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

<table>
<thead>
<tr>
<th>Module</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1: 04/02 – 04/09</td>
<td></td>
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</tbody>
</table>
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: 04/09 – 04/16 |  
Module 2 Summary Exercises  
Project #1  
Module 2 Summary Exercises  
• MASM Assembly  
  o Introduction  
  o How Instructions Work  
  o Defining Data (Variables)  
  o Arithmetic Operations  
  • Irvine Procedures and your First Program |
| #3: 04/16 – 04/23 |  
Module 3 Summary Exercises  
Project #2  
Module 3 Summary Exercises  
Project #1  
• MASM Assembly  
  o Conditions and Control Structures  
  o Repetition Structures  
  • Using the Visual Studio Debugger |
| #4: 04/23 – 04/30 |  
Module 4 Summary Exercises  
Project #3  
Quiz #1  
Module 4 Summary Exercises  
Project #2  
Quiz #1  
• MASM Assembly  
  o Defining Constants  
  o Data Validation  
  • Endianness  
  • IEEE 754 Floating Point Format |
| #5: 04/30 – 05/07 |  
Module 5 Summary Exercises  
Module 5 Summary Exercises  
Project #3  
• The Runtime Stack  
• Program Design (Modularization)  
• MASM Assembly  
  o Procedure Calls/Returns  
  o Procedure Documentation  
  o Passing Parameters to Procedures |
### Course Calendar*  Spring 2023

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<thead>
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</tr>
</thead>
</table>
| #6: 05/07 – 05/14 | • Error Detecting Codes  
• Review for Midterm Exam |
| Module 6 Summary Exercises  
Project #4  
Midterm Exam  
Module 6 Summary Exercises  
Midterm Exam | |
| #7: 05/14 – 05/21 | • MASM Assembly  
○ More Parameter Passing (Stack)  
○ Arrays & Array parameters |
| Module 7 Summary Exercises  
Project #5  
Module 7 Summary Exercises  
Project #4 | |
| #8: 05/21 – 05/28 | • MASM Assembly  
○ Data-related operators  
○ String Processing  
○ Macros |
| Module 8 Summary Exercises  
Module 8 Summary Exercises  
Project #5 | |
| #9: 05/28 – 06/04 | • Reverse Polish Notation (RPN)  
• IA-32 floating-point unit (FPU) |
| Module 9 Summary Exercises  
Project #6  
Quiz #2  
Module 9 Summary Exercises  
Quiz #2 | |
| #10: 06/04 – 06/11 | • CISC vs. RISC Architectures  
• Parallelism  
• Review for final exam |
| Module 10 Summary Exercises  
Module 10 Summary Exercises  
Project #6 | |
| #11: 06/11 – 06/14 | **Final Exam**  
(Available Sunday – Wednesday only)  
Finals Week |