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

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date
Economic math	6220103061	Compulsory Study Program Subjects	T=3 P=0 ECTS=4.77	1	May 10, 2023

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
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Learning model: Case Studies

Program Learning Outcomes (PLO)

PLO study program that is charged to the course

PLO-7	Able to prepare, present and evaluate cost accounting and management accounting reports according to the professional code of ethics
PLO-8	Able to prepare, present, analyze and interpret financial and non-financial reports by considering sustainability for the purpose of decision making at a strategic level in accordance with the professional code of ethics with the support of information technology

Program Objectives (PO)

PO - 1	Able to master basic mathematical concepts related to the field of Economics and utilize information technology in the field of Economic Mathematics. / Able to master basic mathematical concepts associated with the field of Economics and utilize information technology in the field of Economic Mathematics
PO - 2	Able to make decisions based on economic mathematical analysis. / Able to make decisions based on economic mathematical analysis.
PO - 3	Have an intelligent and thorough character in economic mathematics learning activities. / Have a smart and rigorous character in economic mathematics learning activities

PLO-PO Matrix

P.O	PLO-7	PLO-8
PO-1		
PO-2		
PO-3		

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
PO-1																
PO-2																
PO-3																

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 as well as conducting inquiry approach, namely task completion and problem solving / This subject contains the basic concepts of mathematics associated with micro and macroeconomic theory, including sequence and Series, Linear Functions, Non-Linear Functions, Differentials, Partial and Integral Differentials and their application in the economics fields. Learning methods are carried out in the form of lectures and discussions as well as conducting an inquiry approach, task completion and problem solving

References

Main :

1. Bumulo, Hussain. , Mursito, Djoko. 2011.Matematika untuk Ekonomi dan Aplikasinya. Bayumedia Publishing
2. Kalangi, Josep Bintang. 2014.MatematikaEkonomi & Bisnis edisi ke-3. Jakarta: SalembaEmpat
3. Jacques, Ian. 2015.Mathematics for Economics and Business (8thEdition). Pearson

Supporters:

1. Dumairy. 2010.Matematika Terapan untuk Bisnis dan Ekonomi. edisi ketiga.Yogyakarta:BPFE

Supporting lecturer	Made Dudy Satyawan, S.E., M.Si., Ak. Dr. Ika Permatasari, S.E.,Ak., M.Ak.,CA. Dwi Yuli Rakhmawati, S.Si., M.Si., Ph.D. Aisyaturrahmi, S.E., M.A.,Ak. Ambar Kusumaningsih, S.E., Ak., CA., M.A. Intan Kurnia Permatasari, S.E., Ak., M.A. Loggar Bhilawa, S.E., M.Si., Ak. Ruth Eviana Hutabarat, S.E., M.E. Eka Indah Nurlaili, S.Pd., M.Pd.

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	The accuracy of analyzing series and its application in economics	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA 3 X 50	**Material:** Mathematical series **Reference:** *Bumulo, Hussain. , Mursito, Djoko. 2011. Mathematics for Economics and its Applications. Bayumedia Publishing*	4%
2	Analyzing series and their application in economics	The accuracy of analyzing series and its application in economics	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA 3 X 50	**Material:** Mathematical series **Reference:** *Bumulo, Hussain. , Mursito, Djoko. 2011. Mathematics for Economics and its Applications. Bayumedia Publishing*	4%
3	Identifying the elements and forms of linear functions, compiling linear functions, calculating the values of linear function variables.	Accuracy in identifying the elements and forms of linear functions, compiling linear functions, calculating the values of linear function variables	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA 3 X 50	**Material:** Linear Functions **References:** *Bumulo, Hussain. , Mursito, Djoko. 2011. Mathematics for Economics and its Applications. Bayumedia Publishing*	4%
4	Applying linear functions in microeconomics	The accuracy of applying linear functions in microeconomics	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA 3 X 50	**Material:** Linear Functions **References:** *Bumulo, Hussain. , Mursito, Djoko. 2011. Mathematics for Economics and its Applications. Bayumedia Publishing*	4%
5	Applying linear functions in microeconomics	The accuracy of applying linear functions in microeconomics	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA 3 X 50	**Material:** Linear Functions **References:** *Bumulo, Hussain. , Mursito, Djoko. 2011. Mathematics for Economics and its Applications. Bayumedia Publishing*	4%

