the regulations on formal university trained under the current credit system of the Ministry of Education and Training and Thai Nguyen University of Agriculture and Forestry

The prescribed hours are calculated as follows:

1 credit = 15 theoretical lectures or class discussions

= 30 hours of experimentation or practice

= 45 hours of self-study

= 45 ÷ 90 hours of on-site practice.

= 45 ÷ 60 hours of implementation of the project or thesis.

The number of hours of the course is a multiple of 15

b. Engllish proficiency: According to regulations of Thai Nguyen University of Agriculture and Forestry, during the study period, the University may control the development of student's language skills through each academic year to determine the number of credits for courses in the semester that student is allowed to enroll in. Student can self-study or apply for the language skills development program under the school's scheme

.5. Brief description of the content and volume of courses

1. **Marxist-Leninist philosophy – 3 credits**

Time of study: 3 credits (45 theoretical units/0 practice units/90 self-study hours)

Previous courses: No

Prerequisites: No

Co-requisites courses: No

Summary of course content:This course is equipped with knowledge of the most common laws of movement and development of nature, society and thinking to form the world view and the most common method of scientific awareness and revolutionary practice. The content of the lesson includes:

Part I: Overview of philosophy and philosophical history

Chapter I: A Vision of Philosophy

Chapter II: A summary of the philosophical history before Mark

Chapter III: The Birth and Development of Marxist-Leninist Philosophy

Chapter IV: Some ModeProfessional practices WesteProfessional practices Philosophical Trends

Part II : The basic principles of Marxist-Leninist philosophy

Chapter V: Matter and Consciousness

Chapter VI: Two principles of material defense

Chapter VII: Basic pairs of material defenses

Chapter VIII: The Basics of Material Defense

Chapter IX: Perception Reasoning

Chapter X: Socio-Economic Forms

Chapter XI: Class and Ethnicity

Chapter XII: The State and the Social Revolution

Chapter XIII: social consciousness

Chapter XIV: Marxist-Leninist Philosophical Views on People

2. Political Economy - 2 credits

Time of study: 2 credits (30 theoretical units/0 practice units/60 self-study hours)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: Political economy is a social science that studies the production and exchange of goods placed in relation to politics under the perspective of politicians. Political economy is the subject that provides the most basic concept and knowledge system for the modern economics faculty such as supply and demand, profit, free trade ... Many views of the main economic schools have become the ideological creeds of economists and politicians.

3. Scientific socialism - 2 credits

Time of study: 2 credits (30 theoretical units/0 practice units/60 self-study hours)

Previous lesson: No.

Prerequisite: No.

Parallel learning:: No.

Summary of subject content: Scientific socialism is a subject equipped with knowledge of socio-economic theories created by Marx and Angels. This subject is one of the three constituent parts of Marxism-Leninism, studying social movement aimed at abolishing capitalism and building socialist society, towards building communist society. tenet. In a narrow sense, scientific socialism is one of the three parts of Marxism-

Leninism. The scientific socialism module will help students build on the philosophical methodology of dialectical materialism and historical materialism, while also on the scientific theoretical bases of economic laws and relations. economy ... to explain scientifically about the process of socialist revolution, formation and development of communist socio-economic form, associated with historical mission. the whole world of the modern working class, aimed at human liberation, social liberation.

4. Ho Chi Minh's Ideology – 2 credits

Time of study: 2 credits (30 theoretical hours/0 practice hours/60 self-study hours)

Previous courses: No

Prerequisites: No

Parallel learning:: No

Summary of subject content:This course provides a system of views and thoughts of Ho Chi Minh in the revolutionary career summarized and systemized by the Communist Party of Vietnam. This ideology system includes views on the fundamental issues of the Vietnamese revolution, from the People's Democratic National Revolution to the Socialist Revolution; the application and development of Marxism-Leninism to the specific conditions of Vietnam. After studying this part, students will raise awareness of regularly training, cultivating, studying and following the moral example and Style of Ho Chi Minh to improve themselves and contribute to building the country

5. History of the Vietnamese Communist Party – 2 credits

Time of study: 2 credits (30 theoretical hours/0 practice hours/60 self-study hours)

Previous courses: No

Prerequisites: No

Parallel learning:: No

Summary of subject content: This course presents objectively, comprehensively and veningly the basic events of the Party's history through each stage and revolutionary period in its movement, development andinteProfessional practicesal relationships. On that basis, it compares with practical requirements for analyzing and evaluatiing the Party's activities; affirming the victories, achievements and mistakes and shortcomings in the process of the Party leading the Vietnamese revolution; generalize historical events and events, outline the nature, general tendencies and objective laws that goveProfessional practices the movement of history.

The study of this subject also has a great significance in educating about revolutionary traditions, about nationalism and genuine national spirit, about pride for the Party and for the Vietnamese people; at the same time, it also has the effect of fostering the will to fight revolutionary, urging in the conscious tuition to follow the example of those who have gone ahead, continuing the fight of tenacious, intelligent and creative

bravery to protect and develop the revolutionary achievements that the Party and our people have spent so much blood to win. , successfully building socialism and firmly protecting the Socialist Fatherland of Vietnam.

6. Chemistry – 4 credits

Time of study: 4 credits (50 theoretical hours/20 practice hours/120 self-study hours)

Previous courses: No

Prerequisites: No

Co-requisites: No

Summary of course content: Chemistry course consists of 6 chapters including 50 theoretical hours and 10 practice hours. The theory course equips students with basic knowledge of chemical balance, factors affecting chemical balance; application of explanations of the movement of favorable reactions; reaction rate and influential factors. Research on the composition and content of survey samples: dosing analysis, dosing, structural determination, evaluation of product results and quality, separation, division, cleaning, processing of ultra-pure compounds ... etc.

The practice course equips students with some basic laboratory rules; study experiments on the effects of factors on chemical balance, reaction rate, explanation, application to practice; practice of determining the pH value of some common types of solution; study of esthing experiments, determining the content of analytical samples

7. Biology – 3 credits

Time of study: 3 credits (40 theoretical hours/10 practice hours/90 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of subject content: Biology course consists of 7 chapters. The theoretical part equips students with basic knowledge about the chemical composition of the living body, the organizational levels of the living body, the main metabolic methods in living cells, the reproduction and development of living bodies, the ability to in touch and adapt to the habitat of the organism, the evolution of organisms, the application of biology in agriculture and forestry ... etc.

The practice course equips students with some basic laboratory rules; research and practice as a plant-living specimen; observe some fixed specimens of animal cells; visual observation of the spawning agency of some flowers; observe and categorise some results to practicalize theoretical content to help students in carm deeply ingrain knowledge..

8. General sociology – 2 credits

Time of study: 2 credits (30 theoretical hours/0 practice hours/60 self-study hours)

Previous courses: No

Prerequisites: No

Parallel learning:: No

Summary of content: General sociology is a compulsory course to equip students with a systemual knowledge of socio-leaProfessional practicesing,including: courses, functions, research tasks of socio-leaProfessional practicesing; socio-socion socionual basics. On the basis of basic concepts, students can understand the relationships between individuals, groups and society; the role of individuals, social groups, institutions, social organizations, classes and social classes in a society. Based on that knowledge, educating students about socio-professional ethics in the construction of our country today.

