NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY

EGR 266 – LINEAR ELECTRONICS (3 CR.)

COURSE DESCRIPTION

Presents theory of solid-state materials, electronic devices, and device applications. Lecture 3 hours per week.

GENERAL COURSE PURPOSE

This course will introduce the student to the electronics circuit design with both an overview of the basic concepts that are essential to an understanding of the field and a discussion of the problem solving approaches that have been demonstrated as effective for today's complex setting.

ENTRY LEVEL COMPETENCIES

Competence in calculus through ordinary differential equations, LaPlace Transform, and matrix algebra. Prerequisites are MTH 291 - "Differential Equations" and EGR 251 - "Basic Electric Circuits I".

COURSE OBJECTIVES

The course objective is to provide the student with the fundamental tools of electronic circuit analysis and design:

A. Diodes as voltage -- controlled switches
B. Bipolar junction transistors (BJT)
C. Field effect transistors (FET)
D. AC amplifiers and DC Coupled amplifier mores

Also, the course will convey to the student the concept of negative feedback, distortion, amplifiers performance and linear application of the operational amplifiers.

MAJOR TOPICS TO BE INCLUDED

EXTRA TOPICS (optional)