

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

Module name	Compiler Development
Module level	Undergraduate
Code	MII - 4211
Courses (if applicable)	Compiler Development
Semester	Spring (Genap)
Contact person	Bambang Nurcahyo Prastowo M.Sc., Drs.
Lecturer	Bambang Nurcahyo Prastowo M.Sc., Drs.
Language	Bahasa Indonesia
Relation to curriculum	<ol style="list-style-type: none"> 1. Undergraduate degree program, elective, 4th or 6th semester. 2. International undergraduate program, elective, 4th or 6th semester.
Type of teaching, contact hours	<ol style="list-style-type: none"> 1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 30 students.
Workload	<ol style="list-style-type: none"> 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	Languages and Automata
Learning outcomes and their corresponding PLOs	<p>After completing this module, a student is expected to:</p> <p>LO1 Students are able to describe programming language syntax using formal notations.</p> <p>LO2 Students are able to design simple lexical analyzers, parsers, code generators and interpreters.</p> <p>LO3 Students are able to explain techniques of optimizing programs.</p>

	<p>LO4 Students are able to have good understanding of mapping program source codes and executable object codes.</p> <p>LO5 Students are able to write simple program interpreters.</p>
Content	In this course, several basic concepts of compilers and interpreters constructions are discussed along with working projects of designing and implementing programming language translators both as compilers and interpreters.
Study and examination requirements and forms of examination	<ol style="list-style-type: none"> 1. Assignments. 2. Mid-term examination. 3. Final examination.
Media employed	LCD, whiteboard, and websites.
Assessments and Evaluation	<p>LO1: Assignment 1 (5%).</p> <p>LO2: Assignment 2 (5%).</p> <p>LO3: Assignment 3 (5%).</p> <p>LO4: Assignment 4 (5%).</p> <p>LO5: Problem in midterm (40%), and problem in final exam (40%)</p>
Reading List	W1: Compiler Construction: Principles and Practice, Kenneth C. Loudon, PWS Publishing, 1997, ISBN 0-534-93972-4.