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

***Assignments are due end-of-week 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
#0: **Program #1** **Week 0 Quiz** **Week 0 Quiz**	• 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
#1: **Week 1 Quiz** **Program #2** **Week 1 Quiz** **Program #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)
#2: **Week 2 Quiz** **Week 2 Quiz** **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
#3: **Week 3 Quiz** **Program #3** **Week 3 Quiz**	• 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
#4: **Week 4 Quiz** **Program #4** **Week 4 Quiz** **Program #3**	• MASM procedures: o Calls/returns o Functional decomposition, parameters o Documentation • MASM assembly language: o The system stack o Parameter passing **Read** Irvine Chapter 4.4 **Read** Irvine Chapter 8.1, 8.2

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

#5: **Midterm Exam** **Program #4** **Midterm Exam**	• Review for Midterm Exam **Midterm Exam** **Thursday in class**
#6: **Week 6 Quiz** **Program #5** **Week 6 Quiz**	• MASM assembly language: o More parameter passing o Random numbers o Arrays, array parameters **Read** Irvine Chapter 9.5
#7: **Week 7 Quiz** **Program #6** **Week 7 Quiz** **Program #5**	• MASM assembly language: o Data-related operators o 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
#8: **Week 8 Quiz** **Week 8 Quiz**	• Recursion • MASM assembly language: o Macros o String processing • Digital logic level: o Gates, circuits, integrated circuits
#9-10: **Week 9-10 Quiz** **Week 9-10 Quiz** **Program #6**	• Parallelism • Advanced architectures • Review for final exam
#11: Finals Week	**Final Exam** **Monday 2:00pm in normal classroom**