THAI NGUYEN UNIVERSITY OF AGRICULTURE AND FORESTRY
FACULTY OF FORESTRY

SOCIALIST REPUBLIC OF VIETNAM
Independence-Freedom-Happiness

BRIEF OUTLINE OF ALL COURSES IN FOREST RESOURCES MANAGEMENT

(Attached to Decision No. 1087/QD-DT dated December 9, 2020, of the Rector of University of Agriculture and Forestry - Thai Nguyen University)

Briefly describe the content and volume of the subjects

1. Marxist-Leninist philosophy - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of the subject content: This module equips knowledge of the laws of motion, the most common development of nature, society and thinking to form the most common worldview and methodology for scientific awareness. And revolutionary practice. The content of the module includes:

Part I: Overview of philosophy and history of philosophy

Chapter I: An overview of philosophy

Chapter II: An overview of the history of philosophy before Marx

Chapter III: Birth and development of Marxist-Leninist philosophy

Chapter IV: Some trends in modern Western philosophy

Part II: Basic principles of Marxist-Leninist philosophy

Chapter V: Matter and consciousness

Chapter VI: Two principles of material dialectic

Chapter VII: Pair of basic categories of material dialectic

Chapter VIII: Basic laws of material dialectic

Chapter IX: Cognitive theory

Chapter X: Socio-economic form

Chapter XI: Class and ethnicity

Chapter XII: State and social revolution

Chapter XIII: social consciousness

Chapter XIV: Marxist-Leninist philosophical view of man

2. Marxist-Leninist political economy - 2 credits

Allocation of study time: 2 credits (30 theory periods / 0 practice periods / 60 self-study periods)

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 economics is the module that provides the most basic concepts and knowledge systems for the modern economics faculty such as supply and demand, profit, and free trade ... Many perspectives of the main economic schools Values have become the ideological creeds of economists and politicians.

3. Science socialism - 2 credits

Allocation of study time: 2 credits (30 theory periods / 0 practice periods / 60 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: Scientific socialism is a module equipped with knowledge of socio-economic theories created by Marx and Angels. This module is one of the three constituent parts of Marxism-Leninism, studying social movements aimed at abolishing capitalism and building socialist society, towards building communist society. 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 arising of the socialist revolution, formation and development of the socialist socio-economic form, associated with the

historical mission. The whole world of the modern working class, aimed at human liberation, social liberation.

4. Ho Chi Minh's Ideology - 2 credits

Allocation of study time: 2 credits (30 theory periods / 0 practice periods / 60 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: This module provides a system of Ho Chi Minh's views and ideas in the revolutionary cause, summarized and systematized by the Communist Party of Vietnam. This ideological system includes views on basic issues of the Vietnamese revolution, from the people's democratic revolution to the socialist revolution; applying and developing Marxism-Leninism in Vietnam's specific conditions. After completing this module, learners will increase their awareness of regularly practicing, cultivating, studying and following the example of Ho Chi Minh's ethics and style to increasingly improve themselves and contribute to building the country.

5. History of the Vietnamese Communist Party - 2 credits

Allocation of study time: 2 credits (30 theory periods / 0 practice periods / 60 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of the subject content: This module presents objectively, comprehensively and systematically the basic facts about the history of the Party through each revolutionary period and period in the movement, development and development. Its intrinsic relationship. On that basis, compared with practical requirements to analyze and evaluate the Party's activities; affirming the victories, achievements, mistakes and shortcomings in the Party leading the Vietnamese revolution; Generalizing historical events and events, pointing out the nature, general tendency and objective laws governing the movement of history.

The study and research of this module also has great significance in educating about the revolutionary tradition, about patriotism and genuine national spirit, and pride towards the Party and the nation. Vietnam; At the same time, it also has the effect of fostering the will to fight the revolution, motivating learners to be aware of imitating those who went ahead, to continue the brave, brave struggle, intelligent and creative to protect and to develop the revolutionary achievements that the Party and people have spent so much blood to win, successfully built socialism and firmly defended the Socialist Vietnam Fatherland.

6. Chemistry - 4 credits

Allocation of study time: 4 credits (50 theory periods / 20 practice periods / 120 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: Chemistry module consists of 6 chapters, including 50 theoretical periods and 10 practical periods. The theoretical part equips students with basic knowledge of chemical balance, the factors affecting chemical balance; apply the translation of the reversible reaction; reaction speed and influencing factors. At the same time, provide basic concepts and knowledge about the solution. Research on the composition and content of survey samples: qualitative analysis, quantitative, structural determination, assessment of product results and quality, separation, separation, cleaning, preparation of compounds super pure ... etc.

The practical part equips students with some basic laboratory rules; research experiments on the effects of factors on chemical balance, reaction speed, explanation and application in practice; practice determining the pH value of some common solutions; research on titration experiments, to determine the content of analyzed samples.

7. Biology - 3 credits

Allocation of study time: 3 credits (40 theory periods / 10 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: Biology module consists of 7 chapters. The theory section equips students with basic knowledge about the chemical composition of the living organism, the organizational levels of the living organism, the main metabolic modes in living cells, and reproduction. Growth and development of living organisms, ability to induce and adapt to the living environment of organisms, the evolution of organisms, the application of Biology in agriculture and forestry ... etc.

The practical part equips students with some basic laboratory rules; research and practice to make live plant specimens; observing some fixed specimens of animal cells; Visually observe reproductive organs of some flowers; Observe and classify a number of results to actualize the theoretical content to help learners inculcate knowledge.

8. General Sociology - 2 credits

Allocation of study time: 2 credits (30 theory periods / 0 practice periods / 60 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The General Sociology subject is a compulsory subject in order to systematically equip students with basic knowledge of sociology, including: subjects, functions, tasks, sociological research department; Basic sociological concepts. On the basis of basic concepts, students can understand relationships between individuals, groups and society; the role position of individuals, social groups, institutions, social organizations, classes and social classes in a society. On the basis of that knowledge, educate students about professional sociology in the construction of our country today.

9. Physics - 2 credits

Allocation of study time: 2 credits (30 theory periods / 0 practice periods / 60 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: Physics module consists of 5 chapters with 17 theoretical periods and 13 exercises and discussion periods. Theoretical part: equipping students with general understanding about mechanics, basic motion types associated with practice, basic laws of New Zealand; Common concepts and phenomena in fluid mechanics, analyzing important applications of fluid mechanics in agriculture and forestry; equipping with basic knowledge of electromagnetic fields, electromagnetic waves and applying them to the fields of agriculture and forestry; provide some knowledge about optical waves, quantum optics, photochemical processes; basic knowledge of nuclear physics and use of some nuclear techniques in high-tech agriculture. Exercises and discussion sections: Ask students to apply the knowledge they have learned in each chapter to solve practical problems: explain phenomena, apply their learned knowledge to their current subject.

10. Mathematic - 2 credits

Allocation of study time: 2 credits (30 theory periods / 0 practice periods / 60 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: Advanced Math includes 3 chapters with 17 theoretical periods and 13 discussion periods. Theoretical part: Equipping the concepts of matrices, matrix operations, application of matrices in real problems; system of linear equations (mathematical physics), how to solve the system of mathematical equations; differential equations (PTVP), different types of differential equations and some applications of differential equations; some optimal mathematical types in agriculture and forestry and methods to solve the optimal problem. Discussion part: Ask students to apply the learned methods to solving problems, especially proficient in using software (Excel) on the machine to solve problems of matrices, mathematical systems and dark problems. pros.

