Instructor: Fethi Belkhouche  
Office: Riverside Hall 5028  
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Phone: 8-7346  
Meeting Time: Tuesday & Thursday 4:30-5:45pm  
Meeting Place: RVR 104  
Office Hours: Monday 09:00-10:00am & Monday 12:00-01:00pm & Friday 11:00-12pm  
Reading:  

Course Description from Catalog  
Analyzes linear systems in the state space. System realization and modeling, solutions of linear systems, stability including the method of Lyapunov, controllability and observability, state feedback and observers for both continuous and discrete time systems. Familiarity with Matlab is required.

Learning Outcomes  
After successfully completing the course, students will be able to:  
- Use mathematical modeling tools to represent linear systems  
- Use mathematical modeling tools to analyze linear systems  
- Communicate effectively in written and oral forms.

Grading Policy  
Student performance in this course is evaluated based on homework, midterm exams, a project, and a final exam, weighted as follows:  
- Homework: 10%  
- Exam 1: 20%  
- Exam 2: 20%  
- Project: 30%  
- Final exam: 20%

Homework  
Homework is to be done individually. However, discussions about the homework between students are allowed and encouraged. Some homework problems require the use of Matlab or other numerical tools. Homework is assigned weekly and due in one week. Late homework will be returned without a grade.

Project  
The completion of a semester-long project is an important part of this course. Students are required to submit a written report and make a presentation at the end of the semester. Students are encouraged to choose their project. Students will work in groups of two to complete the project. Groups of three are allowed for more challenging projects.
EXAMS AND LETTER GRADES

There will be two midterm exams and a final exam. Schedule will be announced in class. The final exam is comprehensive. Make-up exams will not be given except in extraordinary circumstances.

Letter grades ranges are:

- **A**: $A \geq 95$; $90 \leq A- < 95$
- **B**: $87 \leq B+ < 90$; $83 \leq B < 87$; $80 \leq B- < 83$
- **C**: $77 \leq C+ < 80$; $73 \leq C < 77$; $70 \leq C- < 73$
- **D**: $67 \leq D+ < 70$; $63 \leq D < 67$; $60 \leq D- < 63$
- **F**: Below 60