

## **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)**