CS 271   Computer Architecture and Assembly Language
Course Calendar*   Spring 2020

*Weeks are shown Sunday-Sunday, Assignments are due the 2nd Sunday 11:59pm Pacific Time 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: 03/29 – 04/05 **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 - 2.3 　　　　　Chapter 3.1 - 3.5
#2: 04/05 – 04/12 **Week 2 Summary Exercises** **Program #2** **Quiz #1** **Week 2 Summary Exercises** **Program #1** **Quiz #1**	• MASM assembly language: 　　○ Constants, variables 　　○ Libraries, assembling, linking, loading 　　○ Addressing modes 　　○ Arithmetic operations 　　○ Conditions, decisions, repetition **Re-read** Irvine Chapter 1.3 - 1.4 **Read** Irvine Chapter 4.1, 4.2, 4.5 (and 6.2)
#3: 04/12 – 04/19 **Week 3 Summary Exercises** **Week 3 Summary Exercises** **Program #2**	• MASM assembly language: 　　○ Modular development 　　○ Data validation 　　○ Debugging • Internal/external data representation **Read** Irvine Chapter 5 (5.5 is optional)
#4: 04/19 – 04/26 **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 　　　　　Chapter 7.3 　　　　　Chapter 12.1
#5: 04/26 – 05/03 **Week 5 Summary Exercises** **Program #4** **Quiz #2** **Week 5 Summary Exercises** **Program #3** **Quiz #2**	• MASM procedures: 　　○ Calls/returns 　　○ Functional decomposition, parameters 　　○ Documentation • Introduction to the system stack **Read** Irvine Chapter 4.4 **Read** Irvine Chapter 8.1, 8.2

#6: 05/03 – 05/10
 	
Program #4
	- MASM assembly language:
	  - More system stack
	  - Parameter passing
	- Review for Midterm Exam
	
	**Midterm Exam
	(Available Thursday – Sunday only)**

#7: 05/10 – 05/17
 	
**Week 7 Summary Exercises
Program #5**
 	
Week 7 Summary Exercises
	- MASM assembly language:
	  - More parameter passing
	  - Random numbers
	  - Arrays, array parameters
	
	Read Irvine Chapter 9.1, 9.2, 9.4, 9.5

#8: 05/17 – 05/24
 	
**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 4.3
	Re-read Irvine Chapter 9.5
	Re-read Irvine Chapter 12.1

#9: 05/24 – 05/31
 	
Week 9 Summary Exercises
 	
Week 9 Summary Exercises
	- Recursion
	- MASM assembly language:
	  - Macros
	  - String processing
	- Digital logic level:
	  - Gates, circuits, integrated circuits
	
	Read Irvine Chapter 8.3 (through 8.3.1)
	Read Irvine Chapter 10.2 (through 10.2.4)

#10: 05/31 – 06/07 **Week 10 Summary Exercises Quiz #4** **Week 10 Summary Exercises Program #6 is due Quiz #4**	- Parallelism - Advanced architectures - Review for final exam
#11: 06/07 – 06/10 Finals Week	**Final Exam (Available Sunday – Wednesday only)**