



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	Decision Support Systems
Module level	Undergraduate
Code	MII-213406
Courses (if applicable)	
Semester	Fall (even)
Contact person	Dr. Sri Mulyana, M. Kom.
Lecturer	<ol style="list-style-type: none">1. Prof. Dra. Sri Hartati, M. Sc., Ph.D.2. Drs. Retantyo Wardoyo, M. Sc., Ph. D.3. Dr. Sri Mulyana, M. Kom.
Language	Bahasa Indonesia & English
Relation to curriculum	<ol style="list-style-type: none">1. Undergraduate degree program, compulsory, 6th semester.2. International undergraduate program, compulsory, 6th semester.
Type of teaching, contact hours	<ol style="list-style-type: none">1. Undergraduate degree program: lectures, < 60 students,2. International undergraduate program: lectures, < 30 students.
Workload	<ol style="list-style-type: none">1. Lectures: 3 x 50 = 150 minutes per week.2. Exercises and Assignments: 2 x 50 = 100 minutes per week.3. Private study: 1 x 50 = 50 minutes 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	Programming

<p>Learning outcomes (course outcomes) and their corresponding PLOs</p>	<p>After completing this module, a student is expected to:</p> <p>CO1. Students are able to distinguish DSS and other computer systems.</p> <p>CO2. Students are able to understand the decision support approach with the system, able to understand the phases of decision making.</p> <p>CO3. Students are able to understand the SPK configuration, understand the characteristics and capabilities of the DSS, understand the structure of the DSS component.</p> <p>CO4. Students are able to understand alternative decision-making structures. Students are able to understand the basic concepts of MSS modelling.</p> <p>CO5. Students are able to understand quantitative decision-making modelling.</p> <p>CO6. Students can apply models of decisions and their applications.</p> <table border="1" data-bbox="467 682 1393 905"> <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> </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> </tr> <tr> <td>PLO2</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> </tr> <tr> <td>PLO4</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> </tr> </tbody> </table>	PLO		CO1	CO2	CO3	CO4	CO5	CO6	Program Learning Outcome (PLO)	PLO1							PLO2	√	√	√	√	√		PLO3					√	√	PLO4				√	√		PLO5						√
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<p>Contents</p>	<ol style="list-style-type: none"> 1. Management Support System (MSS) 2. Decision Support System Concept 3. Decision Management in business and other fields 4. Capabilities and Characteristics of Decision Support Systems 5. Basic Components of a Decision Support System 6. Data Management in Decision Support Systems 7. Decision-making Models in Decision Support Systems 8. Weighting and Scoring 9. Simple Additive Weighting (SAW), Weighted Product (WP), Profile Matching (PM), TOPSIS, Analytic Hierarchal Process (AHP) 10. Group Decision Support Systems (GDSS): Computing and Technology Development of Decision Support Systems 																																												
<p>Study and examination requirements and forms of examination</p>	<p>The evaluation is done in 3 forms, namely:</p> <ol style="list-style-type: none"> 1. Trial, either midterm or semester test, 2. Three tasks, including individual, 3. One group assignment to be completed within a certain timeframe, <p>Assessment is done using benchmark assessment, with the aim of measuring the level of student understanding related to the target and class rank.</p>																																												
<p>Media employed</p>	<p>e-learning Platform (eLOK), LCD, whiteboard, and websites.</p>																																												

Assessments and Evaluation	<table border="1"> <thead> <tr> <th>Type</th> <th>Percentage</th> <th>CO1</th> <th>CO2</th> <th>CO3</th> <th>CO4</th> <th>CO5</th> <th>CO6</th> </tr> </thead> <tbody> <tr> <td>Task 1</td> <td>10</td> <td>√</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Task 2</td> <td>10</td> <td></td> <td>√</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Mid Test</td> <td>30</td> <td>√</td> <td>√</td> <td>√</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Task 3</td> <td>10</td> <td></td> <td></td> <td></td> <td>√</td> <td></td> <td></td> </tr> <tr> <td>Group Task 1</td> <td>15</td> <td></td> <td></td> <td></td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>Final test</td> <td>25</td> <td></td> <td></td> <td>√</td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>Total</td> <td>100</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								Type	Percentage	CO1	CO2	CO3	CO4	CO5	CO6	Task 1	10	√						Task 2	10		√					Mid Test	30	√	√	√				Task 3	10				√			Group Task 1	15				√	√	√	Final test	25			√	√	√		Total	100						
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Reading List	<ol style="list-style-type: none"> 1. Turban, E., Aronson, JE., and Liang, T., Decision Support System and Intelligent Systems. Pearson/ Prentice Hall. 2005. 2. Gray, P., "Decision Support and Executive Information Systems", Prentice Hall. 1994 																																																																							

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