Faculty of Engineering & Technology

Computer Programming

Information :

Course Code :	CMP 132	**Level**	**:** Undergraduate	**Course Hours :**	2.00- Hours

Department :	Faculty of Engineering & Technology

Instructor Information :

Title	Name	Office hours
Lecturer	Samah Ahmed Zaki Hassan	22
Assistant Lecturer	Mahinda Mahmoud Samy Ahmed Zaki Zidan	
Teaching Assistant	Mariam Ali Ibrahim Elsayed	
Teaching Assistant	Mona Mohamed Mohamed Ali Almakhton	

Area Of Study :

The main aims of this course are to:
˝ÁÉBuild studentsḱnowledge regarding different IT tools and facilities.
˝ÁÀTrain students to use basic mathematics and science in computing and information

Description :

Structured program development: problem solving decision structure, repetition structures. Top-down and stepwise refinement. Subprograms: Procedures and functions. Structured data types: arrays, structures and classes. Recursion..

Course outcomes :

a.Knowledge and Understanding: :

1 -	Define the basic concepts and theories of algorithms using pseudo-code.
2 -	. Recognize different programming tools
3 -	Define the concepts of inheritance, polymorphism, the Abstract classes, Interfaces and OO Model.
4 -	Explain the object oriented programming logic, techniques and use in practical applications.

b.Intellectual Skills: :

1 -	Apply a set of methods for a given problem associated with their results.
2 -	Select appropriate methodologies and techniques for a given problem solution and setting out their limitations, restrictions and errors using JAVA language
3 -	Evaluate different solutions using well-defined JAVA language criteria.
4 -	Compare between algorithms, methods and techniques used in OOP.

c.Professional and Practical Skills: :

1 -	Implement OOP techniques to solve various problems using JAVA programming language.
2 -	Test techniques of OOP languages and different supporting tools.

	3 -	Use human computer interaction principles in the construction and evaluation of user interfaces for object-oriented programming language applications.

d.General and Transferable Skills: :

	1 -	Exploit a range of learning resources.
	2 -	Communicate effectively general computing facilities.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to Computer Programming	4	2	2
Fundamentals of a JAVA Program- Data Types and Operators	4	2	2
Control Structures - Creating Conditional Statements	4	2	2
Creating Iteration Statements	4	2	2
Methods	4	2	2
Arrays	4	2	2
The conceptual basis of Object Orientated Programming	4	2	2
Primitive data types and data types as objects.	4	2	2
Data Abstraction and encapsulation	4	2	2
Classes and object as abstract data types	4	2	2
An object-oriented programming language syntax, creating objects from class definitions	4	2	2
Inheritance	4	2	2
OOP: Polymorphism, Abstract class, Interface.	4	2	2
Project presentation	8	4	4

Teaching And Learning Methodologies :

Lecture
Tutorials
Practical
Self-Study
Case Study

Recommended books :

Course Notes are available with all the slides used in lectures in electronic form on Learning Management System (Moodle)