



Module Description

Module name	Software Engineering
Module level, if applicable	Bachelor of Informatics
Code, if applicable	21D12121303
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	4 th
Person responsible for the module	Dr. Ir. Zahir Zainuddin, M.Sc
Lecturer	1. Dr. Ir. Zahir Zainuddin, M.Sc 2. Elly Warni, ST., M.Sc 3. Muhammad Alief Fadhal Imran Oemar., ST., M.Sc
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course and offered in the 4 th semester.
Type of teaching, contact hours	Teaching methods: [group discussion], [simulation], [case study], [Problem-based learning]. Teaching forms: [lecture], [tutorial]. 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 have participated in at least 80% of the learning activities (Academic Regulations, Chapter VII)</p>
<p>Recommended prerequisites</p>	<p>Object-oriented Programming</p>
<p>Module objectives/intended learning outcomes</p>	<p>Intended Learning Outcomes (ILO): After completing the course, Students are able: 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 3 : Apply the knowledge of computing and other related disciplines to analyse and identify solutions for any computing-based problem</p> <p>Course Learning Objective (CLO): After following the Software Engineering course for 1 semester, students are able to understand theoretical Concepts of informatics knowledge in the field of software engineering independently, of good quality and measurable and able to analyze and design quality software. In software engineering I, students are able to formulate problem solving as outlined in the form of computational design requirements analysis documentation.</p> <p>ILO 1 =>CLO 1 : students are able to understand theoretical Concepts of informatics knowledge in the field of software engineering independently, of good quality and measurable and able to analyze and design quality software ILO 3 =>CLO 2 : students are able to formulate problem solving as outlined in the form of computational design requirements analysis documentation.</p>
<p>Content</p>	<p>Students will learn about :</p> <ol style="list-style-type: none"> 1. Software and Software Engineering 2. Process Models 3. Agile Development 4. Requirements Engineering and Requirements Analysis



	<ol style="list-style-type: none"> 5. Design Concepts 6. Software Architecture 7. Interface Analysis and Design Pattern 8. Study Case
Forms of Assessment	<p>Assessment techniques: [observation], [written test].</p> <p>Assessment forms: [quiz], [midterm exam], [final term exam], [assignment].</p> <p>Quiz = 50%, Midterm exam = 20% Finalterm exam = 20%, Assignment =10%</p> <p>CLO 1 => ILO 1: 90% (Quiz, Midterm exam, and Final term exam: written test)</p> <p>CLO 2 => ILO 3: 10% (Assignment: observation)</p>
Study and examination requirements and forms of examination	<p>Study and examination requirements:</p> <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 final grade. <p>Form of examination:</p> <p>Written exam: Essay</p>
Media employed	Video conference, Slide Presentation, Learning Management System (LMS).
Reading list	<p>Main :</p> <ol style="list-style-type: none"> 1. Software Engineering A Practitioner’s Approach – Seventh Edition, Pressman. 2010 <p>Support :</p> <ol style="list-style-type: none"> 1. Brian Hambling et al., Software Testing – An ISTQB-ISEB Foundation Guide 2nd Edition, BCS The Chartered Institute for IT, 2010 2. Kathy Schwalbe, Managing Information Technology Projects 6th Edition, Course Technology, Cengage Learning, 2010