Faculty of Engineering & Technology

Introduction to Computer

Information :

Course Code :	CSC 101	**Level**	: Undergraduate	**Course Hours :**	2.00- Hours

Department : University Requirments

Area Of Study :

By studying this course the student should be able to:
˝Demonstrate knowledge and understanding of the basic elements of computer hardware and software and their roles in a computer system.
˝Understand how to use Internet and WWW for searching and browsing information.
˝Understand the basics of software development.
˝Ability to develop and produce diversity of computer applications using Word processing, Spreadsheet, Database and Powerpoint Software tools.
˝Demonstrate knowledge and understanding of standard methods and approaches for problem solving.
˝Demonstrate knowledge and understanding of the algorithmic approach for problem solving.
˝Design and represent an algorithmic solution for a given algorithmic problem.
˝Implement the algorithmic solution using C++ as a programming language.
˝Demonstrate knowledge and understanding of using C++ in implementing various problem solutions in different application areas.

Description :

Introduction to computer hardware, computer software and computer networks. Data internal representation in computer memory. Numbering systems. Problem solving techniques using Pseudocode (Structured English).

Course outcomes :

a.Knowledge and Understanding: :

1 -	List the basic components of computer hardware
2 -	Define the flow charts
3 -	Outline the hardware and software
4 -	Define the information technology

b.Intellectual Skills: :

1 -	Solve the different engineering problems using flow charts
2 -	Analyze the numbering systems
3 -	Select the appropriate course actions for building a program code

c.Professional and Practical Skills: :

1 -	Apply the methods of flow charts and number systems to solve engineering problems
2 -	Apply the methods of C++ programming language for solving engineering problems
3 -	Write and implement simple practical programs to solve mathematical problems

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d.General and Transferable Skills: :

1 -	Conduct oral and written communication
2 -	Write technical reports
3 -	Team working

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to computers	2	1	1
Computer Hardware	2	1	1
Computer Software	2	1	1
Computer Networks and Internet	2	1	1
Midterm I	2	1	1
Program development in C++ -	2	1	1
Problem Solving Methodologies and Algorithmic Approach	2	1	1
Basic Elements & Data Types of C++	2	1	1
Midterm II	2	1	1
Program development in C++ - Selection Control Structures	2	1	1
Program development in C++ - Repetitive C++ Structures (Loops)	2	1	1
Program development in C++ - Arithmetic C++ Operations	2	1	1
One Dimensional Arrays	2	1	1
Program development in C++ - Modular Programming using Functions	2	1	1
Final Exam	2	2	0

Teaching And Learning Methodologies :

Lectures
Practical Assignments
Exercises and tutorials
Research assignments

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments,	10.00	1	class activities
Attendance	5.00	1	class activities
Final-term Examination	40.00	15	Written examinations
Lab Final Practical Exam	20.00	14	
Mid-term Examination	20.00	6	Written examinations
Quizzes	5.00	14	Written examinations

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Books :

Book	Author	Publisher
Computer fundamentals for technical students (Ebook)	Heisserer, Nick	LibreTexts

Course Notes :

Course notes
Lecture notes to be handed out

Recommended books :

Friedman and Koffman, %Problem Solving, Abstraction, and Design using C+++Ẑ6th edition, Addison Wesley, 2011

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