9. Physics – 2 credits

Time of study: 2 credits (30 theoretical hours/0 practice hours/60 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of content: Physics consists of 5 chapters with 17 theoretical hours and 13 hours of exercises and discussions. Theoretical part: equip students with general understanding of mechanical, basic forms of movement associated with practice, basic laws of Nitrogen; common concepts and phenomena in fluid mechanical, analysis of important applications of fluid mechanical fluids in agriculture and forestry; equip basic knowledge of electric fields, soy waves and application to the specialies of agriculture and forestry; provides some knowledge of photoethtrosy, photofluorescent, photofluorescent processes; basic knowledge of nuclear physics and the use of certain nuclear techniques in high-tech agriculture. Exercises, discussions: Ask students to apply the knowledge leaProfessional practicesed in each chapter to solve practical problems: explain the phenomena, apply the knowledge to the main major

10. Mathematics – 2 credits

Time of study: 2 credits (30 theoretical hours/0 practice hours/60 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of content: Mathematics consists of 3 chapters with 17 theoretical hours and 13 discussion hours. Theoretical course: Equipped with the concepts of matrix, mathematics on the matrix, system of linear equations, how to solve system of linear equations; differental equations, differental forms of equations and some applications of differental equations; some optimal forms of mathematics in agriculture and forestry and optimal methods of solve problems. Discussion: Asking students to apply that knowledge

to solve problems, especially using software proficiently (Excel) on the computter to solve problems of matrix, linear equations and optimal problems.

11. English 1 – 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of content:: this is equipped learners with basic and core knowledge about Grammar (sentence structure, dynamic phrases...), Phonetic (phonetic & intonation), and Vocabulary (words & word structure); Reinforce the basics of Grammar, Transcriptet, and Vocabulary as the basis for communication practice; Forming the first step of language communication skills such as Listening, Speaking, Reading, Writing on the basis of masterful theoretical and practical mastery; The basics of in-course relationships between Language, Culture, and speech action.

Grammar: simple present; simple past tense; present tense continues; past tenses; past tenses; Like/ would like; modal verbs; comparative levels of the annth feature.

Vocabulary: Phrases that point to daily activities and in their free time; antonym; expressions of time in the present and past; words describing feelings, states; means of transport.

Listening: health; sports; transportation; exploration.

Say: ambition; tell a story.

Write: connecting words; report; the story happened.

Pronunciation: / s/, /z/, /iz /, /d/, /t/, /id/, /ŋ/.

After finishing this subject, students have the ability to: Skim the main idea; read some details, guess the meaning of words in the context; Listen to the main idea, listen to some detailed information, hear guesses from; The ability to make simple conversations and simple sentence patteProfessional practicess tocommunicate information and respond to information given by others within the; Writing skills with content is within the scope of the topics of this course.

12. English 2 – 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of content: this is equipped with basic and core knowledge about Grammar (sentence structure, dynamic phrases...), Phonetic (phonetic & intonation), and Vocabulary (words & word structure); Reinforce the basics of Grammar, Transcriptet, and Vocabulary

as the basis for communication practice; Forming the first step of language communication skills such as Listening, Speaking, Reading, Writing on the basis of masterful theoretical and practical mastery; The basics of in-course relationships between Language, Culture, and speech action

Grammar: countable noun noun and uncountable noun for noun; from quantity indicators, words; then the future with be going to, will; the present refers to the near future; a place of words; the present one is complete; relation clauses and category 1 conditional sentences.

Vocabulary: material-only words; consummation; asyms; career-only words; sy smoothies; prefixes.

Reading*:* : environment; life; events; workplace; exploration.

Listening*:* environment; planning and planning; job interviews; the importance of technology; new inventions.

Say: present the report; Interview.

Write: report; e-mail; description; CV; paragraph; from joining; topic sentences.

Pronunciation: / tə /, /ð ə/, /ð i /, /w/, intonation in conditional sentences

After finishing this course, students have the ability to: Skim the main idea; read some details, guess the meaning of words in the context; Listening to the main idea, listening to some detailed information, hearing guesses from; The ability to make simple conversations and simple sentence patterns to communicate, respond to information given by others within the course; Writing skills with content is within the scope of the topics of this course.

13. English 3 – 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of content:: course is equipped with basic and core knowledge about Grammar (sentence structure, dynamic phrases...), Phonetic (phonetic & intonation), and Vocabulary (words & word structure); Reinforce the basics of Grammar, Transcriptet, and Vocabulary as the basis for communication practice; Forming the first step of language communication skills such as Listening, Speaking, Reading, Writing on the basis of masterful theoretical and practical mastery; The basics of in-course relationships between Language, Culture, and speech action.

Grammar: Dynamic sentences (present and past); then the past is complete; structure Used to.; indirect sentences; unsymed wording; category 2 conditional sentences;

Vocabulary: phrases; words related to vacation; independent no words; animal classification; weather.

Reading*:* : history; language; travel and vacation; nature.

Listening*:* language leaProfessional practicesing; travel; nature.

Say: holiday plans; predict the future.

Write: letter; biography.

Pronunciation: /s /, /z/, /key.

After completing this course, students have the ability to communicate in English, compose texts in English, read documents in English at the pre-intermediate level.

14. General Informatic – 3 credits

Time of study: 3 credits (15 theoretical hours/60 practice hours/90 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of content: The subject equips learners with knowledge about computers and computer networks, basic skills using basic computer applications. After completing this course, students can: Proficiently use computers; works on Windows operating systems and some application programs; know how to manage and exploit information on computers effectively, use computers safely and have knowledge of the law in the use of information technology; Proficiently use Microsoft Word todraft and present a complete text in a template, using some back-up tools to process text faster; Use Microsoft Excel to build a complete database to solve real-world problems; Use calculation functions in Excel from basic to complex to calculate, statistics, extract necessary information; Use Microsoft PowerPoint to create an engaging and effective presentation; Know how to exploit and connect information available on the Internit for studying and researching; know how to use e-mail to send and receive documents.

15. Probability and Statistics – 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous courses: No

Prerequisites: Advanced Mathematics

Parallel courses: No

Summary of content: The Probability and Statistics consists of 2 parts: Probability and statistics with 27 theoretical hours and 18 discussion courses. **The** theoretical part equips learners with knowledge about trials, events, probability of events; random variables (BNN), the law of distribution of probability and characteristic parameters of BNN; overall, samples, characteristic parameters of the sample and calculation; estimating parameters; parameters inspection; correlation and revoicing. The Discussion

part asks students to calculate the probability of events through formulas; determine the law of distribution of probability and calculate the characteristic parameters of the BNN; masterfully solve the problems of estimating, checking parameters, finding correlations and writing the rewriting equations of two random variables.

16. Management Science – 3 credits

Time of study: 3 credits (45 theories/0 practice hours/60 self-study hours)

Previous courses: No

Prerequisites: No

Summary of content: The Management Science helps students achieve basic knowledge in the field of management science. On that basis, students have the ability to apply reasoning to management practice, creating favorable conditions for them to deeply research and solve reasoning or practical problems in separate or interdisciplinary fields. Students can master scientific management knowledge, science and technology, quickly and effectively solve problems of management practice; have the capacity to create, analyze and evaluate management policies; have the ability to adapt quickly and appropriately to the changes of the management environment; have the capacity to organize, mobilize and persuade the masses to achieve the objectives of the organization.

Management Science: Management Science is an applied and practical course. The part is designed into 6 chapters, each of which is compiled in an order, presented logically, scientifically, detailing the content of each problem, thereby for researching and studying. The main contents include:

Chapter 1: In-Science Management

Chapter 2: Principles, Functions and Management Methods

Chapter 3: Managers

Chapter 4: Information in Management

17. General Microbiology - 3 credits

Time of study: 3 credits (39 theoretical hours/12 practice hours/90 self-study hours)

Previous courses: Biology

Prerequisites: No

Summary of course content: The study provides and equips students with basic understandings about ererm, structural, biological, bio-biomededizing, genetic characteristics ... of groups of microorganisms common in nature and in the human body, animals such as bacteria, viruses, yeasts, mold ... In addition, the course also studies the impact of extra-wing factors on microorganisms, studying the beneficial and harmful aspects of microorganisms in life, especially in the field of agriculture, from understanding and explaining the phenomena and applications of microorganisms in real life and agriculture.

In addition, the study also acts as a premises and basis for students to absorb the knowledge of other specialized courses such as veterinary microbiology, infectious diseases ... at the same time, it can be used as a reference for microbiology, scientists….

