



UNIVERSITAS GADJAH MADA

Faculty of Mathematics and Natural Sciences

Mathematics Department

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Undergraduate Program in Statistics

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MODULE HANDBOOK

Module name	Matematika Diskrit dan Kombinatorika (Discrete Mathematics and Combinatorics)																						
Module level, if applicable	Bachelor																						
Code, if applicable	MMS-1408																						
Subtitle, if applicable	-																						
Courses, if applicable	-																						
Semester(s) in which the module is taught	2 nd Semester																						
Person responsible for the module																							
Lecture(s)	Prof. Dr.rer.nat. Dedi Rosadi, M.Sc. Danang Teguh Qoyyimi, M.Sc., Ph.D.																						
Language	Bahasa Indonesia																						
Classification within the Curriculum	Compulsory course/ Elective Studies																						
Teaching format /class hours per week during the semester:	3 hours lecture																						
Workload	3 hours lectures, 6 hours individual study, 14 weeks per semester, and total 126 hours a semester																						
Credit points	3																						
Requirements	-																						
Module objectives/intended learning outcomes	By the end of this course, students should be able to: CO1 Solve problems using methematical concept, set theory, and mathematical proof CO2 Understand relation and functions and its applications in statistics CO3 Use recurrence relation in statistics applications																						
Content	<ol style="list-style-type: none"> 1. Mathematical proof 2. Set theory 3. Relation and function 4. Recurrence relation 5. Introduction to graph theory 																						
Study and xamination requirements and forms of examination	<p>The weight of assignments will be as follows:</p> <table style="margin-left: 20px;"> <tr> <td>i. Quiz, homework</td> <td>10%</td> </tr> <tr> <td>ii. Group discussion</td> <td>15%</td> </tr> <tr> <td>iii. Mid semester exam</td> <td>35%</td> </tr> <tr> <td>iv. Final exam</td> <td>40%</td> </tr> </table> <p>Grade scale:</p> <table style="margin-left: 20px;"> <tr> <td>A</td> <td>85 ≤ score</td> </tr> <tr> <td>A/B</td> <td>75 ≤ score < 85</td> </tr> <tr> <td>B</td> <td>60 ≤ score < 75</td> </tr> <tr> <td>B/C</td> <td>50 ≤ score < 60</td> </tr> <tr> <td>C</td> <td>40 ≤ score < 50</td> </tr> <tr> <td>D</td> <td>20 ≤ score < 40</td> </tr> <tr> <td>E</td> <td>score < 20</td> </tr> </table>	i. Quiz, homework	10%	ii. Group discussion	15%	iii. Mid semester exam	35%	iv. Final exam	40%	A	85 ≤ score	A/B	75 ≤ score < 85	B	60 ≤ score < 75	B/C	50 ≤ score < 60	C	40 ≤ score < 50	D	20 ≤ score < 40	E	score < 20
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D	20 ≤ score < 40																						
E	score < 20																						
Media employed	Slides and LCD projectors, blackboards																						
Reading List	<ol style="list-style-type: none"> 1. Grimaldi, R., 2004, <i>Discrete and Combinatorial Mathematics. An Applied</i> 																						

	<i>Introduction, 5th eds</i> , ISBN 0201199122 , Addison-Wesley Longman. 2. Liu, C/L., 1995, <i>Elements of Discrete Mathematics</i> , Mc Graw Hill
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CO and PLO mapping

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
CO 1		x					
CO 2	x						
CO 3	x						