Equip with basic calculation skills, practice analytical skills, and mathematical modeling for a number of practical problems such as: Business management and production problems; the problem of the ration of animal feed; Calculation of residual chemical content in the environment and food; the optimization problem in Agriculture and Forestry. Equip students with some software to solve math problems, then apply them to solve math problems in the module and apply them in real problems.

11. English 1 -3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Course content summary: This module provides basic and core knowledge of Grammar (sentence structure, verb tense ...), Phonetics (stress & intonation), and Vocabulary (words & consist of); Consolidating the basic phenomena of Grammar, Phonetics and Vocabulary mentioned above as a basis for practice in communication; Initially forming language communication skills such as Listening, Speaking, Reading, and Writing on the basis of a firm grasp of theory and proficient practice; Basic concepts of interdisciplinary relationships between Language, Culture and verbal action.

Grammar: present tense is simple; the past tense is simple; the present continuous tense; past acting tense; Like / would like; modal verbs; comparison levels of adjectives.

Vocabulary: Verbs for everyday activities and spare time; adjective; present and past expressions of time; words describing feelings, states; transport.

Reading: health; sport; transport; explore.

Hear: health; sport; transport; explore.

Say: ambitious; telling stories.

Write: linking words; report; the story happened.

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

After completing this module, students have the ability: Skimming and grasping the main idea; Read learn some detailed information, guess the meaning of words in context; Listen to the main idea, listen to discover some detailed information, listen to guess the word; The ability to perform simple conversations and simple sentence patterns to convey information, respond to information given by others within the program; The skill of writing sentences with content is within the range of topics learned in the program.

12. English 2 - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Course content summary: This module provides basic and core knowledge of Grammar (sentence structure, verb tense ...), Phonetics (stress & intonation), and Vocabulary (words & consist of); Consolidating the basic phenomena of Grammar, Phonetics and Vocabulary mentioned above as a basis for practice in communication; Initially forming language communication skills such as Listening, Speaking, Reading, and Writing on the basis of a firm grasp of theory and proficient practice; Basic concepts of interdisciplinary relationships between Language, Culture and verbal action.

Grammar: countable nouns and uncountable nouns; words indicating quantity, articles; future tense with be going to, will; present continuous tense refers to the near future; preposition for place; present perfect; relational statements and type 1 conditional sentences.

Vocabulary: words for materials; linking words; synonym; career words; suffixes; prefix.

Reading comprehension: the environment; life; event; Workplace; explore.

Listening: the environment; plans and plans; job interview; the importance of technology; new invention.

Say: presentation report; interview.

Write a report; email; describe; CV; paragraph; linking words; topic sentence.

Pronunciation: sound / tə /, / đ ə /, / đ i /, / w /, intonation in conditional sentences.

After completing this module, students have the ability: Skimming and grasping the main idea; Read learn some detailed information, guess the meaning of words in context; Listen to the main idea, listen to discover some detailed information, listen to guess the word; The ability to perform simple conversations and simple sentence patterns to convey information, respond to information given by others within the program; The skill of writing sentences with content is within the range of topics learned in the program.

13. English 3 - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Course content summary: This module provides basic and core knowledge of Grammar (sentence structure, verb tense ...), Phonetics (stress & intonation), and Vocabulary (words & consist of); Consolidating the basic phenomena of Grammar, Phonetics and Vocabulary mentioned above as a basis for practice in communication; Initially forming language communication skills such as Listening, Speaking, Reading, and Writing on the basis of a firm grasp of theory and proficient practice; Basic concepts of interdisciplinary relationships between Language, Culture and verbal action.

Grammar: Passive sentences (present and past); Past Perfect Tense; Used to... Structure; reported speech; uncertain pronouns; conditional sentence type 2;

Vocabulary: verb phrases; holiday-related words; independent preposition; classification of animals; weather.

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

Listening: learning languages; travel; nature.

Say: plan for vacation; predict the future.

Write a letter; story.

Pronunciation: sound / s /, / z /, / stress.

After completing this module, students have the ability to communicate in English, draft documents in English, and read documents in English at pre-intermediate level.

14. General informatics - 3 credits

Allocation of study time: 3 credits (15 theory periods / 60 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The course equips knowledge of computers and computer networks, skills to use basic informatics applications. After completing this module, students can: Proficient in using computers; can work on Windows operating systems and some application programs; know how to effectively manage and exploit information on computers, use computers safely and have legal knowledge in the use of information technology; Proficient in Microsoft Word to compose and present a complete document in a form, using a number of auxiliary tools for faster word processing; Using Microsoft Excel to build a complete database to solve real problems; Using calculation functions in Excel from basic to complex to calculate, statistic, and filter necessary information; Use Microsoft PowerPoint to create an engaging and effective presentation; Knowing how to exploit and connect information available on the Internet to serve learning and research; know how to use email to send and receive documents.

15. Probability and Statistics - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: Advanced Math

Parallel learning: No.

Summary of the subject content: The Probability module includes 2 parts: Probability and statistics with 27 theoretical periods and 18 discussion periods. Theoretical part: Equip knowledge of trial, event, probability of events; random variables (BNN),

probability distribution laws and characteristic parameters of BNN; sample population, sample characteristic parameters and calculation; parameter estimation; parameter testing; correlation and regression. Discussion: Ask students to calculate the probabilities of events through the formulas; determine the probability distribution law and calculate the characteristic parameters of work-related diseases; Proficient in solving estimation problems, testing parameters, finding correlation coefficients and writing regression equations of two random variables.

16. Management Science - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 60 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of the subject content: The Management Science module helps students to equip with the basic knowledge of the field of management science. On that basis, students have the ability to apply theories to management practice, creating favorable conditions for them to go into research and solve theoretical or practical problems in separate fields or is interdisciplinary. Students can master modern management science, science and technology knowledge, quickly and effectively solve problems of management practice; has the capacity to create, analyze and evaluate management policy; have the ability to quickly and reasonably adapt to changes in the management environment; has the capacity to organize, mobilize and persuade the public to realize the goals of the organization.

Management Science module: Management Science is a highly practical and applied subject. The module is designed into 6 chapters, each chapter is compiled in order, presented logically, scientifically, in detail the content of each problem, from which the meaning of learning and research is drawn. The main content includes:

Chapter 1: Introduction to Management Science

Chapter 2: Principles, functions and methods of management

Chapter 3: Managers

Chapter 4: Information in management

17. General Microbiology - 3 credits

Allocation of study time: 3 credits (39 theory periods / 12 practice periods / 90 self-study periods)

Previous lesson: Biology

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The module provides students with basic knowledge about morphological, structural, physiological, biochemical, genetic ... characteristics of common microorganism groups. in nature and in the human body, animals such as bacteria, viruses, yeasts, fungi ... In addition, the subject also studies the effects of extracellular factors on microorganisms, studies the beneficial and harmful side of microorganisms in life, especially in the agricultural field, from understanding and explaining phenomena and applying microorganisms in learning and research into production practices. .

In addition, the module also serves as a premise and basis for students to acquire knowledge of other subjects such as veterinary microbiology, infectious diseases ... at the same time, can be used as reference materials. Survey for staff working on microbiological research.

