Module designation	*Probability Theory*
Semester(s) in which the module is taught	*3*
Person responsible for the module	*Dra. Mathilda Susanti, M.Si.*
Language	*Bahasa Indonesia*
Relation to curriculum	*Compulsory course*
Teaching methods	*150 minutes lectures and 180 minutes structured activities per week.*
Workload (incl. contact hours, self-study hours)	*Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes self-study per week for 16 weeks.*
Credit points	*3*
Required and recommended prerequisites for joining the module	*MAT6301 Logic and Sets*
Module objectives/intended learning outcomes	*After taking this course, the students have the ability to:* *CO1. Demonstrate respect for the views, opinions or original findings of others.* *CO2. Demonstrate the ability to think critically, creatively, innovatively, and systematically in the development of science and technology, both independently and in groups.* *CO3. Demonstrate the ability to convey mathematical ideas in writing and verbally based on values of honesty.* *CO4. Explain concepts in probability theory.* *CO5. Prove the theorems related to probability.* *CO6. Solve problems using concepts in probability theory.*
Content	*The course is more focused on probability concepts. The materials of probability theory are combinatorial methods, probability, random variables and their distributions, joint distributions, properties of random variables, and functions of random variables.*
Examination forms	*CO1: Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude.*

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<tr>
<td>Study and examination requirements</td>
<td>
The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.

The final mark will be weight as follow:
<table>
<tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr>
<tr><td>1</td><td>CO 1</td><td>a. Presentation
b. Discussion</td><td>Observation</td><td>5%
10%</td></tr>
<tr><td>2</td><td>CO 2, CO 3, CO 4</td><td>a. Individual assignment
b. Group assignment
c. Quiz
d. Midterm
e. Final test</td><td>Written</td><td>10%
10%
20%
20%
25%</td></tr>
<tr><td colspan="4">Total</td><td>100%</td></tr>
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<tr>
<td>Reading list</td>
<td>

1. Bain, Lee J. &Engelhardt, Max. 1992. Introduction to Probability and Mathematical Statistics. Belmont: Duxbury Press.
2. Ross, Sheldon M. 2010. A First Course in Probability. New Jersey: Prentice-Hall.
3. Rice, John A., 1995. Mathematical Statistics and Data Analysis. Belmont: Duxbury Press.

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