COURSE	**Course Name** : Analog Electronics
	Course Code : VI231206
	Credit : 3 SKS
	Semester : II

DESCRIPTION OF COURSE

The Analog Electronics Technology course is included in the Electrical Engineering Technologies course group at PS S. Tr. TRI – ITS. This course discusses the working principles of active electronic components and the mechanisms for using these active components.

LEARNING OUTCOMES

- Able to study cases of the application of science and technology in the field of expertise according to work competency standards, and able to make appropriate decisions from the results of one's own work or group work in the form of a final assignment report or other form of learning activity whose output is equivalent to the final assignment through logical, critical thinking , innovative, quality and measurable by considering health, safety, security and the environment. (CPL-2)
- Able to communicate, write reports and make presentations effectively. (CPL-4)
- Able to apply knowledge of mathematics, natural sciences, the basics of measurement instrumentation, control and security for procedures, processes, systems and technical methodologies applied in an industrial process. (CPL-5)
- Able to demonstrate an understanding of engineering social issues, health, safety, law, culture and responsibilities that are relevant to the practice of implementing instrumentation technology engineering. (CPL-10)

COURSE LEARNING OUTCOME

- Students are able to understand semiconductor materials, their properties and characteristics
- Students are able to understand the characteristics of diodes, so they are able to explain and use diodes correctly
- Students are able to understand and master Transistor applications
- Students are able to understand and master FET and MOSFET applications
- Students are able to understand and master Op – Amp applications.
- Students are able to understand filters.
- Students are able to understand and apply Oscillators
- Students are able to understand and master the Development of Semiconductor Components (IGBT etc.)

MAIN SUBJECT

1. Introduction to Semiconductors
2. Introduction to Diodes
3. Analysis of diodes and their circuits
4. Introduction to Transistors
5. DC Analysis of Transistors + Circuits
6. AC Analysis on Transistors + Circuits
7. Introduction to FETs
8. DC analysis of FET
9. AC analysis on FET
10. Introduction to OP AMP
11. OP AMP circuit
12. Other Semiconductor Component Technology

PREREQUISITES

- Electric Circuits

REFERENCE

Books:

1. Malvino, Albert Paul, 1986, "Prinsip – prinsip Elektronika Jilid 1",Erlangga, Jakarta.
2. Malvino, Albert Paul, 1987, "Prinsip – prinsip Elektronika Jilid 2",Erlangga, Jakarta.