Module Handbook

Course:	**Microprocessor and Microcontroller**
Module Level:	Undergraduate
Code:	FIE304
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/Term:	5th / Third year
Module Coordinator:	Drs. Bambang Suprijanto, M.Si.
Lecturer(s):	Winarno, S.Si, M.T. and Drs. Bambang Suprijanto, M.Si.
Language:	Bahasa Indonesia
Classification within the Curriculum:	~~Compulsory Course~~ / Elective Course
Teaching format / class hours per week during semester:	2 hours of lectures (50 min / hour)
Workload:	2 hours of lectures, 2 hours of structural activities, 2 hours of individual study, 13 weeks per semester, and total of 78 hours per semester ~ 2.6 ECTS*
Credit Points:	2
Requirement(s):	(FIE 204) Digital Electronics
Learning Goals/Competencies:	**General Competence (Knowledge):** Students are able to design simple microcomputer system, microcontroller system and its programming. **Specific Competence :** 1. Students are able to relate theory and application about addresing circuit, RAM circuit, ALU circuit, control unit circuit, CPU circuit, simple microprocessor circuit and microprocessor instruction set. 2. Students are able to know simple computer system. 3. Students are able to relate theory and application about microcontroller, microcontroller memory, microcontroller structure, register, and microcontroller programming.
Contents:	The course is consist of some basic topics about addresing circuit, RAM circuit, ALU circuit, control unit circuit, CPU circuit, simple microprocessor circuit, microprocessor instruction set, simple computer system, microcontroller, microcontroller memory, microcontroller structure, register, and microcontroller programming.
Soft Skill Attribute	Active and good communication
Study/Exam Achievements:	Final score is calculated as follow: 15% assignment 1 + 15% assignment 2 + 35% midterm test + 35% final exam Final grade is defined as follow: A : 75 – 100 AB : 70 - 74.99 B : 65 - 69.99 BC : 60 - 64.99 C : 55 - 59.99 D : 40 - 54.99 E : 0 - 39.99
Forms of Media:	Powerpoint slides, LCD projectors and whiteboards

Learning Methods:	Lectures and assessments
Literature(s):	1. Sutrisno, 1998, *Perancangan Sistem Mikroprosesor*, Jurusan Fisika ITB, Bandung . 2. Hartono, 1995, *Tuntunan Praktis Pemrograman Bahasa Aassembler*, PT. Elex Media Komputindo, Jakarta. 3. Barden,W, 1978, *The Z-80 Microcomputer Handbook*, Howard W.Sam & Co., Inc. 4. Atmel Electronics, 2000, mikrocontroler 8051 5. Mackenzie, L.Scott, 1995, The 8051 microcontroller, University of Guelph, Prentice hall.
Notes:	*Total ECTS = {(total hours workload × 50 min) / 25 hours Each ECTS is equals with 25 hours.