



UNIVERSITAS GADJAH MADA

Faculty of Mathematics and Natural Sciences

Department of Computer Science and Electronics

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Bachelor in Computer Science

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MODULE HANDBOOK

Module name	Science Management
Module-level	Undergraduate
Code	MII-3202
Courses (if applicable)	Science Management
Semester	Fall (Odd)
Contact person	Faizal, S.Kom., M.Sc., PhD.
Lecturer	
Language	Bahasa Indonesia and English
Relation to curriculum	1. Undergraduate degree program, compulsory, 3rd semester. 2. International undergraduate program, compulsory, 3rd semester.
Type of teaching, contact hours	1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 30 students.
Workload	1. Lectures: 3 x 50 = 100 minutes (1 hour 40 minutes) per week. 2. Exercises and assignments: 3 x 60 = 120 minutes (2 hours) per week. 3. Individual study: 3 x 60 = 120 minutes (2 hours) per week.
Credit points	3 credit points (sks).
Requirements according to the Examination regulations	A student must have attended at least 75% of the lectures to sit in the exams.
Recommended prerequisites	Numerical Methods
Learning outcomes (course outcomes) and their corresponding PLOs	After completing this module, students are expected to: CO1 Comprehend the Linear Programming and be able to solve its case problems CO2 Comprehend the transportation, Assignment and network problems; and be able to solve its cases problems. CO3 Comprehend the integer programming and be able to solve its case problems CO4 Comprehend the forecasting concept and be able to solve its case problems CO5 Comprehend and be able to solve nonlinear programming and its case problems CO6 Comprehend to explain the Game theory and be able to solve its case problems CO7 Comprehend the decision analysis

	<p>CO8 Comprehend the queuing and inventory concepts and be able to solve its case problems</p> <table border="1"> <thead> <tr> <th colspan="2">PLO</th> <th>CO1</th> <th>CO2</th> <th>CO3</th> <th>CO4</th> <th>CO5</th> <th>CO6</th> <th>CO7</th> <th>CO8</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Program Learning Outcome (PLO)</td> <td>PLO1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>PLO2</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>PLO3</td> <td></td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>PLO4</td> <td></td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>PLO5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	PLO		CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	Program Learning Outcome (PLO)	PLO1									PLO2	√	√	√	√	√	√	√	√	PLO3		√	√	√	√	√	√		PLO4		√	√	√	√	√	√		PLO5																		
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Contents	<ol style="list-style-type: none"> 1. Linear Program 2. Transportation problems and assignments 3. Network model optimization 4. Integer programming 5. Forecasting 6. Non-linear programming 7. Game theory 8. Analysis of decision making 9. Queuing problems 10. Inventory problems 																																																																		
Study and examination requirements and forms of examination	<p>Evaluation is done in 3 forms, namely:</p> <ol style="list-style-type: none"> 1. Two examinations, mid-term and final, 2. Two individual assignments, and 3. Two group assignments. <p>Assessment is done using benchmark assessment, with the aim of measuring the level of student's understanding related to the target and class rank.</p>																																																																		
Media employed	LCD, blackboard, videos, and websites.																																																																		
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Reading List	<ol style="list-style-type: none"> 1. Taylor, B.W., 2013, Introduction to Management Science 11th edition, Pearson. 2. Winston, W.L., 2003, Operations Research: Applications and Algorithms (with CD-ROM and InfoTrac) 4th Edition, Duxbury Press 																																																																		

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