

1.	Course Title	Computer Architecture		
2.	Course Code	CICT1083		
3.	Status	Faculty		
4.	Credit Hour	Credit hour: 3 (2+1) 2 for lecture (2 hours per week x 14 weeks) 1 for tutorial (1.5 hours per week x 14 weeks)		
5.	Semester/Year	2/1		
6.	Prerequisites	Nil		
7.	Teaching method:	Lecture and Tutorial		
8.	Evaluation	Assessment and Marking Percentage: Quizzes 10 % Assignments 10 % Interactions through discussion board 10 % Mid-Semester Exam 20 % Final Examination 50 %		
9.	Lecturer			
10.	Objective of the Subject	This subject is designed to enable students to: - Know typical component of a system and their function. - Understand the features provided by a typical operating system and explain how these features facilitate program execution. - Understand the computer system architecture in general and the related component of the CSO.		
11.	Learning Outcomes	Upon completion of this subject, students should be able to: - Expose to the knowledge related to a typical component of a system and their function. - Describe features provided by a typical operating system and explain how these features facilitate program execution. - Describe the computer system architecture in general and the related component of the CSO.		
12.	Synopsis	This subject introduces students to the principles of Computer System and Organization. Upon completion of the course, students should be able to explain and understand the basic component of system organization, methods, computational systems, different computer architecture.		
13.	Topics	Details	Lecture (Hrs)	Tutorial (Hrs)
	Topic 1	Overview of a Computer System - Introduction - Definition of Computer and Computer System - Functional Capabilities of a Computer System - Conceptual Components of a Computer - Computer System Components - Classes of Computer Systems	4	3
	Topic 2	Hardware Interface - Introduction - The Buses - The Interface (Ports) - Parallel and Serial Transmissions - The Parallel Interface - The Serial Interface - The IEEE-488 Interface	4	3
	Topic 3	CPU and Memory - Introduction - The Components of CPU - The Instruction Cycle - Register Organization	4	3

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		Memory		
	Topic 4	Storage Devices - Introduction - Storage Structure - Disk Structure - Caching	4	3
	Topic 5	Input and Outpun Technologies - Introduction - I/O Structure and Hardware - Application I/O Subsystem Services	4	3
	Topic 6	File - Introduction - File Concept - File Access - File Organization - File Organization and Type - File Management - Protection - Consistency Sematics - Performance and Efficiency - Recover	4	3
	Topic 7	Operating System - Introduction - Virtual Machine - Concurrency - Virtual Memory - Process Management - Interrupt - Spooling - Time Sharing - Time Slicing	2	1.5
	Topic 8	Security and Access Control - Security - Domain Protection - Program and System Thrats - Encryption - Computer Security Classifications	2	1.5
		Total contact hours	28	21
		Equivalent lecture hours	28	14
		Total lecture hours	42	
		Credit hours	3	
14.	Main reference:	John L. Hennessy , David A. Patterson, Computer Architecture: A Quantitative Approach, Fourth Edition , , 2006.		
15	Additional References:	1. Bartee, T. C. (1991). Computer Architecture and Logic Design. McGraw-Hill, Inc. 2. Mano, M. M. (1993). Computer System Architecture. Prentice Hall, Inc. 3. Tanenbaum, A. S. (1992). Modern Operating System. Prentice Hall, Inc. 4. Tanenbaum, A. S. (1990). Structured Computer Organization. Prentice Hall, Inc		
	Other Materials:	All other materials will be available to students online.		