



Module Description

Module name	Information Retrieval
Module level, if applicable	Bachelor of Informatics
Code, if applicable	21D12142703
Subtitle, if applicable	-
Course, if applicable	
Semester(s) in which the module is taught	7 th
Person responsible for the module	Prof. Dr. Ir. Syafruddin Syarif, M.T.
Lecturer	Prof. Dr. Ir. Syafruddin Syarif, M.T. Elly Warni, ST., MT
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is an elective course and is offered starting from the 7 th semester.
Type of teaching, contact hours	Teaching methods: [group discussion], [case study]. Teaching forms: [lecture]. CH : 08.00 - 16.00
Workload	For this course, students are required to meet a minimum of 136.00 hours in one semester, which consist of: - 40.00 hours for lecture, - 48.00 hours for structured assignments, - 48.00 hours for private study
Credit points	3 credit points (equivalent with 5.1 ECTS)



<p>Requirements according to the examination regulations</p>	<p>Students must have attended all minimum 80% of classes and submitted all class assignments that are scheduled before the final tests.</p>
<p>Recommended prerequisites</p>	<p>-</p>
<p>Module objectives/intended learning outcomes</p>	<p>After completing the course, Students are able:</p> <p>Intended Learning Outcome (ILO): ILO 1 : Have the knowledge of fundamental in Computing Science that includes basic theory and concepts of computer science, Mathematics and Statistics, Programming Algorithm, Software Engineering, Information Management and Digital Resilience, also the advance topics of either Artificial Intelligence, Data Science, Computer Network, Cloud Computing or Internet of Things. ILO 4 : Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements by applying computer science theory and software development fundamentals ILO 7 : Perform a logical systematic procedure to solve problems, then communicate their ideas in a convincing and effective manner, either in written or orally, to propose solutions.</p> <p>Course Learning Objectives (CLO):</p> <p>After attending The Information Retrieval Course for 1 (one) semester, students should be able to have the knowledge of Information retrieval system basic concepts, inverted index and text processing, Information retrieval system modeling, Information retrieval system evaluation, Relevance feedback, and query expansion and should be able to design, implement, and evaluate case studies information retrieval systems (classification, clustering, summarization).</p> <p>CLO 1 : Students should be able to have the knowledge of basic concepts of information retrieval system, inverted index and text processing, Modeling of information retrieval system, Evaluation of information retrieval system, Relevance feedback, and query expansion CLO 2 : Students should be able to design, implement, and evaluate information retrieval case studies (document classification, document clustering, text summarization). CLO 3 : Students should be able to present data mining case studies.</p>



Content	Students will learn about : <ol style="list-style-type: none"> 1. The basic concept of an information retrieval system 2. Inverted index and text processing 3. Information retrieval system modeling 4. Evaluation of information retrieval system 5. Relevance feedback and query expansion 6. Classification 7. Clustering 8. Text summarization
Forms of Assessment	Assessment techniques: [observation], [participation], [written test] Assessment forms: [quiz], [midterm exam], [assignment], [presentation] Quiz = 15%, Midterm exam = 25%, Assignment = 30%, Presentation = 30% CLO 1 => ILO 1: 40% (Quiz and Mid term exam: written test) CLO 2 => ILO 4: 30% (Assignment: participation) CLO 3 => ILO 7: 30% (Presentation: observation)
Study and examination requirements and forms of examination	Study and examination requirements: <ul style="list-style-type: none"> - Students must attend 15 minutes before the class starts. - Students must switch off all electronic devices. - Students must inform the lecturer if they will not attend the class due to sickness, etc. - Students must submit all class assignments before the deadline. - Students must attend the exam to get a final grade. Form of examination: Written test
Media employed	Video conference, Slide Presentation, Learning Management System (LMS).
Reading list	<ol style="list-style-type: none"> 1. Manning, C.D., Raghavan, P., Schütze, H., An Introduction to Information Retrieval, 2009 2. Ceri, S., Bozzon, A., Brambilla, M., Valle, E.D., Fraternali, P., Quarteroni, S., Web Information Retrieval, 2013 3. Salton, J.K. Information Retrieval System. KluwerAcademic Publisher. 1995