CS 271 Computer Architecture and Assembly Language
Course Calendar*   Fall 2016

*Weeks are shown Sunday-Sunday, Assignments are due the 2nd Sunday 11:59pm unless otherwise specified. Schedule subject to change based on material pace.

New Assignments are in BLACK.   Due Assignments are in RED.

Unit / Week	Topics

#1: 09/25 – 10/02
 	
Syllabus Quiz
Week 1 Summary Exercises
Program #1
 	
Syllabus Quiz
Week 1 Summary Exercises
	• Introductions
	• Programming languages
	• Virtual machines
	• Computer architectures, processor types, metrics
	• Machine instructions, instruction execution cycle
	• CISC, x86 architectures, Intel IA-32 architecture
	• Introduction to MASM assembly language.
	
	Read Irvine Chapter 1
	      Chapter 2.1, 2.2, 2.3
	      Chapter 3.1, 3.2, 3.3 (pg 71 only), 3.4, 3.5

#2: 10/02 – 10/09 **Week 2 Summary Exercises** **Program #2** **Quiz #1** **Week 2 Summary Exercises** **Program #1** **Quiz #1**	• MASM assembly language: o Constants, variables o Libraries, assembling, linking, loading o Addressing modes o Arithmetic operations o Conditions, decisions, repetition **Re-read** Irvine Chapter 1.3, 1.4 **Read** Irvine Chapter 4.1, 4.2, 4.5 (and 6.3)
#3: 10/09 – 10/16 **Week 3 Summary Exercises** **Week 3 Summary Exercises** **Program #2**	• MASM assembly language: o Modular development o Data validation o Debugging • Internal/external data representation **Read** Irvine Chapter 5.1, 5.2, 5.3, 5.4, 5.6, 5.7

#4: 10/16 – 10/23
 	
Week 4 Summary Exercises
Program #3
 	
Week 4 Summary Exercises
	• Binary arithmetic
	• Floating-point representation
	• Parity, error detection/correction, Hamming codes
	
	Read Irvine Chapter 6.1, 6.2, 6.3,
	     Chapter 7.3
	     Chapter 12.1

#5: 10/23 – 10/30 **Week 5 Summary Exercises** **Program #4** **Quiz #2** **Week 5 Summary Exercises** **Program #3** **Quiz #2**	• MASM procedures: o Calls/returns o Functional decomposition, parameters o Documentation • Introduction to the system stack **Read** Irvine Chapter 4.4 **Read** Irvine Chapter 8.1, 8.2

#6: 10/30 – 11/06
 	
Program #4
	• MASM assembly language:
	    ○ More system stack
	    ○ Parameter passing
	• Review for Midterm Exam
	
	Midterm Exam
	(Available Thursday – Sunday only)

#7: 11/06 – 11/13
 	
Week 7 Summary Exercises
Program #5
 	
Week 7 Summary Exercises
	• MASM assembly language:
	    ○ More parameter passing
	    ○ Random numbers
	    ○ Arrays, array parameters
	
	Read Irvine Chapter 9.5

#8: 11/13 – 11/20
 	
Week 8 Summary Exercises
Program #6
Quiz #3
 	
Week 8 Summary Exercises
Program #5
Quiz #3
	• MASM assembly language:
	    ○ Data-related operators
	    ○ Low-level I/O
	• RPN
	• IA-32 floating-point unit (FPU)
	
	Read Irvine Chapter 9.1, 9.2, 9.4, 9.5
	Re-read Irvine Chapter 12.1

#9: 11/20 – 11/27
 	
Week 9 Summary Exercises
 	
Week 9 Summary Exercises
	• Recursion
	• MASM assembly language:
	    ○ Macros
	    ○ String processing
	• Digital logic level:
	    ○ Gates, circuits, integrated circuits

#10: 11/27 – 12/04 **Week 10 Summary Exercises** **Quiz #4** **Week 10 Summary Exercises** **Program #6 is due** **Quiz #4**	• Parallelism • Advanced architectures • Review for final exam
#11: 12/04 – 12/07 Finals Week	**Final Exam** **(Available Sunday – Wednesday only)**