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## COURSE OUTLINE COURSE SYLLABUS

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**Fall 2021**

**Computer Architecture**

**COSC 3345.001**

**M-W 2:30-3:55 PM**

**Room# TBD**

**Instructor:** Arun Kulkarni, Ph.D. Professor of Computer Science

**Office:** COB 315.07

**Office Hours:** T-R 11:30-1:30 PM

**Email:** [akulkarni@uttyler.edu](mailto:akulkarni@uttyler.edu)

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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.

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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, September 29, 2021	70 %
Test 2	Wednesday, November 10, 2021	
Final	Wednesday, December 8, 2021	
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.

**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.