

# COMP 3050 Computer Architecture

## Spring 2022 Class Schedule

|           |   |  |
|-----------|---|--|
| Jan<br>18 | T | ch 2, Integer Representation, Floating Point Representation<br><a href="https://www.cs.uml.edu/~bill/cs305/First_class_slides.pdf">https://www.cs.uml.edu/~bill/cs305/First_class_slides.pdf</a><br><a href="https://www.cs.uml.edu/~bill/cs305/First_class_examples.pdf">https://www.cs.uml.edu/~bill/cs305/First_class_examples.pdf</a><br>review on-line floating point slides at<br><a href="https://www.cs.uml.edu/~bill/cs305/Floating_Point.pdf">https://www.cs.uml.edu/~bill/cs305/Floating_Point.pdf</a> ,read ch2.4 to end<br>ch 2, <b>Assign #1 handed out</b> , <b>read Assign #1</b><br><a href="https://www.cs.uml.edu/~bill/cs305/Assignment_1.pdf">https://www.cs.uml.edu/~bill/cs305/Assignment_1.pdf</a> |
| 20        | R | on-line floating point slides, review Assign #1, complete ch 2, read Mic1 handout  |
| 25        | T | Mic1 Machine Architecture, read Mic1 handout and examples<br><a href="https://www.cs.uml.edu/~bill/cs305/Mic1_details.pdf">https://www.cs.uml.edu/~bill/cs305/Mic1_details.pdf</a><br><b>Assign #2 handed out, read Assign #2</b>  |
| 27        | R | Mic1 Assembly Level Programming, review Assign #2, Mic1 Microcode Instruction Architecture and examples<br><a href="https://www.cs.uml.edu/~bill/cs305/Mic1_help_architecture.pdf">https://www.cs.uml.edu/~bill/cs305/Mic1_help_architecture.pdf</a><br><a href="https://www.cs.uml.edu/~bill/cs305/Mic1_Help_basics.pdf">https://www.cs.uml.edu/~bill/cs305/Mic1_Help_basics.pdf</a>  |
| Feb<br>1  | T | <del>Assign #1 due</del> , Mic1 Microcode Instruction Implementation, Using the mcc Tool<br><a href="https://www.cs.uml.edu/~bill/cs305/adder_example.pdf">https://www.cs.uml.edu/~bill/cs305/adder_example.pdf</a><br><a href="https://www.cs.uml.edu/~bill/cs305/Microcode_parsing.pdf">https://www.cs.uml.edu/~bill/cs305/Microcode_parsing.pdf</a>   |
| 3         | R | <b>Assign #1 due, Assign #2 due, Assign #3 posted, read Assign #3,</b><br><a href="https://www.cs.uml.edu/~bill/cs305/rfib.c">https://www.cs.uml.edu/~bill/cs305/rfib.c</a>  |
| 8         | T | Mic1 Adding New Microcode Instructions, examples, review Assign #3<br><a href="https://www.cs.uml.edu/~bill/cs305/promfile_simple.mc">https://www.cs.uml.edu/~bill/cs305/promfile_simple.mc</a>  |
| 10        | R | Mic1 Implementing new machine level instructions and updating assembler support<br><a href="https://www.cs.uml.edu/~bill/cs305/promfile_nand_rshift.pdf">https://www.cs.uml.edu/~bill/cs305/promfile_nand_rshift.pdf</a>   |
| 15        | T | <b>Assign #3 due, Mic1 Integrating all the pieces, Assign #4 handed out, read Assign #4, assignment #1 submission cutoff at midnight (11:59:59) tonight.</b><br><a href="https://www.cs.uml.edu/~bill/cs305/Assignment_4_help_dir/mic1symasm_nand_rshift.c">https://www.cs.uml.edu/~bill/cs305/Assignment_4_help_dir/mic1symasm_nand_rshift.c</a><br><a href="https://www.cs.uml.edu/~bill/cs305/Assignment_4_help_dir/mic1symasm_nand_rshift.ll">https://www.cs.uml.edu/~bill/cs305/Assignment_4_help_dir/mic1symasm_nand_rshift.ll</a><br><a href="https://www.cs.uml.edu/~bill/cs305/Assignment_4_help_dir/Makefile_nand_rshift">https://www.cs.uml.edu/~bill/cs305/Assignment_4_help_dir/Makefile_nand_rshift</a>      |

