

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	6
Lecturer	Samah Ahmed Zaki Hassan	6
Teaching Assistant	Amany Hussein Hassan Mohamed Abou elnaga	
Teaching Assistant	Salma Roshdy Ahmed Badwy Ali	
Teaching Assistant	Mahmoud Magdy Mohamed Abdo	

Area Of Study :

The main aims of this course are to:

- Build students' knowledge regarding different IT tools and facilities.
- Train 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

Books :

Book	Author	Publisher
C++ for Everyone	Cay S. Horstmann	wiley
No Book	no	no

Recommended books :

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