CPE201
Digital Design

By Benjamin Haas

Class 1: Syllabus and Introduction

Syllabus

- Available in Canvas

- Email: bdhaas@unr.edu
- Office hours: T 2:30-4:30pm (by Zoom)

- How I Teach
  - With examples
  - Fast, even though I try to go slow
  - With bad handwriting, ask for clarifications

Syllabus

- Two lectures per week
  - Theory
  - Examples
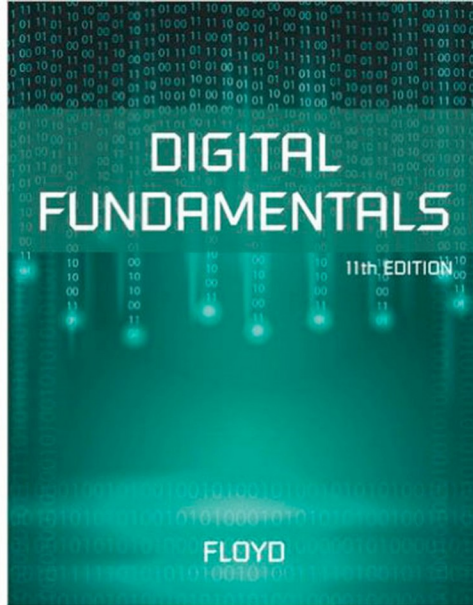- One lab per week
  - Hands-on

Syllabus

- During the Semester
  - Come to class, please
  - Participate
  - Take Notes
  - Ask questions (if you are too shy send an email or come to office hours)

- How You Take Tests
  - During class time
  - On paper
  - Limited materials

Syllabus

- Book: Digital Fundamentals 11th Ed by Floyd

Syllabus

- Grading
  - Homework (20%)
  - Midterms (15% each)
  - Final (20%)
  - Labs (25%)
  - Instructor Meeting (5%)
  - Use +/- grading

Syllabus

- ## Homework
  - 10-ish Assignments
  - Will force you to think, so it will cover ideas that are more complex than the examples from class
  - Homework is due at the beginning of class, homework turned in after the start of class is considered late. Late homework gets 50% of its normal graded value and is accepted up to 24 hours after the due date.
  - It has to be a pdf
  - Put your name and homework number on it
  - Clearly mark the problem and answer all questions completely. Put a box around the final solution. Show your work.
  - Attach any computer work for a problem directly behind the other work for the problem.

- ## Midterms
  - Held on Wednesday February 23rd and Wednesday April 6th. Notify the instructor before the exam takes place to make arrangements for makeup exams, otherwise bring a doctor's note.

Syllabus

- Final
  - Friday May 6th 9:50 to 11:50am
- Labs
  - Report due the Thursday following the lab
  - 65% in this to pass the class
- Instructor Meetings
  - 10 minutes
  - Whatever you want to talk about

Syllabus

- See syllabus for:
  - Student Safety and Equality
  - Statement on Academic Dishonesty
  - Statement of Disability Services
  - Statement on Audio and Visual Recordings
  - Statement for Academic Success Services

Syllabus

Mastery Grading:

To aid you in learning the material more deeply by allowing you to prove that you have taken the time to really understand the material.

- The grading style for homework, midterms, and labs
- You can redo the assignment once to improve the grade
- On the first grading, NO partial credit (incorrect things get a zero)
- Resubmitted work includes a reflection
  - Why you missed the problem
  - The research that you did to solve the problem correctly
  - Revised solution
- The revised submission is also graded for the final grade WITHOUT partial credit
- Submission must reasonable (no blank and shows work) to qualify for resubmission

Syllabus

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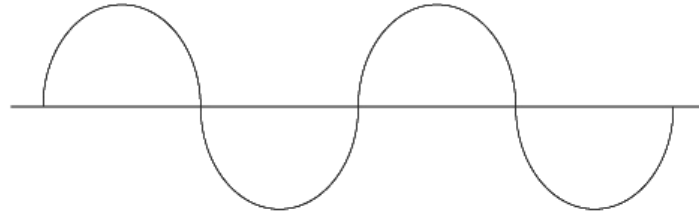**Office**: SEM323
Office Hours: Wednesdays 3-5pm

Introduction

- Digital vs. Analog
- Binary
- Digital Systems vs. Microprocessors
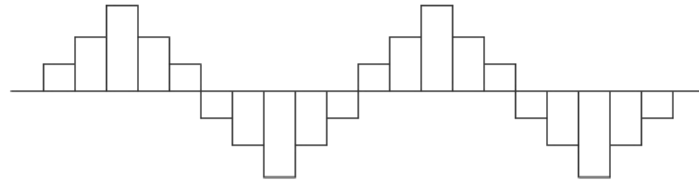- Digital Design Example
- Reading

Introduction

- Digital vs Analog

Introduction

- Binary
  - On/Off switches to represent states/data
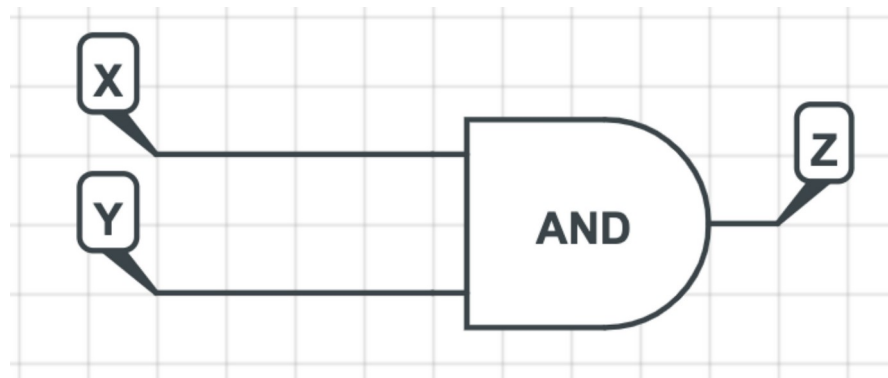 - Also a number system

Introduction

- Digital Systems
  - Custom circuits
    - Gates and iCs
  - Microprocessors (μCs)
    - Programmed

Introduction

- Digital Design Example

```
if (x==1 && y==0) {
    z=1;
}
```

Reading

- This lecture
  - Section 1.1
- Next lecture
  - Sections 2.1-2.3, 2.8-2.9