

HANDBOOK

BACHELOR OF INFORMATICS PROGRAM
DEPARTMENT OF INFORMATICS
FACULTY OF INTELLIGENT ELECTRICAL AND INFORMATICS TECHNOLOGY
INSTITUT TEKNOLOGI SEPULUH NOPEMBER

Module name	Software Evolution	
Module level	Undergraduate	
Code	IF184973	
Courses (if applicable)	Software Evolution	
Semester	7	
Contact person		
Lecturer	Dr.Ir. Siti Rochimah, MT.	
Language	Bahasa Indonesia and English	
Relation to curriculum	<ol style="list-style-type: none"> 1. Undergraduate degree program; optional; 7th semester. 2. International undergraduate program; optional; 7th semester. 	
Type of teaching, contact hours	<ol style="list-style-type: none"> 1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 40 students 	
Workload	<ol style="list-style-type: none"> 1. Lectures: 3 sks x 50 = 150 minutes (2 hours 30 minutes) 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	A student must have attended at least 80% of the lectures to sit in the exams.	
regulations		
Mandatory prerequisites	Analysis and Design of Information Systems	
	After completing this module, a student is expected to:	

Learning outcomes and their corresponding PLOs	CO1 Students understand and able to apply the concept and methods of software evolution including program comprehension, code cloning, software repositories, fault prediction and refactoring.	
Content	<p>Knowledge:</p> <p>Mastering the concepts and principles of:</p> <ul style="list-style-type: none"> - Design and development of software using standardized and scientific methods of planning, requirement engineering, design, implementation, testing, and product releasing, to produce software products that meet various parameters of quality, i.e. technical, managerial, and efficient; - Making simple programs in common programming languages as well as object-oriented programming languages, creating web applications and desktop applications, creating simple database to solve problems in the context of general software development. <p>Specific Skill:</p> <p>Able to analyze, design and build software using software engineering process principles to produce software that meets both technical and managerial qualities</p>	
Study and examination requirements and forms of examination	Mid-terms examination and Final examination.	
Media employed	LCD, whiteboard, websites, books (as references), etc.	
Assessments and Evaluation		

Reading List	<p>Stephan Diehl, Software Visualization: Visualizing the Structure, Behaviour, and Evolution of Software, Springer-Verlag, Berlin, 2007</p> <p>Nazim H. Madhavji, Juan Fernandez-Ramil, dan Dewayne Perry, Software Evolution and Feedback: Theory and Practice, John Wiley & Sons, England, 2006.</p> <p>J. Fernandez-Ramil et al., Empirical Studies of Open Source Evolution.</p> <p>R. Koschke, Identifying and Removing Software Clones.</p> <p>E. Duala-Ekoko and M.P. Robillard, Tracking Code Clones in Evolving Software, In Proceedings of the 29th International Conference on Software Engineering.</p>
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