Course Code	TKEE162105P
Course Name	Analog Electronic Lab Work
Course Instructors	Prapto Nugroho
Course Type	Required
Course Classification	Engineering Topics
Credit / Contact Hour per Week	1 / 150 minutes per Week
Course Description	In this labwork, the students will work through a sequence of design exercise culminating in the design of a simple op-amp from discrete components..
Prerequisites Courses	
Covered Student Outcome	**Engineering Design (c)** **Data and Experiment (d)** **Modern Tools Utilization (e)** **Multidisciplinary Teamwork (h)**

Learning Outcome	1. Students are able to perform expt on variouse basic electronic circuit 2. Studens are able to design a circuit 3. Students are able to operate both in team and individually to realize their analog circuit design
Topic	1. Inverting OP-Amp Configuration. 2. Instrumentation Amplifier 3. NPN Common-Emitter Amplifier 4. PNP Common-Emitter Amplifier 5. Regulator (DC Power Supply) 6. Self Practicum (Making MOSFET Op-Amp.)
Direct Asessment	

Direct Asessment Plan	**Measured Learning Outcome**
Lab Work Report	LO1 LO2 LO3
Pretest	LO1 LO2 LO3

Indirect Assesment	Questionnaire (EDOM)
References	[1] Robert L. Boylestad & Louise Nashelsky", Electronic Devices and Circuit Theory", 8th edition, Prentice Hall, 2002. [2] Albert P. Malvino & David J. Bates, "Electronic Principles", McGraw-Hill, 7th Edition, 2006. [3] Behzad Razavi, "Fundamental of Microelectronics", McGraw-Hill International Edition, 2001. [4] Adel S. Sedra & Kenneth C. Smith, "Microelectronics Circuits", Oxford Series in Electrical and Computer Engineering, 6th edition, 2011.