Modul Description

Module name	Course Module
Module level, if applicable	Bachelor of Electronics Engineering
Code, if applicable	5215-188-3
Subtitle, if applicable	-
Course, if applicable	Electrical Circuit I
Semester(s) in which the module istaught	I
Person responsible for the module	Lecturer of course
Lecturer	Dr.Aodah Diamah,M.Eng. ; Dr. Baso Maruddani, M.T.
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course and offered in the 1st semester.
Type of teaching, contact hours	Teaching methods used in this course are: - Lecture (i.e., group investigation, small group discussion, casestudy, and video based learning) - Structured assignments (i.e., essays and case study) - Practice (i.e., computer simulation and case study in laboratory) The class size for lecture is 30 students. Contact hours for lecture is 27 hours, assignments is 32 hours
Workload	For this course, students are required to meet a minimum of 91 hours in one semester, which consist of: - 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.

PLO-CLO-ILO	After completing the course and given with this case: **Course Learning Objectives (CLO1):** Mahasiswa mampu menganalisis elemen rangkaian listrik dan sifat-sifatnya (K1, S2, S3) (20) **Course Learning Objectives (CLO2):** Mahasiswa mampu menerapkan sumber tegangan/arus dependen dan independen (K2, S1, S3) (20) **Course Learning Objectives (CLO3):** Mahasiswa mampu menerapkan hukum rangkaian pada rangkaian listrik (K2, S1, S3, C2) (30) **Course Learning Objectives (CLO4):** Mahasiswa mampu menganalisis rangkaian arus bolak balik (K1, S2, S3, C2) (30) **Program Learning Outcomes (PLO3):** Menerapkan kompetensi teknik elektronika untuk memecahkan masalah keteknikan **Knowledge (K1):** Menerapkan matematika, ilmu dasar dan teknik dasar untuk merancang dan menganalisis untuk memecahkan masalah di bidang teknik elektronika. **Knowledge (K2):** Untuk menerapkan prinsip-prinsip teknik elektronik untuk memecahkan masalah dalam sistem teknik elektronik **Engineering and Education Skill (S1):** Mampu merancang prinsip dan aplikasi sistem rekayasa elektronik **Engineering and Education Skill (S2):** Mampu menganalisis prinsip kerja dan penerapan sistem rekayasa elektronik **Competence (C2):** Mampu mengelola dan mengembangkan proses, sistem operasi, dan peralatan dengan mempertimbangkan dampak teknis dan nonteknis dari kegiatan industri di bidang teknik elektronika.
Content	**Students will learn about:** Introduction to electrical circuit, passive and active component/devices, Ohm law, Kirchoff law, circuit theorem, basic circuit analysis method, and general circuit analysis method (nodal and mesh equation).

Forms of Assessment	Assessment is carried out based on written examinations, assessment/evaluation of the learning process and performance with the following components: Structured tasks: 20% ; Quiz 10% ; Mid Test : 35% Final Test: 35%
Study and examination requirements and forms of examination	**Study and examination requirements:** - 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 classdue to sickness, etc. - Students must submit all class assignments before the deadline. - Students must attend the exam to get final grade. **Form of examination:** Written exam: Essay
Media employed	Direct Whiteboard and Power Point Presentation.
Reading list	1. Sudirham, Sudaryatno. 2012. Analisis Rangkaian Listrik jilid 1. Bandung: Darpublic. 2. Sudirham, Sudaryatno. 2012. Analisis Rangkaian Listrik jilid 2. Bandung: Darpublic 3. Karris, S.T., 2003. Circuit Analysis I with Matlab Application. California: Orchad Publication. 4. Karris, S.T., 2003. Circuit Analysis II with Matlab Application. California: Orchad Publication.