MODULE HANDBOOK

Module Name:	Probability and Statistics
Module Level:	Sarjana (S-1) / Bachelor
Abbreviation, if applicable:	8420202142
Sub-heading, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	5/ Third year
Module Coordinator(s):	Rudianto Artiono, M.Si
Lecturer(s):	Dr. A'yunin Sofro, M.Si Drs. Hery Tri Sutanto, M.Si Rudianto Artiono, M.Si Dayat Hidayat, M.Pd., M.Si
Language:	Indonesia
Classification within the curriculum:	Compulsory course/~~elective studies~~
Teaching format/class hours per week during the semester	Teaching format: lectures, tutorial assignment, and individual study. 3 x 170 minutes = 510 minutes = 8.5 hours lectures
Workload:	15 weeks per semester consisting of: ➢ 3 hours lectures (3 x 50 minutes) per week, ➢ 3 hours tutorial assignments (3 x 60 minutes) per week, ➢ 3 hours individual study (3 x 60 minutes) per week, Total workload: 14x3x170 minutes = 7,140 minutes = 4.76 ECTS*
Credit Point:	3
Requirements:	Statistic Method 8420203127

Learning Goals :	**Knowledge (KNO-1)** CLO-1 : Develop mathematical thinking which begins from an understanding of probability theory, random variables, discrete and continuous random distribution functions, and moment generating functions. CLO-2: Formulate problems related to probability theory, random variables, discrete and continuous random distribution functions, and moment generating functions. **Skill (SKI-2)** CLO-3: Implement understanding of probability theory, random variables, discrete and continuous random distribution functions, and moment generating functions in solving statistical problems.
Content:	Set and Enumeration, Permutation and Combination, Sample Space and Events, Sample Space Members, Probability of an Event, Sum Rule, Conditional Probabilty, 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 the Central Limit Theorem.

Study/exam achievements	- Students are considered competent and pass if the final score calculated from the score of midterm exam, assignments, participation, and final exam is at least 55 or C. - Final score is calculated as follows: 20% midterm exam + 30% assignments + 20% participation + 30% final exam - Final index is defined as follow:

Index	Converted Score	Score Range
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	$0 \leq E <40$

Forms of Media	Slides and LCD projectors, whiteboard
Literature	[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,Inc. USA
Note	*Total hours per 1 credit in 1 semester={(1 credit x 170 minutes x 14 weeks)/60 minutes}=39,67 hours. Each ECTS equals with 25 hours therefore 1 credit in 1 semester equals 1,59 ECTS.