



Sample Brief Course Description

Course title	Electronic Devices
Course code	ECE 242
College	Engineering
Department / Program	Biomedical Engineering
Year/ Level	3/8
Course Type	A. <input type="checkbox"/> University <input type="checkbox"/> College <input checked="" type="checkbox"/> Department <input type="checkbox"/> Others b. <input checked="" type="checkbox"/> Required <input type="checkbox"/> Elective
Credited Hours	6
Contact Hours	(LT: 4, LB: 4, TR: 0)
Pre-requisites (if any)	ECE 212
Co-requisites (if any)	---
Course description	The course provides the students with the ability of applying the electronic components and ICs in the implementation of different communication circuits and Electronics systems. In addition to analyze and design different electronics devices such as diodes, Bipolar Junction Transistor, Field Effect Transistor, different types of amplifiers as well as their frequency response, feedback, and stability. The course will cover the efficiency of power and operational amplifiers and their



	applications as well as the analysis and design of waveform signal generators and oscillators.
Course Main Objectives	<ol style="list-style-type: none">1. Furnish information on the mechanisms of current flow in semi-conductors.2. Understand the basic operation of diode, transistor and their medical applications.3. Provide knowledge about advanced semiconductor devices and their significant practical applications.
Learning Outcomes	Knowledge and Understanding:-- <ol style="list-style-type: none">1. Understand the operation and structure of electronic devices such as diodes and transistors.2. Understand the use of diodes in electronic circuits such as rectifying, clipping, clamping, switching, and regulation circuits.3. Understand the different types of feedback in an amplifier and their uses.
	Skills:--- <ol style="list-style-type: none">1. Design transistor amplifiers, power amplifiers, and oscillators to required specifications.2. Analyze operational amplifier in different electronic applications.3. Evaluate the effects of coupling and bypass capacitors and parasitic capacitances that limit the cutoff frequencies for transistor amplifiers.
	Values:--- <ol style="list-style-type: none">1. Communicate effectively and write lab report.