

Modul Description

Module name	Course Module
Module level, if applicable	Bachelor of Electronics Engineering
Code, if applicable	5215-038-3
Subtitle, if applicable	-
Course, if applicable	Microprocessor System
Semester(s) in which the module istaught	V
Person responsible for the module	Lecturer of Courses
Lecturer	Drs. Jusuf Bintoro, MT
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course and offered in the 5 th semester.
Type of teaching, contact hours	<p>Teaching methods used in this course are:</p> <ul style="list-style-type: none"> - Lecture (i.e., group investigation, small group discussion, case study, and video-based learning) - Structured assignments (i.e., essays and case study) <p>The class size for lecture is 30 students. Contact hours for lecture is 27 hours, assignments are 32 hours</p>
Workload	<p>For this course, students required to meet a minimum of 91 hours in one semester, which consist of:</p> <ul style="list-style-type: none"> - 27 hours for lecture, - 32 hours for structured assignments, - 32 hours for private study,
Credit points	2 credit points (equivalent with 2.88 ECTS)
Requirements according to the examination regulations	Students must have attended all classes and submitted all class assignments that are scheduled before the final tests.
Recommended prerequisites	Students must have attended all classes and submitted all class assignments that are scheduled before the final tests.

<p>PLO-ILO-CLO</p>	<p>After completing the course and given with this case:</p> <p>Course Learning Objectives (CLO1): Mahasiswa mampu memahami manfaat mikroprosesor baik secara praktis maupun teoritis (K1) (10)</p> <p>Course Learning Objectives (CLO2): Mahasiswa mampu menganalisa sistem mikroprosesor sebagai rangkaian penggerak utama pada peralatan elektronika dan elektro yang menggunakan mikroprosesor sebagai basis kerjanya (K1, S2, S3, C2) (20)</p> <p>Course Learning Objectives (CLO3): Mahasiswa mampu merancang Sistem Penggerak Elektronika Berbasis mikroprosesor (K2, S1, S3, C1) (70)</p> <p>Program Learning Outcomes (PLO3): Menerapkan kompetensi teknik elektronika untuk memecahkan masalah keteknikan</p> <p>Knowledge (K2): Untuk menerapkan prinsip-prinsip teknik elektronik untuk memecahkan masalah dalam sistem teknik elektronik</p> <p>Engineering and Education Skill (S1): Mampu merancang prinsip dan aplikasi sistem rekayasa elektronik</p> <p>Competence (C1): Menerapkan teknologi baru di bidang rekayasa dengan mempertimbangkan standar teknis, aspek kinerja, keandalan, penerapan, dan keberlanjutan.</p>
<p>Content</p>	<p>Students will learn about: Memberikan dasar yang kokoh dalam memanfaatkan teknologi mikroprosesor baik secara teoritis maupun praktis, sehingga dapat digunakan dalam menganalisa, dan memanfaatkan sistem mikroprosesor sebagai rangkaian penggerak utama pada peralatan elektronika dan elektro yang menggunakan mikroprosesor sebagai basis kerjanya serta memiliki kemampuan dasar teknologi mikrokontrol. Perkembangan dan Manfaat Teknologi Mikroprosesor 8, 16 dan 32 Bit, Eksternal dan Internal Arsitektur Sistem Mikroprosesor, Peta Memory dan I/O, Komponen kontrol dan Sistem mikroprosesor, Memory ROM dan RAM, Berbagai komponen I/O dan penggunaannya. Teori pemrograman mikroprosesor menggunakan bahasa rakitan atau bahasa mesin. Aplikasi sistem mikroprosesor untuk penggerak rangkaian elektronika.</p>

Forms of Assessment	Assessment is carried out based on written examinations, assessment/evaluation of the learning process and performance with the following components: Attitude: 5%; General Skills: 5%; Special skill: 20%; Mid Test: 30%; Final Test: 40%
Study and examination requirements and forms of examination	<p>Study and examination requirements:</p> <ul style="list-style-type: none"> - Students must attend 15 minutes before the class starts. - Students must switch off all electronic devices. - Students must inform the lecturer if they will not attend the class due to sickness, etc. - Students must submit all class assignments before the deadline. - Students must attend the exam to get final grade. <p>Form of examination: Written exam: Essay</p>
Media employed	Direct Whiteboard and Power Point Presentation.
Reading list	<p>Referensi Utama:</p> <ol style="list-style-type: none"> 1. Bhurchandi. K.M and Ray. A.K (2013). Advanced Microprocessors and Peripherals Third Edition. New Delhi, Tata McGraw Hill Education Private Limited. 2. Brey, Barry B. (2009). The Intel microprocessors 8086/8088, 80186/80188, 80286, 80386, 80486, Pentium, Pentium Pro processor, Pentium II, Pentium III, Pentium 4, and Core2 with 64-bit extensions: Architecture, Programming, and Interfacing- 8 th ed. London: Pearson Education Ltd. 3. Crisp, John. (2004). Introduction to Microprocessors and Microcontrollers Second Edition. Amsterdam: Newnes. 4. Gaonkar, Ramesh. (1988). the Z80 Microprocessor: Architecture, Interfacing, Programming, and Design. NewYork: Macmillan Publishing Company. 5. Godse, A.P and Godse, Mrs. D.A. (2008). Microprocessor & Microcontroller System First Edition. India: Technical Publications Pune. 6. Kumar, K. Udaya. And Umashankar.B.S (2008). The 8085 Microprocessor Architecture, Programming and Interfacing. India: Dorling Kindersley. Pvt. Ltd. Licenses of Pearson Education in South Asia. <p>Referensi Pendukung:</p> <ol style="list-style-type: none"> 6. Sen, S.K. (2010). Understanding 8085/8085 Microprocessor and Peripheral UCs: Through Questions and Answers. India. New Age International Limited Publishers 7. - (1981), MPF-1 Users Manual. Multitech Industrial Corp. 8. Wiki Books, (2015). Microprocessor Design. En.wikibooks.org. 9. Referensi Pendukung lainnya yang dapat dibaca tidak terbatas pada nama pengarang; melalui internet browser (google, etc) dan youtube dengan kata kunci (Keyword): Microprocessor