

## ECE 381 Microcontrollers – Spring 2017 Schedule

Week	Lecture/Activity	Lab Assignment	In Lab	Submit
1	Overview / C Language Primer	Lab 1 – Introduction		
	General Purpose I/O	Lab 2 – Polling and the LCD	Lab 1 Demo	
2	Interrupts	Lab 3 – Interrupts and Rotary Encoders	Lab 2 Demo	
	PSoC5 Schematic Editor and Modules			Lab 2 Report
3	Lab 4 Overview	Lab 4 – Square Wave Generator	Lab 3 Demo	
	The RS232 Interface and Protocol			Lab 3 Report
4	Lab 5 Overview	Lab 5 – RS232 Interfacing	Lab 4 Demo	
	Class convenes in lab			Lab 4 Report
5	<b>Exam 1</b>			
	Lab 6 Overview	Lab 6 – I2C External RAM	Lab 5 Demo	
6	Class convenes in lab			Lab 5 Report
	USB Basics			
7	Lab 7 Overview	Lab 7 – Thermostat & Stepper Motors	Lab 6 Demo	
	Class convenes in lab			Lab 6 Report
8	PS/2 Keyboard Protocol / Bitbanging			
	Class convenes in lab		Lab 7 Demo	
9	Lab 8 Overview	Lab 8 – PS/2 Keyboard Interface		
	The PSoC5 Analog System			Lab 7 Report
10	Lab 9 Overview	Lab 9 – Wireless Temperature Sensor	Lab 8 Demo	
	SPI Protocol and Interfacing			
11	Lab 10 Overview	Lab 10 – SPI SRAM Interface	Lab 9 Demo	Lab 8 Report
	<b>Exam 2</b>			
12	The Final Project			
	ADCs & DACs	Lab 11 – Data Acquisition System	Lab 10 Demo	Proposal/9 Report
13	Class convenes in lab			
	Final Project Assignment			
14	Class convenes in lab	Begin Work on Final Project	Lab 11 Demo	
	Class convenes in lab			
15	Class convenes in lab			Lab 11 Report
	Class convenes in lab			
Finals			Project Demo	Project Report