EE 384 Lab Syllabus

The University of Alabama in Huntsville
ECE Department Course Syllabus
SUMMER 2015 EE 384
Digital Signal Processing (DSP) Laboratory
MW 2:45PM - 4:45PM, EB 109

Course Pre/Co-requisites: - CPE 381 or EE 383 or equivalent.

Lab Instructor: Aditi Singh

Office: 242-F **Email:** as0086@uah.edu

Office Hours: W 1:45PM-2:45PM EB242-F

Course Web Page: http://canvas.uah.edu

Grading:

1. Classworks / Pre-lab Quizzes 60 %
2. Project 25 %
3. Attendance 15 %

Laboratory Information:

1. Use your Charger ID card to enter the lab. Please make sure your card works as soon as possible.

2. **Attendance is very important and is reflected in the grading policy**.

3. I will assign reading regularly. The pre-lab quizzes will reflect material covered in reading assignments. Both pre-lab and class work have a hard deadline. Class work assignments given will be done in MATLAB. All assignments (include figures and codes) must be turned in on time. **No late assignments will be accepted** without prior arrangements unless circumstances arise beyond the student's control.

4. You can come by my office during office hours, which is my preferred method of contact. However, feel free to email me. I check my email regularly.

5. Each student has been allotted **50 pages** of printing in this lab. This is an open lab, which means you can come any time another class is not being held. Please clean up behind yourselves in the lab. **Keep your workstations neat and orderly.**

6. To log into the computers, the default password will be your first initial, last initial, and the last six digits of your A#. The letters are case sensitive (i.e. lower case). The standard user name is the official standard UAH email username.

7. I reserve the right to give an in-class quizzes at any time during this semester that will fairly reflect the current material being covered.

8. I'll update your grade on Canvas as soon as possible, please check it regularly to see if there is any missing grade. I'm going to turn your final grade to the school on **August 3rd 2015**. No change would be made after that.

Topics Covered:

1. Introduction to Digital Signal Processing and MATLAB
2. Discrete time signals and systems
3. Signal Sampling and Reconstruction
4. Discrete Time Fourier Transform, Fast Fourier Transform, and Z Transform
5. FIR Filter and IIR Filter Design
6. Introduction to Digital Image Processing (2-D signal processing)

References:

[1] **MATLAB® Primer* (Required)**
[2] **Signal Processing Toolbox™ User's Guide*(Required)**
[3] James McClellan, Ronald Schafer, and Mark Yoder, **DSP First: A Multimedia Approach** (Optional)
[3] Material from EE 383 (Optional)
[4] Reza Adhami, Peter Meenen, and Dennis Hite; **Fundamental Concepts in Electrical and Computer Engineering with Practical Design Problems** (Optional-textbook of EE 100).
[5] B. Preetham Kumar; **Digital Signal Processing Laboratory** 2nd Edition (Optional)
[6] Vinay Ingle and John Proakis; **Digital Signal Processing using MATLAB®** (Optional)

*You can get a free pdf copy at www.mathworks.com

Disclaimer: The lab instructor reserves the right to amend this syllabus as needed.