	Universitas Negeri Surabaya Faculty of Sports and Health Sciences, Undergraduate Nutrition Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Mathematics	1321102008		T=2	P=0	ECTS=3.18	1	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Amalia Ruhana, S.P., M.P.H.

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	Conduct studies and provide an understanding of the role of mathematics through learning that is adapted to the curriculum structure in the field of fashion design. Mathematics learning consists of: Basic concepts of algebra, including: Number Systems and Operations, Powers, Roots and Logarithms, Basic Mathematics in buying and selling, Series, Functions, Matrices and Linear Programming. Learning is carried out by providing theory and assignments.
References	**Main :**
	1. Budnick, Frank S. 1986. *Applied Mathematics for business, economics, and the Social Sciences*. Second Edition. Singapore: McGraw-Hill Book (1) Du Mairy. 2010, Matematika Terapan untuk Bisnis dan Ekonomi. Yogyakarta: BPFE: (2) Easterling. 2003. Merchandising of Mathematic. New Yersey: Prentice Hall (3) Martono. 2008. Programasi Linier, Modul 1-9. Jakarta: Universitas Terbuka (4)
	Supporters:
Supporting lecturer	Dr. Dian Savitri, 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	Students are able to understand the concepts of numbers, equations and inequalities	1. Students can solve or classify real numbers 2. Students can solve equations 3. Students can solve absolute function inequalities and rational split functions		Approach: Scientific Method: discussion and problem solving Approach strategy: practice questions and applications 2 X 50			0%
2	Students are able to understand the concepts of numbers, equations and inequalities	1. Students can solve or classify real numbers 2. Students can solve equations 3. Students can solve absolute function inequalities and rational split functions		Approach: Scientific Method: discussion and problem solving Approach strategy: practice questions and applications 2 X 50			0%
3	Understand the concept of function	1. Identify relationships and functions 2. sketch graphs of functions and sketch graphs with shifts		Approach: Scientific Method: discussion and problem solving Approach strategy: 2 X 50 practice questions			0%
4	Understand the concept of function	1. Identify relationships and functions 2. sketch graphs of functions and sketch graphs with shifts		Approach: Scientific Method: discussion and problem solving Approach strategy: 2 X 50 practice questions			0%
5	Understanding Matrix Concepts Understanding the application of matrices in solving Systems of Linear Equations Understanding the application of matrices in the field of nutrition and others	1. Determine the results of matrix operations 2. using matrix concepts in solving systems of linear equations 3. Applying SPL in the field of nutrition and others		Scientific approach Learning model: discussion and problem solving approach strategy: practice questions and applications in the field of nutrition and others 2 X 50			0%

6	Understanding Matrix Concepts Understanding the application of matrices in solving Systems of Linear Equations Understanding the application of matrices in the field of nutrition and others	1. Determine the results of matrix operations 2. using matrix concepts in solving systems of linear equations 3. Applying SPL in the field of nutrition and others		Scientific approach Learning model: discussion and problem solving approach strategy: practice questions and applications in the field of nutrition and others 2 X 50			0%
7	Understanding Matrix Concepts Understanding the application of matrices in solving Systems of Linear Equations Understanding the application of matrices in the field of nutrition and others	1. Determine the results of matrix operations 2. using matrix concepts in solving systems of linear equations 3. Applying SPL in the field of nutrition and others		Scientific approach Learning model: discussion and problem solving approach strategy: practice questions and applications in the field of nutrition and others 2 X 50			0%
8	UTS			2 X 50			0%
9	Understanding the Concept of Limit and Continuity	1. Declaring a quantity as a limit 2. Determining the limit of a function at a certain point		2 X 50 synthetic approach			0%
10	Understand the concept of derivative and differential	1. Determine the derivative of a function 2. Determining the differential of a function 3. Using derivatives in application problems		Scientific approach 2 X 50			0%
11	understand the concept of derivatives and their applications	1. Determine the derivative of a function 2. Determining the differential of a function 3. Using derivatives in application problems		Scientific approach 2 X 50			0%

12	Understand the concept of derivatives and their applications	1. Determine the derivative of a function 2. Determining the differential of a function 3. Using derivatives in application problems		Scientific approach 2 X 50			0%
13	Understand integral concepts and their application	1. Determining the indefinite integral of a function 2. Calculating definite integrals 3. Solve problems using integral concepts		scientific approach 2 X 50			0%
14	Understand integral concepts and their application	1. Determining the indefinite integral of a function 2. Calculating definite integrals 3. Solve problems using integral concepts		scientific approach 2 X 50			0%
15	Understand integral concepts and their application	1. Calculating definite integrals 2. Solve problems using integral concepts		scientific approach 2 X 50			0%
16	UAS			2 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.