

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

Module name	<b>Microprocessor</b>
Module level	Undergraduate
Code	MII-2601
Courses (if applicable)	Microprocessor
Semester	Fall (Gasal)
Contact person	Drs. Widodo Priyodiprojo, M.Sc.EE Triyogatama Wahyu Widodo, S.Kom, M.Kom.
Lecturer	Drs. Widodo Priyodiprojo, M.Sc.EE Triyogatama Wahyu Widodo, S.Kom, M.Kom.
Language	Bahasa Indonesia
Relation to curriculum	<ol style="list-style-type: none"> <li>1. Undergraduate degree program, compulsory, 3<sup>th</sup> semester.</li> <li>2. International undergraduate program, compulsory, 3<sup>th</sup> semester.</li> </ol>
Type of teaching, contact hours	<ol style="list-style-type: none"> <li>1. Undergraduate degree program: lectures, &lt; 60 students,</li> <li>2. International undergraduate program: lectures, &lt; 30 students.</li> </ol>
Workload	<ol style="list-style-type: none"> <li>1. Lectures: 2 x 50 = 100 minutes per week.</li> <li>2. Exercises and Assignments: 2 x 60 = 120 minutes (2 hours) per week. <ol style="list-style-type: none"> <li>1. Private study: 2 x 60 = 120 minutes (2 hours) per week.</li> </ol> </li> </ol>

Credit points	2 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:	
	<b>LO1</b> Comprehend the history of microprocessor development, especially Intel x86 families, along with its architecture.	<b>PLO3</b>
	<b>LO2</b> Able to apply the use of registers and instructions available on Intel x86 microprocessors into a program written in Assembly language	<b>PLO4</b>
	<b>LO3</b> Be able to solve problems by utilizing the microprocessor as part of the solution	<b>PLO5</b>
Study and examination requirements and forms of examination	The evaluation is done in 3 forms, namely: (a) Trial, either midterm or semester test, (b) 2 (two) tasks, including individual or group assignments to be completed within a certain timeframe, and (c) 2 (two) quizzes, held on face-to-face, once before midterm exam and once after midterm exam, with a short answer form. Assessment is done using benchmark assessment, with the aim of measuring the level of student understanding related to the target and class rank.	
Media employed	LCD, blackboard, and websites.	

<p>Assessments and Evaluation</p>	<p><b>LO1:</b> Midterm exam no.1 (7%), Midterm exam no.2 (7%), Midterm exam no.3 (7%), and Quiz (7,5%).</p> <p><b>LO2:</b> Midterm exam no.4,5 (7%), Assignment 1 (7,5%), Final exam no.1, 2, 3 (21%), Quiz 2 (7,5%).</p> <p><b>LO3:</b> Final exam no.4, 5 (14%), and Assignment 2 (7,5%).</p>
<p>Reading List</p>	<p><b>W1</b> Barry B. Brey, 2008, "Intel Microprocessors", 8th ed., Pearson Education</p> <p><b>W2</b> Mazidi, M.A., 2003, "The 80x86 IBM PC &amp; Compatible Computers Vol. 1&amp; II", 4th ed., Prentice Hall International Inc., New Jersey, USA.</p> <p><b>W3</b> Kip R. Irvine, 2010, "Assembly Language for x86 Processors", 6th ed., Prentice Hall</p>