18. Environmental Ecology– 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous courses: Biology

Prerequisites: No

Parallel course: No

Summary of course content: The course is divided into 5 main parts: General concept in biology; Individual eco-biology; Populations and bio biomedes; Ecosystems; Eco-biology with environmental resource**.** Provide students with the basics of biology; the relationship between organisms and the environment. On that basis, it is applied to building a balanced agricultural ecosystem and towards sustainable agricultural development while managing, protecting the habitat and exploiting natural resources in a reasonable and effective way.

19. Economic Geography – 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/60 self-study hours)

Previous course: Biology

Prerequisites: No

Parallel courses: No

Summary of course content:: The Economic Geography Module is a socio-economic science, studying the current situation and orientation of the development of Vietnam's natural resources. Vietnam's ability to integrate in the region and in the world; World economic associations affecting Vietnam's socio-economic development; Territorial organizations of sectors and economic regions of Vietnam.

20. State and Law – 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous course: Marxist-Leninist philosophy

Prerequisites: No

Parallel courses: No

Summary of course contents: State and Law courses provide students with basic knowledge aboutthe state and law such as: origin, historical nature, form, types of state and law; basic legal concepts such as: legal regulations, legal relations, law implementation, law violations, legal liability, socialist legislation, legal system; basic contents of some important legal branches in the Vietnamese legal system and the law on anti-corruption.

21. Environmental Pollution – 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous course: No

Prerequisites: Chemistry, general microorganisms

Parallel course: No

Summary of course contents:: Environmental Pollution course to meet the requirements of improving quality for students of schools in the management and technical sectors, as well as those working in factories, companies, enterprises, research institutes, schools and State agencies. The environmental pollution component provides students with an overview of environmental knowledge, environmental composition, environmental games, the relationship between development and sustainable development. The course introduces the basic concepts of the main types of environmental pollution, causes of pollution, causes and harms of environmental pollution as well as measures to prevent and minimize environmental pollution. The course includes 5 main contents as follows: Basis for reasoning of environmental pollution, air pollution, water pollution, soil environmental pollution and other forms of environmental pollution.

22. Molecular Biology - 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous courses: No

Prerequisites: Biology

Parallel courses: No

Summary of course content: Molecular Biology is a course on the organization of life on a molecular level, providing a foundational knowledgeof biological subm molecules (DNA, RNA, proteins) and how to organize and function life at the molecular levels. As a foundation for students to understand the methods of testing and evaluati captioning food using molecular biology tools.

23. Scientific Approach Methodology - 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of course content:The Scientific Approach Methodology course aims to help students know how to approach science, some methods of scientific research, how to identify and select research issues, how to write researchoutlines, organize research, how to write reports and publish the results of scientific topics. When finishing this course, students have the most basic knowledge to participate in scientific research. Skills: The

Scientific Approach Methodology course gives students the ability to think logically in science, know scientific reasoning and know how to analyze science.

23. Scientific Approach Methodology - 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of course content:The Scientific Approach Methodology course aims to help students know how to approach science, some methods of scientific research, how to identify and select research issues, how to write researchoutlines, organize research, how to write reports and publish the results of scientific topics. When finishing this course, students have the most basic knowledge to participate in scientific research. Skills: The Scientific Approach Methodology course gives students the ability to think logically in science, know scientific reasoning and know how to analyze science.

24. Labor Safety – 3 credits

Time of study: 3 credits (45 theoretical hours/0 practice hours/90 self-study hours)

Previous courses: No

Prerequisites: Chemistry, Physics, Biology, General Microorganisms

Parallel courses: No

Summary of course contents: Labor Safety courses to meet the requirements of improving the quality for students of schools in the management andtechnical sectors such as Veterinary Medicine, Food Technology, Environmental Science, High-tech Agriculture, ... etc., and for those who are working in factories, companies, enterprises, research institutes, schools and State agencies. The Course of Occupational Safety introduces students to the basic concepts of occupational safety and hygiene such as: labor; dangerous and harmful factors at the workplace; occupational accidents and causes of occupational accidents; the concept of labor protection, the nature of labor protection; a culture of occupational safety and digitalization and occupational safety. The course introduces thesystem of legal policies on occupational safety and hygiene of Viet Nam such as: Law on Occupational Safety and Sanitation; Protection policies for special and dangerous employees; Decrees and decisions of the GoveProfessional practicesment; Circulars of ministries and inter-ministries and System of technical standards and regulations on occupational safety and sanitation.

Occupational safety courses provide students with basic and necessary knowledge about safety, occupational hygiene such as: working conditions, personal protective means at work; how to avoid harmfulfactors, measures to improve working conditions, prevent occupational accidents, occupational diseases for employees; handle incidents in

production and first aid of occupational accidents (theory and practice); develop plans and organize the implementation of the occupational safety and hygiene management system; to build a culture of safety in production;to know the rights and obligations of employers and employees in occupational safetyand hygiene.

Moreover, the course also equips students with knowledge about occupational safety techniques such as: Electrical safety techniques; chemical safety techniques; safety when using pressure equipment; safe to work with lifting equipment; fire safety, explosion and laboratory-safe micro-engineering.

25. Athletics – 1 credit

Time of study: 1 credit (0 theoretical hours/30 practice hours/30 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of course content: The course equips students with knowledge, skills in practicing bare-handed exercises and performing athletics content such as running ... After finishing this lesson, students will raise awareness of regular health training to have a better studying and working spirit.

26. Volleyball – 1 credit

Time of study: 1 credit (0 theoretical hours/30 practice hours/30 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of course content: The course equips students with knowledge and skills in volleyball. After finishing this lesson, students will raise awareness of regular health training to have a better studying and working spirit.

27. Badminton – 1 credit

Time of study: 1 credit (0 theoretical hours/30 practice hours/30 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of course content: The course equips students with badminton knowledge and skills. After finishing this lesson, students will raise awareness of regular health training to have a better studying and working spirit.

28. Shuttlecock Kicking – 1 credit

Time of study: 1 credit (0 theoretical hours/30 practice hours/30 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of course content: The course equips students with knowledge and skills in football. After finishing this lesson, students will raise awareness of regular health training to have a better studying and working spirit.

29. Martial Art – 1 credit

Time of study: 1 credit (0 theoretical hours/30 practice hours/30 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of course content: The course equips students with knowledge and skills in martial arts. After finishing this lesson, students will raise awareness of regular health training to have a better studying and working spirit.

30. Basketball - 1 credits

Time of study: 1 credit (0 theoretical hours/30 practice hours/30 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of course content: The course equips students with basketball knowledge and skills. After finishing this lesson, students will raise awareness of regular health training to have a better studying and working spirit.

31. Football – 1 credit

Time of study: 1 credit (0 theoretical hours/30 practice hours/30 self-study hours)

Previous courses: No

Prerequisites: No

Parallel courses: No

Summary of course content: The course equips students with knowledge and skills in football. After finishing this lesson, students will raise awareness of regular health training to have a better studying and working spirit

32. Cơ thể học động vật – 5 tín chỉ

Allocation of study time: 5 credits (65 theory periods / 20 practice periods / 150 self-study periods)

Previous lesson: no

Prerequisite: no

Parallel modules: Biochemistry of animals, Animal physiology, Animal embryonic tissue...

Summary of subject content: The Animal Anatomy module equips students with the knowledge about the position, shape, structure and function of organs in the body of cattle (buffalo, cow, horse, pig, and goat) and poultry (chicken).

After completing the section on Animal Anatomy, students will be able to correctly locate and describe organs in the body of cattle and poultry for medical examination and treatment; compare and distinguish organs of livestock and poultry species; perform animal anatomy operations and have practical applications.

33. Biochemistry - animal physiology - 5 credits

Time of study: 5 credits (65 theoretical hours / 20 practice hours / 150 self-study hours)

Previous modules: Biology, Organic Chemistry

Prerequisite: no

The module provides learners with the following knowledge about: i) Structure, chemical composition, physical and chemical properties, biological functions of substances in living organisms: blood, muscle, fluid ... The metabolism of the components that make up the living organism, the changes of each organ, tissue in the metabolic process in the animal body. iii) Digestion, absorption in animals, synthesis, breakdown, normal activities of livestock and poultry and pathological mechanisms, metabolic disturbances. iv) The regulation of functional activities to grow, develop and adapt to environmental changes, factors affecting from the habitat to the structure - function of organ systems and the whole animal body.

