

## CTC 212-CSC 212-EET 233 SYLLABUS

### Computer Organization & Design

**Credit: 4**

**PREREQUISITE:** CSC 113- COMPUTER LOGIC & DISCRETE MATHEMATICS

EET 212- ACTIVE ELECTRONIC DEVICES

**TEXT: DIGITAL ELCTRONICS, 9<sup>th</sup> EDITION, William Kletiz, Prentice Hall**

**INSTRUCTOR:**

**Email:**

**Office: phone:**

**Course Objective:** To study the building blocks of a digital system and digital circuitry. The first part focuses on combinational logic. The next, sequential circuits are considered. Finally, a higher-level digital system analysis is presented which addresses issues related to memory design, Arithmetic Operations and Circuits.

**Attendance Policy:** Attendance is **mandatory** at lectures and laboratory sessions. Material covered in missed classes is the responsibility of the students. If you miss two consecutive classes, you will be referred to the Division Dean. Students get a failing grade (F) in the course after 3 unjustified absences.

**Homework:** Problems related to covered topics are assigned on a regular basis. Selected problems will be discussed in class. Laboratory reports are due the following week after completion of the current experiment.

**Grading Policy:** There will be three examinations:

**Test One 20%**

**Test two 20%**

**Quizzes and HW 20%**

**Programming projects 40 %.**

<b>Grading Range</b>	<b>A 90 - 100</b>	<b>B+ 85 -89</b>
<b>B 80 - 84</b>	<b>C+ 75 - 79</b>	<b>C 70 -74</b>
<b>D 60 -69</b>	<b>F 00 -59</b>	

**Disability Support Services:** Students with disabilities who believe that they might need accommodations in this class are encouraged to contact the Disability Support Services at 201-360-4157 as soon as possible to better ensure that such assistance can be implemented in a timely fashion. All disabilities must be documented by a qualified professional such as a physician, licensed learning disability teacher (LDTC), psychologist, psychiatric nurse, licensed social worker or licensed professional counselor, who is qualified to assess the disability that the student claims to have and note recommendations on accommodations for the student. All information provided to the Disability Support Services Program will be confidential between the programs, professors involved with the student and the individual student.

**Students MUST have CAMERA's on during class participation and EXAMS**

**Course Outline and Laboratory Assignments**

<b>CSC-212</b>		
<b>Day</b>	<b>Date</b>	<b>Topic</b>
	5/26	Introduction and Ch1 Numeric Systems
	5/27	Ch1 Numeric Systems
		Lab Experiment Number 3( AND and OR gates
		Ch3(Enable and Disable), go over homework assignment questions. Check and validate project work
		Lab Experiment Number 4 (Enable, Disable Circuits)
		Ch5_L4 Boolean Algebra
		Lab Experiment Number 5( Inverting logic)
		Ch5_L5 DeMorgan's Theorem
		Lab Exp Number 8 Demorgan Theorem
		<b>Test 1</b>
		Ch 6 L7 Exclusive-OR and Exclusive-NOR Gates
		Exp 10 Exclusive-OR and Exclusive-NOR Gates
		Ch5_L6 Karnaugh Maps
		Exp 9group work on K maps
		Lab Experiment Number 7 Boolean reduction
		Ch 7_L8A Arithmetic Operations and Circuits
		Exp 11
		Ch 7_L8B: Adders , 2s comp hex arithmetic
		Exp12
		Ch 8 L9 Code Comparators, Coders, decoders Multiplexers and De multiplexers
		Exp 13
		Ch10 Flip-Flops and Registers SR FF is the main FF all other FFs are driven from the SR
		<b>Final Exam</b>