



**Universitas Negeri Surabaya**  
**Faculty of Mathematics and Natural Sciences Natural**  
**Sciences**  
**Education Undergraduate Study Program**

Document  
Code

## SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date																																																																		
<b>Anatomy and Physiology of Living Creatures</b>	8420103197	Compulsory Study Program Subjects	T=2	P=1	ECTS=4.77	3	April 27, 2023																																																																		
<b>AUTHORIZATION</b>	<b>SP Developer</b>		<b>Course Cluster Coordinator</b>			<b>Study Program Coordinator</b>																																																																			
	Enny Susiyawati, Ph.D., Dr. Dyah Astriani, M.Pd., Aris Rudi Purnomo, S.Si., M.Pd., M.Sc., Dhita Ayu Permata Sari, S.Pd., M.Pd.		Dr. Dyah Astriani, M.Pd.			Prof. Dr. Erman, M.Pd.																																																																			
<b>Learning model</b>	<b>Project Based Learning</b>																																																																								
<b>Program Learning Outcomes (PLO)</b>	<b>PLO study program which is charged to the course</b>																																																																								
	<b>PLO-1</b>	Able to demonstrate religious, national and cultural values, as well as academic ethics in carrying out their duties																																																																							
	<b>PLO-2</b>	Demonstrate the character of being tough, collaborative, adaptive, innovative, inclusive, lifelong learning and entrepreneurial spirit																																																																							
	<b>PLO-3</b>	Develop logical, critical, systematic and creative thinking in carrying out specific work in their field of expertise and in accordance with work competency standards in the field concerned																																																																							
	<b>Program Objectives (PO)</b>																																																																								
	<b>PO - 1</b>	CPMK BU ENNY 1																																																																							
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	<b>PLO-PO Matrix</b>																																																																								
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<b>Short Course Description</b>	This course examines the structure and function of the parts that make up the body of living creatures in terms of their morphological and anatomical characteristics. Studies include the structure and function of plant and animal cells and tissues, respiration, photosynthesis, plant and animal reproduction, the cardiovascular system, the digestive system, and the coordination system. The topic of discussion regarding animals will be elaborated on the human system and will end with learning about efforts to maintain health.																																																																								
<b>References</b>	<b>Main :</b>																																																																								

1. Beck, Charles B. (2010). An Introduction to Plant Structure and Development: Plant Anatomy for the Twenty-First Century, 2 Edition Book. New York: Cambridge University Press.
2. Adam, Jennifer W. Mac. (2008). Structure and Function of Plants. New Delhi: Willey Blackwell.
3. Taiz, L. and Zeiger E. 2010. Plant Physiology, Fifth Edition. Sinauer Associates. California: Sunderland.
4. Kay, I. (1998). Introduction to Animal Physiology. Manchester: Bios Scientific Publisher.
5. Sherwood, Klandorf, & Yancey. (2013). Animal Physiology: from Genes to Organisms. Belmont, USA: Brooks/Cole.
6. Tortora & Derrickson. (2012). Principles of Anatomy and Physiology. 13th Edition. USA: John Wiley & Sons, Inc.

**Supporters:**

1. Taiz, L. and Zeiger E. 2010. Plant Physiology, Fifth Edition. Sinauer Associates. California: Sunderland
2. Tortora & Derrickson. (2012). Principles of Anatomy and Physiology. 13th Edition. USA: John Wiley & Sons, Inc
3. Pratiwi, RH. 2019. Studi adaptasi tumbuhan secara anatomi terhadap kondisi lingkungan yang ekstrim. Prosiding Symbion (Symposium on Biologi Education), 30 Agustus 2019. Universitas Ahmad Dahlan.
4. Rindyastuti, R. dan Hapsari, L. 2017. Adaptasi Ekofisiologi Terhadap Iklim Tropis Kering: Studi Anatomi Daun Sepuluh Jenis Tumbuhan Berkayu (Ecophysiology adaptation to dry tropical climate: a study of foliar anatomic structure of ten woody plant species). Jurnal Biologi Indonesia Vol. 13, No. 1, pp 1-14.
5. Sari, RP, Melsandi, M., Fransiska, N., dan Fauzi, A. 2018. Hormon Auksin dan pengaruhnya terhadap pertumbuhan cabai rawit (*Capsicum frutescens*) dan cabai keriting (*Capsicum annuum*). Prosiding Seminar Nasional IV Peran Biologi dan Pendidikan Biologi dalam Revolusi Industri 4.0 dan Mendukung Pencapaian Sustainability Development Goals (SDGs) 2018 hal 155-162

**Supporting lecturer**

Dr. Dyah Astriani, S.Pd., M.Pd.  
 Enny Susiyawati, S.Si., M.Sc., M.Pd., Ph.D.  
 Dhita Ayu Permata Sari, S.Pd., M.Pd.  
 Aris Rudi Purnomo, S.Si., M.Pd., M.Sc.  
 Dr. Syarif Prasetyo, S.Si., M.Si.  
 Fasih Bintang Ilhami, S.Kep., M.T., Ph.D.  
 Dr. Sapti Puspitarini, S.Si., M.Si.

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	1.TRY 2.TRY 2		<b>Forms of Assessment :</b> Participatory Activities, Project Results Assessment / Product Assessment, Portfolio Assessment, Practice / Performance	okay			5%
2							0%
3							0%
4							0%
5							0%
6							0%
7							0%
8							0%
9							0%

10							0%
11							0%
12							0%
13							0%
14							0%
15							0%
16							0%

#### Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	1.25%
2.	Project Results Assessment / Product Assessment	1.25%
3.	Portfolio Assessment	1.25%
4.	Practice / Performance	1.25%
		5%

#### 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** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities 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.**