34. Animal Feed & Nutrition - 4 credits

Time of study: 4 credits (52 theoretical hours/16 practice hours, 120 self-study hours)

Previous module: Animal Biochemistry- Physiology, Genetic-breeding livestock

Prerequisites: Animal Biochemistry- Physiology

Parallel courses: Use management software in the business of animal feed and veterinary medicine.

Summary of the course: The course provides university students with the following knowledge: i) Essential nutrients for livestock ii) Methods of evaluati ampe evaluation of protein quality and nutritional value of feed; iii) The demand for nutrients of livestock ; iv) Characteristics of green forage plants and planting techniques, vi). Method of production of compound feed.

35. Veterinary pharmacology - 3 credits

Allocation of study time: (39 theory periods /12 practice periods / 90 self-study periods)

Prerequisite modules: Animal biochemistry, Animal physiology

Previous module: General Microbiology

Parallel learning: no

The subject focuses on basic knowledge of pharmacology, pharmacokinetics, and mechanism of action of drugs; drugs acting on specialized organs of the body; drugs with

metabolic effects, growth stimulants, antimicrobial, anti-fungal, viral, anti-parasitic drugs and instructions on how to use preventive and treat drugs for livestock and poultry

36. Veterinary disease diagnosis - 3 credits

Previous module: veterinary microorgnism, Veterinary pathology

Prerequisites: Scientific animal's body, Animal Biochemistry- Physiology

Parallel courses: Parasite and veterinary parasitology, Veterinary external Desease, Veterinary infectious diseases

This course provides the basic knowledge of veterinary disease diagnostics in approach and fixation of animals for medical examination; method of questioning, observation method, palpation method, percussion method, auscultation method; general clinical examination, physical appearance clinical examination, cattle constitution clinical examination, mocous membrane clinical examination, lymphatic system clinical examination, fur and skin clinical examination, examination of temperature). Cardiovascular system clinical examination and blood test, Respiratory system clinical examination, gastrointestinal system clinical examination, urinary – genital system clinical examination, neuromuscular system physical examination

37. Veterinary Microorganism – 3 credits

Previous module: General microorgnism,

Prerequisites: Biology, General microorgnism

Parallel courses: non

Conten summary: This course epuips for students understanding of : Bacterial, viral and fungial characteristic, methods of culture, isolation and diagnosis of pathogenic microorganisms for livestock

38. Veterinary immunology - 3credits

Previous module: General microorgnism,

Prerequisites: Scientific animal's body, Animal Biochemistry- Physiology

Parallel courses: non

The subject equips students with knowledge of; (i) the natural resistance of the animal to ecology; (ii) functional roles of components in the body's immune system and immune response processes in the body; (iii) mechanism of action and immune state of the body; (iv) the body's immune response against pathogenic microorganisms; (v) Application of veterinary immunology in testing, diagnosis, prevention and treatment of diseases in animals.

39. Veterinary epidemiology – 2 credits

Previous module: veterinary immunology, Veterinary pathology

Prerequisites: Veterinary disease diagnosis, Veterinary infectious diseases

Parallel courses: Desease, Veterinary infectious diseases, Skill pactice: Using epidemic management software

The subject provides learners with knowledge about: i) Causes of disease and risk factors for disease formation; ii) Understanding epidemiology of infectious diseases and infectious disease prevention measures; iii) Methods of calculating epidemiological parameters, analyzing risk factors between disease and pathogens; iv) Know how to take samples and the number of samples in the study

40. Veterinary pathology - 3 credits

Prerequisites: Scientific animal's body, Animal Biochemistry- Physiology

Previous, parallel courses: Veterinary infectious disease

The subject provides learners with knowledge about concept of veterinary pathology, basic process of disease, functional disorganization in disease animal's body, equips the knowledge of lesions of organs system in veterinary infectious disease

41. Genetics – breeding animals – 3 credits

Time distribution: 3 credits (39 theorycal hours/12 practical hours/90 self-study hours

Previous: Scientific animal's body, Animal Biochemistry- Physiology

Prerequisites: Scientific animal's body, Animal Biochemistry- Physiology

This subject equips the basic scientific knowledge about: i) genetic basis of animal traits and behaviors; ii) the origin, domestication process, adaptation and characteristics of livestock breeds; iii) the scientific basis and methods of evaluating, selecting, creating animals

42. Animal Reproductive technology: 2 credits

Time distribution: 2 credits (26 theorycal hours/8 practical hours/60 self-study hours)

Previous: Scientific animal's body, Animal Biochemistry- Physiology

Prerequisites: Scientific animal's body, Animal Biochemistry- Physiology

This subject provides the basic scientific knowledge about: the reproductive activities of male and female cattle; techniques for exploiting semen of male cattle, techniques for semen quality testing, techniques of artificial insemination for cattle and poultry; technology of bovine embryo transfer and gender control essentials in animal reproduction

43. Veterinary toxicology – 2 credits

Time distribution: 2 credits (28theorycal hours/6 practical hours/60 self-study hours)

Prerequisites: Veterinary disease diagnosis, Veterinary pharmacology

Previous module:, Scientific animal's body, Animal Biochemistry- Physiology

Parallel courses: no

Veterinary Toxicology module equips students with the following knowledge: how toxins enter the animal's body, the impact of toxins on the body. to diagnose and treat poisoned animals, to prevent poisoning and treat when animals are poisoned

44. Diagnostic Imaging - 3 credits

Time distribution: 2 credits (30 theorycal hours/0 practical hours/60 self-study hours

Previous module: Animal Biochemistry- Physiology,

Prerequisites:, Scientific animal's body, Veterinary pathology

Parallel courses: Veterinay infectiuos disease, veteriary epidemiology

Diagnostic Imaging subject equips students with knowledge of X-ray method, ultrasound, CT scan method and others diagnostic imaging method. To provides applying diagnostic imaging in veterinary medicine

45. Practice veterinary disease diagnosis – 3 credits

Time distribution: 3 credits (0 theorycal hours/90 practical hours/90 self-study hours

Previous module: Scientific animal's body, Veterinary pathology, Animal Biochemistry- Physiology,

Prerequisites: Veterinary microorganism, veterinary disease diagnosis

Parallel courses: Veterinay infectiuos disease, veteriary epidemiology

This course is includes 15 practical lesson which content are: Cattle immobilazation method, Clinical examination method and using modern diagnosis techniques in cattle and poultry. To provides for students in veterinary medicine major method of clinical examination organs system in cattle, to hepl students using modern equiment to diagnose suah as: ultrasound machine, endoscope, X-ray machine… Last one's, this course equips for students adaptational skills to veatrinarian's job environment

46. Practice Non – clinical examination – 3 credits

Time distribution: 3 credits (0 theorycal hours/90 practical hours/90 self-study hours

Previous module: Scientific animal's body, Veterinary microorganism

Prerequisites:, veterinary disease diagnosis, Animal Biochemistry- Physiology, General microrganism, veterinary pathology, veterinary internal medicine, Veterinary infectiuos disease

Parallel courses: No

This course practise students non - clinical examination skills by sample testing methods, using modern equiment to diagnose in cattle, poultry such as: ultrasound, blood test, urine test, microorganism test, to diagnose based on lesion of normal tissuse, pathological tissuse.

