

George Mason University
Volgenau School of Engineering
Department of Electrical and Computer Engineering

ECE 447: Single-chip Microcomputers
Lecture Schedule
Spring 2014

Date	Lec	Topic	Reading	HW Due	Lab
M 1/20		Martin Luther King Day			Digital / C Review
W 1/22	1	Introduction			
M 1/27	2	Software development (C / Assembly)	3, 4.1 – 4.2		Lab 0
W 1/29	3	MSP430 Introduction	1, 2	1	
M 2/3	4	MSP430 Architecture and Instructions	5.1 – 5.6		Lab 1 due
W 2/5	5	Software development (C / Assembly)	4.3 – 4.8	2	
M 2/10	6	I/O Interfacing	7.1 – 7.5		Lab 2 due
W 2/12	7	Polling and Interrupts	5.7, 6.5 – 6.7	3	
M 2/17	8	Reset and Interrupts	5.7, 6.5 – 6.7		Lab 3 due
W 2/19	9	Interrupts and Low power	6.8 – 6.10	4	
M 2/24	10	Timer input Capture	8.1 – 8.10		Lab 4 due
W 2/26	11	Timer output Compare	8.1 – 8.10	5	
M 3/3	12	External LCD	7.6 – 7.9		
W 3/5	13	Real-time Clock (RTC)	5.8, 8.11	6	
M 3/10		Spring Break			No lab.
W 3/12				None	
M 3/17	14	Keypad software scanning	7.2 – 7.3		Lab 5 due
W 3/19	15	Keypad hardware scanning	7.2 – 7.3	7	
M 3/24	16	Review			Lab Midterm
W 3/26		Midterm (Lectures 1 – 15)		None	
M 3/31	17	SPI	10.1 – 10.6		
W 4/2	18	I2C	10.7 – 10.11	8	
M 4/7	19	RS232	10.12 – 10.14		Lab 6 due
W 4/9	20	Analog Comparison	9.1	9	
M 4/14	21	Analog-to-Digital Conversion (ADC)	9.2 – 9.7		
W 4/16	22	ADC and Digital-to-Analog Conversion	9.8 – 9.12	10	
M 4/21	23	Advanced Assembly			Lab 7 due
W 4/23	24	Optimization	slau132h	11	
M 4/28	25	MSP430 Variants	11.1 – 11.2		Lab 8 due
W 4/30	26	µcontroller use in Senior Design projects	11.3	12	
M 5/5	27	Review			
M 5/12		Final Exam: 10:30am – 1:15pm			