

## **EEE4304 - Electronics II**

Three Credits, One hour and fifteen minutes, Engineering Topic.

**Instructor:** Dr. Gustavo Roig.

**Textbook:** Fabrizio Romano, Learn Python Programming, Packt Publishing ISBN-10: 1-788-996666

### **Specific Course Information:**

Second course in electronics with particular emphasis on equivalent circuit representation and analysis of electronic analog circuits and systems, their frequency response and behavior under feedback control.

### **Specific Goals for the Course**

#### **a. Specific outcomes of instruction**

Upon successful completion of this course, the student will:

1. Oscillators
2. Feedback
3. Power Amplifiers
4. DC-DC Converters
5. Thyristors

#### **b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.**

In this course the student will have to show

- (a) an ability to apply knowledge of mathematics, science, and engineering (X)
- (b) an ability to design and conduct experiments (simulations), as well as to analyze, interpret data (N/A)
- (c) an ability to design a system, component, or process to meet desired needs (X)
- (d) an ability to function in multi-disciplinary teams (N/A)
- (e) an ability to identify, formulate, and solve engineering problems (homework) (X)
- (f) an understanding of professional and ethical responsibility (N/A)
- (g) an ability to communicate effectively (through project reports) (N/A)
- (h) the broad education necessary to understand the impact of engineering solutions in a global and societal context (N/A)
- (i) a recognition of the need, and an ability to engage in life-long learning (N/A)
- (j) a knowledge of contemporary issues (N/A)
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice (X)
- (l) a knowledge of probability and statistics (N/A)

### **Brief list of the topics to be covered**

1. Oscillators
2. Feedback
3. Power Amplifiers
4. DC-DC Converters
5. SCR, Triac, applications

6. GTO, PUT, applications

7. Project Presentations

**GRADING:**

Course Requirements	Weight
First Test	40%
Second Test	40%
<u>Project</u>	<u>20%</u>
Overall Grade	100%

**Conversion of Numerical Grade to Letter Grad**

95<=A<=100	83<=B<85	70<=C<74
90<=A-<94	80<=B-<82	60<=D<69
86<=B+<89	75<=C+<79	F: Below 60