

Master Syllabus

EET 2201 - Electronic Devices & Circuits

Division: Science, Mathematics and Engineering

Department: Electronics Engineering Technology

Credit Hour Total: 5.0

Lecture Hrs: 4.0 **Lab Hrs:** 3.0

Prerequisite(s): EET 1155

Date Revised: June 2014

Course Description:

Semiconductor properties, diode applications, special-purpose diodes, bipolar junction transistors (BJTs), BJT biasing circuits and stability, BJT amplifier circuits, multistage amplifier design, power amplifiers, field effect transistors (FETs), JFET and MOSFET biasing circuits, FET amplifier circuits, frequency analysis, thyristors and applications, negative and positive feedback concepts, oscillators, Op-Amp circuits and applications, and electronically regulated power supplies. Four classroom, three lab hours per week.

General Education Outcomes:

- ▣ Oral Communication Competency
- ▣ Critical Thinking/Problem Solving Competency
- ▣ Information Literacy Competency
- ▣ Written Communication Competency

Course Outcomes:

Semiconductor devices and linear integrated circuits (ICs) in circuits

Apply knowledge of semiconductor devices and linear ICs to solve engineering problems and to troubleshoot circuits.

Assessment Method: Locally developed exams

Performance Criteria: 70% or better

Technical skills

Apply technical skills in solving problems requiring the use of semiconductor devices and linear integrated circuits (ICs).

Assessment Method: Performance appraisals

Performance Criteria: Score "17.5" or greater on a five by five rubric

Technical environment communication

Communicate through the writing of reports.

Assessment Method: Performance appraisals

Performance Criteria: Score "17.5" or greater on a five by five rubric

Outline:

Diodes and applications Bipolar junction transistors with biasing circuits, stability and amplifiers Multistage and power amplifiers Field effect transistors including JFET and MOSFETs Thyristors and applications Op-Amp circuits and applications Oscillators and electronically regulated power supplies