

SU DEPARTMENT OF COMPUTER SCIENCE SYLLABUS (Tentative)
COSC 456 Computer Architecture

Objectives: To study the organization and internal composition of advanced computer systems.

Prerequisites: COSC 220 and COSC 250.

Texts: "Computer Architecture Class Notes and Lab Manual," by Dean DeFino and Asif Shakur; 2006. (Available only through SU's Bookstore)
 "Fundamentals of Digital Logic and Microcomputer Design," by M. Rafiqzaman; Wiley Interscience Publishing, Fifth edition, 2005. (Optional)

	Weeks
PART I: Overview of the Computer System	2
Introduction to Computer Systems, Microcomputer Organization Review, Addressing Codes.	
PART II: Assembly Language	6
Instruction formats, Assembly Language Instruction Sets, Assembler Labs in Assembly language.	
PART III: The Central Processing Unit	3
Data Path, Instruction Decoding, ALU, Register File, Instruction Execution, Branching, Floating Point Unit Operation	
PART IV: Memory, I/O	2
Memory Systems, Cache Memory Organization, I/O.	
Tests and Oral Presentations and Optional Topics	1
	14

EVALUATION	
Homework and presentations	30%
Tests	55%
Lab	15%