MODULE HANDBOOK
Master Program in Computer Science
Department of Computer Science and Electronics
Faculty of Mathematics and Natural Sciences
Universitas Gadjah Mada

Semantic Search and Information Retrieval

Module name	**Semantic Search and Information Retrieval**
Module level	Master
Code	MII-6835
Courses (if applicable)	Semantic Search and Information Retrieval
Semester	1
Contact person	Anny Kartika Sari, M.Sc.,Ph.D.
Lecturer	Anny Kartika Sari, S.Si., M.Sc., Ph.D. Azhari, Dr., M.T.
Language	Bahasa Indonesia
Relation to curriculum	master program, elective, 1st semester.
Type of teaching, contact hours	Lectures, < 30 students Thursdays, 13.00-15.30.
Workload	1. Lectures: 3 x 50 = 150 minutes (2.5 hours) per week. 2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week. 3. Private study: 3 x 60 = 180 minutes (3 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	-
Learning outcomes and their corresponding PLOs	After completing this module, a student is expected to:

CO	Description	PLO
CO-1	Be able to explain the architecture of a Search Engine and its components.	PLO-3
CO-2	Be able to explain the stages to develop an index and be able to do text acquisition, text transformation, and index creation.	PLO-4
CO-3	Be able to explain different kind of queries and rank them	PLO-4
CO-4	Be able to evaluate Search Engine and question answering sistem	PLO-4
CO-5	Be able to explain the concepts related to web semantic and ontology and apply the concepts to develop an ontology.	PLO-4, PLO-9
CO-6	Be able to explain the components of a semantic search engine and question answering system.	PLO-3,

<table>
<tr><td></td><td><table><tr><td></td><td></td><td>PLO-9</td></tr></table></td></tr>
<tr><td>Content</td><td>This course provides the students with the methods used in information retrieval and concepts of semantic search.</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td>• In-class exercises
• Assignments
• Mid-term examinations
• Final examinations</td></tr>
<tr><td>Media employed</td><td>LCD, blackboard, and websites.</td></tr>
<tr><td>Assessments and Evaluation</td><td>
<table>
<tr><th>CO</th><th>Assessment Methods</th><th>Supported PLO</th><th>Type</th><th>Percentage</th><th>Total</th></tr>
<tr><td>CO-1</td><td>Question no 1 in midterm exam</td><td>PLO-3</td><td>Summative</td><td>10%</td><td>10%</td></tr>
<tr><td>CO-2</td><td>Question no 2 in midterm exam</td><td>PLO-4</td><td>Summative</td><td>10%</td><td>15%</td></tr>
<tr><td></td><td>Assignment 1</td><td>PLO-4</td><td>Formative</td><td>5%</td><td></td></tr>
<tr><td>CO-3</td><td>Question no 3 in midterm exam</td><td>PLO-4</td><td>Summative</td><td>10%</td><td>15%</td></tr>
<tr><td></td><td>Assignment 2</td><td>PLO-4</td><td>Formative</td><td>5%</td><td></td></tr>
<tr><td>CO-4</td><td>Question no 4 in midterm exam</td><td>PLO-4</td><td>Summative</td><td>10%</td><td>20%</td></tr>
<tr><td></td><td>Question no 1 in final exam</td><td>PLO-4</td><td>Summative</td><td>10%</td><td></td></tr>
<tr><td>CO-5</td><td>Question no 2 in final exam</td><td>PLO-4</td><td>Summative</td><td>10%</td><td>25%</td></tr>
<tr><td></td><td>Question no 3 in final exam</td><td>PLO-4</td><td>Summative</td><td>10%</td><td></td></tr>
<tr><td></td><td>Assignment 3</td><td>PLO-9</td><td>Formative</td><td>5%</td><td></td></tr>
<tr><td>CO-6</td><td>Question no 4 in final exam</td><td>PLO-3</td><td>Summative</td><td>10%</td><td>15%</td></tr>
<tr><td></td><td>Assignment 4</td><td>PLO-9</td><td>Summative</td><td>5%</td><td></td></tr>
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</td></tr>
<tr><td>Reading List</td><td>• Chowdhury, G. G., Introduction to modern information retrieval. Facet publishing, 2010.
• Manning, C.D., Raghavan, P., Schutze, H., An Introduction to Information Retrieval. Cambridge University Press, 2009.
• Hang Li, and Jun Xu, Semantic Matching in Search, 2014.
• Federico Alberto Pozzi, Messina & Liu, Sentiment Analysis in Social Networks,</td></tr>
</table>

	1st Edition, Morgan Kaufmann, 2016. • Bast, H., Buchhold, B., & Haussmann, E., Semantic search on text and knowledge bases, 2016.