

**SU DEPARTMENT OF COMPUTER SCIENCE  
SYLLABUS  
COSC 250 Microcomputer Organization**

**Description:** Organization and internal behavior of microcomputer hardware: digital logic, Boolean algebra, switching networks, design of memories and ALUs, controllers, COSC 120.

amentals of Logic Design, any edition, by Charles H. Roth, Cengage  
33628478.

	<u>Weeks</u>
<b>Unit 1 Combination Logic</b>	6.0
Introduction to computer system. Number systems (Binary, octal and hexadecimal), conversion and arithmetic. Negative number representation. Logic gates (minterm and maxterm combinations). NAND and NOR logic. Boolean operations, function and algebra; K-map simplification. Adders, subtractors, decoders and multiplexers.	
<b>Unit 2 Sequential Lmicroprocessors.</b>	
<b>Unit 3 CPU Design, Machine-level Instructions and Assembly Language</b>	3.0
CPU architecture, Machine instructions. Wait states and machine cycles.	
<b>Tests</b>	<u>1.0</u> 14.0

**EVALUATION**

Homework 20%  
Tests 60%  
Lab 20%

NOTE: ONCE A STUDENT HAS RECEIVED CREDIT, INCLUDING TRANSFER CREDIT, FOR A COURSE, CREDIT MAY NOT BE RECEIVED FOR ANY COURSE WITH MATERIAL THAT IS EQUIVALENT TO IT OR IS A PREREQUISITE FOR IT.