CS 271  Computer Architecture and Assembly Language  
Course Calendar*  Fall 2021

*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.

<table>
<thead>
<tr>
<th>Module</th>
<th>Topics</th>
</tr>
</thead>
</table>
| #1: 09/22 – 10/03 | • Introduction to Assembly Language  
• Internal Data Representation  
• Binary/Hexadecimal Arithmetic  
• Computer Architecture Fundamentals  
• IA-32 Basic Execution Environment |
| Syllabus Quiz  
Module 1 Summary Exercises  
Project #0 | |
| #2: 10/03 – 10/10 | • MASM Assembly  
  o Introduction  
  o How Instructions Work  
  o Defining Data (Variables)  
  o Arithmetic Operations  
  • Irvine Procedures and your First Program |
| Module 2 Summary Exercises  
Project #1 | |
| #3: 10/10 – 10/17 | • MASM Assembly  
  o Conditions and Control Structures  
  o Repetition Structures  
  • Using the Visual Studio Debugger |
| Module 3 Summary Exercises  
Project #2  
Project #1 | |
| #4: 10/17 – 10/24 | • MASM Assembly  
  o Defining Constants  
  o Data Validation  
  • Endianness  
  • IEEE 754 Floating Point Format |
| Module 4 Summary Exercises  
Project #3  
Quiz #1  
Project #2  
Quiz #1 | |
| #5: 10/24 – 10/31 | • The Runtime Stack  
• Program Design (Modularization)  
• MASM Assembly  
  o Procedure Calls/Returns  
  o Procedure Documentation  
  o Passing Parameters to Procedures |
| Module 5 Summary Exercises  
Module 5 Summary Exercises  
Project #3 | |
<table>
<thead>
<tr>
<th>Module</th>
<th>Topics</th>
</tr>
</thead>
</table>
| #6: 10/31 – 11/07 | • Error Detecting Codes  
• Review for Midterm Exam |
| **Module 6 Summary Exercises**  
**Project #4**  
**Midterm Exam** | **Midterm Exam**  
*(Available Thursday – Sunday only)* |
| #7: 11/07 – 11/14 | • MASM Assembly  
• More Parameter Passing (Stack)  
• Arrays & Array parameters |
| **Module 7 Summary Exercises**  
**Project #5** | **Module 7 Summary Exercises**  
**Project #4** |
| #8: 11/14 – 11/21 | • MASM Assembly  
• Data-related operators  
• String Processing  
• Macros |
| **Module 8 Summary Exercises**  
**Project #5** | **Module 8 Summary Exercises**  
**Project #5**  
**Quiz #2** |
| #9: 11/21 – 11/28 | • Reverse Polish Notation (RPN)  
• IA-32 floating-point unit (FPU) |
| **Module 9 Summary Exercises**  
**Project #6**  
**Quiz #2** | **Module 9 Summary Exercises**  
**Project #6**  
**Quiz #2** |
| #10: 11/28 – 12/05 | • CISC vs. RISC Architectures  
• Parallelism  
• Review for final exam |
| **Module 10 Summary Exercises**  
**Project #6** | **Final Exam**  
*(Available Sunday – Wednesday only)* |
| #11: 12/05 – 12/08  
**Finals Week** |