

Energy and Power Electronics: Advisor - Dr. A. Domijan

Controls: Advisor - Dr. W. Moreno

1. **Mathematics Requirement** (2 math courses selected from the following list)

POWER Option

EGN-5422 Partial Differential Equations; EGN-5424 Complex Analysis; *EEL-6545 Random Processes

CONTROLS Option

EGN-5422 Partial Differential Equations; EGN-5425 Matric Computations; *EEL-6545 Random Processes

**PR - Mandatory - a previous undergraduate or graduate level statistics course required for EEL 6545*

2. **Major Sequence #1** (A two-course sequence selected from the list of possible sequences for this option. In each sequence the second course requires the first course as a prerequisite)

3. **Major Sequence #2** (A two-course sequence selected from the list of possible sequences for this option. In each sequence the second course requires the first course as a prerequisite)

4. **Course Work Option students must take a “capstone” course (see handbook)**

5. Thesis EEL-6971 (6 Hrs.)

Sequences

Control Theory Emphasis

Sequence #1 EEL-5631 Digital Control Systems
EEL-6613 Modern Control Theory

Sequence #2: EEL - 6XXX Introduction to VHDL
EEL - 6XXX Rapid System Prototyping**
** Class projects must be on Control Based Applications

Sequence #3 EEL 6502 Digital Signal Processing I
EEL 6752 Digital Signal Processing II

Energy and Power Emphasis

Sequence #1 EEL-5250 Electric Power Systems I
EEL-6935 Electric Power Systems II

Sequence #2 EEL-5935 Electric Power Distribution I
EEL-6935 Electric Power Distribution II

Sequence #3 EEL-6486C Electromagnetic Field Theory
EEL-6487C Advanced Electromagnetic Field Theory