

CS 271 Computer Architecture and Assembly Language Course Calendar* Summer 2018

*NOTE: Weeks are shown Sunday through Sunday. Assignments are due the 2nd Sunday, unless otherwise noted.

*NOTE: Subject to change based on material pace

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

Unit / Week	Topics
<p>#1: 06/24 – 07/01</p> <p>Syllabus Quiz Week 1 Summary Exercises Program #1</p> <p>Syllabus Quiz Week 1 Summary Exercises</p>	<ul style="list-style-type: none"> • 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. <p>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</p>
<p>#2: 07/01 – 07/08</p> <p>Week 2 Summary Exercises Program #2 Quiz #1</p> <p>Week 2 Summary Exercises Program #1 Quiz #1</p>	<ul style="list-style-type: none"> • MASM assembly language: <ul style="list-style-type: none"> ○ Constants, variables ○ Libraries, assembling, linking, loading ○ Addressing modes ○ Arithmetic operations ○ Conditions, decisions, repetition ○ Modular development ○ Data validation & Debugging • Internal/external data representation <p>Re-read Irvine Chapter 1.3, 1.4 Read Irvine Chapter 4.1, 4.2, 4.5 (and 6.3) Chapter 5 (Section 5.5 is optional)</p>
<p>#3: 07/08 – 07/15</p> <p>Week 3 Summary Exercises</p> <p>Week 3 Summary Exercises Program #2</p>	<ul style="list-style-type: none"> • Binary arithmetic • Floating-point representation • Parity • Error detection/correction, • Hamming codes <p>Read Irvine Chapter 6.1, 6.2, 6.3, Chapter 7.3, 12.1</p>
<p>#4: 07/15 – 07/22</p> <p>Week 4 Summary Exercises Program #3 Midterm Exam</p> <p>Week 4 Summary Exercises</p>	<ul style="list-style-type: none"> • MASM procedures: <ul style="list-style-type: none"> ○ Calls/returns ○ Functional decomposition, parameters ○ Documentation • The System Stack & passing parameters <p>Read Irvine Chapter 4.4 Read Irvine Chapter 8.1, 8.2</p> <p style="text-align: center;">Midterm Exam (Available Saturday – Monday only)</p>

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<p>#5: 07/22 – 07/29</p> <p>Week 5 Summary Exercises Program #4</p> <p>Week 5 Summary Exercises Program #3</p>	<ul style="list-style-type: none"> • MASM assembly language: <ul style="list-style-type: none"> ○ Detailed parameter passing ○ More on the system stack ○ Random numbers ○ Arrays ○ Array parameters <p>Read Irvine Chapter 9.5</p>
<p>#6: 07/29 – 08/05</p> <p>Week 6 Summary Exercises Program #5 Quiz #2</p> <p>Week 6 Summary Exercises Program #4 Quiz #2</p>	<ul style="list-style-type: none"> • MASM assembly language: <ul style="list-style-type: none"> ○ Data-related operators ○ <i>n</i>-Dimensional arrays and string processing ○ Low-level I/O • RPN • IA-32 floating-point unit (FPU) <p>Read Irvine Chapter 9.1, 9.2, 9.4, 9.5 Re-read Irvine Chapter 12.1</p>
<p>#7: 08/05 – 08/12</p> <p>Week 7 Summary Exercises</p> <p>Week 7 Summary Exercises Program #5</p>	<ul style="list-style-type: none"> • Recursion • MASM assembly language: <ul style="list-style-type: none"> ○ Macros ○ String processing • Digital logic level: <ul style="list-style-type: none"> ○ Gates, circuits, integrated circuits
<p>#8: 08/12 – 08/19</p> <p>Week 8 Summary Exercises Final Exam</p> <p>Week 8 Summary Exercises</p>	<ul style="list-style-type: none"> • How computers come together • Parallelism • Advanced architectures • Research topics in Computer Architectures • Review for final exam <p style="text-align: center;">Final Exam (Available Thursday – Sunday only)</p>