6	Applying linear functions in macroeconomics	The accuracy of applying linear functions in macroeconomics	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA 3 X 50	**Material:** Linear Functions **References:** *Bumulo, Hussain. , Mursito, Djoko. 2011. Mathematics for Economics and its Applications. Bayumedia Publishing*	5%
7	Applying linear functions in macroeconomics	The accuracy of applying linear functions in macroeconomics	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Portfolio Assessment	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearningn: SIDIA 3 X 50	**Material:** Linear Functions **References:** *Bumulo, Hussain. , Mursito, Djoko. 2011. Mathematics for Economics and its Applications. Bayumedia Publishing*	10%
8	MIDTERM EXAM		**Form of Assessment** : Test	Test 3 X 50	Test 3 X 50		15%
9	Apply financial mathematics in calculating and analyzing asset depreciation	Accuracy of applying financial mathematics in calculating and analyzing asset depreciation	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA 3 X 50	**Material:** Depreciation **Bibliography:** *Jacques, Ian. 2015.Mathematics for Economics and Business (8th Edition). Pearson*	4%
10	Apply financial mathematics in calculating and analyzing the cost of capital	The accuracy of applying financial mathematics in calculating and analyzing the cost of capital	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA 3 X 50	**Material:** Cost of Capital **References:** *Jacques, Ian. 2015.Mathematics for Economics and Business (8th Edition). Pearson*	4%
11	Apply financial mathematics in calculating and analyzing the cost of capital	The accuracy of applying financial mathematics in calculating and analyzing the cost of capital	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA 3 X 50	**Material:** Cost of Capital **References:** *Jacques, Ian. 2015.Mathematics for Economics and Business (8th Edition). Pearson*	4%
12	Analyze and apply the EOQ Model for inventory management	Accuracy of analyzing and applying the EOQ Model for inventory management	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA	**Material:** EOQ Model **Bibliography:** *Jacques, Ian. 2015.Mathematics for Economics and Business (8th Edition). Pearson*	4%

13	Applying financial mathematics to bond valuation practice	The accuracy of applying financial mathematics in bond valuation practice	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA 3 X 50	**Material:** Bond Valuation **Reference:** *Jacques, Ian. 2015.Mathematics for Economics and Business (8th Edition). Pearson*	4%
14	Applying financial mathematics to bond valuation practice	The accuracy of applying financial mathematics in bond valuation practice	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Participatory Activities	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA	**Material:** Partial differentials **References:** *Kalangi, Josep Bintang. 2014.Mathematics, Economics & Business, 3rd edition. Jakarta: SalembaFour4. Jacques, Ian. 2015.Mathematics for Economics and Business (8th Edition). Pearson*	5%
15	Applying financial mathematics as an introduction to analytical data	The accuracy of applying financial mathematics as an introduction to analytical data	**Criteria:** Criteria: Descriptive rubric Accuracy of description and explanation Non-test form: Answering practice questions **Form of Assessment** : Portfolio Assessment	3 credits (1x(3x170')): TM (1x(3x50')): Explanation of material and discussion BM (1x(3x60')): Comprehension of material PT (1x(3x60')): Assignment 3 X 50	Vilearning: SIDIA	**Material:** Introduction to Data Analytics **References:** *Jacques, Ian. 2015.Mathematics for Economics and Business (8th Edition). Pearson*	10%
16	FINAL SEMESTER EXAMINATION / Final exam		**Form of Assessment** : Test	Test 3 X 50	Test		15%

Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	50%
2.	Portfolio Assessment	20%
3.	Test	30%
		100%

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.