47. Veterinary Infectious Diseases - 4 credits

Time distribution: 4 credits (52 theorycal hours/16 practical hours/120 self-study hours)

Previous module: veterinary pathology, veterinary disease diagnosis, Scientific animal's body, Veterinary microorganism

Prerequisites: veterinary pathology, veterinary disease diagnosis, Scientific animal's body, Veterinary microorganism

Veterinary infectious desease is subject that researchs about i) general veterinary infectious disease which includes: Concepts and signs of infection, types of infection, pathogens mechanisms, periods of infectious disease, affect of the factors to epidemic processing, tranmissions of pathogen, the principle of preventation and control diseases. ii)Specialist infectiuos diseases which cludes: Generals infectiuos diseases in livestocks, Ruminants infectious diseases, Swines infectiuos diseases, poultries infectiuos diseases

***48.* Veterinary parasites and parasitic diseases - 4 credits**

Time distribution: 3credits (37 theorycal hours/16 practical hours/90 self-study hours)

Previous module: veterinary pathology, veterinary disease diagnosis, Scientific animal's body, Veterinary microorganism

Prerequisites: veterinary pathology, veterinary disease diagnosis, Scientific animal's body, Veterinary microorganism

Veterinary parasites and parasitic desease is subject that researchs about: i) the fundamental problems of veterinary parasites (including concepts, classifications, characteristics, and parasitic survival point, helminthic eradication theory, methods of diagnosis of parasitic diseases, methods of diagnosis and prevention of parasitic diseases); ii) Specialized parasites, including: trematodes and some trematodes, tapeworms and some tapeworm diseases, nematodes and some nematodes, parasitic arthropods and some animal diseases arthropods, protozoa and some protozoan diseases in cattle and poultry

49. Veterinary internal medical disease - 3 credits

Time distribution: 3credits (37 theorycal hours/16 practical hours/90 self-study hours)

Previous module:Veterinary pharmacology, veterinary pathology

Prerequisites: Scientific animal's body, veterinary disease diagnosis

Parallel courses: Disease in dog and cat, Veterinary Surgery diseases

The subject provides students the knowledge of medical treatment outline, knowledge of blood transfusion, fluid transfusion for cattle, and at the same time going deep to find out. Understanding of pathological features, causes, symptoms, lesions, diagnostic and treatment methods of diseases in the cardiovascular, respiratory, digestive, urinary, neurological systems, metabolic disorders, toxins cause disease in animals.

After completing the subject on Veterinary Medicine Disease, students will be able to apply general medical knowledge to support treatment for animal diseases; applying clinical diagnostic techniques; Applying of non-clinical examination techniques and modern techniques such as ultrasound, blood, urine testing in comon disease Perform

surgical operations in support of the treatment of internal animal diseases; proficient in prescribing, supporting treatment and treatment of animal diseases

50. Veterinary Surgery diseases - 3 credits

Time distribution: 3 credits (39 theorycal hours/12 practical hours/90 self-study hours)

Prerequisites:Veterinary pharmacology, veterinary pathology, veterinary disease diagnosis, veterinary microorganism

Previous module: Veterinary internal medince , Disease in dog and cat, Animal welfare and profesional laws

Parallel courses: Veterinary internal medince, Veterinary obstetrical medince

The subject provides students with a high quality Veterinarian major with knowledge of the basic techniques of veterinary surgery as: cattle's immobilization methods anesthesia methods, anesthesia used in surgery , surgical hemostasis methods, methods of connecting the tissue used to seal wounds, and dressing methods for animals., surgery method in organs system : organ reproductive, head and abdomen. In addition, students have knowledge about the causes, symptoms and treatment method of surgery diseases

51. Veterinary obstetrical diseases: 3 credits

Time distribution: 3 credits (39 theorycal hours/12 practical hours/90 self-study hours)

Prerequisites:Veterinary pharmacology, veterinary pathology, veterinary disease diagnosis, veterinary microorganism

Previous module: Veterinary internal medince , Disease in dog and cat, Animal welfare and profesional laws

Parallel courses: Veterinary internal medince, Veterinary obstetrical medince

This subject equips learners with the knowledge of i) signs pregnancy, the process of fetal development, physiological changes of animal's body in gestation, diagnosis methods pregnant cattles.ii) realize signs of calving and practice to deliver for cattle. iii) the disease in gestation . iv) the disease in calving brith, difficul calving. v) the disease in time of after give birth. vi) mamarial gland disease vii) Reproductive disorders in cattle

52. Disease in dogs and cats - 2 credits

Time distribution: 2 credits (24 theorycal hours/12 practical hours/60 self-study hours)

Prerequisites: Sciecentific animal's body, veterinary physiology – biochemistry, veterinary disease diagnosis

Previous module: Veterinary pharmacology, veterianry pathology

Parallel courses: Veterinary internal medince, Animal welfare and profesional laws, Veterinary obstetrical medince

The subject provides knowledge about some common infectious diseases, parasites, general surgery in dogs and cats . To research about cause , symptom, diagnostic methods and prevention and treatment diseases in dog and cat

53. Vetrinary pharmaceutic and products control : 3credits

Time distribution: 3 credits (41 theorycal hours/8 practical hours/90 self-study hours)

Prerequisites: veterinary pharmacology, general microorganism, veterinary microorganism

Previous module: Chemistry, biology

Parallel courses: No

This course is includes: i) the basic knowledge of pharmaceutics and pharmacokinetisc, ii) pharmaceutics method and product control method in veterinary medicine, iii) the knowledge of medicinal herbs and pharmaceutics, control techniques

54. Animal welfare and profesional law

Time distribution: 2 credits (30 theorycal hours/0 practical hours/60 self-study hours)

Prerequisites: Scientific animal's body, veterinary Physiology -biochemistry,

Previous module: Animal nutrition and feed, Veterinary epidemiology, microbiology, Veterinary infectiuos disease, Parasite and veterinary parasitology, Animal product quarantine

Parallel courses: No

This course is include 3 main contents:

Content 1: the chapters about introduction of animal welfare, evaluation of animal welfare based on criterias, evaluation of animal wlefair based on physiology- auto nervous systerm, evaluation of animal wlefair based on physiology – endocrine

Content 2: Introduction about Veterinary law No. 97/2015/QH13

Content 2: Introduction about Animal husbandry law No. 32/2018/QH14

55. Hygiene in animal: 2 credits

Time distribution: 2 credits (30 theorycal hours/0 practical hours/60 self-study hours)

Prerequisites: veterinary Physiology -biochemistry, professional animal husbandry, Veterinary infectiuos disease

Parallel courses: Veterinary law, Food safety and hygence, Animal product quarantine

This course equips for students the knowledge and upgrade of environmental factors effective to animal health and productivity. The method of improvement the enviroment to increase livestock productivity methods of treating livestock waste, minimizing environmental pollution.

56. Aquatic disease - 3 credits

Time distribution: 3 credits (39 theoretical hours/12 practical hours/90 self-study hours)

Prerequisites: General microorganism, veterinary physiology, veterinary pharmacology

Parallel courses: No

This course equips for students overal knowledge, particular knowledge of aquatic disease to support students self- confident applying to reality, the basic knowledge of the emergence and development of diseases in aquaculture, methods of determining the cause of fish death in ponds; analysis of the characteristic pathological signs of some parasitic internal-external diseases, fungal diseases, bacterial diseases and viral diseases commonly occurring in aquatic animals. The module also provides students with knowledge of drugs and chemicals as well as methods of using drug

57. One Health in Veterinary Medicine - 2 credits

Time distribution: 2 credits (30 theoretical hours/0 practical hours/60 self-study hours

Prerequisites: Veterinary microorganism

Previous module: Veterinary infectiuos disease, Parasite and veterinary parasitology…

Parallel courses: Zoonotic diseases

The One Health module in Veterinary Medicine provides for students with basic knowledge of One Health, including the factors effect to One Health, the One Health core competencies. Applying One Health core competencies in disease control and food safety.

