FUTURE UNIVERSITY IN EGYPT جامعة المستقبل

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:
ÅDemonstrate knowledge and understanding of the basic elements of computer hardware and software and their roles in a computer system.
ÅUnderstand how to use Internet and WWW for searching and browsing information.
ÅUnderstand the basics of software development.
ÅAbility to develop and produce diversity of computer applications using Word processing, Spreadsheet, Database and Powerpoint Software tools.
ÅDemonstrate knowledge and understanding of standard methods and approaches for problem solving.
ÅDemonstrate knowledge and understanding of the algorithmic approach for problem solving.
ÅDesign and represent an algorithmic solution for a given algorithmic problem.
ÅImplement the algorithmic solution using C++ as a programming language.
ÅDemonstrate 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

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

Course Notes :
Course notes Lecture notes to be handed out

Recommended books :
Friedman and Koffman, ñProblem Solving, Abstraction, and Design using C++ò, 6th edition, Addison Wesley, 2011