



UNIVERSITAS NEGERI YOGYAKARTA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF MATHEMATICS EDUCATION

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Bachelor of Education in Mathematics

MODULE HANDBOOK

Module name:	Probability Theory
Module level, if applicable:	Undergraduate
Code:	MAT6315
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	3 rd
Module coordinator:	Dra. Mathilda Susanti, M.Si.
Lecturer(s):	Dra. Mathilda Susanti, M.Si. Rosita Kusumawati, M.Sc. Syarifah Inayati, S.Pd., M.Sc.
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory course
Teaching format/class hours per week during the semester:	150 minutes lectures and 180 minutes structured activities per week.
Workload:	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
Prerequisites course(s):	Statistics (MKU6201)
Targeted learning outcomes:	After taking this course, the students have the ability to:

	<p>CO1. Demonstrate collaborative attitude and independence in carrying out individual tasks and group assignments.</p> <p>CO2. Communicate ideas in solving mathematical problems in writing or verbally.</p> <p>CO3. Explain concepts in probability theory.</p> <p>CO4. Solve problems using concepts in probability theory.</p>																												
Content:	<p>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.</p>																												
Study/exam achievements:	<p>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. 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.</p> <p>The final mark will be weight as follow:</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CO2</td> <td>Presentation</td> <td>Observation</td> <td>10%</td> </tr> <tr> <td rowspan="5">2</td> <td rowspan="5">CO3, CO4</td> <td>a. Individual Assignment</td> <td rowspan="5">Written test</td> <td>10%</td> </tr> <tr> <td>b. Group Assignment</td> <td>10%</td> </tr> <tr> <td>c. Quiz</td> <td>20%</td> </tr> <tr> <td>d. Mid-Term Examination</td> <td>25%</td> </tr> <tr> <td>e. Final Examination</td> <td>25%</td> </tr> <tr> <td colspan="4">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO2	Presentation	Observation	10%	2	CO3, CO4	a. Individual Assignment	Written test	10%	b. Group Assignment	10%	c. Quiz	20%	d. Mid-Term Examination	25%	e. Final Examination	25%	Total				100%
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Total				100%																									
Forms of media:	Board, LCD Projector, Laptop/Computer																												
Literature:	1. Bain, Lee J. & Engelhardt, Max. 1992. <i>Introduction to Probability and Mathematical Statistics</i> . Belmont: Duxbury Press.																												

	<ol style="list-style-type: none"> 2. Ross, Sheldon M. 2010. <i>A First Course in Probability</i>. New Jersey: Prentice-Hall. 3. Rice, John A., 1995. <i>Mathematical Statistics and Data Analysis</i>. Belmont: Duxbury Press. 4. Wackerly, D. D., Mendenhall, W. and Scheaffer, R.L. 2002. <i>Mathematical Statistics with Applications</i>. Duxbury Press.
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PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CO1		✓										
CO2			✓									
CO3					✓							
CO4							✓					