Faculty of Computers and Information Technology

Computer Programming-1

Information :

Course Code :	CS112	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Faculty of Computers and Information Technology

Instructor Information :

Title	Name	Office hours
Professor	Awad Hassballah Khalil Matous	1
Associate Professor	Wael Hassan gomaa Mohamed Abuzaid	1
Lecturer	SALMA RADWAN HASSAN ABDELHAMID	
Assistant Lecturer	Mahinda Mahmoud Samy Ahmed Zaki Zidan	8
Teaching Assistant	Tasnim Salah Abdelraaouf Mahmoud Kandil	
Teaching Assistant	Hadeer Khaled Adel Abdelaziz	
Teaching Assistant	Farah Ashraf Wafaa Mahmoud	
Teaching Assistant	Yasmina Mohamed Nasr Abdel Latif Eldafrawy	
Teaching Assistant	Omar Khaled Mohamed Mohey Eldein Ahmed El Azhary	
Teaching Assistant	Salma Mohamed Shalaby Abdelaziz	

Area Of Study :

Explain the different structured programming concepts.
Analyze a given requirement to match the structured programming concepts
Compare and select methodologies from range of techniques, theories and methods to develop a structured programming

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 -	Apply the basic concepts and theories of algorithms using pseudo-code.
2 -	Combine and evaluate different structured programming tools.
3 -	Use the concepts of control structures, functions, arrays and pointers of structured programming.
4 -	Analyze the structured techniques and use in practical applications of structured programming.
b.Intellectual Skills: :	
1 -	Illustrate a set of methods for a given problem associated with their results for structured programming

2 -	Select appropriate methodologies and techniques for a given problem solution and setting out their limitations, restrictions and errors for structured programming
3 -	Evaluate and justify different solutions using well-defined structured programming criteria
4 -	Compare and differentiate between algorithms, methods and techniques used in structured programming
c.Professional and Practical Skills: :	
1 -	Analyze, Design, Implement and test structured techniques to solve various problems using structured programming
2 -	Apply, design methodologies, C languages and different supporting tools for structured programming
3 -	Use human computer interaction principles in the construction and evaluation of user interfaces for structured programming language applications
d.General and Transferable Skills: :	
1 -	Exploit a range of learning resources
2 -	Utilize effectively general computing facilities

ABET Course outcomes :	
1 -	Apply the algorithmic method to design solutions for computational problems.
2 -	Apply software engineering principles and top-down design approach to develop structured modular programs.
3 -	Test and analyze algorithmic solutions for computational problems.
4 -	Demonstrate adequate proficiency of developing a high-level program on the computer.
5 -	Demonstrate adequate proficiency of using a structured programming language.
6 -	Use a structured programming language to develop structured programs.
7 -	Use techniques of control structures, functions, arrays, and pointers of structured programming.
8 -	Test and debug structured programs to identify syntax and run-time errors.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to Computer Programming	4	2	2
Fundamentals of a C Program- Data Types and Operators	4	2	2
Control Structures - Creating Conditional Statements	4	2	2
Creating Iteration Statements	4	2	2
Functions	4	2	2
Arrays	4	2	2
Strings	4	2	2
Pointers	4	2	2
Mid Term Exam	2		
Structures and Unions	4	2	2
Bitwise Operations	4	2	2
Input and Output	4	2	2
Project presentation	4	2	2
Final Exam	2		

Teaching And Learning Methodologies :
Interactive Lectures including discussion
Practical Lab Sessions
Self-Study (Project / Reading Materials / Online Material / Presentations)
Case Studies

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Midterm Exam (s)	20.00	9	Knowledge and Understanding,Practical / Professional Skills, Intellectual Skills

Course Notes :

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