Co-funded by the Erasmus+ Programme of the European Union

Souphanouvong University

No _____/.....

Place, Date ____/___/___

Course Syllabus

1 Program

Title of the study programme: *Bachelor of Science in Forest Resource*

2 Course details

Course name: Silviculture

Course code: 3310

Number of credits (hours/week): 3(2-3-4), Total 144 hours, 4 hours/week, Lecture 32 hours, Practices 48 hours, and Assignment 64 hours.

Course type (tick the appropriate box): ☒ Required, ☐ Elective, ☐ Other, if other please explain:

Prerequisites courses: *Nursery Techniques, Botany and Dendrology*

Semester, in which the course is taught: *tick the appropriate box below*

Year 1		Year 3	
Semester 1	**Semester 2**	**Semester 1**	**Semester 2**
☐	☐	√	☐

3 Responsible unit

3.1 Department:

Names and affiliations of lecturer(s): Mrs. Pazeun BOUAPHAKEO and Faculty of Agriculture and Forests Resource, Souphanouvong University

4 Course description

This course offers knowledge about natural forestry silviculture and forestry restoration and its benefits. The course will present for students an historical perspective of forestry globally and in Laos, including forestry classification. They also will learn about forestry strategies for natural forestry silviculture systems and how to apply them for forestry restoration and management in the Laos case. Furthermore, all students will increase their knowledge of forestry monitoring and assessment.

Course objectives

To make students aware of the importance of planning activities or practices related to natural forest management. To know the relevant definitions, objectives and concepts related to forest, including the design of forest parks and evaluation of activities thus being able to use these resources effectively.

Knowledge: All students will have knowledge about natural forestry and silvicultural systems of the world and in Laos, and they will have some experience in field practices of forest restoration and forest stand management.

Skills: All students can apply silvicultural principles for forest management in the field study and use these concepts for sustainable forest management.

Application of theories to practice: After learning the theory, the students will be introduced to practical activities such as demonstration plots, forest restoration and related natural forests so that students can research and collect information for lessons that can be implemented and used in the future.

Social knowledge: Students will have knowledge of how to work together in the classroom, and work for community development. Students can be leading a team work in forest management and forestry restoration.

4.1 Learning objectives of particular modules

If the course is divided into sections or modules, please state the learning objectives for the specific sections/modules taught within the course

5 Course teaching methods

Lectures, group discussions in the classroom (with guidance) and assignments to be done and practical work in the experimental plantation to give students a better understanding

6 Teaching plan

Specify the teaching plan for each week of the course, including the methods used to relay information to the students and the number of hours spent on the subjects

Week	Content	Method/activity	Hours
1	**Chapter 1: Introduction** I. Definition of Silviculture and Nature Forest Silviculture II. Significance and benefits of silviculture III. Basic concept of silviculture (Regeneration, growth, composition, health and quality) IV. Silviculture and its Place in Forestry	- Lecture - Q and A	3
2	Study the Concept of Silviculture and Nature Forest Silviculture including it benefits	Group Assignment	14
3	**Chapter 2: History of Natural Forest Silviculture** I. Founding of Tropical Forest Silviculture II. Forest Management and Colonialism III. Logging period from 1950-1990 of Lao PDR. IV. Global Forest management situation from 1990 to 2015; and Global Forest management situation from 2015 to present. V. Forest management conditions in the Mekong Basin	- Lecture - Q and A	2
4	Each group work for Tropical Forest Silviculture (Taung Ya [Taungya] system)	Assignment	4

5	**Chapter 3: Forest classification** I. Principles of Forestry and forest classification II. Forest types in Lao PDR	- Lecture - Q and A	3
6	Forestry classification in Luang Prabang area.	Group Assignment	10
7	**Chapter 4: Laws and policies related to natural forest silviculture in Lao PDR** I. Forestry Strategy of Laos. 1.1. Forestry development 1.2. Forest protection 1.3. Forest utilization 1.4. Forest management 1.5. Research, experimentation, and tourism 1.6. Logging surveys II. Land use management 1. land allocation in Laos 2. land use planning in Laos.	- Lecture - Q and A	2
8	Each group investigates about forest development strategies in Lao PDR.	Group Assignment	10
9	**Chapter 5: The natural forest silvicultural system** I. Natural Reproduction on forestry. II. Reproductive methods and categories for natural silviculture systems III. Differences between systems on natural silviculture	- Lecture - Q and A	5

10	Each group does a survey of natural forestry for young trees at the trial plots	Group Assignment	16
11	Midterm		1
12	**Chapter 6: Selection of Natural forest silviculture System** I. Principles of selecting the natural forestry silviculture II. Social and economic aspects to consider an application system	- Lecture - Q and A	3
13	**Chapter 7: Analysis of the Natural forest Silviculture system** I. Seed and coppice reproduction system II. Factors related to Silviculture practices 1. For seed propagation, cuttings and planting systems 2. Clear-cutting system with natural reproduction 3. Selection systems	- Lecture - Q and A	3
	Seed and Coppice data collection by group	Assignment	
14	**Chapter 8: Natural forestry Silviculture practices** I. Logging when medium to large (thinning) 1. Weeding control 2. Cutting large trees to open shade 3. How to cut to extend the term 4. Natural pruning. 5. Logging to improve forest conditions	- Lecture - Q and A	5

15	**Chapter 9: Establishment of some economic forest plantations in neighbouring countries** I. Principles and importance of economic tree planting II. Selection of tree species to suit the planting area III. Horticulture model. IV. Techniques and plantations of forest plantations. V. Planting and pruning of forest plots VI. Forest fire control. VII. Forest Productivity Assessment	- Lecture - Q and A	5
16	**Chapter 10: Forest monitoring and assessment** I. Forest zoning 1. Production forests. 2. Protected areas. 3. Protection forest. II. Master Plan for the Operation of Forest Management Areas	- Lecture - Q and A	1
17	- A field study of forest condition - Classification of forest types, - Study tree species - There is a plan of activities or practices for the evolution of natural forests to create replacement forests.	A field study by a group	14
18	Report presentation	Presentation	30
19	Week for pre-Exam	Q and A	2
20	Final exam		1

7 Material needs

Course equipment: LCD, Computer, Marker, Thinning and Prunning tree, Basic nursery equipment, Nursery Smart System Control.

8 References

8.1 Compulsory reading list

- Mongxion NOPO, and Pazeun BOUAPHAKEO, 2019. Forest Silviculture. Souphanouvong University. Laos.

8.2 Suggested reading list

- Saly sihtthavong and Thanan Codphathoum, 2013. Natural Forestry Silviculture, National University, Laos.

- Lathsamee chanthalungsy, 2002. Silviculture. National University of Laos.

- FAO. Silviculture in Natural Forests, Available online at: https://www.fao.org/sustainable-forest-management/toolbox/modules/silviculture-in-natural-forests/basic-knowledge/en/?type=111

9 Assessment of students

9.1 Description of assessment

Course assessment for students' grade, this will collect the score from several criteria, as class participation 10%, Activities with Q&A 10 %, Report 20%, Midterm 20% and final term 40%.

9.2 Grade distribution and student assessment

Grading scale

Grade		Total score	Scale
Symbol	Verbal grade		
A	Excellent	90-100	4.00
B^+	Very Good	85-89	3.5
B	Good	80-84	3.00
C+	Fairly Good	75-79	2.50
C	Fair	70-74	2.00
D+	Poor	65-69	1.50
D	Very Poor	60-64	1.00

F	Fail	59	0.00

Place, Date ...../...../.....