

Syllabus Fall 2022

Course: CSCE 212
Instructor: William Hoskins
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Office Number: Innovation Center Office 2221
Office Hours: Via Zoom, by appointment

Computer architecture, components. and organization; memory addressing; Input/Output; instruction sets; interrupts; assembly-language programming.

Prerequisites: CSCE 211 and either 145 or 206

Course Objectives:

- Describe the microstructure of a processor
- Describe how conventional machine instructions operate in conjunction with the components of a computer
- Demonstrate the ability to program a microprocessor in assembly language and C
- Evaluate the performance of computers

Recommended Text:

- David A. Patterson and John L. Hennessy. 2013. Computer Organization and Design, Fifth Edition: The Hardware/Software Interface (5th. ed.). Morgan Kaufmann Publishers Inc., San Francisco, CA, USA. ISBN 978-0-12-407726-3

Required Software:

- All required software will be provided by the instructor via web-app
- Only download needed is MARS (<http://courses.missouristate.edu/kenvollmar/mars/>)

Grading:

- Quizzes: 5 quizzes, 20%
 - Quizzes will be graded as follows:
 - 50% submission based
 - 50% correctness based
 - By submitting the quiz, you automatically get a 50%, the other 50% comes from correctness of the submission
- Homeworks: 6 Homeworks, 1 extra credit HW, 50%
 - Each homework will assess understanding of programming concepts learned in class
 - 2 C Homework, 2 MIPS Homework, and 2 GBA Homework, with an extra credit GBA homework that will replace your lowest homework grade

- The C homework will give tangible examples to concepts like bitwise logical operations and threading
 - The MIPS homework will test the understanding of assembly languages and concepts such as leaf functions, loops, and memory management
- Final: 30%
- Standard grading scale will be used:
 - [90-100] = A [87-89] = B+ [80-86] = B [77-79] = C+ [70-76] = C [67-69] = D+ [60-66] = D [0-59] = F

Office Hours:

- I will be available via email and can schedule video office hours

Request for Accommodations:

The University of South Carolina is committed to providing access to programs and services for qualified students with disabilities. If you are a student with a disability and require accommodation to participate and complete requirements for this class, notify me immediately and contact the Office of Student Disability Services (<http://www.sa.sc.edu/sds>, 1523 Greene Street, LeConte College Room 112A, 803-777-6142, sasds@mailbox.sc.edu) for verification of eligibility and determination of specific accommodations. In addition, please provide me the required accommodation letter from the Office of Student Disability Services. *All course materials are available in alternative format upon request.*

Academic Integrity:

The faculty takes violations of the University Honor Code (<http://www.sc.edu/policies/ppm/staf625.pdf>) seriously. Students are encouraged to review the Honor Code and to understand the consequences of any action that is proven to be a violation of the code.

You are expected to practice the highest possible standards of academic integrity. Any deviation from this expectation will result in a minimum academic penalty of your failing the assignment. In addition, an honor code violation will be subject to the sanctions described in the USC Community Handbook and Policy Guide. Violations of the University Honor Code include, but are not limited to, improper citation of sources, using another student's work, and any other form of academic misrepresentation. For more information, please see the University Honor Code.

In reference to this course, students are expected to do their own work when assignments require individual work. For example, students may not copy the work of others, either manually or electronically, under these conditions.

Further, students who allow their work to be copied by others risk violation of the University Honor Code. All violations of the University Honor Code or this Academic Integrity Statement will be reported to the Office of Student Conduct and Academic Integrity.

The following paragraph, written by Professor Duncan Buell, clarifies the distinction between "learning from a discussion" and "turning in someone else's work": If, after having participated in a group activity, you can walk away, put the books down, have lunch, and then come back afterwards to re-create from your own head the material and techniques you discussed as a group, then you can legitimately say that you have learned from the group but the work you turn in is your own.