CS 271   Computer Architecture and Assembly Language
Course Calendar*   Fall 2017

*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: 09/24 – 10/01 **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: 10/01 – 10/08 **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: 10/08 – 10/15 **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: 10/15 – 10/22 **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: 10/22 – 10/29 **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: 10/29 – 11/05 **Program #4**	- MASM assembly language: - More system stack - Parameter passing - Review for Midterm Exam **Midterm Exam (Available Thursday – Sunday only)**
#7: 11/05 – 11/12 **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: 11/12 – 11/19 **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: 11/19 – 11/26 **Week 9 Summary Exercises** **Week 9 Summary Exercises**	- Recursion - MASM assembly language: - Macros - String processing - Digital logic level: - Gates, circuits, integrated circuits
#10: 11/26 – 12/03 **Week 10 Summary Exercises** **Quiz #4** **Week 10 Summary Exercises** **Program #6 is due** **Quiz #4**	- Parallelism - Advanced architectures - Review for final exam
#11: 12/03 – 12/06 Finals Week	**Final Exam (Available Sunday – Wednesday only)**