18. Vietnamese culture – 3 credits

Allocation of study time: 3 credits (35 theory periods / 20 practice periods / 60 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: Identifying the subject of culture, culture in the environment, and contact - cultural exchange. The necessity of the study of culturology and approaches to cultural research. Specifying the nature, methods, and fields of cultural studies of culturology. Determining the object, scope, and methods of the study of Vietnamese culture. Presenting the meaning of the study of Cultural Studies and Vietnamese Cultural Syllabus.

19. Environmental Ecology - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: Biology

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The subject is divided into 5 main parts: General concepts in ecology; Individual ecology; Biomes and biomes; Ecosystem; Ecology with environmental resource management. Provide students with basic knowledge of ecology; the interaction relationship between an organism and its environment. On that basis, it applies to build a balanced agricultural ecosystem and towards sustainable agricultural development, at the same time managing, protecting the living environment and exploiting natural resources in a reasonable and effective manner.

20. Vietnam's economic geography - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 60 self-study periods)

Previous lesson: Biology

Prerequisite: No.

Parallel learning: No.

Summary of subject content: Economic Geography module is an economic - social science, researching on the current situation and development orientation of natural resources of Vietnam. The integration capacity of Vietnam in the region and in the world; International economic association influencing Vietnam's socio-economic development; Territorial organization of all branches and economic regions of Vietnam.

21. State and law - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: Marxist-Leninist philosophy

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The State and law module provides learners with basic knowledge about the state and law such as: origin, nature, form, types of state and law in the calendar. history; Basic legal concepts such as legal norm, legal relations, law implementation, law violation, liability, socialist legislation, legal system; the basic contents of a number of important legal branches in the Vietnamese legal system and the law on anti-corruption.

22. Environmental Pollution - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite module: Chemistry, general microbiology

Parallel learning: No.

Summary of the subject content: The Environmental Pollution module aims to meet the requirements of improving the quality of students in the fields of management and engineering, as well as those who are working in factories. , companies, businesses, research institutes, schools and State agencies. The environmental pollution module provides students with an overview of knowledge about the environment, environmental composition, the role of the environment, the relationship between development and sustainable development. The module introduces the basic concepts of main types of environmental pollution, causes of pollution, agents and harms causing environmental pollution as well as measures to prevent and minimize environmental pollution. The module consists of 5 main contents as follows: Theoretical basis of environmental pollution, air environment pollution, water environment pollution, soil pollution and other forms of environmental pollution.

23. Molecular Biology - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: Biology

Parallel learning: No.

Summary of subject content: Molecular biology is a module on the organization of life at the molecular level, providing background knowledge of biological macromolecules (DNA, RNA, protein) and how to organize life activity at the molecular level. It is the foundation for students to understand the methods of testing and evaluating food using the tools of Molecular Biology.

24. Scientific approach methodology - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of the subject content: The module "Scientific approach" aims to help students know how to approach science, some scientific research methods, how to identify and select research problems, how to write research proposals, how to conduct research, how to write reports and publish results of scientific topics. After completing this module, students have the most basic knowledge to participate in scientific research. Skills: The module "Scientific approach" helps students to have the ability to think scientific logic, to know scientific reasoning and to analyze science. The subject is divided into four chapters:

Chapter 1: Introduction to science and scientific research

Chapter 2: Scientific research order

Chapter 3: Scientific research topics

Chapter 4: Content 4. Evaluation, acceptance, and announcement of results

25. Works safety - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite modules: Chemistry, Physics, Biology, General Microbiology

Parallel learning: No.

Summary of subject content: Occupational safety course to meet the requirements of improving the quality of students and students in schools in the fields of management

and engineering such as: Veterinary Medicine, Food Technology , Environmental Science, High-tech Agriculture, ... etc, and for those working in factories, companies, businesses, research institutes, schools and government agencies. The occupational safety course introduces students to the basic concepts of occupational safety and health such as: labor; dangerous and harmful factors at the workplace; labor accidents and the causes of occupational accidents; Concept of labor protection, nature of labor protection; labor safety culture and digitization and labor safety. The subject introduces the legal system of labor safety and hygiene in Vietnam such as the Law on Occupational Safety and Hygiene; Protection policy for special and dangerous workers; Decrees and Decisions of the Government; Circulars of the Ministry and inter-ministry and the System of technical standards and regulations on occupational safety and sanitation.

The occupational safety course provides learners with basic and necessary knowledge about occupational safety and sanitation such as: working conditions, personal protective equipment in work; ways to avoid harmful factors, measures to improve working conditions, to prevent occupational accidents and diseases for employees; handling incident situations in production and first aid for occupational accidents (theory and practice); planning and implementing the management system of occupational safety and sanitation; building a culture of safety in production; know the rights and obligations of employers and employees in occupational safety and health.

Moreover, the course also equips learners with knowledge of occupational safety techniques such as: Electrical safety technique; chemical safety engineering; safe when using pressure equipment; safe when working with lifting equipment; fire and explosion safety and safety microbiological techniques.

26. Soft skills – 3 credits

Allocation of study time: 1 credit (30 theory periods / 30 practical periods / 90 self-study periods)

Pre-study course: No

Prerequisites: No

Parallel learning: No

Summary of subject content: The module provides students with basic knowledge of teamwork skills and principles, communication skills, and behavior in some common cases. Students have basic knowledge about stress, psychological stress, pressure to study, work and know methods to relieve pressure in the study, emotional balance, personal psychology when having problems, unexpected situations. Basic knowledge of preparing resumes, writing CVs, personal portfolios, basic knowledge of recruitment interviews, working environment, office culture, and distinguishing and applying their styles and ways of thinking in studying and working.

27. Academic English – 3 credits

Allocation of study time: 3 credits (45 theory period / 0 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The subject includes reading comprehension exercises related to a number of linguistic issues and majors in order to help students enhance vocabulary, grammar, and knowledge, language skills learned, and at the same time strengthen vocabulary commonly used in scientific writing, especially materials related to language and linguistics. Students are introduced and trained in skills to understand the style, discourse, structure of scientific texts as well as reason and interpret the meanings, ideas, attitudes, and opinions of the writer correctly in the scientific articles. The second concentration is on practicing writing sentences, paragraphs, summaries of scientific papers, and writing essays in a scientific style. In addition, the course also includes English-Vietnamese and Vietnamese-English translation exercises, focusing on some specific and common structures in scientific writing as well as linguistic structures, vocabulary, and terminology, academic words that Vietnamese students often find difficult to supplement reading and writing skills.

28. Athletics - 1 credit

Allocation of study time: 1 credit (0 theory period / 30 practice periods / 30 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The module equips students with knowledge and skills to practice bare-handed exercises and perform athletic content such as running ... After completing this module, students will become highly aware of regular health exercises to have a better spirit of learning and working.

29. Volleyball - 1 credit

Allocation of study time: 1 credit (0 theory period / 30 practice periods / 30 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The course equips students with knowledge and skills of volleyball. After completing this module, students will improve their sense of regular exercise to have a better spirit of learning and working.

30. Badminton - 1 credit

Allocation of study time: 1 credit (0 theory period / 30 practice periods / 30 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The course equips students with badminton knowledge and skills. After completing this module, students will improve their sense of regular exercise to have a better spirit of learning and working.

31. Shuttlecock Kicking - 1 credit

Allocation of study time: 1 credit (0 theory period / 30 practice periods / 30 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The course equips students with knowledge and skills of soccer. After completing this module, students will improve their sense of regular exercise to have a better spirit of learning and working.

