	Universitas Negeri Surabaya Faculty of Mathematics and Natural Sciences Bachelor of Science Education Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Basic mathematic	8420102186		T=2	P=0	ECTS=3.18	1	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Prof. Dr. Erman, M.Pd.

Learning model	**Project Based Learning**
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	Study of functions, function limits, function continuity, function derivatives and their applications, integrals and their applications, and matrices for solving systems of linear equations.
References	**Main :**
	1. 1. Purcel, EJ dan D. Verberg. 1996. *Kalkulus dan Geometri Analitik I* . Terjemahan Ind. Susila B. Kartasasmita dan Rawuh. Erlangga, Jakarta. 2. Finney, R.L., Weir, M.D., Giordano F.R., 2001. *Thomas' Calculus 10th Edition* . USA : Addison-Wesley Publishing Company 2. Finney, R.L., Weir, M.D., Giordano F.R., 2001. *Thomas' Calculus 10th Edition* . USA : Addison-Wesley Publishing Company
	Supporters:
Supporting lecturer	Dr. Rini Setianingsih, M.Kes. Abdul Haris Rosyidi, S.Pd., M.Pd. Dini Kinati Fardah, S.Pd.Si., M.Pd. Muhammad Jakfar, S.Si., M.Si. Nina Rinda Prihartiwi, S.Pd., M.Pd. Dayat Hidayat, S.Pd., M.Pd., 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	Understanding functions, origin areas, product areas, drawing function graphs.	- Determine the origin and result areas of a function - Draw function graphs		2 X 50			0%
2	Understanding function limits	Understand and determine limit values of ALgebraic functions		2 X 50			0%
3	Understanding function limits	Understand and determine limit values of trigonometric functions		2 X 50			0%
4	Understand the derivatives of algebraic, trigonometric and exponential functions	Understand the concept of algebraic function derivatives		2 X 50			0%
5	Understand the derivatives of algebraic, trigonometric and exponential functions	Understand and determine derivatives of trigonometric and exponential functions		2 X 50			0%
6	Solve problems related to derivatives	Solving maximum and minimum problems using derivatives		2 X 50			0%
7	Solve problems related to derivatives	Using derivatives to draw graphs		2 X 50			0%
8	All abilities in encounters 1-7	All indicators confluence 1-7		UTS (paper and pencil test) 2 X 50			0%
9	Understand integral concepts of course	1. Define the meaning of definite integral 2. Determining the value of the indefinite integral of a function		2 X 50			0%
10	Understand integration techniques using substitution	Determining the integral value of course uses substitution		2 X 50			0%
11	Understand integral concepts of course	Determining the value of a definite integral using a definition Determining the value of a definite integral using a formula		2 X 50			0%
12	Understand the application of integrals	Determine the area of a plane using integrals		2 X 50			0%
13	Understand the application of integrals	Determine the volume of a rotating object using integrals		2 X 50			0%
14	Understanding matrices and systems of linear equations	Determining the SPL solution using the Cramer method		2 X 50			0%

15	Understanding matrices and systems of linear equations	- Determine the SPL solution using the Gauss-Jordan method		2 X 50			0%
16	Competencies from level 1 to 15	Indicators from meetings 1 to 15		Final exam semester 2 X 50			0%

Evaluation Percentage Recap: Project Based Learning

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** 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.