MODULE HANDBOOK DESCRIPTION

Module designation	Microprocessor System
Code	FBS2235
Semester(s) in which the module is taught	4 /Second year
Person responsible for the module	Dr. Ir. I Ketut Wiryajati,ST.,MT.,IPU.,ASEAN.Eng.
Language	Indonesian
Relation to curriculum	Compulsory for all majors
Teaching methods	Lectures, small group discussion, Project base method.
Workload (incl. contact hours, self-study hours)	Contact minutes every week, each week of the 16 weeks/semester: • Lectures: 3 x 50 minutes • Exercises and Assignments: 3 x 60 minutes • Private study: 3 x 60 minutes. Total study hours = 8 hours 30 minutes/week
Credit points	3 SKS (~ 4,8 ECTS)
Required and recommended prerequisites for joining the module	- Logic Ciruit (FBS1107)
Module objectives/intended learning outcomes	1. Students able to understand the development microelectronics, Conversion number, Heksadecimal, ASCI, Architecture Microprosesor, microcontroller, Input, Output, CPU, EPROM, ROM, RAM, memory, Address, Register, Flag, Flash memory. Arduino, Raspberry.	PLO2
	2. Students are able to analyze the logic conversion, ASCI System, Architeture, ROM, CPU,EEPROM, RAM, ALU,STACK, FLAG, Logic Programming, Machine Language, Register system, Flowchart Programming, Logic Programming.	PLO3
	3. Students can conclude the best way to design microelectronics device with load.	PLO4

Content	1. Microprocessor and Microcontroller Systems. 2. Number system and its application. 3. Microprocessor system architecture. 4. Programming Language on Microsystems, Microprocessor. 5. Software, Simulation on Microprocessor systems. 6. Programming microcontroller system input, Programming microcontroller system output. 7. Raspberry Architecture, Raspbery Application. 8. Application of microcontrollers on motor control.
Examination forms	- Collecting a portfolio after finishing each topic, in the form of voice recordings and working on practice assignments. - Midterm and final test.
Study and examination requirements	The final grade in the module is composed of: 1. The portfolio of 6 topics is 11,67% each, for a total of 75% 2. Midterm assessment: 10% 3. Final assessment: 15% Students must have a final grade of 75% or higher to pass
Reading list	1. Nichols and Roony, 1979, Z80 Microprosesor Book Programming, Howard W Sams & Co. 2. Andrianto, H., 2008, Pemrograman Mikrokontroler AVR ATMEGA 16 menggunakan Bahasa C (CodeVision AVR). Bandung: Informatika. 3. Brey, B. B., 2009, Intel Micreoprocessor 8th ed, Ohio, New Jersey: Prentice Hall. 4. Rafiquzzaman, 1984, Microprosessor and Microcomputer Development System, Harper & Row Publishers 5. Yuen, KG Beauchamp, GPS Robinson, 1987, Microprosesor System and Their Aplication to Signal Processig, Academic Press.