CS 315
Introduction to Computer Organization and Assembly Language Programming
Fall 2016

Instructor

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Office Hours: M & W 10-11 & 3:20 until ? or by Appointment.

TA's

All TAs have their office hours in EMS E280 at the times listed or by appointment

Akshay Khanna 801 & 802 khannaa@uwme.edu
Office hours: T & W 11-12
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Office hours: R 1-2
Seyedamirhossein Hesamian 804 &805 hesamian@uwm.edu
Office hours M & W 12-1

Required materials

MIPS Assembly Language Programming by Robert L. Britton, Pearson Prentice Hall

Recommended materials

A Programmer's View of Computer Architecture by J. Goodman & K. Miller, Oxford University Press

Grading

- Exam -- 1: 20%
- Exam -- 2: 20%
- Final Exam: 20%
- Homework : 20%
- Programs/Labs : 20%

Letter Grades will be assigned on a curve for the class.
The final exam will be Friday, December 16, 2016 10-12 AM IAW the UWM final exam schedule.

Outline

- The MIPS Architecture

- Algorithm Development in Pseudocode (Basic Syntax of Assembly Language)
- Number Systems/ Data Representation (Binary Operations)
- PC Spim, Spim and QtSpim
- Efficient Algorithm Development (Logical Operators & Function Calls)
- Function Calls Using the Stack (Stack Operations & Dynamic Memory Operations)
- Floating Point Instructions (Moving information between Processors in the CPU)
- Reentrant Functions
- Memory-Mapped I/O
- Exceptions and Interrupts
- Pipeline Implementation

Academic Misconduct: It is hoped students discuss subject matter amongst themselves, but there should be **no collaborating on assignments**. A more detailed description of Student Academic Disciplinary Procedures may be found in Regents Policy Statements, UWS Chapter 14 and UWM Faculty Document #1686.

Late Policy: There is none: assignments must be turned in when they are due. Exceptions will only be made in case of documented evidence of medical emergency, etc. Otherwise, late assignments score zero points.

Accommodation for Religious Observances: Students will be allowed to complete examinations or other requirements that are missed because of religious observance with advance coordination with the class instructor. http://www4.uwm.edu/secu/docs/other/S1.5.htm

Participation by Students with Disabilities: If you need special accommodations in order to meet any of the requirements of this course, please contact the instructor as soon as possible. http://www4.uwm.edu/arc

Military Service Conflicts: If you have conflicts due to Military Orders (Active or Reserve) to meet any the requirements of this course, please contact the instructor as soon as possible.

Complaint Procedures: Students may direct complaints to the instructor or the chairman of the Computer Science Program. If the complaint allegedly violates a specific university policy, it may be directed to the chairman of the Computer Science Program or to the appropriate university office responsible for enforcing the policy.

Discriminatory conduct (such as Sexual Harassment): Discriminatory conduct will not be tolerated by the University, the Computer Science Program or by the Instructor. It subverts the mission of the University and threatens the careers, educational experience, and well being of students, faculty, and staff. The University at all levels will not tolerate behavior

between or among members of the University community which creates an unacceptable working environment.

Grade Appeal Procedures: A student may appeal a grade on the grounds that it is based on a capricious or arbitrary decision of the instructor. Such an appeal shall follow the procedures adopted by the College of Engineering and Applied Science (CEAS). These procedures are available in writing from the chairman of the Computer Science Program or the Dean of CEAS.