32. Martial Art - 1 credit

Allocation of study time: 1 credit (0 theory period / 30 practice periods / 30 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The course equips students with knowledge and skills of martial arts. After completing this module, students will improve their sense of regular exercise to have a better spirit of learning and working.

33. Basketball - 1 credit

Allocation of study time: 1 credit (0 theory period / 30 practice periods / 30 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The course equips students with basketball knowledge and skills. After completing this module, students will improve their sense of regular exercise to have a better spirit of learning and working.

34. Football - 1 credit

Allocation of study time: 1 credit (0 theory period / 30 practice periods / 30 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of subject content: The course equips students with football knowledge and skills. After completing this module, students will improve their sense of regular exercise to have a better spirit of learning and working.

35. Forest Plant- 3 credits

Allocation of study time: 3 credits (30 theory periods / 15 practice periods / 90 self-study periods)

Previous lesson: Forest ecology

Prerequisite lesson: Biology

Parallel lesson: No.

Summary of the subject content: Forest plants is a basic subject, with a duration of 3 credits for the majors of Forest Resource Management, Forestry, and Agroforestry. This subject includes 6 chapters:

Chapter 1: The basis of forest plant, chapter 1 provides learners with general knowledge about forest plants, plant morphology and taxonomy, phenology, plant distribution, and ecology of plant distribution, plant classification methods, and some software to support plant identification;

Chapter 2. Plant morphology, Chapter 2 provides learners with knowledge about the morphology of vegetative and reproductive organs of plants, initially forming skills to distinguish between plant morphological forms;

Chapter 3. Taxonomy principles and taxonomic systems, chapter 3 provides knowledge on plant taxonomy principles, botanical nomenclature, plant species taxonomy systems;

Chapter 4. Plants of the Conifer branch, chapter 4 provides knowledge about the identification, biological characteristics, ecology, geographical distribution, value, trading, and conservation of forest plant species of the branch. This chapter strengthens the skill of classifying plants based on morphological characteristics;

Chapter 5. Plants of the Magnolia alba branch, chapter 5 provides knowledge about the identification characteristics, biological characteristics, ecology, geographical distribution, value, trading, and conservation of forest plant species belonging to the Magnolia alba species

36. Forest Measurement- 3 credits

Allocation of study time: 3 credits (30 theory periods / 15 practice periods / 90 self-study periods)

Previous lesson: Mathematic

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The Forestry Measurement is a compulsory subject in the specialized training which provides students with knowledge about measurement, cartography in general and forestry cartography in particular; methods of mapping, determining the location and area of forest plots, etc.; Building forest maps with GIS technologies and smart mobile devices, etc. according to current regulations. Students learn how to use and update map data from various sources.

37. Biodiversity- 3 credits

Allocation of study time: 3 credits (39 theory periods / 5 practice periods / 78 self-study periods)

Previous lesson: Forest plants

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The Biodiversity subject provides learners with knowledge related to biodiversity, the values of biodiversity for human life, the status and causes of biodiversity degradation, conservation problems and principles related to biodiversity conservation in the world and Vietnam, challenges and solutions in conservation in the context of climate change. Learners are given a precious opportunity to practice and analyze the relationship between biodiversity, climate change and sustainable development, specifically the role of biodiversity with sustainable development, climate change mitigation as well as the link between deforestation and biodiversity and climate change. Based on these activities, skills of analysis and planning for biodiversity conservation will be formed. Besides, students also develop other skills such as presenting in front of groups/classes, finding and analyzing information through writing exercises on topic overviews. The method of teaching and learning through group discussions, presentations will contribute to developing creative thinking, teamwork ability, .. which is very important for a future career. .

38. Forest Ecology- 3 credits

Allocation of study time: 3 credits (36 theory periods / 6 practice periods / 90 self-study periods)

Previous lesson: Forestry Measurement, Biodiversity

Prerequisite:

Parallel learning: No.

Summary of the subject content: The Forest Ecology subject provides the background knowledge for students in FRM training program. Basic definitions of forest, forest ecology, forest structure, basic meteorological factors, weather and climate will be introduced throughout the subject. In addition to that, the subject also provides learners with an overview of the relationship between forests and ecological factors; overview of forest vegetation classification according to Thai Van Trung.

39. Experimental methods- 3 credits

Allocation of study time: 3 credits (30 theory periods / 15 practice periods / 90 self-study periods)

Previous lesson: Probability and statistics, Scientific approach methods

Prerequisite: No

Parallel learning: No.

Summary of the subject content: Experimental Methods subject provides learners with basic knowledge of the steps involved in conducting a scientific research, data collection methods, and analysis of investigational and experimental research data, and draw conclusions for the study.

40. Wood science- 3 credits

Allocation of study time: 3 credits (39 theory periods / 6 practice periods / 90 self-study periods)

Previous lesson: No

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The subject equips with basic knowledge about the structure of wood with the target that learners can identify some common types of wood in Vietnam. Professional knowledge on properties of wood such á: physics, mechanics, wood chemistry and defects of wood. The subject content includes: i) Wood structure; ii) Chemical composition of wood; iii) Physical properties of wood; iv) Mechanical properties of wood; v) Wood defects.

41. Law and Policy for Forestry Management- 3 credits

Allocation of study time: 3 credits (39 theory periods / 6 practice periods / 90 self-study periods)

Previous lesson: State and Law

Prerequisite: Forest Plants, Forest Ecology

Parallel learning: No.

Summary of the subject content: The subject provides learners with knowledge of the current Forestry Law and the content of state management of forestry and forestland management. Based on detailed instructions on the implementation of the law, learners are able to explain the need to promulgate the Forestry Law, distinguish new points in the 2017 Forestry Law, the content and methods of state management of forestry, the relationship between the Forestry Law and Land Law,... In addition, learners can apply current policies in forestry into practice such as: policies on forest protection and development, policies on strengthening forest protection, policies on forest protection and development and investigation in supporting infrastructure, assigning public utility tasks to agricultural and forestry companies, etc.

42. Hydrometeorology for Forestry- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Forest Ecology

Prerequisite: No

Parallel learning: No.

Summary of the subject content: Forest hydrometeorology is a basic subject, with a duration of 3 credits for the majors of Forest Resource Management, Forestry, and Agroforestry. The subject provides learners with basic information related to meteorology and hydrology such as: atmospheric composition, the role of gasses in the atmosphere, atmospheric stratification; knowledge about radiation in the atmosphere, about air temperature, about air pressure and wind, about water; knowledge about weather, special weather patterns commonly encountered in Vietnam, climate and the influence of Vietnam's climate on forestry production. In-depth knowledge on forest hydrology such as: hydrological processes in the basin, the

main factors affecting hydrological processes, the influence of forests on hydrology, research methods in forest hydrology; the influence of climatic factors on plant life, the combined effect of meteorological factors on the forest, on the assessment of climatic conditions, the influence of the forest on the hydro-meteorological conditions; application areas of forest hydrometeorology. After completing the course, learners are able to analyze meteorological data, measure climate indicators and investigate factors affecting the forest hydrology into practice; application of hydrometeorological research for production. In addition, students' skills in self-study, searching for learning materials, critical thinking, independent and group work, and presentation ability of learners are enhanced through the combination of theory and practice, self-study periods throughout the subject.

43. Principle of Conservation - 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: Botany; Forest plants; Forest zoology; Forest ecology

Prerequisite: Biodiversity

Parallel learning: No.

