



MODULE HANDBOOK PROBABILITY THEORY

**BACHELOR DEGREE PROGRAM
DEPARTMENT OF MATHEMATICS
FACULTY OF SCIENCE AND DATA ANALYTICS
INSTITUT TEKNOLOGI SEPULUH NOPEMBER**

MODULE HANDBOOK

PROBABILITY THEORY

Module name	Probability Theory	
Module level	Undergraduate	
Code	KW184901	
Course (if applicable)	Probability Theory	
Semester	Spring (Genap)	
Person responsible for the module	Dr. Valeriana Lukitosari, S.Si, MT	
Lecturer	Dr. Valeriana Lukitosari, S.Si, MT Dra. Laksmi Prita Wardhani, M.Si Endah Rokhmati Merdika Putri, S.Si, MT, Ph.D	
Language	Bahasa Indonesia and English	
Relation to curriculum	Undergraduate degree program, mandatory , 4 th semester.	
Type of teaching, contact hours	Lectures, <60 students Tuesdays, 11.00-12.50 (GMT+7)	
Workload	<ol style="list-style-type: none"> 1. Lectures : 3 x 50 = 150 minutes per week. 2. Exercises and Assignments : 3 x 60 = 180 minutes (3 hours) per week. 3. Private learning : 3 x 60 = 180 minutes (3 hours) per week. 	
Credit points	3 credit points (sks)	
Requirements according to the examination regulations	A student must have attended at least 80% of the lectures to sit in the exams.	
Mandatory prerequisites	Statistical Methods Calculus 2/Mathematics 2	
Learning outcomes and their corresponding ILOs	<p>Course Learning Outcome (CLO) after completing this module,</p> <p>CLO-1 : Students are able to explain, understand the basic concepts of probability, random variables, distribution of random variables and their nature</p> <p>CLO-2 : Students are able to identify and analyze the modeling and the development of statistical mathematics in relation to the concept of probability and random variables</p>	
Content	This course will explain about definitions, basic concepts, and characteristics of probability and calculation techniques.	

	Furthermore, it discusses random variables, distribution functions, function of random variables and finite distributions. The basics of the probability theory are used to represent and interpret the basic of populations and probabilistic mathematical models.
Study and examination requirements and forms of examination	<ul style="list-style-type: none"> • In-class exercises • Assignment 1, 2, 3 • Mid-term examination • Final examination
Media employed	LCD, whiteboard, websites (myITS Classroom), zoom.
Reading list	<p>Main :</p> <ol style="list-style-type: none"> 1. Bain, L.J., Engelhardt, M.1992 , " Introduction to Probability and Mathematical statistics", Duxbury Press, 2nd. <p>Supporting :</p> <ol style="list-style-type: none"> 1. Kreyszig, Introductory to Mathematical Statistic, Principles and Methods, John Wiley, 1970 2. Ross, SM, Introduction to Probability Models, Academic Pres, 1980