58. Scentific researching method: 2 credits

Time distribution: 2 credits (30 theoretical hours/0 practical hours/60 self-study hours

Prerequisites:veterinary Physiology-chemistry, Genetic – breeding livestook

Previous module: Statistics

Parallel courses: Zoonitic disease

This coures equips for students the basic knowledge of with knowledge of basic principles in designing an experiment methods of analyzing experimental data and processing research results using computer software

59. Vaccine production technology and vaccination: 2 credits

Time distribution: 2 credits (30 theoretical hours/0 practical hours/60 self-study hours)

Previous module: General microorganism, Veterinary pharmacology

Prerequisites: Veterinary microorganism, veterinary immunology

Parallel courses: veterinary infectiuos disease,

The course studies on: i) basic issues about vaccines (including: vaccine concept and classification, basic properties copies of vaccines, ingredients of vaccines, characteristics of some vaccines used in veterinary medicine); ii) Technology of vaccine production and testing, including principles of vaccine production, vaccine production, processes of vaccine production and testing, and some procedures of vaccine testing; iii)

The use of vaccines in disease prevention for livestock and poultry (including: principles of using vaccine, rules of specific antibody formation after vaccination in animals, rule of using vaccine some vaccines used to prevent diseases for livestock and poultry).

60. Food safety and hygiene - 2 credits

Time distribution: 2 credits (30 theoretical hours/0 practical hours/60 self-study hours

Prerequisites: no

Previous module: General microorganism, veterinary physiology -biochemistry

Parallel courses: No

The course equips learners with knowledge of food safety and hygiene including basic concepts of food and food safety and hygiene. basic knowledge about microorganisms infecting in food, pathways of infection with food, characteristics of some microorganisms that cause human diseases through food, knowledge of sanitation facilities food production, hygienic requirements for street food and beverages, etc. on food quality management systems such as HACCP, ISO, VietGAP in animal husbandry, and food safety and hygiene law.

61. Disease in wildlife - 2 credits

Time distribution: 2 credits (30 theoretical hours/0 practical hours/60 self-study hours

Previous module: Veterinary pharmacology

Previous module: General microorganism, veterinary pathology, veterinary disease diagnosis

Parallel courses: Veterinary infectiuos disease, Parasite and veterinary parasitology…

The Wildlife Diseases module equips learners with the following knowledge: i) Classification of animals, classification of birds, classification of reptiles, classification of rodents); ii) Some common diseases in animals (including: infectious diseases, parasitic diseases, internal - external - obstetric diseases); iii) Some common diseases of avian birds (infectious diseases, parasitic diseases); iv) Some common diseases in reptiles (infectious diseases, parasitic diseases); v) Some common diseases in rodents (infectious diseases, parasit diseases).

62. Animal productive quarantine: 3 credits

Time distribution: 3 credits (39 theoretical hours/12 practical hours/90 self-study hours)

Prerequisites: veterinary physiology -biochemistry, scientific animal's body, veterinary microorganism

Previous module: Veterinary infectiuos disease, Parasite and veterinary parasitology…

Parallel courses: veterinary law

Animal productive quarantine is a study on methods of transportation, storage, processing and veterinary hygiene inspection of animals and animal products such as meat, eggs, milk, fish, etc. The aim is to provide people with high-value animal products, ensuring food hygiene and safety, health safety for consumers and disease safety for livestock and poultry.

63. Zoonotic diseases: 2 credits

Time distribution: 2 credits (26 theoretical hours/8 practical hours/60 self-study hours)

Prerequisites: veterinary pharmacology, veterinary pathology, veterinary microorganism

Previous module: veterinary pharmacology, veterinary pathology, veterinary microorganism

Parallel courses: Veterinary infectiuos disease, Parasite and veterinary parasitology…

Zoonotic Disease is the science that studies: i) Outline of zoonotic diseases (including concepts and general introduction to infectious diseases between animals and humans; main types of infectious diseases; animals carrying pathogens.); ii) Infection between animals and humans caused by viruses; iii) Infection between animals and humans by bacteria; iv) Infection between animals and humans by parasites; v) One Health Application in zoonotic disease prevention

64. Animal nutritional diseases

Time distribution: 2 credits (30 theoretical hours/0 practical hours/60 self-study hours

Previous module: veterinary pharmacology, veterinary pathology, animal nutrition anf feed

Prerequisites: : Scientific animla's body, veterinary physiology -biochemistry, veterinary disease diagnosis

Parallel courses: Veterinary infectiuos disease, Parasite and veterinary parasitology…

The module equips learners with knowledge of nutritional imbalance in animal's body, researching about causes, symptoms, diagnosis, treatment methods by nutritional imbalance in livestock

65. Valuable animal husbandry: 2 credits

Time distribution: 2 credits (30 theoretical hours/0 practical hours/60 self-study hours

Previous module: veterinary pharmacology, veterinary pathology, animal nutrition anf feed

Prerequisites: : Scientific animla's body, veterinary physiology -biochemistry,

Parallel courses:

This course equips learners with the registration law of raising, transporting and using rare animal products; breeding techniques, production organization, management, and research on bees, silkworms and other rare animal species.

66. Acupuncture for treatment in domestic diseases:

Time distribution: 3 credits (45 theoretical hours/0 practical hours/90 self-study hours

Prerequisites: veterinary physiology -biochemistry, scientific animal's body, veterinary pathology

Previous module: veterinary physiology -biochemistry, scientific animal's body

Parallel courses: Veterinary infectiuos disease, Reproductive technology

The course equips learners with knowledge of theories of oriental traditional medicine in disease treatment; mechanism of acupuncture under modern medicine; acupuncture points, acupuncture points on the body of domestics; treatment methods includeing hand-puncture, electro-acupuncture, hydro-acupuncture and acupuncture; some single acupressure treatment for domestics

67. Animal waste and Environmental management– 3 credits

Time of study: 3 credits (45 theoretical hours /0 practice hours /90 self-study hours)

Previous courses: Veterinary Infectious Diseases, Veterinary Internal Diseases, Parasites and Veterinary Parasits

Prerequisite courses: Animal biochemistry; Animal Physiology; Specialized Breeding; Veterinary Infectious Diseases

Parallel courses: veterinary law, animal product quarantine, Food safety and hygiene

This course equips for students the knowledge and upgrade of environmental factors effective to animal health and productivity. The method of improvement the enviroment to increase livestock productivity

68. Using biotechology in veteriary medicine – 3 credits

Time of study: 3 credits (45 theoretical hours /0 practice hours /90 self-study hours)

Previous courses: Animal biochemistry-Physiology, genetic-breeding livestock, Veterinary pharmacology

Prerequisite courses: Animal biochemistry-Physiology; Poultry production, Swine production

Parallel courses: veterinary law, animal product quarantine, Food safety and hygiene

This course equips for students the basic knowledge of biotechnology and applying in field of animal husbandry and vetrinary medicine (breeding, nutrition and feed,

prevention and control disease, animal product processing, animal waste treatment and invironmental protection.

69. Farm Administration 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Previous courses: Animal biochemistry-Physiology, Scientific animal's body, Veterinary pathology

Prerequisite courses: Veterinary pharmacology, veterinary disease diagnosis

Parallel courses: veterinary surgery disease, Disease in dog and cat

This course equips for students the basic knowledge of overal farm and farm administration, the scientific foundation of farm administration; elaborating and formulating farm production and business plans; knowledge of management, establishment, production organization, production resources, techniques of the farm and the role, importance of traceability, application in farm administration in the era of application of information technology 4.0 to livestock products.

70. Practice in Veterinary Surgry - 3 credits

Time of study: 3 credits (0 theorical hours / 90 practice hours / 90 self-study hours)

Previous courses:, Veterinary Pharmacology, Veterinary surgery diesease, Veterinary Disease Diagnosis.

Prerequisite courses: Scientific animal's body, Animal biochemistry-Physiology

Parallel courses: disease in dog and cat, Veterinary surgery diesease

The module provides learners with the basic techniques of Surgery - Veterinary Medicine, and implementing specialized techniques to intervene and treat Surgery - Veterinary Medicine diseases in animal.

71. Practice in Veterinary Surgery-Obstetrics– 3 credits

Time of study: 3 credits (0 theoretical hours /90 practice hours /90 self-study hours)

Previous courses:, Reproductive technology, Veterinary enternal diesease, Veterinary Disease Diagnosis.

