



National Computing Education Accreditation Council NCEAC



NCEAC.DOC.001-E

COURSE DESCRIPTION

NAME OF INSTITUTION	Lahore Garrison University
PROGRAM (S) TO BE EVALUATED	Computer Science , Spring 2023

Course Description : none

Course Code	CSC312																		
Course Title	Introduction to Information and Communication Technology																		
Credit Hours	2+1																		
Prerequisites by Course(s) and Topics	none																		
Assessment Instruments with Weights (homework, quizzes, midterms, final, programming assignments, lab work, etc.)	SESSIONAL (Quizzes, Assignments, Presentations) =25 % Midterm Exam =25 % Final Exam = 50%																		
Course Coordinator	Aima Arif																		
URL (if any)	none																		
Current Catalog Description	none																		
Textbook (or Laboratory Manual for Laboratory Courses)	Introduction to Computers 7th International Edition, Peter Norton, N. McGraw-Hill.																		
Reference Material	1. Using Information Technology: A Practical Introduction to Computer & Communications, 6th Edition. Williams, S. McGraw-Hills. 2. Discovering Computers by Gary B. Shelly & Misty E. Vermaat, Course Technology; 1st Edition(January 25, 2011). 3. Computers, Communications & information: A user's introduction, Sarah, E. Hutchinson. Stacey, C. Swayer. 4. Fundamentals of Information Technology, Alexis L Mathewsleon Leon Press.																		
Course Goals	The main aim of this exam is to provide the awareness of computer technology has made a significant impact in many areas of teaching and learning. The introduction of desktop computers, word-processing packages and presentation preparation tools has improved greatly the quality of the material presented to students and used in lectures. The use of simple database packages and spreadsheets has improved and simplified record keeping at all levels within education																		
Course Learning Outcomes (CLOs):	<table><tr><td>At the end of the course the students will be able to:</td><td>Domain</td><td>BT Level*</td></tr><tr><td>Describe computer applications and operating systems and data security.</td><td>Cognitive</td><td>2</td></tr><tr><td>CLO_2 Explain how computer hardware, Software and networks work. Cognitive 2</td><td>Cognitive</td><td>2</td></tr><tr><td>Recognize students with basic structure of programming languages. Familiarize students with problem solving techniques.</td><td>Psycho motor</td><td>2</td></tr><tr><td>Discuss the conversions of binary language and performing binary arithmetic operations</td><td>Cognitive</td><td>2</td></tr><tr><td colspan="3">* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain</td></tr></table>	At the end of the course the students will be able to:	Domain	BT Level*	Describe computer applications and operating systems and data security.	Cognitive	2	CLO_2 Explain how computer hardware, Software and networks work. Cognitive 2	Cognitive	2	Recognize students with basic structure of programming languages. Familiarize students with problem solving techniques.	Psycho motor	2	Discuss the conversions of binary language and performing binary arithmetic operations	Cognitive	2	* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain		
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Topics Covered in the Course, with Number of Lectures on Each Topic (assume 15-week instruction and one-hour lectures)

Week	Lecture	Topics Covered
Week 1	1	Introduction to Course, Explain Course Outline and contents. Chap1: Introducing today's technologies Exploring Computers and their uses including the computer defined and Characteristics of Computers.
	2	Looking inside the Computer System; Parts of Computer system, The Information processing cycle. Essential computer hardware, Input/output devices, Software and its types, Computer data, the user's role, User less Computers.
Week 2	3	Computer Devices and mobile • Server • client • Systems for single users • systems for Organizations
	4	Input/Output Devices Input Devices
Week 3	5	• Data Storage • Boolean operations • Gates • Flip-flop • Memory addresses • Memory terminology
	6	Conversions: • Binary to decimal & Decimal to Binary • Binary to Hexa Decimal • Binary Addition • Binary Multiplication • Ascii codes.
Week 4	7	Data Manipulation • Architecture • Machine Language Instruction • Decoding the instruction
	8	• Program execution • Machine cycle • Arithmetic Operations • Programming Data Manipulation • Functions
Week 5	9	Operating Systems • Functions of operating systems • Batch processing • Interactive processing •
	10	Types of Software • Software classification • Operating System Components
Week 6	11	• File Manager • Memory Manager • booting process processes • Deadlock • Security
	12	SDLC/PDLC
Week 7	13	Programming Languages
	14	Revision of syllabus
Week 8	1 hours	Mid Term
Week 9	15	Midterm
	16	Midterm
Week 10	17	Data Communication • Internet
	18	Connecting to the internet • www & Types
Week 11	19	Artificial Intelligence
	20	Semantic Networks • Knowledge representation • Expert Systems
Week 12	21	Database • Database concepts and characteristics
	22	Classifications and models • Relational database
Week 13	23	Security • privacy and ethics: • computer crime
	24	Data security • security threats • computer virus • worms.
Week 14	25	Personal computer security • backup of data • antivirus • data protection • intellectual property.
	26	Network Topologies
Week 15	27	Problem solving Skills
	28	Computer Codes
Week 16	29	Presentaions
	30	Presentations
Week 17	2 hours	Final Term

Laboratory Projects/Experiments Done in the Course	yes
Programming Assignments Done in the Course	yes

Instructor Name	Aima Arif
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Instructor Signature

Date
