						Document Code
UNESA	**Universitas Negeri Surabaya** **Faculty of Mathematics and Natural Sciences** **Biology Education Undergraduate Study Program**					

SEMESTER LEARNING PLAN

Courses		CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Tropical Ecology		8420503304		**T=3**	**P=0**	**ECTS=4.77**	5	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	....	....	Dr. Rinie Pratiwi Puspitawati, M.Si.

Learning model	**Case Studies**

Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**
	Program Objectives (PO)
	PLO-PO Matrix
	P.O
	PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Short Course Description	This course examines aspects of diversity, abundance, distribution of flora (plants) and fauna (animals) found in various ecosystems in tropical areas (especially Indonesia) along with the environmental physico-chemical factors that influence them. The ecosystems studied include rainforests, mangroves, estuaries, wetlands and peatlands, karst, marine and coral reefs, lakes, rivers and watersheds (DAS), rice fields and various gardens. Furthermore, this course also examines the role of humans in changing these ecosystems along with the efforts that need to be made to maintain their sustainability.

References	**Main :**
	Supporters:

Supporting lecturer	Dra. Winarsih, M.Kes.

Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline (*offline*)	Online (*online*)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Understand the scope of tropical ecology	1.Explain ecological parameters 2.Explain the tropical regions and their main characteristics 3.Explains the richness of tropical flora and fauna (Indonesia) and explanations.	**Criteria:** Attached	Lectures, discussions, 3 X 50			0%
2	Understand the scope of tropical ecology	1.Explain ecological parameters 2.Explain the tropical regions and their main characteristics 3.Explains the richness of tropical flora and fauna (Indonesia) and explanations.	**Criteria:** Attached	Lectures, discussions, 2 X 50			0%
3	Understanding Physico-Chemical Factors, Weather and Tropical Climate	1.Explaining the Physics and Chemistry of the terrestrial environment 2.Explain the chemical factors of the aquatic environment 3.Explains tropical weather and climate (rainfall, milk, monsoons, El Nino and La Nina) 4.Explain the physics - chemistry and climate of the tropical environment with its biodiversity and abundance of flora and fauna	**Criteria:** Attached	Lectures, discussions 3 X 50			0%
4	Understanding Research Methods for Tropical Flora and Fauna	Explaining Methods for Investigating Tropical Flora and Fauna	**Criteria:** Attached	Lectures, Discussions 3 X 50			0%
5	Understanding Research Methods for Tropical Flora and Fauna	Explaining Methods for Investigating Tropical Flora and Fauna	**Criteria:** Attached	Lectures, Discussions 3 X 50			0%
6	Understanding Tropical Rainforest Ecology	Explaining Tropical Rainforest Ecology	**Criteria:** Attached	Discussion, lecture 3 X 50			0%
7	Understanding Rivers and Watersheds (DAS)	Explaining Rivers and Watersheds (DAS)	**Criteria:** Attached	Lectures, discussions, practice 3 X 50			0%
8	UTS	UTS		2 X 50			0%

No							
9	Understanding the Ecology of Estuaries and Mangroves (Mangroves)	Explaining the Ecology of Estuaries and Mangroves (Mangroves)	**Criteria:** Attached	Lectures, discussions, practice 3 X 50			0%
10	Understanding Lake Ecology	Explaining Lake Ecology	**Criteria:** Attached	Lectures, discussions, practicum 3 X 50			0%
11	Understanding Marine Ecology and Coral Reefs	Explaining Marine Ecology and Coral Reefs	**Criteria:** Attached	Lectures, discussions, practicum 3 X 50			0%
12	Understanding Agricultural and Plantation Ecology (Pests, Predators, Parasitoids, Pollinators)	Explaining Agricultural and Plantation Ecology (Pests, Predators, Parasitoids, Pollinators)	**Criteria:** attached	Lectures, discussions, practice 3 X 50			0%
13	Understanding the Ecology of Karst, Swamps (Wetlands) and Peat	Explaining the Ecology of Karst, Swamps (Wetlands) and Peat	**Criteria:** Attached	Discussion, lecture, 3 X 50			0%
14	Understanding Human Influence on Tropical Ecosystems	1. Explaining Tropical Ecosystem Degradation 2. Explaining Tropical Ecosystem Conservation	**Criteria:** Attached	Lectures, discussions 3 X 50			0%
15	Mini Evaluation of Research and Projects	Mini Evaluation of Research and Projects	**Criteria:** Attached	Presentation, discussion 3 X 50			0%
16							0%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
		0%

Notes

1. **Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
2. **The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
5. **Indicators for assessing** ability in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
6. **Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
7. **Forms of assessment:** test and non-test.
8. **Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
9. **Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
10. **Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
11. **The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
12. TM=Face to face, PT=Structured assignments, BM=Independent study.