- 17 R Mic1 Assign #4 review, Review for exam #1, ch 2 and Mic1 material,  
[https://www.cs.uml.edu/~bill/cs305/Exam1\\_Help.pdf](https://www.cs.uml.edu/~bill/cs305/Exam1_Help.pdf)
- 22 T **\*\*\*\*\* Monday Schedule, NO CLASS \*\*\*\*\***
- 24 R Review for exam #1 (cont'd), ch 2 and Mic1 material, read ch 6 through 6.1, **assignment #2 submission cutoff at midnight (11:59:59) tonight.**  
[https://www.cs.uml.edu/~bill/cs305/ch6\\_memory\\_hierarchy.pdf](https://www.cs.uml.edu/~bill/cs305/ch6_memory_hierarchy.pdf)
- Mar**
- 1 T Review and prepare for exam #1.
- 3 R **EXAM #1 on ch 2 and Mic1 material to date**, locality and the memory hierarchy, read ch6.2 – 6.3
- 6 – 13 **\*\*\*\*\* Spring Break, NO CLASS \*\*\*\*\***
- 15 T ch 6, Cache Memory, read ch6.4 – 6.4.3, Mic1 UART, **Assign #5 handed out, read Assign #5**  
[https://www.cs.uml.edu/~bill/cs305/ch6\\_cache\\_memories.pdf](https://www.cs.uml.edu/~bill/cs305/ch6_cache_memories.pdf)
- 17 R Review exam # 1, assignment #5 discussed, Mic-1 UART organization and serial port programming and assignment #5 IO, read ch 6 Cache Organizations, read ch6.4.4 – 6.4.7, **assignment #3 submission cutoff at midnight (11:59:59) tonight.**  
[https://www.cs.uml.edu/~bill/cs305/Mic1\\_help\\_IO.pdf](https://www.cs.uml.edu/~bill/cs305/Mic1_help_IO.pdf)  
[https://www.cs.uml.edu/~bill/cs305/IO\\_str\\_and\\_echo.asm](https://www.cs.uml.edu/~bill/cs305/IO_str_and_echo.asm)
- 22 T **Assign #4 due**, Memory hierarchy and Cache organizations, review ch 6, read ch6.5 – 6.7  
[http://www.cs.uml.edu/~bill/cs305/IO\\_str\\_and\\_scan\\_number.asm](http://www.cs.uml.edu/~bill/cs305/IO_str_and_scan_number.asm)  
[http://www.cs.uml.edu/~bill/cs305/IO\\_scan\\_two\\_numbers\\_asm.txt](http://www.cs.uml.edu/~bill/cs305/IO_scan_two_numbers_asm.txt)
- 24 R Finish ch 6 and cache models, cache examples, read ch 7 on Linkers, 7.1 – 7.5
- 29 T Introduction to linkers, ch 7 Symbol Tables, read ch7.6, **Assign #6 handed out**
- 31 R **Assign #5 due**, Linkers, assignment #6 discussed, ch 7 Relocation, read 7.7  
[https://www.cs.uml.edu/~bill/cs305/ch7\\_linker\\_slides.pdf](https://www.cs.uml.edu/~bill/cs305/ch7_linker_slides.pdf)
- Apr**
- 5 T assignment #6 code examples , ch 7 Executables, read ch 7.8 - 7.10, **assignment #4 submission cutoff at midnight (11:59:59) tonight.**  
[https://www.cs.uml.edu/~bill/cs305/Linker\\_example.pdf](https://www.cs.uml.edu/~bill/cs305/Linker_example.pdf)

- 7 R Dynamic Linking, ch 7 Shared Libraries, read 7.11, Review for exam #2, see exam 2 help file on-line  
[https://www.cs.uml.edu/~bill/cs305/Assignment\\_6\\_help\\_dir/](https://www.cs.uml.edu/~bill/cs305/Assignment_6_help_dir/)  
[https://www.cs.uml.edu/~bill/cs305/Assignment\\_6\\_help\\_dir/example\\_linker\\_use.txt](https://www.cs.uml.edu/~bill/cs305/Assignment_6_help_dir/example_linker_use.txt)
- 12 T Exceptional Control Flow, read ch8 – 8.1  
[https://www.cs.uml.edu/~bill/cs305/ch8\\_exceptional\\_flow\\_slides.pdf](https://www.cs.uml.edu/~bill/cs305/ch8_exceptional_flow_slides.pdf)  
[https://www.cs.uml.edu/~bill/cs305/ch8\\_processes\\_threads\\_slides.pdf](https://www.cs.uml.edu/~bill/cs305/ch8_processes_threads_slides.pdf)
- 14 R EXAM #2 on ch 6 and 7, and Mic1 IO, Exceptional Control Flow, read ch 8.2 -8.3, Assign #7 handed out, assignment #5 submission cutoff at midnight (11:59:59) tonight.**
- 19 T Assign #6 due**, review exam #2, Exceptions and Processes, assignment #7 details and examples, ch 8 Processes and Threads, read ch 8.4 – 8.5
- 21 R Process Attributes and Control, Finish Processes, finish ch 8
- 26 T Review ch 8 and prepare for final
- 28 R Review ch 8 and prepare for final. Assign #7 due, Last class day ... Last chance to submit assignment #6 and/or #7 ... assignment submit queues closed at midnight (11:59:59 PM) tonight, April 28**

**FINAL EXAM DATE – Thursday, May 5, 11:30 AM – 2:30 PM, FAL 309 (our regular class room) – ch 2, 6, 7, 8 and Assign #1 through Assign #7**