



MINISTRY OF HIGHER EDUCATION, SCIENCE, AND
TECHNOLOGY

UNIVERSITAS NEGERI SURABAYA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES
UNDERGRADUATE PROGRAM OF MATHEMATICS EDUCATION

Ketintang Campus, Jalan Ketintang, C8 C9 Building, Surabaya 60231

Phone: +62 895335466373, email: s1-pmat@unesa.ac.id

Website: <https://pendidikan-matematika.fmipa.unesa.ac.id/>

Undergraduate Program of Mathematics

Module Handbook

Module Name:	Probability Theory Teori Peluang
Module Level:	Sarjana (S-1) / Undergraduate
Abbreviation, if applicable:	8420202004
Sub-heading, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	5 / Third year
Module Coordinator(s):	Dr. Ismail, M.Pd.
Lecturer(s):	Dr. Ismail, M.Pd. Affiati Oktaviarina, S.Si., M.Sc. A'yunin Sofro, M.Si., Ph.D. Nina Rinda Prihartiwi, S.Pd., M.Pd.
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/ $2 \times 170 \text{ minutes} = 340 \text{ minutes} = 5.67 \text{ hours}$ lectures
Workload:	16 weeks per semester consisting of: <ul style="list-style-type: none">• 1 hour lectures (1 x 50 minutes) per week,• 1 hours assignments (1 x 60 minutes) per week,➤ 1 hours individual study (1 x 60 minutes) per week, Total workload : $16 \times 2 \times 170 \text{ minutes} = 5,440 \text{ minutes} = 90.7 \text{ hours} = 3.18 \text{ ECTS}^*$
Credit Point:	2
Requirements:	Integral Calculus
Learning Goals :	PLO-5 : Possess basic mathematical knowledge to solve mathematical problems and their applications in education



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	PLO-6 : Master the principles of mathematical knowledge to support mathematical thinking skills in solving mathematical problems																																																																																			
Content:	Studying probability theory, random variables and probability distributions, mathematical expectations, several discrete probability distributions, and several continuous probability distributions, as well as their applications in statistical problems																																																																																			
Study/exam achievements	<ul style="list-style-type: none">Students are considered competent and pass if the final score is at least 55 or C.Final score is calculated as follows:<table><tr><th>Week</th><th>Course Learning Outcomes (CLO)</th><th>Programme Learning Outcomes (PLO)</th><th>Evaluation (%)</th></tr><tr><td>1</td><td>CLO-1</td><td>PLO-6</td><td>5</td></tr><tr><td>2</td><td>CLO-1</td><td>PLO-6</td><td>5</td></tr><tr><td>3</td><td>CLO-5</td><td>PLO-6</td><td>10</td></tr><tr><td>4</td><td>CLO-2</td><td>PLO-5</td><td>10</td></tr><tr><td>5</td><td>CLO-2</td><td>PLO-5</td><td>10</td></tr><tr><td>6</td><td>CLO-3</td><td>PLO-6</td><td>5</td></tr><tr><td>7</td><td>CLO-3</td><td>PLO-6</td><td>5</td></tr><tr><td>8</td><td>CLO-3</td><td>PLO-6</td><td>5</td></tr><tr><td>9</td><td>CLO-4</td><td>PLO-5</td><td>10</td></tr><tr><td>10</td><td>CLO-4</td><td>PLO-5</td><td>5</td></tr><tr><td>11</td><td>CLO-4</td><td>PLO-5</td><td>5</td></tr><tr><td>12</td><td>CLO-4</td><td>PLO-5</td><td>5</td></tr><tr><td>13</td><td>CLO-4</td><td>PLO-5</td><td>5</td></tr><tr><td>14</td><td>CLO-4</td><td>PLO-5</td><td>5</td></tr><tr><td>15</td><td>CLO-4</td><td>PLO-5</td><td>5</td></tr><tr><td>16</td><td>CLO-4</td><td>PLO-5</td><td>5</td></tr></table>Final index is defined as follow:<table><tr><th>Index</th><th>Converted Score</th><th>Score Range</th></tr><tr><td>A</td><td>4.00</td><td>$85 \leq A \leq 100$</td></tr><tr><td>A-</td><td>3.75</td><td>$80 \leq A < 85$</td></tr><tr><td>B+</td><td>3.50</td><td>$75 \leq B < 80$</td></tr><tr><td>B</td><td>3.00</td><td>$70 \leq B < 75$</td></tr></table>	Week	Course Learning Outcomes (CLO)	Programme Learning Outcomes (PLO)	Evaluation (%)	1	CLO-1	PLO-6	5	2	CLO-1	PLO-6	5	3	CLO-5	PLO-6	10	4	CLO-2	PLO-5	10	5	CLO-2	PLO-5	10	6	CLO-3	PLO-6	5	7	CLO-3	PLO-6	5	8	CLO-3	PLO-6	5	9	CLO-4	PLO-5	10	10	CLO-4	PLO-5	5	11	CLO-4	PLO-5	5	12	CLO-4	PLO-5	5	13	CLO-4	PLO-5	5	14	CLO-4	PLO-5	5	15	CLO-4	PLO-5	5	16	CLO-4	PLO-5	5	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	$70 \leq B < 75$
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	<table><tr><td>B-</td><td>2.75</td><td>$65 \leq B- < 70$</td></tr><tr><td>C+</td><td>2.50</td><td>$60 \leq C+ < 65$</td></tr><tr><td>C</td><td>2.00</td><td>$55 \leq C < 60$</td></tr><tr><td>D</td><td>1.00</td><td>$40 \leq D < 55$</td></tr><tr><td>E</td><td>0.00</td><td>$0 \leq E < 40$</td></tr></table>	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	$0 \leq E < 40$
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Forms of Media	Slides and LCD projectors, whiteboard															
Literature	<ol style="list-style-type: none">Walpole, R. E. dan Myers, R. H. 2012. Ilmu Peluang dan Statistika untuk Insinyur dan Ilmuwan Terjemahan. Bandung: ITB.Hogg, R. V. & Craig, A. T. 2012. Introduction to Mathematical Statistics 7th Edition. New York: MacMilan Publishing Co. Inc.															
Note	Based on the regulation of the minister of education and culture of Indonesia number 3 of 2020 concerning national higher education standards, it is state 1 CU equals to 170 minutes per week. Therefore, in one semester (16 weeks, including midterm a final exam) 1 CU = 170 X 16 = 2.720 minutes or 45.3 hours. Therefore, workhours in 144 CU x 45.3 hours = 6.523,2 hours. Unesa decided that 1 ECTS with 144 CU, $6.523,2/229 \text{ ECTS} = 28.48$ hours, so that 1 CU = 1.59 ECTS															