**ECE480 Lab Syllabus**

**Fall 2014**

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**SCHEDULE:**

Week of Topic

Sept. 1st Lab I: Digital Color Organ - Power Supply and LED Outputs

Sept. 8th Lab II: Digital Color Organ - Mic Amplifier, Line-Input

Summer, and Low-Pass Filter

Sept 15th Lab III: Digital Color Organ - Code Composer Studio and the MSP430

Sept 22nd Lab IV: Digital Color Organ - Analog-to-Digital Converters,

PWM Output, and Lattice Wave Digital Filters

Sept 29th Demonstration and Final Report

 *Demonstration: Sept.29th – Oct. 3rd by appointment*

 *Final Report: Due Oct. 3rd in class (10:20 in 2250 EB)*

**GRADING:**

Weekly Quizzes 10%

Lab Reports 40%

Demonstration 30%

Final Report 20%

**OVERVIEW:**

There will be a weekly quiz given at the start of each lab, covering both the lab lecture and procedure. Recorded video lectures are available at: <www.youtube.com/user/ECE480Lmsu> The quiz will last no longer than 5 minutes, and you will be given the remaining time to finish the lab. Your lab report will be graded and returned to you at the end of the lab period. Any work not completed during the scheduled lab time can still be graded at the beginning of next week’s lab for half credit. For example, if you finish 60% of the lab during your scheduled lab time, and the remaining 40% by the start of next week’s lab, your total grade will be 80% (60% + 20%).

The demonstration will cover the overall functionality of the digital color organ. You will need to show a low pass and high pass response with both the microphone input and the line input.

The final report will summarize the digital color organ project. Include an introduction, overview of the design (schematics and code), explanation of how the design works, measured lab data, and a conclusion.

**POLICIES:**

Copying of lab data or code will result in immediate failure of the lab.

Safety glasses are required. You will not be allowed to stay in the lab without safety glasses.