

<b>COURSE</b>	Name	: Electronic Circuits
	Code	: EE184306
	Credits	: 3
	Semester	: III

### Description of Course

The course of Electronic Circuits discusses: Analysis, simulation, design, and application of Semiconductor Diode, Bipolar Junction Transistor, and Field-Effect Transistor circuits; Analysis of frequency response of the transistor circuits; Analysis of Power Amplifier, Differential Amplifier, Feedback & Oscillator, and Power Supply circuits; Analysis, simulate, design, and application of Silicon-Controlled Rectifier, Alternating Current Diode, Triode for Alternating Current, Unijunction Transistor, and Programmable Unijunction Transistor circuits.

### Learning Outcomes

#### KNOWLEDGE

(P02) Mastering the concepts and principles of engineering, and implementing them in the form of procedures for analysis and design in power systems, control systems, multimedia telecommunications, or electronics

#### SPECIFIC SKILL

(KK02) Able to describe the completion of engineering problems in power systems, control systems, multimedia telecommunications, or electronics

#### GENERAL SKILL

(KU01) Able to apply logical, critical, systematic and innovative thinking in the context of development or implementation of science and technology that concerns and implements the value of humanities in accordance with their area of expertise

#### ATTITUDE

(S09) Demonstrating attitude of responsibility on work in his/her field of expertise independently

### Course Learning Outcomes

#### KNOWLEDGE

Mastering the concepts and principles of electronic components for analysis, simulation, design, and application of electronic circuits.

#### SPECIFIC SKILL

Able to describe the analysis, simulation, design, and application of electronic circuits.

#### GENERAL SKILL

Able to apply the analysis, simulation, design, and application of electronic circuits

#### ATTITUDE

Demonstrating attitude of responsibility regarding the analysis, simulation, design, and application of electronic circuits independently.

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### Main Subjects

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1. Semiconductor Diode
2. Bipolar Junction Transistor
3. Field-Effect Transistor
4. The frequency response of the transistor circuits
5. Power Amplifier
6. Differential Amplifier
7. Feedback & Oscillator
8. Power Supply
9. Silicon-Controlled Rectifier, Alternating Current Diode, Triode for Alternating Current, Unijunction Transistor, and Programmable Unijunction Transistor circuits

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### Reference(s)

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- [1] Muhammad Rivai, 2018. Lecture Note: Electronic Circuits
- [2] Robert L Boylestad and Louis Nashelsky, 2012. Electronic Devices and Circuit Theory, Prentice Hall, Inc.

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### Prerequisite(s)

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EW184003 Electrical Circuits (for students of the DEE) or  
SF184202 Physics II (for students of the other Departments)

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