Prerequisite courses: Scientific animal's body, Animal biochemistry-Physiology

Parallel courses: Veterinary surgery diesease, Veterinary *obstetrics* diesease

The module provides learners with the basic techniques of surgery –obstetrics veterinary medicine, and implementing specialized techniques to intervene and treat surgery –obstetrics veterinary medicine diseases in animal.

72. Practice of diagnosing aquatic diseases - 3 credits

Distribution of study time: 3 credits (0 theory periods / 90 practice periods / 90 self-study periods)

Prerequisite Module: Aquatic Animal Diseases

Previous lesson:

Parallel modules:

The course provides students with the knowledge of methods of observing, recording the external and internal characteristics of infected aquatic animals to shape and form disease diagnosis diagrams by group of infected species or group of pathogen; providing basic knowledge and skills in the diagnosis and testing of endosymal diseases in which students will observe and perform the operations of the Parasitic Diagnostic Method routine; providing students with a method of diagnosing fungal diseases by scanning method; providing students with knowledge and skills about Rapid Diagnostic Methods and Bacterial Isolation Methods in the Laboratory; providing students with knowledge and skills to identify diseases caused by viruses by microscopy method, gram staining method, tissue cutting method and molecular method which have been widely used in the identification of viral diseases in aquatic animals.

73. Practice in Pet Surgery-Obstetrics - 2 Credits

Time of study: 2 credits (0 theory hours / 60 practice hours / 60 self-study hours)

Prerequisite subject: Veterinary microbiology, Foreign - Veterinary medicine.

Previous Subject: Animal Physiology, Biochemistry - Physiology

The Practice in Pet Surgery-Obstetrics (dogs and cats are the main pets), includes 15 exercises, divided into the following contents:

- Methods of anesthesia, anesthesia, blood transfusion, infusion ... are performed when providing surgical and obstetric treatments for pets.
- Some surgical and obstetric procedures for pets.
- Apply some modern equipment in diagnosing pet diseases

74. Practice in Pet grooming (pet spa) - 2 Credits

Time of study: 2 credits (0 theory hours / 60 practice hours / 60 self-study hours)

Prerequisite subjects: Pet care and training practices, Advanced pet diagnostic and treatment practices ...

Previous Subject: Zoology

Nowadays, many people are interested in and focused on pet beauty. Not always pet owners have enough time and conditions to bathe and groom themselves at home. Therefore, they need to bring them to professional spas to enjoy the best care.

With this subject, students will master some of the most basic techniques to take care of their pets as well as those of customers

75. Practice in Pet Diagnostic and Treating - 2 credits

Time of study: 2 credits (0 theory hours / 60 practice hours / 60 self-study hours)

Prerequisite subjects: Veterinary microbiology, Diagnosis of veterinary diseases

Previous Subject: Animal Physiology, Biochemistry - Physiology

The course equips the skills of animal immobilization, anesthesia, diagnostic manipulation and treatment of some common skin diseases, infectious diseases, parasites, and maternal care in dogs and cats

76. Practice in Pet care and traning - 2 Credits

Time of study: 2 credits (0 theory hours / 60 practice hours / 60 self-study hours)

Prerequisite subjects: Infectious diseases, Cat and dog diseases ..., Practice of caring and training pets, Advanced practice in diagnosing and treating pet diseases ...

Previous Subjects: Animal Physiology, Biochemistry - Animal Physiology…

The pet care and training course consists of 15 exercises, divided into the following contents:

- Pet care and feeding operations: food, nutrition, care regimen, detection and treatment of some common diseases.

- Actions and steps to train some basic pet commands

77. Professional animal husbandry- 4 credits

Time of study: 4 credits (52 theory hours / 16 practice hours / 120 self-study hours)

Previous courses: Genetic – breeding livestock, reproductive technology

Prerequisites courses:Sceinetific animal's body, vetrinary physiology – chemistry, Animal nutrition and feed

Parallel courses: animal product quarantine, zoonotic disease

This course provides the knowledge about breedings of bufalo, cow, swine and poultry that are raised commonly in Viet Nam. The basic knowledge of raising technology which correspond to type of livestock: Boar, Sow, dairy, layer, broiler…., the knowledge of hatching

78 Marketing – 3 credits

Time of study: 3 credits (15 theory hours / 60 practice hours / 90 self-study hours)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of the course content: The Marketing module equips learners with basic knowledge of marketing in the context of commodity economic development in Vietnam and integration with the world economy. Particular content research the trade in field of animal husbandry and vetrinary medicine, marketing invironment in produce and busines, the policy of animal product and cost, distribution in trade

79. Transaction and bargaining in business – 3 credits

Time of study: 3 credits (30 theoretical hours /30 practice hours /90 self-study hours)

Previous courses: No

Prerequisites courses: No

Parallel courses: No

The course aims to convey to students the basics of business negotiations,the basic principles of trading, the psychological basis of transactions, multilateral transactions and ceremonies in the transaction, the main contents of negotiations and strategies in negotiations, the stages of negotiation and the conclusion of negotiations, the legal basis of negotiations..

80. Business startup – 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

The module consists of four chapters. Chapter 1 introduces the foundations for starting a business, Chapter 2 deals with forming, evaluating and choosing a business idea, Chapter 3 deals with business planning, Chapter 4 deals with business planning. to building a business start-up and business development model.

81. Value Chain Analysis - 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Previous courses: No

Prerequisites courses: No

Parallel courses: No

Summary of course content: The course equips the basics of value chain analysis and approaches and value chain evaluation. Practice value chain analysis tools for livestock products.

82. Blockchain applications in agricultural economics - 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Previous courses: No

Prerequisites courses: No

Parallel courses: No

Summary of course content: The course focuses on issues such as management and development of online transactions, online marketing, exchange of data for production and business of veterinary livestock, traceability of QR code, electronic payment ...

83. Branding and product development - 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Prerequisite subject: No.

+ Previous subject: No.

The Branding and Development module equips students with knowledge applicable to corporate governance, focusing on aspects such as branding, designing and identifying

branding models. brand, brand positioning strategies, communication and brand protection

84. Business Administration – 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Previous lesson: Management Science

Prerequisite: No.

Parallel modules: Starting a business, building and developing a brand

Summary of the course content: The business administration module aims to equip students with basic knowledge of business administration skills, including: Introduction of business issues, business environment, introduction the basics of governance (human resource management, production and operational management, quality management, cost management, results and corporate financial policy) as well as related issues. related to the inspection and control in the enterprise.

85. Posthavesting and processing of Agro-products- 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Prerequisite:

Previous subject:Scientific management

Preservation and processing of agricultural products is a specialization referring to the nature and nature of preserving agricultural products and foodstuffs in the process of industrial production, especially in the food industry. Thereby giving directions to preserve agricultural products, good quality food for a long time in the production process.

86. Agroforestry– 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Previous courses: Profesional animal husbandry, crop science

Prerequesite courses: No

Parallel course: No

The module provides learners with the basic and general concepts of agroforestry farm management, the scientific basis of farm governance; establishment and construction of farm production and business plans; knowledge of management, establishment, production organization, production resources, farm technology and the role, importance of traceability, application in farm management in the age of application information technology 4.0 for livestock products. After completing the course, students will be able to apply the knowledge they have learned into the construction, management of production and business activities, and traceability of an agroforestry farm to meet practical requirements.

87. Food technology – 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Previous courses: Profesional animal husbandry, crop science

Prerequesite courses: physitic, chemistry

Parallel course: No

Equip learners with basic concepts and knowledge of processes in food production such as sorting, sedimentation, filtration, centrifugation, heat, extraction, and drying. Variations and influencing factors occur in food processing. Applying and operating equipment systems for food production with high productivity and efficiency

88. Biological risk management - 3 credits

Time of study: 3 credits (30 theory hours / 0 practice hours / 60 self-study hours)

Previous lesson: No.

