	Universitas Negeri Surabaya **Faculty of Sports and Health Sciences** **Bachelor of Sports Science Study Program**					**Document Code**

SEMESTER LEARNING PLAN

Courses		**CODE**	**Course Family**	**Credit Weight**			**SEMESTER**	**Compilation Date**
Mathematics		8920102095		**T=2**	**P=0**	**ECTS=3.18**	1	July 17, 2024
AUTHORIZATION		**SP Developer**		**Course Cluster Coordinator**			**Study Program Coordinator**	
		....		....			Dr. Heri Wahyudi, S.Or., M.Pd.	

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 lecture aims to develop students' ability to understand algorithms in the field of sports science. The scope of discussion includes: the concept of arithmetic sequences and series and their application in the world of sports, the concept of geometric sequences and series and their application in sports, linear functions and their application in sports, differential and integrals and their application in the field of sports science. Assessment of student learning outcomes in this lecture includes assessment of assignments and student mastery of lecture material through Sub-Summative Examinations and Summative Examinations.
References	**Main :**
	1. Murray Spiegel (Alih bahasa, Kasir Iskandar). 1999 . Matematika Dasar-seri buku Schaum. Jakarta: Erlangga 2. Chiang, Alpha C. and Kevin Wainwright. 2005. Fundamental Methods of Mathematical Economics , 4th . McGraw-Hill, In 3. Grassmann, W.K., Tremblay J.P. 1996. Logic And Discrete Mathematuics. United States of Amerika:Prentice Hall
	Supporters:
Supporting lecturer	Dr. Roy Januardi Irawan, S.Or., M.Kes.

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 the basics of number operations is able to carry out number operations to solve daily problems	1. Able to understand the basics of number operations, able to carry out number operations to solve daily problems 2. Capable of the basics of number operations, able to perform number operations to solve daily problems for 13 days 3. Capable of the basics of number operations, able to perform number operations to solve daily problems for 13 days	**Criteria:** 1. Activeness in asking (20%) 2. activeness in answering (20%) 3. do the questions in front (60%)	Lecture, Discussion, Question and answer, practice questions 2 X 50			0%
2	Students understand and master the material of arithmetic sequences and series	1. Students are able to master the basic concepts of sequences and series 2. Students are able to think analytically, logically and critically 3. Students are able to think and work quickly, precisely and thoroughly.	**Criteria:** 1. Activeness in asking (20%) 2. Activeness in answering (20%) 3. Doing questions ahead (60%)	Lectures, discussions, questions and answers, practice questions 2 X 50			0%
3	Understanding of sequences and geometric series	1. Students are able to master the basic concepts of sequences and geometric series 2. Students are able to think analytically, logically and critically 3. Students are able to think and work quickly, precisely and thoroughly.	**Criteria:** 1. Activeness in asking (20%) 2. activeness in answering (20%) 3. do the questions in front (60%)	Lectures, discussions, practice questions 2 X 50			0%

No	Sub-CPMK	Indicator	Criteria & Form	Learning Method / Time			%
4	Understanding and application of the concept of ranks and series in the field of sports science	Students understand and master the material on the application of the concept of ranks and series in the field of sports science	**Criteria:** 1.Activeness in asking (20%) 2.activeness in answering (20%) 3.do the questions in front (60%)	lectures, discussions, practice questions 2 X 50			0%
5	Understanding and application of linear functions	Students understand and master the material on applying the concept of linear functions in the field of sports science	**Criteria:** 1.Activeness in asking (20%) 2.activeness in answering (20%) 3.do the questions in front (60%)	lectures, discussions, practice questions 2 X 50			0%
6	Understanding and application of matrix concepts in sports science	Students are able to understand and master the matrix concept and its application in the field of sports science	**Criteria:** 1.Activeness in asking (20%) 2.activeness in answering (20%) 3.do the questions in front (60%)	lectures, discussions, practice questions 2 X 50			0%
7	Understanding and application of matrix concepts in sports science	Students are able to understand and master the matrix concept and its application in the field of sports science	**Criteria:** 1.Activeness in asking (20%) 2.activeness in answering (20%) 3.do the questions in front (60%)	lectures, discussions, practice questions 2 X 50			0%
8	Understanding of the concept of linear equations	Students are able to understand and master the concept of linear equations and apply them in the field of sports science	**Criteria:** 1.Activeness in asking (20%) 2.activeness in answering (20%) 3.do the questions in front (60%)	lectures, discussions, practice questions 2 X 50			0%
9	UTS	UTS	**Criteria:** UTS	UTS 2 X 50			0%
10	Understanding and application of the concept of quadratic equations in the field of sports science	Students are able to master the concept of quadratic equations and their application in the field of sports science	**Criteria:** 1.Activeness in asking (20%) 2.activeness in answering (20%) 3.do the questions in front (60%)	lectures, discussions, practice questions 2 X 50			0%
11	Understanding and mastery of differential and integral concepts in the field of sports science	Students are able to understand and master differential and integral concepts and apply them in the field of sports science	**Criteria:** 1.Activeness in asking (20%) 2.activeness in answering (20%) 3.do the questions in front (60%)	Lectures, discussions, practice questions 2 X 50			0%
12	Understanding and mastery of the concept of Trigonometric Comparisons and their application in the field of sports science	Students are able to understand and master the concept of Trigonometric Comparisons and apply them in the field of sports science	**Criteria:** 1.Activeness in asking (20%) 2.activeness in answering (20%) 3.do the questions in front (60%)	Lectures, discussions, practice questions 2 X 50			0%

13	Understanding and mastery of the concept of Trigonometric Comparisons and their application in the field of sports science	Students are able to understand and master the concept of Trigonometric Comparisons and apply them in the field of sports science	**Criteria:** 1. Activeness in asking (20%) 2. activeness in answering (20%) 3. do the questions in front (60%)	Lectures, discussions, practice questions 2 X 50			0%
14	Understanding and mastery of the concept of Trigonometric Comparisons and their application in the field of sports science	Students are able to understand and master the concept of Trigonometric Comparisons and apply them in the field of sports science	**Criteria:** 1. Activeness in asking (20%) 2. activeness in answering (20%) 3. do the questions in front (60%)	Lectures, discussions, practice questions 2 X 50			0%
15	Understanding and application of the concept of the Sine Rule in the field of Sports Science	Students are able to understand and master the concept of the sine rule and apply it in the field of sports science	**Criteria:** 1. Activeness in asking (20%) 2. activeness in answering (20%) 3. do the questions in front (60%)	lectures, discussions, practice questions 2 X 50			0%
16	Understanding and application of the concept of the Sine Rule in the field of Sports Science	Students are able to understand and master the concept of the sine rule and apply it in the field of sports science	**Criteria:** 1. Activeness in asking (20%) 2. activeness in answering (20%) 3. do the questions in front (60%)	lectures, discussions, practice questions 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.