

**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)

	<b>Weeks</b>
<b>PART I: Overview of the Computer System</b>	2
Introduction to Computer Systems, Microcomputer Organization Review, Addressing Codes.	
<b>PART II: Assembly Language</b>	6
Instruction formats, Assembly Language Instruction Sets, Assembler Labs in Assembly language.	
<b>PART III: The Central Processing Unit</b>	3
Data Path, CPU Organization, Instruction Set Architecture, CPU Organization, CPU Operation	
<b>PART IV: Memory, I/O</b>	2
Memory Systems, Cache Memory Organization, I/O.	
<b>Tests and Oral Presentations and Optional Topics</b>	1
	14

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