COURSE OUTLINECOURSE SYLLABUS

Fall 2024
Computer Architecture
COSC 3345.001
M-W 2:30-3:55 PM
Room# COB 207

Instructor: Arun Kulkarni, Ph.D. Professor of Computer Science
Office: COB 315.07
Office Hours: T-R 11:30-1:30 PM
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Course Description: The course focuses on the function and design of various components necessary to process information digitally. Topics include: Digital logic and digital systems, machine level representation of data, assembly level machine organization, memory system and organization, multiprocessing, and alternative architectures.

Textbook: Linda Null and Julia Lobur (2015). *Computer Organization and Architecture.* (Fourth Edition) Jones and Bartlett, Sudbury, MA.

Topics and tentative time allotment are shown below.

	Topic	Hours
1	Introduction to Digital Concepts	3
2	Number Systems	1
3	Boolean Algebra and Digital logic	6
4	Combinational Logic circuits	3
5	Flip-flops, registers, counters, and state machines	9
6	MARIE a simple computer, Programming in Assembly Language	12
7	Memory	3
9	Alternative Architectures	3

		Evaluation
Test 1	Wednesday, October 2, 2024	70 %
Test 2	Wednesday, November 13, 2024	
Final	Wednesday, December 11, 2024	
Class Participation		5 %
Assignments		25%

Academic Dishonesty: You are expected to do your own work. You may assist each other with general concepts, but direct assistance with an assignment or any attempts to gain an unfair academic advantage will not be tolerated. Cheating is considered a serious academic offense both by the department and the University. It may result in a failing grade from this course for all parties involved. The instructor reserves the right to ask you to explain any assignment that you turn in to judge if the work is yours.

Usage of AI tools: I expect all the work students submit for this course to be their own. I have carefully designed all assignments and class activities to support your learning. Doing your own work, without human or artificial intelligence assistance, is best for your efforts in mastering course learning objectives. For this course, I expressly forbid using ChatGPT or any other artificial intelligence (AI) tools for any stages of the work process, including brainstorming. Deviations from these guidelines will be considered a violation of UT Tyler's Honor Code and academic honesty values.

Disabilities: If you have a disability, including a learning disability, for which you request an accommodation, please contact the Student Services Center located in the University Center, Room 282. The telephone number is 566-7079 (TDD 565-5579) so that the appropriate arrangements may be made.