MEEG 311
MIDTERM EXAM IFORMATION
Prof. Poulakakis

Exam Time/Place:
Time: Tuesday, October 30 at 11:00am-12:15 pm (in class)
Room: 319 Willard Hall

Office Hours for this Week:
Poulakakis: Monday October 29 at 12:00-1:30 pm. Room: SPL205
Yadav: Monday October 29 at 3-5pm. Room: SPL131

Topics:
As mentioned in the lecture content slides, the following topics will be examined:
1. Solutions of ordinary differential equations (ODEs)
2. System representation in state space
3. Laplace transformations and transfer functions
4. Linearization
5. Modeling mechanical, electrical, electromechanical & liquid level systems
6. Block diagrams and simplifications
7. Fundamental system properties (linearity, causality and time invariance)
8. Impulse response
9. Test signals (impulses, step and ramp functions)
10. Transient response of first-order systems
11. Transient response of second-order systems and performance specifications
12. Open-loop vs. closed-loop systems and the benefits of feedback
13. Poles and "type" of response (stability)
14. Proportional (P) and proportional-derivative (PD) control design
15. Zeros and "shape" of response

These topics essentially include everything that was covered up to and including this week and in the first eight homework assignments.

Exam Rules:
1. You are allowed to have **open** notes.
2. Bring your own paper to use as a scratch paper.
3. Calculators are allowed, but no cell phones, music devices, laptops etc.
4. If you arrive late you do not get extra time.

Exam Format:
The exam will contain two or three problems. You can write your solution in the space below each problem and you can use extra paper if you need to.

You are required to know and follow the College of Engineering Honor Code.