

CS 271 Computer Architecture and Assembly Language

Course Calendar* Summer 2023

*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.

Module	Topics
#1: 6/25 – 7/02 Syllabus Quiz Module 1 Summary Exercises Project #0 Syllabus Quiz Module 1 Summary Exercises Project #0	• Introduction to Assembly Language • Internal Data Representation • Binary/Hexadecimal Arithmetic • Computer Architecture Fundamentals • IA-32 Basic Execution Environment
#2: 7/02 – 7/09 Module 2 Summary Exercises Project #1 Quiz #1 Module 2 Summary Exercises Quiz #1	• MASM Assembly ◦ Introduction ◦ How Instructions Work ◦ Defining Data (Variables) ◦ Arithmetic Operations • Irvine Procedures and your First Program
#3: 7/09 – 7/16 Module 3 Summary Exercises Project #2 Module 3 Summary Exercises Project #1 Project #2	• MASM Assembly ◦ Conditions and Control Structures ◦ Repetition Structures • Using the Visual Studio Debugger
#4: 7/16 – 7/23 Module 4 Summary Exercises Project #3 Quiz #2 Module 4 Summary Exercises Project #3 Quiz #2	• MASM Assembly ◦ Defining Constants ◦ Data Validation • Endianness • IEEE 754 Floating Point Format

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Module	Topics
#5: 7/23 – 7/30 Module 5 Summary Exercises Project #4 Module 5 Summary Exercises Project #4	• The Runtime Stack • Program Design (Modularization) • MASM Assembly ○ Procedure Calls/Returns ○ Procedure Documentation ○ Passing Parameters to Procedures
#6: 7/30 – 8/06 Module 6 Summary Exercises Project #5 Quiz #3 Module 6 Summary Exercises Quiz #3	• Error Detecting Codes • MASM Assembly ○ More Parameter Passing (Stack) ○ Arrays & Array parameters
#7: 8/06 – 8/13 Module 7 Summary Exercises Project #6 Module 7 Summary Exercises Project #5	• MASM Assembly ○ Data-related operators ○ String Processing ○ Macros • Reverse Polish Notation (RPN) • IA-32 floating-point unit (FPU)
#8: 8/13 – 8/18 Module 8 Summary Exercises Quiz #4 Module 8 Summary Exercises Project #6 Quiz #4	• CISC vs. RISC Architectures • Parallelism NOTE THAT THE DUE DATE FOR PROJECT #6 IS ACTUALLY FRIDAY!!!