	Universitas Negeri Surabaya Faculty of Economics and Business Bachelor of Economics Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Economic math	8722003007		T=3	P=0	ECTS=4.77	1	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Dr. Tony Seno Aji, S.E., M.E.

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 contains basic mathematical concepts related to micro and macro economic theory, including: Lines and Series, Linear Functions, Non-Linear Functions, Differentials, Partial Differentials and Integrals and their application in the field of economics. The learning method is carried out in the form of lectures and questions and answers. and taking an inquiry approach, namely completing tasks and solving problems
References	**Main :**

1. Bumulo, Hussain. , Mursito, Djoko. 2011.Matematika untuk Ekonomi dan Aplikasinya. Bayumedia Publishing
2. Dumairy. 2010.Matematika Terapanuntuk Bisnis dan Ekonomi. edisi ketiga.Yogyakarta:BPFE
3. Kalangi, Josep Bintang. 2014.MatematikaEkonomi & Bisnis edisi ke-3. Jakarta:Salemba Empat4. Sarjono,Haryadi. dan Sanny, Lim 2012. Aplikasi Matematika Untuk Bisnis Dan Manajemen. Jakarta: Salemba Empat

	Supporters:
Supporting lecturer	Dr. Lucky Rachmawati, S.E., M.Si. Choirul Nikmah, S.AB., M.AB. Nurul Hanifa, S.E., 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	Analyzing series and their application in economics	1.1 Able to identify geometric series 1.2 Able to calculate and analyze business development 2.1 Able to identify arithmetic series 2.2 Able to calculate and analyze compound interest and population growth		Lectures, demonstrations and questions and answers 6 X 50			0%
2							0%
3	Identifying the elements and forms of linear functions, compiling linear functions, calculating the values of linear function variables.	3.1 Able to identify types of functions 3.2 Able to explain the form of linear functions 3.3 Able to prepare linear function equations		Lectures, demonstrations and questions and answers 3 X 50			0%
4	Applying linear functions in microeconomics	4.1 Able to compile demand and supply functions 4.2 Able to calculate market equilibrium prices and quantities 5.1 Able to calculate and analyze market balance after taxes and subsidies 5.2 Able to calculate and analyze cost, revenue, profit, loss and breakeven functions.		Lectures, demonstrations and questions and answers 6 X 50			0%
5							0%
6	Applying linear functions in macroeconomics	6.1 Able to calculate and analyze consumption, savings and investment functions 7.1 Able to calculate and analyze transfer, tax and import functions. 7.2 Able to calculate and analyze national income		Lectures, demonstrations and questions and answers 6 X 50			0%
7							0%
8	MIDTERM EXAM			3 X 50			0%

9	Analyze the form of non-linear functions and their application in economics	9.1 Able to analyze non-linear functions 9.2. Able to analyze non-linear supply and demand functions 10.1. Able to calculate and analyze market balance for non-linear functions 10.2. Able to calculate and analyze market balance after taxes and subsidies for non-linear functions 10.3. Able to calculate and analyze cost, revenue, BEP functions for non-linear functions		Lectures, demonstrations and questions and answers 6 X 50			0%
10							0%
11	Analyzing the differential rule and its application in economics	Analyzing the differential rule and its application in economics		Lectures, demonstrations and questions and answers 6 X 50			0%
12							0%
13	Analyzing the partial differential rule and its application in economics	13.1. Able to identify partial differential rules 13.2. Able to calculate and analyze maximum and minimum functions 13.3. Able to calculate Lagrange function 14.1. Able to calculate and analyze cross elasticity 14.2. Able to calculate and analyze the maximum profit of 2 types of goods 14.3. Able to calculate and analyze the balance of production and consumption		Lectures, demonstrations and questions and answers 6 X 50			0%
14							0%
15	Analyze integral rules and apply them in economics	15.1 .Able to apply integral rules 15.2 .Able to calculate and analyze consumer and producer surplus		Lectures, demonstrations and questions and answers 3 X 50			0%
16	FINAL EXAMS			3 X 50			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.