

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