MODULE HANDBOOK

Course:	**Electronics I**
Module Level:	Undergraduate
Code:	FIE210
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/Term:	3rd / Second Year
Module Coordinator:	Yhosep Gita Yhun Yhuwana S.Si M.T
Lecturer(s):	Yhosep Gita Yhun Yhuwana S.Si M.T, Drs. Bambang Suprijanto M.Si, Drs. Tri Anggono Prijo
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory Course / ~~Elective Course~~
Teaching format / class hours per week during semester:	3 hours of lectures (50 min / hour)
Workload:	3 hours of lectures, 3 hours of structural activities, 3 hours of individual study, 13 weeks per semester, and total of 117 hours per semester ~3.9 ECTS*
Credit Points:	3
Requirement(s):	FID101 Basic Physics I and FID103 Basic Physics II
Learning Goals/Competencies:	**General Competence (Knowledge):** After following the subject students are able to understand the basic concept; electric current and voltages, active and pasive components, amplifier circuit, ocillators as a fundation of an Analog electronical instrumentation system **Specific Competence:** 1. Students are able to solve electrical instruments problems 2. Students are able to explain the function of alternating current, semiconductors, semiconductors diode, dipole transistors, strengthening RC coupling, DC coupling amplifier, power amplifier, Operational Amplifiers (Op-Amp) and the oscillator
Contents:	Introduction, alternating current, semiconductors, semiconductors diode, dipole transistors include common base transistor circuit, common emitor transistor circuit, and equivalent circuit common base, equivalent circuit common emitor , field effect transistor, Strengthening RC coupling, DC coupling amplifier, power amplifier, Operational Amplifiers (Op-Amp) include : properties of ideal op-amp, inverting and non-inverting amplifier, Op-amp comparator circuit, the circuit pengintegral and differential op-amp; The oscillator includes RC oscillator, LC oscillator, crystal oscillator.
Soft Skill Attribute:	Effort and ethic
Study/Exam Achievements:	Students are considered competent and eligible to pass the course upon obtaining at least 40 of maximum score for the exams (midterm test and final exam), structured activity (group discussion).

	Final score is calculated as follow: 20% assignment +10% (soft skill) + 35% midterm exam + 35% final exam Final grade is defined as follow: A : 70 - 74.99 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 Method:	Lecturing, homework
Literature(s):	1. Sutrisno 1986, *Elektronika : Teori dasar dan penerapannya*, Jilid 1 dan 2, Bandung:penerbit ITB 2. Milmann, H.1987,*Integrated Electronics*: Analog and Digital Circuits and systems,McGraw-Hill, Inc, New York
Notes:	*Total ECTS ={(total hours workload x 50min)/60 min)/25 hours each ECTS is equals with 25 hours