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

Faculty of Forestry, Kasetsart University No _____/.....

Place, Date ____/___/___

Course Syllabus

1 Program

Title of the study programme: *M.Sc. (Forestry)*

2 Course details

Course name: Silvicultural systems for forest certification

Course code: 01306513

Number of credits (hours/week): *3 (3)*

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

Prerequisites courses: *none*

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

Year 1		Year 2	
Semester 1	**Semester 2**	**Semester 1**	**Semester 2**
☒	☒	☒	☒

3 Responsible unit

3.1 Department: Silviculture Department, KUFF

Names and affiliations of lecturer(s):

Asst. Prof. Damrong Pipatwattanakul, Dept. of Silviculture

Asst. Prof. Rachanee Pothitan, Dept. of Forest Management

Asst. Prof. Pichit Lumyai, Dept. of Forest Management

Asst. Prof. Nopparat Kaakkurivaara, Dept. of Forest Engineering

Dr. Chakrit Na Takuathung, Dept. of Forest Engineering

4 Course description

Principle and concepts of silvicultural systems and forest certification**.** Stand treatments, appropriate silvicultural systems, monitoring and evaluation of silvicultural system application, relevant forest law and policy measures and related activities for sustainable forest management certification.

5 Course objectives

5.1 Learning objectives of particular modules

At the end of the course, students are able to…

1. Understand principles and concepts of Silvicultural systems, Sustainable Forest Management, and Forest Certification system.
2. Apply three main principles and concepts in development of activities for forest certification program

6 Course teaching methods

Project-based learning with various forestry applications / online course with modern technology application, assignment, presentation, field trip required.

7 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

Wk	Content (hr)	Method/activity	Hours
1	Principle and concept of silvicultural system(3hrs)	Group work of Project-based learning method will be employed with following activities: ● Lecture ● Discussion ● Case study	3
2	Principle and concept of forest certification(3hrs)		3
3	Principle of sustainable forest plantation management(3hrs)		3
4	General arrangement for economic forest plantation: Plantation Mapping(3hrs)		3

Wk	Content (hr)	Method/activity	Hours
5	General arrangement for economic forest plantation: Plantation Objectives & Design(3hrs)	• Virtual Reality • 360 photo/video • Exercises with relevant Forest Applications • Quiz	3
6	Appropriate silvicultural systems: 5.1 Seed procurement and seedling management (1.5hrs) 5.2 Site preparation and planting(1.5hrs)		3
7	Appropriate silvicultural systems: 5.3 Intermediate cuttings including monitoring and evaluation growth and yield(1.5hrs) 5.4 Regeneration cuttings including monitoring and evaluation the project for the 2nd rotation(1.5hrs)		3
8-9	Other matters in relate to SFM for forest management certification: 6.1 How to include Role and function of social dimension in relate to forest plantation(6hrs)		6
10-11	Other matters in relate to SFM for forest management certification: 6.2 Important Law and policy in relate to large scale forest plantation(6hrs)		6
12-13	Other matters in relate to SFM for forest management certification: 6.3 How to monitor and evaluate environmental impacts of forest plantation specific to Carbon sequestration within Thailand context(6hrs)		6
14-15	6.4 Corporate Social Responsibility(6hrs)		6

8 Material needs

8.1 Course equipment:

- Camera 360
- computer high performance
- Mapping equipment
- Measurement equipment (altimeter, caliper, measuring tape)
- Powerpoint presentation,
- VR technology,
- video-audio materials,
- Harvester Simulator.

8.2 Information sources

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9 References

9.1 Compulsory reading list

Sven, G., *et. al.* 2012. Silviculture in the Tropic. Springer. New York. 579 pp.

Smith, M.D., B. C. Larson, M. J. Kelty, and P.M.S. Ashton. 1979. The Practice of Silviculture: Applied Forest Ecology. John Wiley & Son. New York. 537 pp.

Nyland, R.D. 2015. Silviculture: Concept and Applications. CBS Publishers & Distributor Pvt. Ltd. India. 682 pp.

Mattherws, J.D. 1992. Silvicultural Systems. Clardon Press, London. 284 pp

John L. Innes, and Anna V. Tikina. 2017. Sustainable Forest Management: from concept to practice. Routledge.

Forest Certification textbook will be identified later.

9.2 Suggested reading list

Academic Journals for reading to be assigned during the class.

10 Assessment of students

10.1 Description of assessment

	Percent
Class engagement	**10**
Assignments	**30**
Presentation	**40**
Examinations	**20**
Total	**100**

10.2 Grade distribution and student assessment

Grading scale

A	**90-100%**
B+	**85-89%**
B	**80-84%**
C+	**75-79%**
C	**70-74%**
D+	**65-69%**
D	**60-64%**
F	**<60%**

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