Summary of the subject content: The subject provides learners with basic knowledge about the basis of biodiversity conservation; approaches to conservation of species, populations and ecosystems; principles of restoring degraded ecosystems and threatened populations; principles of conservation and sustainable development.

44. Microeconomics- 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The content of micro-economics focuses on analyzing the behavior of individuals in the economy, including households and businesses operating through the laws of supply and demand, consumers and providers’ choice. The subject studies the operating environment of individuals in the

economy, which is a monopoly market, a perfectly competitive market, etc., and related policy institutions. In addition, the subject also deals with government intervention in ensuring the legitimate rights of stakeholders involved.

45. Applied GIS in Forest 3 credits

Allocation of study time: 3 credits (15 theory periods / 30 practice periods / 90 self-study periods)

Previous lesson: Forestry management, Forest inventory

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The subject provides learners with the basic principles of GIS and Remote Sensing, and the content focuses on GIS and remote sensing applications in FRM such as in biodiversity conservation, land adaptive assessment for forestry crops, forest quality assessment.

46. Forest Pathology - 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 30 self-study periods)

Previous lesson: Forest Ecology, Forest Plants

Prerequisite: No

Parallel learning: No.

Summary of the subject content: Forest pathology aims to provide learners basic knowledge about insects and plant diseases, morphological characteristics, anatomical characteristics, biological characteristics, etc. The growth and development of insects, the causes of forest plant diseases. The specialized content provides the core knowledge and technical measures applied to prevent pests and diseases in general, and forest pests in particular. Characteristics of arising, development and harmful effects of some major pests and diseases that often cause severe damage to seedlings and plantations along with measures to control. In the nursery: Gray caterpillars, crickets, acacia powdery mildew, root rot of seedlings; Plantation: pine worms, green worms, wood termites, pine straw diseases, ….

47. Forest Zoology- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 30 self-study periods)

Previous lesson: Forest Measurement, Biodiversity, Forest Ecology

Prerequisite: Biology, Forest Ecology, Forest Plants, Forest measurement, Forest inventory

Parallel learning: No.

Summary of the subject content: The Forest zoology provides learners with knowledge about the general structural characteristics of terrestrial vertebrate classes, ecological characteristics, animal species composition, animal classification in animal classes, terrestrial vertebrates (class of amphibians, class of reptiles, class of birds, class of mammals); biological, ecological, value, status and distribution characteristics of some rare and precious animal species representing orders and families of that class. Methods to investigate and monitor forest animals, current status of forest animal resources in Vietnam, solutions to conserve and develop forest animals in Vietnam. After completing the subject, learners will be able to describe, identify and classify common forest animals in Vietnam at different taxonomic levels, and distinguish the main habitats of different classes of animals as raw materials for conservation. Learners are also able to carry out surveys on fauna, the number of animals and their habitats,.. and make a list of animals belonging to classes to determine the current distribution status of animals. Based on the results, learners are able to propose suitable solutions to conserve and develop animal species that are in danger of extinction.

48. Fire in forest management- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 30 self-study periods)

Previous lesson: Forest Ecology, Forest measurement

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The fire in forest management subject helps learners understand the concept of forest fires, the basic causes and types of forest fires, the ecological role of forest fires in FRM, and the basic principles of forest fire management, factors affecting the likelihood of forest fires, some methods of forest

fire forecasting, measures to prevent and fight forest fires by applying science and technology.

49. Forest inventory and quantity- 3 credits

Allocation of study time: 3 credits (30 theory periods / 15 practice periods / 90 self-study periods)

Previous lesson: Mathematic, Scientific research Approach.

Prerequisite: Forest plant, Forestry measurement.

Parallel learning: No.

Summary of the subject content: The subject provides learners with basic knowledge about tree measurement science, forest inventory methods, forest resource investigation, land allocation, and project planning. Report the production of natural forests as well as planted forests. Application of some new technologies in survey and monitoring of forest resource changes. Learners are practiced on modern machinery and equipment such as tree height gauges, forest canopy meters, etc. They can experience and practice directly in the forest. Learners are also able to develop a forest inventory plan and method for a forest resource inventory, and apply specialized software to process forest inventory data.

50. Profession of ranger – 3 credits

Allocation of study time: 3 credits (30 theory periods / 15 practice periods / 90 self-study periods)

Previous lesson: Law and policy in Forest management

Prerequisite: Fire in forest management, Forest sustainable management

Parallel learning: No.

Summary of the subject content: The subject provides learners with knowledge related to forest ranger organizational structure, functions and duties of rangers; activities of inspecting, controlling, certifying the origin and making records of forest products, handling administrative violations in the forestry sector, investigating cases under the authority of forest protection agencies, protecting forest rangers, manage the use supporting tools while on duty.

51. Silvicultural Techniques- 3 credits

Allocation of study time: 3 credits (30 theory periods / 15 practice periods / 90 self-study periods)

Previous lesson: Forest Ecology, Forest Plants

Prerequisite: Forest Ecology

Parallel learning: No.

Summary of the subject content: The silvicultural technique subject provides learners with knowledge about the laws of generation, growth and development of forests, basic techniques in forest care and nurturing, forest exploitation and natural forest restoration. course; forest survey and analysis methods. After completing the silvicultural technique subject, learners are able to assess the current status of the forest structure and predict the succession trend of the forest, analyze the necessary input data and build a optimal silviculture impacts on each specific forest to meet specific forest management goals. In addition, after completing the subject, learners are expected to develop basic general skills including: time management skills, teamwork skills, and communication and critical thinking skills

52. Afforestation- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Forest Ecology, Forest Measurement, Hydro-meteorology for Forestry

Prerequisite: Forest seedlings

Parallel learning: No.

Summary of the subject content: The subject of afforestation is a scientific and technical subject associated with production practice. It is based on synthesizing knowledge from many other scientific subjects and on the basis of summarizing extensive experience from practice. It is necessary to have knowledge of other subjects such as: Plants, Climate, Soil, Physiology, Biochemistry, Genetics, Breeding, Forest Ecology... The process of teaching and learning afforestation needs to combine teaching, scientific research and practical application that follow the approach of learning combined with practice, theory associated with practice.

53. Forest governance- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Forest Ecology, Silviculture, Forest inventory, Sustainable forest management

Prerequisite: Forest ecology, Sustainable Forest management

Parallel learning: No.

Summary of the subject content: The subject addresses why forest managers must know about forest governance and provides guidance on what they can do to enable good forest governance. Furthermore, the forest management subject addresses the organizations, human, rules, policies, tools and processes of forest governance, the forest governance framework, and making decisions related to the sustainable forest resource management.

54. Management of forestry information- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Scientific Research Approach, Forest Measurement, Forest Plants, Forest inventory, Forest Planning, Forest Ecology

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The subject provides students with basic knowledge on management of forestry information base systems, focusing on building digital forest maps, updating information on forest resources according to current regulations of the forestry sector.

55. Sustainable Forest management- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Forest Ecology, Silviculture, Forest inventory

Prerequisite: Forest Ecology, Forest inventory

Parallel learning: No.

Summary of the subject content: The Sustainable Forest Management is a subject for learners of FRM and Forestry majors. This subject introduces the theoretical and

practical basis of forest resource management according to the goal of sustainable development. The main content of the course introduces the specific content in sustainable forest management in terms of socio-economic, ecological environment and sustainability within the development of science and technology. Since then, timber products are granted with a certificate of sustainable forest management in order to improve the value and position of forest resources in the process of integration and development of the country.

