COMP 3410: Computer Organization & Assembly Language - Spring 2016
Prof. Marko Puljic

Contact Information:
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Office Hours: Dunn Hall 305
- M 3:00pm – 5:15pm
- T 8:15am – 9:15am
- W 3:00pm – 5:15pm
- R 8:15am – 9:15am
- And by appointment. Send email to schedule.

Course Description:
Computer Organization and Assembly Language. Basic concepts in assembly language programming, including logic, comparing and branching, interrupts, macros, procedures, arrays, program design, testing, debugging, loading, and linking; combinational, arithmetic and logical circuits in ALU; memory circuits, latches, flip-flops, registers; computer structure; fetch-execute cycles, clocks and timing; microprogramming and microarchitecture; data path, timing, sequencing; cache memory organization; RISC architectures. Prerequisite: COMP 2150.

This course is designed to familiarize students with Computer Organization and Assembly Language. It will present major concepts and techniques for computer organization. It will expose students to the inner workings of a computer, to its basic elements and how those are designed and interact with each other. This course is required for the B.S. degree.

Learning Outcomes:
- An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
- Recognition of the need for and an ability to engage in continuing professional development

Resources:
Required textbooks
Principles of Computer Organization and Assembly Language Patrick Juola

Evaluation:
Pre-midterm exam: 17.5%
Midterm: 27.5%,
Pre-final exam: 17.5%
Final Exam: 37.5%
Grading Scale (% of the best student score):
A: 90 and above, B: 80 to 89, C: 70 to 79, D: 60 to 69, F: < 60.

Course Topics:
1 Computation and Representation
2 Arithmetic Expressions
3 Assembly Language Programming in jasmin
4 Control Structures
5 General Architecture Issues: Real Computers
6 The Intel 8088
7 The PowerPC
8 The Intel Pentium
9 Microcontrollers: The Atmel AVR
10 Advanced Programming Topics on the JVM
A Digital Logic

Course Policies:
Cell-phones are not to be utilized during class. This includes making or receiving calls and text-messaging.

Testing Policy
There will NOT be any makeup exams unless there is a documented emergency, so it is very important for you to attend every lecture and exam.

Plagiarism/Cheating Policy:
Plagiarism or cheating behavior in any form is unethical and detrimental to proper education and will not be tolerated. All work submitted by a student is expected to be a student's own work. The plagiarism is incurred when any part of anybody else's work is passed as your own (no proper credit is listed to the sources in your own work) so the reader is led to believe it is therefore your own effort.

For further information on U of M code of student conduct and academic discipline procedures, please refer to:
http://libguides.memphis.edu/academicintegrity

Disability Notice:
Any student who anticipates physical or academic barriers based on the impact of a disability is encouraged to speak with me privately. Students with disabilities should also contact Disability Resources for Students (DRS) at 110 Wilder Tower (901-678-2880).