**Course Description**  Transfer function; block diagrams; flow graphs; state space canonic forms; stability analysis; steady state and transient analysis; feedback control; continuous to discrete conversion; digital control. Previously listed as EECS 450. **Prerequisite:** Grade of C or better in ECE 310.


**Grade Determination**  Your grade for the course will be determined by your performance in the laboratory, quizzes and exams. Here are the relative weights for each component:

- Laboratory reports: 20%
- Quizzes: 20%
- Two one-hour exams: 30% (15% each)
- One two-hour final exam: 30%

**Laboratory**  Laboratory sessions will meet weekly and the assignments will require the use of Matlab.

**Homework**  Reading and homework will be assigned and the solutions will be posted after the due date. Homework will not be graded but will be the basis for the weekly quizzes.

**Quizzes**  Quizzes will be based on the homework assignments and will be given roughly once a week.

**Topics**  The following chapters from the textbook will be covered.

1. Introduction
2. Mathematical Foundation
3. Block Diagrams and Signal-Flow Graphs
4. Theoretical Foundation and Background Material: Modeling of Dynamic Systems
5. Time-Domain Analysis of Control Systems
6. Root-Locus Analysis
7. Frequency-Domain Analysis
8. State Variable Analysis