Prerequisite: Biology, General Microbiology

Parallel learning: No.

This course includes basic and advanced knowledge about biological risks, biosafety levels; basic and advanced knowledge of safe laboratory practices, microbiological techniques, and risk assessment and management of genetically modified organisms and products of variable organisms. genetically modified. From there, learners can apply in the management of biological risks in research and production practices.

89. Crop science – 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Previous courses: No

Prerequisite courses:

Parallel courses: Entrepreneurship, Brand construction and development

This course is includes 3 particulation which are: fruit trees, greentea trees and maize plants. fruit trees. Each component is divided into 5 chapters: Economic value and production situation (fruit trees, tea trees, maize plants), Biological characteristics (fruit trees, tea trees, maize plants), Breeding techniques (for fruit trees). Ecological requirements (fruit trees, tea trees, corn plants), Planting and care techniques (fruit trees, tea trees, corn plants).

90. Environmental technology- 3 credits

Time of study: 3 credits (45 theoretical hours / 0 practice hours / 90 self-study hours)

Previous courses: No

Prerequisite courses:

Parallel courses: Business stratup, Brand construction and development

The module provides learners with knowledge of the process of waste generation, quantity, composition, harm and integrated measures of waste treatment to minimize the

negative impact of livestock waste on the environment. ensure a safe and sustainable ecosystem, and at the same time apply this knowledge to farming practices.

91. **Visiting factories producing animal feed, veterinary medicine and farms- 1 credit**

Time of study: 1credits (0 theoretical hours / 60 practice hours / 60 self-study hours)

Previous courses: No

Prerequisite courses:

Parallel courses: Business stratup, Brand construction and development

The module equips learners with the basics of organization, management and production at feed factories, veterinary medicine, and livestock farms

92. Prevention Vaccination - 3 credits

Time of study: 3 credits (0 theory hours / 180practice hours / 180 self-study hours)

Previous courses: veterinary medicine diagnosis, veterinary pharmacology, Technology for manufacturing and using vaccines

Prerequisite courses: veterinary medicine diagnosis, veterinary pharmacology, Technology for manufacturing and using vaccines

Parallel courses: Business stratup, Brand construction and development

The module is equipped with skills on how to use and preserve vaccines, how to approach animals, and techniques in vaccination

93. The Practice and management dieases of poultry farms - 5 credits

Time of study: 5 credits (0 theory hours / 300 practice hours / 0 self-study hours)

Previous courses: veterinary medicine diagnosis, veterinary pharmacology, poultry production

Prerequisite courses: veterinary medicine diagnosis, veterinary pharmacology, Technology for manufacturing and using vaccines

Parallel courses: One health in veterinary medicine

The module equips learners with skills to prepare poultry farming conditions (barns, tools ... in poultry farming); Rules of a poultry farm; feed for poultry; Characteristics of poultry species raised in the farm; Poultry selection techniques; Poultry breeding techniques (Sanitation of barns, feeding, drinking ...); Check and evaluate the poultry health status; Implementation of the process of disease prevention and treatment (Veterinary hygiene, prevention with vaccines, use of medicines for prevention and treatment ...); Waste treatment in poultry farms; Find out about the farm's production plan through books / interviews; Know the economic efficiency of poultry / year.

94.The Practice and management dieases of swine farms - 5 credits

Time of study: 5 credits (0 theory hours / 300 practice hours / 0 self-study hours)

Previous courses: Genetic- beeding animal livestock, , swine production

Prerequisite courses: veterinary physology – biochemistry, Scientific anial's body, animal nutrition and feed

Parallel courses: One health in veterinary medicine

The module equips learners with skills to prepare swine farming conditions (barns, tools ... in swine farming); Rules of a swine farm; feed for swine; Characteristics of swine species raised in the farm; Swine selection techniques; Swine breeding techniques (Sanitation of barns, feeding, drinking ...); Check and evaluate the swine health status; Implementation of the process of disease prevention and treatment (Veterinary hygiene, prevention with vaccines, use of medicines for prevention and treatment ...); Waste treatment in swine farms; Find out about the farm's production plan through books / interviews; Know the economic efficiency of swine / year.

95. The Practice and management dieases of ruminant farms - 5 credits

Time of study: 5 credits (0 theory hours / 300 practice hours / 0 self-study hours)

Previous courses: Genetic- beeding animal livestock, ,ruminant production

Prerequisite courses: veterinary physology – biochemistry, Scientific anial's body, animal nutrition and feed

Parallel courses: One health in veterinary medicine

The module equips learners with skills to prepare ruminant farming conditions (barns, tools ... in ruminant farming); Rules of a ruminant farm; feed for ruminant; Characteristics of ruminant species raised in the farm; Ruminant selection techniques; Ruminant breeding techniques (Sanitation of barns, feeding, drinking ...); Check and evaluate the ruminant health status; Implementation of the process of disease prevention and treatment (Veterinary hygiene, prevention with vaccines, use of medicines for prevention and treatment ...); Waste treatment in ruminant farms; Find out about the farm's production plan through books / interviews; Know the economic efficiency of ruminant / year.

96. Graduate internship - 10 credits

Time of study: 10 credits (0 theory hours / 600 practice hours / 600 self-study hours)

Previous courses: Veterinary infectiuos disease, Veterinary surgery disease,….

Prerequisite courses: veterinary disease diagnosis, veterinary pharmarcology..

Parallel courses: No

This course is the final part of the training program and plays an important role in the current education. Course also help students access and grasp the reality of production, consolidate the knowledge learned, and apply theory to production practice, thereby improving their professional knowledge to master scientific research methods. In addition, the time of graduation is also the time for students to train and learn from the experiences of their forelimbs, in order to equip themselves with professional knowledge

and management after graduation can become a scientific staff with professional qualifications, solid skills, improve soft skills and effective communication ability.

97. Basic laboratory skills– 2 credit

Time of study: 2 credits (0 theory hours / 60 practice hours / 60 self-study hours)

Previous subjects: General microbiology

Parallel subjects: Animal physiology, Biochemistry - animal physiology; Veterinary pharmacology

The course equips students with skills in cleaning and disinfecting laboratory equipment and tools. How to prepare the medium, culture, and dye the specimen in the microbiological laboratory.

98. Using epidemic management software – 1 credit

Time of study: 1credit (0 theory hours / 60 practice hours / 60 self-study hours)

Previous courses:

Prerequisite courses:

Parallel courses: No

This course equips for students the understanding and using method of epidemic management software in livestock

99. Clinical examination, prevention and treatment disease skills at veterinary infirmary – 1 credit

Time of study: 1credit (0 theory hours / 60 practice hours / 60 self-study hours)

Previous courses: Scientific animal's body, Veterinary physiology- chemistry

Prerequisite courses: veterinary disease diagnosis, veterinary microorganism

Parallel courses

This course equips diagnosis and treatment skill disease in livestock. To prescribe, record-clinical examination, using some veterinary tool to diagnose and treat disease in cattle, poultry in reality.

100. Planning production and use software in management and trading animal feed and veterinary drugs – 1 credit

Time of study: 1 credit (0 theory hours / 60 practice hours / 30 self-study hours)

Prerequisite subjects: Biochemistry - Animal Physiology; Animal feed nutrition, Pharmacology, Farm management.

Previous subjects: Animal feed nutrition, Pharmacology, Farm management

The internship module on production planning and use of animal feed and veterinary medicine management and trading software provides learners with knowledge about the steps of planning for food production and veterinary medicine. organize and manage feed and veterinary medicine using software.

101. Veterinary clinical examination skills (field trip)

Time of study: 3 credit (0 theory hours / 180 practice hours / 180 self-study hours)

Previous courses: Scientific animal's body, Veterinary physiology- chemistry

Prerequisite courses: veterinary disease diagnosis, veterinary microorganism

This course is includes 15 practical lessons which contents are: cattle immobilzation to examine, clinical examination methods, using modern techniques to diagnose disease in cattle and poultry