AeroE/EE/Math/ME 576: Digital Control
http://www.ece.iastate.edu/~rkumar/EE576

Instructor
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Course Description:

- Introduction (Chapter 1)
- Discrete-time System (Chapter 2)
- Sampling and Reconstruction (Chapter 3)
- Open-loop Discrete-time System (Chapter 4)
- Closed-loop Discrete-time Systems (Chapter 5)
- Time-Response (Chapter 6)
- Stability Analysis (Chapter 7)
- Classical Digital Control Design (Chapter 8)
- State Space Design (Chapter 9)
- System Identification (Chapter 10)
- Linear Quadratic Optimal Control (Chapter 11, time permitted)
- Case Studies (Chapter 12, time permitted)

Grading Scheme:

- Home works will be assigned on a weekly basis. They will be due a week later. Prior arrangements must be made for a possible late submission. The TA will grade the home works, so please contact your TA for questions regarding your home work grades.
- There will 2 midterms; the dates will be announced later in the class. Make-up exams will be given only for unanticipated events (medical, emergency travel, etc.); adequate documentation must be provided, and possibly in advance.
- Each student will do a project which will involve selecting a practical discrete-time system and performing its complete analysis (for example as covered in the textbook). A project report describing the system and its analysis will be due on the day of the finals, and each student will make a brief (20-25min) in-class presentation of his/her project. The order of presentation will be the alphabetical ordering of the last names.
- The overall distribution of grades is obtained as:
  
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Home works</td>
<td>25%</td>
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<tr>
<td>Project</td>
<td>25%</td>
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<tr>
<td>Exams</td>
<td>50%</td>
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<tr>
<td>Total</td>
<td>100%</td>
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- Final letter grade will be assigned based on class score distribution, and at least 50% is required to pass the course.
- Disability Statement: If you have a disability and require accommodations, please contact the instructor early in the semester so that your learning needs may be appropriately met. You will need to provide documentation of your disability to the Disability Resources (DR) office, located on the main floor of the Student Services Building, Room 1076, 515-294-7220.