



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	Information Retrieval																																						
Module level	Undergraduate																																						
Code	MII-3503																																						
Courses (if applicable)	NA																																						
Semester	Fall (Odd)																																						
Contact person	Drs. Edi Winarko, M.Sc., Ph.D.																																						
Lecturer	Drs. Edi Winarko, M.Sc., Ph.D.																																						
Language	Bahasa Indonesia & English																																						
Relation to curriculum	1. Undergraduate degree program, compulsory, 6th semester. 2. International undergraduate program, compulsory, 6th 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 = 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	Database																																						
Learning outcomes (course outcomes) and their corresponding PLOs	<p>After completing this module, a student is expected to:</p> <p>CO1. Be able to explain the IR system architecture and its components.</p> <p>CO2. Be able to explain and apply methods for data crawling and data transformation.</p> <p>CO3. Be able to explain and apply methods for creating index and compressing index.</p> <p>CO4. Be able to explain and apply methods for processing queries.</p> <p>CO5. Be able to explain the search engine evaluation methods.</p> <table border="1" style="margin-top: 10px;"> <thead> <tr> <th></th> <th>PLO</th> <th>CO1</th> <th>CO2</th> <th>CO3</th> <th>CO4</th> <th>CO5</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> </tr> <tr> <td>PLO2</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> </tr> <tr> <td>PLO4</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> </tr> </tbody> </table>		PLO	CO1	CO2	CO3	CO4	CO5	Program Learning Outcome (PLO)	PLO1	√					PLO2		√				PLO3			√			PLO4				√		PLO5					√
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Contents	<ol style="list-style-type: none"> 1. Introduction to IR 2. Architecture of Search Engine 3. Crawling documents, document transformation 4. Index construction & index compression 5. Query processing 6. Retrieval models, relevance feedback, query expansion 7. Search engine evaluation 8. Search engine project 																																																	
Study and examination requirements and forms of examination	<p>The evaluation is done in 3 forms, namely:</p> <ol style="list-style-type: none"> 1. Exam: mid exam and final exam. 2. Quiz and individual assignment. 3. Group assignments: before and after mid exam (including one final project). 																																																	
Media employed	e-learning Platform (ELOK), LCD, blackboard, website, Youtube video																																																	
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> </tr> </thead> <tbody> <tr> <td>Quiz</td> <td>10</td> <td>√</td> <td></td> <td>√</td> <td></td> <td></td> </tr> <tr> <td>Group assign. 1</td> <td>20</td> <td></td> <td>√</td> <td>√</td> <td></td> <td></td> </tr> <tr> <td>Mid exam</td> <td>25</td> <td>√</td> <td>√</td> <td>√</td> <td></td> <td></td> </tr> <tr> <td>Group assign. 2</td> <td>20</td> <td></td> <td></td> <td></td> <td>√</td> <td>√</td> </tr> <tr> <td>Final exam</td> <td>25</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> </tr> </tbody> </table>	Type	Percentage	CO1	CO2	CO3	CO4	CO5	Quiz	10	√		√			Group assign. 1	20		√	√			Mid exam	25	√	√	√			Group assign. 2	20				√	√	Final exam	25				√	√	Total	100					
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Reading List	<ol style="list-style-type: none"> 1. Introduction to information retrieval, Christopher D. Manning, Prabhakar Raghavan, Hinrich Schutze, 2009. 2. Search Engines: Information Retrieval in Practice, Bruce Croft, Donald Metzler, and Trevor Strohman, Addison-Wesley, 2010. 																																																	

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