MINISTRY OF EDUCATION, CULTURE, RESEARCH, AND TECHNOLOGY
UNIVERSITAS NEGERI SURABAYA
FACULTY OF MATHEMATICS AND NATURAL SCIENCE
UNDERGRADUATE PROGRAM OF MATHEMATICS
Ketintang Campus, C8-C9 Buildings of FMIPA, Surabaya
Email: s1-mat@unesa.ac.id

Module Handbook

Module Name :	*Peluang dan Statistika* Probability and Statistics
Module level :	Bachelor degree/Undergraduate Program
Course Code :	4420103087
Abbreviation, if applicable:	-
Courses included in the module, if applicable:	Not Applicable
Semester/Term	5th/ third year
Module coordinator(s)	A'yunin Sofro, Ph.D
Lecturer(s):	A'yunin Sofro, Ph.D
Language:	Bahasa Indonesia (Indonesian Language)
Classification within the curriculum:	Compulsory/ Elective
Teaching format/class hours per week during the semester:	3 contact hours of lectures (*sks* or credit unit*)
Workload :	3 x 50 minutes lectures, 3 x 60 minutes structured activity, and 3 x 60 minutes individual activity per week, 14 weeks per semester 119 total hours per semester ~ 4.77 ECTS**
Credit Unit:	3 credit unit (4.77 ECTS)
Requirements:	Statistic Method

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Learning goals/competencies:	**Skill (SKI-3)** CLO-1 : Be able to analyse the probability theory, random variables, expectation mathematics, moment generating functions, discrete and continuous random distribution functions **Competence(COM-1)** CLO-2 : Be able to prove a mathematics statement for the concept of probability theory, random variables, expectation mathematics, moment generating functions, discrete and continuous random distribution functions. **Attitude and Social (SOC-2)** CLO-2 : Be able to show responsibility for work in the field of expertise independently.
Content	This course discusses about set and Enumeration, Permutation and Combination, Sample Space and Events, Sample Space Members, Probability of an Event, Sum Rule, Conditional Probability, Bayes Rule, Random Variable, Discrete Probability Distribution, Continuous Probability Distribution, Empirical Distribution and Cumulative Distribution, Combined Probability Distribution, Marginal and Conditional Distributions, Mathematical Expectations and Types of Mathematical Expectations and their properties, Moment Generating Functions, Distributions of Discrete Random Variables, and distribution of continuous random variables.. Lecture activities are carried out in a student center with discussions, observations, project assignments, and presentations.

Attribute Soft skill:	Active communication; Discipline; Collaboration; Responsibility; and Argumentation in class.
Study/exam achievements:	The final grade (*NA*) is calculated based on the following ratio: <table><tr><td>Assessment Components</td><td>Percentage of contribution</td></tr><tr><td>Participation</td><td>20%</td></tr><tr><td>Assignment</td><td>30%</td></tr><tr><td>Mid-semester test</td><td>20%</td></tr></table>

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Final semester test	30%

Grade conversion of 0-100 scale into 0-4 scale is set as below:

Letter	Number	Grade Interval
A	4,00	$85 \leq A \leq 100$
A-	3,75	$80 \leq A- < 85$
B+	3,50	$75 \leq B+ < 80$
B	3,00	$70 \leq B < 75$
B-	2,75	$65 \leq B- < 70$
C+	2,50	$60 \leq C+ < 65$
C	2,00	$55 \leq C < 60$
D	1,00	$40 \leq D < 55$
E	0,00	$0 \leq E < 40$

Learning Methods :	Student-centered approach; project-based learning; lecturer and discussion; and presentations (structured activities)
Form of Media:	Power point slides; video; worksheets, and textbooks
Literature (primary references):	1. Walpole, R.E, Myers R.H, Myers S.L dan Ye K. 2017. Probability & Statistics for Engineers & Scientists. Ninth Edition. Prentice Hall, USA 2. Robert V. Hogg dan Allen T Craig. 2012. Introduction to Mathematical Statistics. Seventh Edition. New York: McMillan Publishing Co. Inc. 3. H Weiss, NA. 2017. Elementary Statistics. 8 th Edition. Pearson Education, NC. USA

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Notes:	*1 credit unit or *sks* in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.
	**1 credit unit or *sks* = 1.59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/UN38/HK/AK/2019