MODULE HANDBOOK

<table>
<tr><td colspan="2">Module name</td><td colspan="4">Introduction to Probability</td></tr>
<tr><td colspan="2">Module level, if applicable</td><td colspan="4">1st year</td></tr>
<tr><td colspan="2">Code, if applicable</td><td colspan="4">SST-205</td></tr>
<tr><td colspan="2">Semester(s) in which the module is taught</td><td colspan="4">2nd (second)</td></tr>
<tr><td colspan="2">Person responsible for the module</td><td colspan="4">Achmad Fauzan, S.Pd., M.Si.</td></tr>
<tr><td colspan="2">Lecturer</td><td colspan="4">Dr. Jaka Nugraha, M.Si</td></tr>
<tr><td colspan="2">Language</td><td colspan="4">Bahasa Indonesia</td></tr>
<tr><td colspan="2">Relation to curriculum</td><td colspan="4">Compulsory course in the first year (2nd semester) Bachelor Degree</td></tr>
<tr><td>Types of teaching and learning</td><td>Class size</td><td>Attendance time (hours per week per semester)</td><td>Form of active participation</td><td colspan="2">Workload (hours per semester)</td></tr>
<tr><td rowspan="4">Lecture</td><td rowspan="4">50-60</td><td rowspan="4">1.67</td><td rowspan="4">Problem solving</td><td>Face to face teaching</td><td>23.33</td></tr>
<tr><td>Structured activities</td><td>32</td></tr>
<tr><td>Independent study</td><td>32</td></tr>
<tr><td>Exam</td><td>3.33</td></tr>
<tr><td colspan="2">Total Workload</td><td colspan="4">90.67 hours</td></tr>
<tr><td colspan="2">Credit points</td><td colspan="4">2 CUs / 3.4 ECTS</td></tr>
<tr><td colspan="2">Requirements according to the examination regulations</td><td colspan="4">Minimum attendance at lectures is 75%. Final score is evaluated based on quiz, assignment, mid-term exam, and final exam.</td></tr>
<tr><td colspan="2">Recommended prerequisites</td><td colspan="4">Statistical Methods I (SST-103)</td></tr>
<tr><td colspan="2">Related Course</td><td colspan="4">Introduction to Mathematical Statistics I (SST-302)
Introduction to Mathematical Statistics II (SST-402)</td></tr>
<tr><td colspan="2">Module objectives/intended learning outcomes</td><td colspan="4">After completing this course, the students have the ability to:
CO1. describe random variables (discrete and continuous) and their distribution, joint distribution, and marginal distribution
CO2. describe some properties of probability and conditional probability.
CO3. identify and calculate probability on special distributions (Binomial, Multinomial, Hypergeometric, Poisson, Normal, Exponential)
CO4. calculate the expected value, mean, variance, and correlation of random variables
C05. Determine the distribution of the transformation of one random variable.</td></tr>
<tr><td colspan="2">Content</td><td colspan="4">1. Random variables (discrete and continuous) and their distribution, joint distribution, and marginal distribution
2. Describe some properties of probability and conditional probability.
3. identify and calculate probability on special distributions (Binomial, Multinomial, Hypergeometric, Poisson, Normal, Exponential)
4. calculate the expected value, mean, variance, and correlation of random variables
5. Determine the distribution of the transformation of one random variable.</td></tr>
<tr><td colspan="2">Study and examination requirements and forms of examination</td><td colspan="4">The final mark will be weighted as follows:
No | Assessment components | Assessment types | Weight (percentage)
1 | CO1 | Assignment, Midterm Exam | 20%
2 | CO2 | Assignment, Midterm Exam | 25%</td></tr>
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	3	CO3	Assignment, Final Exam	25%
	4	CO4	Assignment, Final Exam	20%
	5	CO5	Assignment, Final Exam	10%
Media employed	Google Classroom, relevant websites, slides (power points), video, interactive media, white-board, laptop, LCD projector			
Reading list	1. Nugraha, Jaka, 2017, "Pengantar Distribusi dan Probabilitas," Penerbit UII 2. Bain, LJ and Engelhart, M., Introduction to Probability and Mathematical Statistics, Duxbury Press, 1992 3. Ross, S., 1997, Introduction to Probability Models 6th ed, Academic Press, San Diego 4. Hoffman-Jorgensen, J., 1994, Probability with a View Towards Statistics, Chapman and Hall, New York 5. https://ocw.mit.edu/resources/res-6-012-introduction-to-probability-spring-2018/			

Mapping CO, PLO, and ASIIN's SSC

ASIIN		PLO											
		E	N	T	H	U	S	I	A	S	T	I	C
Knowledge	a							CO1					
	b												
	c												
	d							CO2					
Ability	e							CO3					
	f							CO4 CO5					
Competency	g												
	h												
	i												
	j												
	k												
	l												