

**UNDERGRADUATE PROGRAM IN COMPUTER SCIENCE
DEPARTMENT OF COMPUTER SCIENCE AND ELECTRONICS
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
UNIVERSITAS GADJAH MADA**

Module name	Software Development Lab	
Module level	Undergraduate	
Code	MII-3502	
Courses (if applicable)	Software Development Lab	
Semester	Fall (Gasal)	
Contact person	Isna Alfi Bustoni, M.Eng.	
Lecturer	Isna Alfi Bustoni, M.Eng.	
Language	Bahasa Indonesia	
Relation to curriculum	1. Undergraduate degree program, elective, 5 th or 7 th semester. 2. International undergraduate program, elective, 5 th or 7 th semester.	
Type of teaching, contact hours	1. Undergraduate degree program: lectures, < 30 students, 2. International undergraduate program: lectures, < 10 student,	
Workload	1. Lectures: 1 x 100 = 100 minutes per week. 2. Exercises and Assignments: 1x 50 = 50 minutes per week.	
Credit points	1 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:	
	LO1 understand the stages of software development.	PLO2
	LO2 understand the development and modeling process of software.	PLO2
	LO3 understand and implement business processes, and use entity relationship diagram (ERD)	PLO3
	LO4 understand and use flowchart, DFD level 0 on the software design based on business processes.	PLO3
	LO5 apply decomposition steps of DFD (level 2 and level 3).	PLO4
	LO6 looking for a case study of software development (mini project) and implement business process analysis, ERD, flowchart diagram, DFD level 0-3.	PLO4
	LO7 undertsand object oriented software development and Unified Modeling Language (UML)	PLO4
	LO8 implement four basic UML diagram, ie usecase, activity, class and sequence diagrams.	PLO4
LO9 implement the results of software development by applying UML diagrams.	PLO3	
Content	In this course, students are expected to know and understand the steps of software design. Students are also expected to be able to	

	design and analysis a software in some variety of diagrams such as Entity Relationship Diagram (ERD), Flowchart, Data Flow Diagram (DAD), along with the Unified Modeling Language (UML).
Study and examination requirements and forms of examination	Mid-terms examination and Final examination.
Media employed	LCD, blackboard, websites, and big data tools.
Assessments and Evaluation	<p>LO1: Problem 1 in final exam (4%).</p> <p>LO2: Problem 2 in final exam (4%), and assignment 1 (5%).</p> <p>LO3: Problem 3 in final exam (4%), and assignment 2 (5%).</p> <p>LO4: Problem 4 in final exam (4%), and assignment 3 (5%).</p> <p>LO5: Problem 5 in final exam (4%), and assignment 4 (5%).</p> <p>LO6: Group Project 1 (10%), group presentation1 (10%).</p> <p>LO7: Problem 6 in final exam (5%), and assignment 5 (5%).</p> <p>LO8: Problem 7 in final exam (5%), and assignment 6 (5%).</p> <p>LO9: Group Project 2 (10%), group presentation 2(10%).</p>
Reading List	<p>W1: Ian Sommerville, Software Engineering, 9th Edition, Addison-Wesley, 2010.</p> <p>W2: Roger S. Pressman, Software Engineering: a Practitioner's Approach, 7th, McGraw-Hill Higher Education, 2010.</p>