56. Forest environmental service- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Scientific Research Approach, Forest Measurement, Forest Plants, Forest Inventory, Forest Planning, Forest Ecology

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The subject provides students basic knowledge about managing the forestry information-based system, focusing on building forestry digital map, and updating information on forest resources according to current regulations of the forestry sector.

57. Conflict management in conservation- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Biodiversity, Conservation Planning, Policy Analysis and assessment in Natural Resources Management

Prerequisite: No

Parallel learning: No.

Summary of the subject content: This is an elective subject and it provides students with basic knowledge of policy analysis; the steps of making a policy as well as the process and method of evaluating a policy. Students also study some basic state policies in the field of natural resource management, especially in the field of forest resource management. It includes analysis and policy-making activities for sustainable management of natural resources, including functions of implementing, promoting and

controlling decisions, plans and policies made in the process administration program. Stakeholders can provide specific strategic directions, measures to exploit, use and regenerate natural resources in a reasonable way, minimizing pollution to the environment.

58. Policy Analysis and Assessment in Natural Resources Management- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Law and Policy in Forest Resource management

Prerequisite: No

Parallel learning: No.

Summary of the subject content: This is an elective subject and it provides students with basic knowledge of policy analysis; the steps of making a policy as well as the process and method of evaluating a policy. Students also study some basic state policies in the field of natural resource management, especially in the field of forest resource management. It includes analysis and policy-making activities for sustainable management of natural resources, including functions of implementing, promoting and controlling decisions, plans and policies made in the process administration program. Stakeholders can provide specific strategic directions, measures to exploit, use and regenerate natural resources in a reasonable way, minimizing pollution to the environment.

59. Argo-forestry system- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Agricultural Extension, Forestry Extension

Prerequisite: Social forestry

Parallel learning: No.

Summary of the subject content: The subject equipes students with the role of agroforestry in sustainable development, natural resource management and land use management. Learners also know the situation of agroforestry development in

Vietnam and in the world, and resent the basic principles of agroforestry, the factors affecting the development of agroforestry production.

60. Biodiversity monitoring and evaluation- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Biodiversity, Forest Zoology, Forest Plants, Forest Measurement

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The subject consists of 3 chapters, which is an elective module in the specialized training section that provides students with knowledge and skills in monitoring activities to track changes over time, and space of biodiversity components under the influence of humans and nature; collect more information on the distribution and population status of important species that have not been studied; identify threats to biodiversity conservation, the intensity of the threat and the change in scope and intensity of threats to biodiversity conservation over time and space. The results of biodiversity monitoring demonstrate the appropriateness and effectiveness of the management activities carried out.

61. Non-timber forest products- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Forest Zoology, Forest Plants, Biodiversity

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The Non-timber Forest Products subject equips learners with an overview of NTFPs such as: Concepts of NTFPs, the role of NTFPs in human life, methods of classifying NTFPs, and potential of non-timber products. Status of NTFP conservation and development in Vietnam, status of NTFP trading and processing. Cultivation techniques for some valuable NTFP species, organization, management and policies to encourage the development of NTFPs. Methods of investigation, monitoring, planning for conservation and development of NTFPs. In addition to theoretical knowledge, learners will be equipped with practical knowledge

through practice: collecting samples of non-timber forest products, making specimens, observing cultivated non-timber forest products processing in the field, capable of developing a plan to conserve and develop NTFPs in a specific locality.

62. Management of Ecosystem- 3 credits

Allocation of study time: 3 credits (36 theory periods / 24 practice periods / 90 self-study periods)

Previous lesson: Conservation principles, biodiversity, forest ecology

Prerequisite: Law and policy in forest management, forest inventory, silvicultural techniques

Parallel learning: No.

Summary of the subject content: The subject provides learners with knowledge about the Earth's Ecosystems, including the structural features of its components, the relationships between the components in the ecosystem, the values landscape - environment and distribution characteristics of ecosystems, methods of investigation and assessment of the current status of ecosystem resources in Vietnam, solutions to conserve and develop ecosystems in Vietnam. After completing the module, learners will be able to describe, identify, and classify the common forest ecosystems in Vietnam, and distinguish the main habitats of the organisms for conservation work. Carrying out surveys and investigations on ecological zones and determining the current distribution status of ecosystems, thereby proposing solutions to conserve, exploit and reasonable development of ecosystems

63. Climate change- 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: Hydro- meteorology for forestry

Prerequisite: No

Parallel learning: No.

Summary of the subject content: Climate change subject provides learners with knowledge related to climate change, causes and impacts of climate change, and solutions to respond to climate change. Learners will have hands-on opportunities to analyze the link between climate change and sustainable development, specifically the

role that development plays in greenhouse gas emissions and climate change drivers as well as the need to respond to climate change through climate change mitigation and adaptation solutions. On that basis, skills of analysis and planning to respond to climate change will be formed. Besides, learners also develop other skills such as presenting in front of groups/classes through group presentation exercises, skills in finding and analyzing information through writing exercises on group topic overviews. The method of teaching and learning through groups, discussions, presentations, etc. will contribute to the development of creative thinking, teamwork, .. which is very important for the future career of students.

64. Forestry and Land Use- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Forest Ecology, Forest Management, Forest Plants

Prerequisite: Forest Ecology, Forest Management

Parallel learning: No.

Summary of the subject content: Land and forest land use management subject provides learners with silviculture, basic knowledge of soil science and land use, knowledge of land use through land assessment for planting, survey of site allocation for forestry production and technical measures for sustainable land use, application of a number of technologies in surveying and building a database on and/or in soil assessment, skilled in using modern equipment in soil investigation and soil assessment. The subject is a basic subject that brings academic knowledge on soil science and land use, knowledge about land use through land assessment for crops, crop regulation, and land use management, survey site allocation for forestry production and technical measures for sustainable land use. Land and forest land use management is also a scientific basis to serve other related forestry studies.

The subject also trains learners in forest skills, data processing skills after investigation, synthesis and report writing skills. This subject also trains students' awareness of hard work and hardship when going to the field, thereby determining their job position after graduation. The subject helps students access modern methods to serve forestry projects and programs, especially on forest land use.

65. Forest seedling- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Scientific Research Approach

Prerequisite: Forest Measurement, Forest Plants

Parallel learning: No.

Summary of the subject content: Forest seedling subject, consists of 6 chapters, provides learners with basic knowledge on forest tree variety improvement, variety testing, breeding methods, hybridization techniques, propagation and other methods in conservation of forest genetic resources. The subject of selective breeding of forest trees is a compulsory subject that helps students acquire working skills in the selection, breeding and production of forest tree varieties. The lecture is based on the framework and content of the textbook "Forest varieties" compiled by Prof. Dr. Le Dinh Kha and Assoc. Prof. Dr. Duong Mong Hung.

66. Basin Management- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Forest Ecology, Applied GIS in forest

Prerequisite: Ecosystem management, Forest Environmental Service

Parallel learning: No.

Summary of the subject content: This subject equips learners with knowledge about the characteristics of basin management, hydrological properties, water quality, principles in basin management from which learners have a basis to make appropriate basin management in the sustainable natural resources management. Learners acquire problem identification, planning and technology application skills in watershed assessment and develop a sustainable watershed management solution. In addition learners will gain exchange and debating skills, ability to work independently, cooperate and manage in teamwork.

