CS 271 Computer Architecture and Assembly Language
Course Calendar* Winter 2022

***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: 01/02 – 01/09 **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: 01/09 – 01/16
 	
Module 2 Summary Exercises
Project #1
 	
Module 2 Summary Exercises
	• MASM Assembly
	  ○ Introduction
	  ○ How Instructions Work
	  ○ Defining Data (Variables)
	  ○ Arithmetic Operations
	• Irvine Procedures and your First Program

#3: 01/16 – 01/23
 	
Module 3 Summary Exercises
Project #2
 	
Module 3 Summary Exercises
Project #1
	• MASM Assembly
	  ○ Conditions and Control Structures
	  ○ Repetition Structures
	• Using the Visual Studio Debugger

#4: 01/23 – 01/30
 	
Module 4 Summary Exercises
Project #3
Quiz #1
 	
Module 4 Summary Exercises
Project #2
Quiz #1
	• MASM Assembly
	  ○ Defining Constants
	  ○ Data Validation
	• Endianness
	• IEEE 754 Floating Point Format

#5: 01/30 – 02/06
 	
Module 5 Summary Exercises
 	
Module 5 Summary Exercises
Project #3
	• The Runtime Stack
	• Program Design (Modularization)
	• MASM Assembly
	  ○ Procedure Calls/Returns
	  ○ Procedure Documentation
	  ○ Passing Parameters to Procedures

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Module	Topics
#6: 02/06 – 02/13 **Module 6 Summary Exercises** **Project #4** **Midterm Exam** **Module 6 Summary Exercises** **Midterm Exam**	• Error Detecting Codes • Review for Midterm Exam **Midterm Exam** **(Available Thursday – Sunday only)**

#7: 02/13 – 02/20
 	
Module 7 Summary Exercises
Project #5
 	
Module 7 Summary Exercises
Project #4
	• MASM Assembly
	  ○ More Parameter Passing (Stack)
	  ○ Arrays & Array parameters

#8: 02/20 – 02/27
 	
Module 8 Summary Exercises
 	
Module 8 Summary Exercises
Project #5
	• MASM Assembly
	  ○ Data-related operators
	  ○ String Processing
	  ○ Macros

#9: 02/27 – 03/06 **Module 9 Summary Exercises** **Project #6** **Quiz #2** **Module 9 Summary Exercises** **Quiz #2**	• Reverse Polish Notation (RPN) • IA-32 floating-point unit (FPU)
#10: 03/06 – 03/13 **Module 10 Summary Exercises** **Module 10 Summary Exercises** **Project #6**	• CISC vs. RISC Architectures • Parallelism • Review for final exam
#11: 03/13 – 03/16 Finals Week	**Final Exam** **(Available Sunday – Wednesday only)**