Department of Electrical & Computer Engineering
University of Tennessee

**Course Title:** Automatic Control Systems
**Course Code:** ECE 415
**Time:** 11:15am–12:05pm MWF
**Credit Hours:** 4
**Instructor:** Dr. Seddik M. Djouadi
**Office #:** Ferris 307
**Office Hours:** TTH 12:30pm–2:00pm or by Appointment

**Course Content:**
- Appendix B  Review of the Laplace Transform
- Chapter 2 Models of Physical: Sections 2.1 – 2.3, 2.7 – 2.8
- Chapter 4 System Responses: Sections 4.1 – 4.7
- Chapter 5 Control System Characteristics: Sections 5.1 – 5.7
- Chapter 6 Stability Analysis: Sections 6.1 – 6.2
- Chapter 7 Root locus Analysis and Design: Sections 7.1 – 7.7
- Chapter 8 Frequency-Response Analysis: Sections 8.1 – 8.7
- Chapter 9 Frequency-Response Analysis: Sections 9.1 – 9.5 (time permitting)

**Text Book:**


**Course Goals:**
- Understand why automatic control is useful
- Recognize the value of integrated control and process design
- Know key ideas and concepts
  - Dynamics and feedback
- Know relevant mathematical theory
- Be able to solve simple control problems
- Recognize difficult problems
- Be aware of computational tools

**Lab (FH 306) (Tentatively)**
- Section 1: Monday 3:30 –5:30 pm
- Section 2: Wednesday 3:30-5:30 pm
Teaching Assistant
Yanyan Li
407 SERF
yli24@utk.edu

Grading

Homework 15% (No late assignment will be accepted unless you have a legitimate excuse)
Lab. reports 25%
Midterm exam 25%  Friday October 6
Final Exam 35%

Grades

90% ≤ A ≤ 100 %, 85% ≤ B+ < 89 %, 80% ≤ B < 84 %, 75% ≤ C+ < 79 %, 70% ≤ C < 74 %, 60% ≤ D < 69 %, F < 60 %