67. Forest economic- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: land and forest land use; Silvicultural; Afforestation; Forest seedlings; Forest inventory; Exploiting and processing forest products; statistics; etc…
Prerequisite: Economic principles; Mathematics, Afforestation; Forestry inventory; Forest inventory; Exploiting and processing forest products; Statistics; etc…
Parallel learning: No.

Summary of the subject content: The subject provides learners with knowledge about: The economic development status of the forestry sector; historical development of the forestry sector, current status and changes in the system and economic restructuring and development of the forestry sector; knowledge in production and trading of forest products; methods and methods of accounting for the value of forests. After completing the module, learners are able to apply their knowledge to implement projects and projects on forestry transformation and restructuring. There is a method to calculate the growth indicators of the industry in terms of: GDP, GNP, GNI (Gross national income), GRDP (local GDP) ...; Identify the importance and analyze the use of resources in the forest industrial economic development; Determining the value of products and goods and product consumption channels; Applying to determine the value of 03 types of forests to propose a reasonable forest business cycle

68. Community Forestry- 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)
Previous lesson: No
Prerequisite: No
Parallel learning: No.

Summary of the subject content: This subject aims to provides learners with basic knowledge about community forests; development status, management forms, legal framework, conditions and influencing factors, humanistic ecological environment in which community forestry is formed and developed such as human ecology, indigenous knowledge, gender, sustainable development; community participation and influencing factors, participatory approach models and implementation tools.

69. Communication in Resource Management – 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Forestry Law, Silvicultural Technique, Profession of Rangers, Forest Fire Management

Prerequisite: land and forest land use, Forest economics, Forestry Community, Conflict management, sustainable forest management

Parallel learning: No.

Summary of the subject content: The subject aims to equip students and forest resource managers with an overview of communication in general and communication in forest resource management in particular. Understanding the meaning and principles of communication, barriers affecting communication. Understanding the role of communication staff.

Strengthening capacity, basic skills in communication work, applying different methods to increase the effectiveness of communication in forest resource management, Proficiently using communication media, knowing production and developing basic documents in communication work. This module will serve the teaching of students majoring in forest resource management and other training programs of the faculty such as silviculture, agroforestry as well as Faculty of Economics and Rural Development, Faculty of Environment.

70. Environmental Impacts Assessment- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: No

Prerequisite: No

Parallel learning: No.

Summary of the subject content: The subject equips learners with basic knowledge about EIA and Environmental protection plan (EPP), the role of EIA in environmental management; Structure of content of EIA and EPP reports; Legal provisions on EIA and EPP and methods used to prepare EIA and EPP

71. Environmental management and sustainable development- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: No

Prerequisite: No

Parallel learning: No.

Summary of the subject content: Basic concepts and definitions of environment, environmental pollution, biodiversity, resources, development; General situation of land, water and air resources in the world as well as in Vietnam; The causes and consequences of the degradation of natural resources, and the role of humans in the protection of natural resources; The relationship between environment and development.

72. Breeding- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: No

Prerequisite: No

Parallel learning: No.

Summary of the subject content: After learning this subject, learners are equipped with knowledge of cattle raising, pig raising, poultry.

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73. Hi-tech agriculture- 3 credits

Allocation of study time: 3 credits (15 theory periods / 30 practice periods / 90 self-study periods)

Previous lesson: Basic subjects and prerequisite subjects

Prerequisite: Biology, General Informatics, Plant Physiology-Biochemistry

Parallel learning: No.

Summary of the subject content: General introduction to advanced agriculture; Applications of information technology, automation technology and biotechnology in high-tech crop production; Sheltered indoor plant production system; Some high-tech applications in inspection and preservation of agricultural products.

74. Project Management- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Basic knowledge subjects; Basic knowledge and specialized subjects: Land and forest land use; Silviculture; Afforestation; Select and breed forest trees; Forest inventory; Exploiting and processing forest products; Statistics; etc…

Prerequisite: Economic principles; Mathematics, Afforestation; Forestry surveying; Forest inventory; Exploiting and processing forest products; Forest economics, Statistic; etc…

Parallel learning: No.

Summary of the subject content: Project Management subject provides learners with general project knowledge including project concepts, characteristics of agroforestry projects, project classification, project cycle; The knowledge related to project management includes project construction, project analysis and appraisal, project organization, project monitoring and evaluation. After completing the project management module, students will be able to develop a proposal based on a project, prepare documents for project appraisal, plan and organize project implementation, set targets and carry out project monitoring and evaluation activities.

75. Start-up and business- 3 credits

Allocation of study time: 3 credits (30 theory periods / 15 practice periods / 90 self-study periods)

Previous lesson: Micro-economics, political-economic

Prerequisite: No

Parallel learning: Marketing

Summary of the subject content: The subject equipes learners with basic theories on starting a business: Business environment, qualities and skills required of business owners; methods of choosing business ideas, basic content of a startup business plan; Deployment of business practices and common responsibilities and risks of startups; analyzing and selecting business ideas, turning those business ideas into real business opportunities, thereby planning to start up and start a business; Presenting and convincing a business project; Practicing research skills and evaluating business projects, the feasibility of a business project

76. Commodity products and brands- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: No

Prerequisite: No

Parallel learning: No

Summary of the subject content: This module provides a process for brand equity management for product brands. The aim is to develop strategies and tactics to build, maintain and grow a customer-driven brand. At the end of the module, students are equipped with knowledge applied to management, with emphasis on content such as model building, design and identification of brand components, positioning strategies, communications and intellectual property.

77. Introduction Bio-economic- 3 credits

Allocation of study time: 3 credits (45 theory periods / 0 practice periods / 90 self-study periods)

Previous lesson: No

Prerequisite: No

Parallel learning: No

Summary of the subject content: Bio-economics is a social science that studies the choices of individuals, businesses, governments and society when they are faced with a scarcity of human resources and are unable to obtain as desired. Bioeconomics is a subject that provides a theoretical framework for other subjects in the economics field.

78. Value chain analysis- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: No

Prerequisite: No

Parallel learning: No

Summary of the subject content: The subject focuses on introducing the main contents of value chains, industries and methods for modeling and evaluating value

chains or industries. The subject is mainly focused on the application content for agricultural products and methods of application in commodity production/agricultural policy analysis at the sectoral, regional and international levels. The course also introduces the tools applicable to build value chains or industries and applies qualitative analysis techniques, quantitative analysis to specific industries, and policy analysis. The course includes both theoretical content and applied exercises, analyzing empirical studies to illustrate policy analysis.

79. Marketing – 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

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. The module helps learners understand the market, market approaches, and know how to find, create and develop products that meet market needs. In addition, the module also equips learners with the most basic knowledge and skills on selecting new products, optimizing resources in production, flexible pricing strategies, building sales networks and advertising. Promoting effective and sustainable product branding. Understanding market needs and finding ways to satisfy market demands is the core content of the Marketing module that helps production and business activities succeed.

80. Farm economics- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of the course content: Learners are equipped with knowledge related to common issues of household economics, understand the goals and factors affecting

the setting of goals, understand the resources in the household including those how to use resources, understand the contents of farm economy, advantages and disadvantages in farm economic development, policies, solutions for farm economic development...

81. Mushroom production techniques - 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: No.

Prerequisite: No.

Parallel learning: No.

Summary of the course content: Ecology and nutritional value of edible mushrooms; morphological characteristics of common edible mushrooms. Isolation and propagation of edible mushrooms. Methods of cultivating mushrooms from straw; ear mushroom, …..

