1.	**Course Title**	**Computer Architecture**		
2.	**Course Code**	**CICT2523**		
3.	**Status**	Faculty		
4.	**Credit Hour**	3 (2+1) 2 lecture (2 hours lecture x 14 weeks) 1 tutorials (1.5 hours per x 14 weeks)		
5.	**Semester/Year**	2/2		
6.	**Prerequisites**	N/A		
7.	**Teaching method:**	Distance Learning (Electronic)		
8.	**Evaluation**	**Assessment and Marking Percentage:** Participation 5% Quizzes 15% Project 15% Mid Sem Exam 15% Final Examination 50%		
9.	**Lecturer**			
10.	**Objective of the Subject**	Students that follow this subject will be able to : • Expose to the knowledge related to a typical component of a system and their function. • Understand 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 CICT2523, students should be able to: • Identify what's 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. • Explain the computer system architecture in general and the related component of the CSO.		
12.	**Synopsis**	This course introduces students to the principles of Computer System and Organisation. Upon completion of the course, students should be able to explain and understand the basic component of system organisation, methods, computational systems, different computer architecture.		
13.	**Topics**	Details	Lecture (Hrs)	Tutorial (Hrs)
	Week 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	2	1.5
	Week 2	Hardware Interface • Introduction • The Buses • The Interface (Ports) • Parallel and Serial Transmissions	2	1.5
	Week 3	• The Parallel Interface • The Serial Interface • The IEEE-488 Interface.	2	1.5
	Week 4	CPU and Memory • Introduction • The Components of CPU	2	1.5

		• The Instruction Cycle • Register Organization • Memory		
	Week 5	Storage Devices • Introduction • Storage Structure	2	1.5
	Week 6	• Disk Structure • Caching	2	1.5
	Week 7	Input and Outpun Technologies • Introduction • I/O Structure and Hardware	2	1.5
	Week 8	• Application I/O Subsystem Services	2	1.5
	Week 9	File • Introduction • File Concept • File Access • File Organization • File Organization and Type	2	1.5
	Week 10	• File Management • Protection • Consistency Sematics • Performance and Efficiency • Recovery	2	1.5
	Week 11	Operating System • Introduction • Virtual Machine • Concurrency • Virtual Memory • Process Management	2	1.5
	Week 12	• Interrupt • Spooling • Time Sharing • Time Slicing	2	1.5
	Week 13	Security and Access Control • Security • Domain Protection • Program and System Thrats	2	1.5
	Week 14	• Encryption • Computer Security Classifications	2	1.5
		Total contact hours	28	36
		Equivalent lecture hours	28	14
		Total lecture hours	42	
		Credit hours	3	
14.	**Main reference: Textbook:**	**John L. Hennessy , David A. Patterson**, **Computer Architecture: A Quantitative Approach**, Fourth Edition, The Morgan Kaufmann Series in Computer Architecture and Design, 2006.		
15.	**Additional References:** **Other Materials:**	**1.** Sajjan G. Shiva (2007), **Computer Organization, Design, and Architecture**, Fourth Edition. 2. **Joseph D. Dumas II (2005), Computer Architecture: Fundamentals and Principles of Computer Design.** All materials will be available to the students online.		