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
Lecturer	HEBA MOHSEN MOHAMED MOSAAD HUSSIEN	3
Lecturer	HEBA MOHSEN MOHAMED MOSAAD HUSSIEN	3
Lecturer	Mohamed Ahmed Hussein Ali	2
Assistant Lecturer	Hadeer Khalid Tawfik El Zayat	12
Teaching Assistant	Fatma Gaafar Ahmed Fouad Mohamed Elsayed	
Teaching Assistant	YASMIN AMR AHMED ANWAR ALI BADR	4
Teaching Assistant	Amany Hussein Hassan Mohamed Abou elnaga	2
Teaching Assistant	Gehad Assem Elsayed Ali Hussein	7
Teaching Assistant	Mahinda Mahmoud Samy Ahmed Zaki Zidan	8
Teaching Assistant	Rahmatallah Hossam Farouk Hassan Mohamed AlSofany	1
Teaching Assistant	Yousef Samir Saad Zaghloul Abdulazeem Allam	5
Teaching Assistant	Nada Emad Abdelsalam Hussien	

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 -	Analyze the structured techniques and use in practical applications of structured programming.
2 -	Use the concepts of control structures, functions, arrays and pointers of structured programming.
3 -	Combine and evaluate different structured programming tools.
4 -	Apply the basic concepts and theories of algorithms using pseudo-code.

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

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

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
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)