82. Enterprise administration- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: Basic knowledge subjects; Basic knowledge and specialized subjects: Land and forest land use; Silviculture; Afforestation; forest seedlings; Forest inventory; Exploiting and processing forest products; Statistical processing methods in forestry; etc…

Prerequisite: Economic principles; Mathematics, Afforestation; Forestry inventory; Forestry economics; Forest measurement; Exploiting and processing forest products; Statistical processing methods in forestry; etc…

Parallel learning: No.

Summary of the course content: The business administration subject provides learners with the knowledge of: Knowledge of business types and procedures and order of business establishment; skills in business management; organization and management of production factors in an enterprise; methods of planning and financial management, human resource management in enterprises. After completing the subject, learners are able to apply their knowledge to create their own businesses if

they are eligible and know how to organize and manage their business and develop sustainably.

83. Beekeepers- 3 credits

Allocation of study time: 3 credits (36 theory periods / 9 practice periods / 90 self-study periods)

Previous lesson: No

Prerequisite: No

Parallel learning: No.

Summary of the subject content: In the theoretical part, learners will learn about techniques for exploiting, preserving and applying bee products based on their natural biological characteristics. Learners will also be able to breed bees in a variety of ways and be able to prevent some diseases that are harmful to bees and handle unusual cases in bees.

In the practical part, learners practice bee care operations, evaluate the quality of bee products, practice creating artificial queens, exploiting domestic honey, managing and multiplying new colonies, students will identify symptoms of disease by slide image, see the technique of honey exploitation in the Melaleuca forest. Learners will visit the Italian bee farm while mining honey.

84. Professional Practice 1: Study conservation activities in the NP/protected area – 1 credit

Allocation of study time: 1 credit (0 theory periods / 15 practical periods / 30 self-study periods)

Prerequisite: completing the first semester of the first year (Biology, chemistry, etc.)

Previous: finished the first semester of the first year (Mathematics, Biology, Chemistry, English....)

Parallel subject: No

Summary of the subject content: The subject provides learners with an overview of the forestry industry, the functional role of the forest ecosystem in environmental protection. Furthermore, this module helps learners to gain knowledge

on forest protection management and development in combination with livelihood development for people living on forests and from forests.

85. Professional Practice 2: Measurement & forest inventory – 3 credits

Allocation of study time: 3 credits (0 theory periods / 45 practical periods / 90 self-study periods)

Prerequisite: No

Previous: No

Parallel subject: No

Summary of the subject content: monitoring forest resource changes provides students with knowledge about cartography in general and forestry cartography in particular; Implement the process of surveying and updating forest resources in accordance with current regulations.

86. Professional Practice 3: Plant inventory and Biodiversity- 3 credits

Allocation of study time: 3 credits (0 theory periods / 45 practical periods / 90 self-study periods)

Prerequisite: Forest Plant, Forest Zoology, Biodiversity

Previous: General biology, Forest Ecology

Parallel subject: No

Summary of the subject content: Helping learners majoring in Forest Resource Management to improve their knowledge and general skills in professional activities such as: Investigating diversity of plants, birds, mammals, amphibians and reptiles; Preparing a biodiversity report. Through this subject, learners are acquainted with practical activities in forestry production as well as the management of forest resources, monitoring of local biodiversity, of participating social organizations management, protection and development of forests

87. Professional Practice 4: Profession of rangers- 4 credits

Allocation of study time: 4 credits (0 theory periods / 60 practical periods / 120 self-study periods)

Prerequisite: Profession of rangers, Law and Policy in Forestry

Previous: GIS for forestry, Forest Plants, Forest zoology, Biodiversity, Forest Fire Management

Parallel subject: No

Summary of the subject content: Profession of rangers subject helps learners know how to analyze the current legal documents in the field of state management of forest rangers, implementation of the missions of local rangers, application of technology in performing their duties. Through this subject, students are familiar with practical activities in forestry production as well as the management of local forest resources and of social organizations participating in the management, protection and forest development.

88. Professional Practice 5: Construction of plan for sustainable forestry management - 3 credits

Allocation of study time: 3 credits (0 theory periods / 45 practical periods / 90 self-study periods)

Prerequisite: No

Previous: No

Parallel subject: No

Summary of the subject content: Help learners apply the knowledge they have learned in planning sustainable forest management for a specific audience.

89. Skilled Practice 1: Construction and operation of forestry nursery- 3 credits

Allocation of study time: 3 credits (0 theory periods / 45 practical periods / 90 self-study periods)

Prerequisite: Forest plants, Forest Ecology

Previous: Forest Ecology

Parallel subject: No

Summary of the subject content: The subject "Construction and operation of forestry nursery" is compiled in a concise manner with a reasonable structure between theory and practice in order to provide knowledge and skills in nursery design, nursery location and designing works in the nursery.

In order for the learning to be effective, the teaching process combines field visit and study. The assessment of students' learning outcomes are based on the process of choosing the location of the nursery and designing the works in nursery, combined with the evaluation of the nursery design of the students

90. Skilled Practice 2: Developing the database of forest information – 4 credits

Allocation of study time: 4 credits (0 theory periods / 120 practical periods / 60 self-study periods)

Prerequisite: No

Previous: Scientific research approach, Forestry measurement, Forest plants, Forest inventory, Forestry planning, Forest ecology, etc.

Parallel subject: No

Summary of the subject content: This subject provides students of with basic skills in managing forestry information systems, focusing on building a forestry digital map, updating information on the change in forest resources according to current regulations of the forestry sector

91. Skilled practice 3: Construction of plan for sustainable forestry management and fire protection – 3 credits

Allocation of study time: 3 credits (0 theory periods / 45 practical periods / 90 self-study periods)

Previous: Sustainable forest resources management, fire in forest management

Prerequisites: (Silviculture, Forest Ecology, Sustainable Forest Management, Fire in forest Management, Forest Law and Policy)

Parallel subject: No

Summary of the subject content: This subject helps students know well about common tools in protection and fire prevention management. Learners are able to use these tools properly. In addition, the course also provides learners with skills to develop plans for forest protection and fire prevention management for a specific unit.

92. Graduate internship- 10 credits

Allocation of study time: 10 credits (0 theory periods / 300 practical periods / 600 self-study periods)

Previous: Subjects in the general education program, basic knowledge and professional knowledge

Prerequisites: Subjects in the general education program, basic knowledge and professional knowledge

Parallel subject: No

Summary of the subject content: Graduation internship is the final module of the training program, playing an indispensable role in today's education. The graduate internship module helps students approach and grasp the reality of production, consolidate their acquired knowledge, and theory into practice, thereby improving their professional knowledge and career skills. In addition, the graduation internship period is a valuable opportunity for students to practice and learn from experts and employers in order to equip themselves with professional knowledge after graduation. Graduates can become a staff with professional qualifications, good skills, improve soft skills and effective communication ability. In this period, students are allowed to choose one of 4 following projects: Project 1. Forestry production and business; Project 2. Construction of plan for sustainable forestry management; Project 3: Technology application in forestry; and Project 4: Establishment and management of forestry projects.

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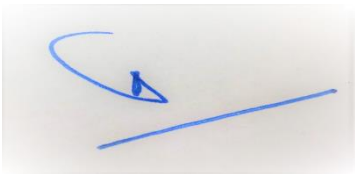

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