

Programming Fundamentals					
Credit Hours:	3	Course Code:	COSC-1101	Prerequisites:	None
Course Learning Outcomes (CLOs):					
At the end of the course the students will be able to:				Domain	BT Level
1. Understand basic problem-solving steps and logic constructs				C	2
2. Apply basic programming concepts				C	3
3. Design and implement algorithms to solve real world problems.				C	3
* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain					
#	SDGs	Relevant CLOs			
1	SDG 4: Quality Education	CLO 1: Understand basic problem-solving steps and logic constructs.			
2	SDG 9: Industry, Innovation and Infrastructure	CLO 3: Design and implement algorithms to solve real world problems.			
Course Content:					
Introduction to Problem Solving, Introduction to Programming, Role of Compiler and Interpreter, Introduction to Algorithms, Basic Data Types and Variables, Input/Output Constructs, Arithmetic, Comparison and Logical Operators, Conditional Statements and Execution Flow for Conditional Statements, Repetitive Statements and Execution Flow for Repetitive Statements, Array and Their Memory Organization, Multi-Dimensional Arrays, Introduction to Modular Programming, Function Definition and Calling, Recursion, String and String Operations, Structures.					
Teaching Methodology:					
Lectures, Written Assignments, Practical labs, Semester Project, Presentations					
Course Assessment:					
Sessional, Mid Exam, Assignments, Quizzes, Presentation, Final Exam					
Reference Material:					
1. C++ How to Program by Paul J. Deitel and Harvey Deitel, Pearson, 10 th Edition, 2016; ISBN-13: 978-0134448237.					
2. Beginning ANSI C++: The Complete Language by Ivor Horton, 3 rd Edition, ISBN-13: 978-1590592274.					
3. Starting out with Programming Logic & Design by Tony Gaddis, Pearson, 4 th Edition, 2015; ISBN-13: 978-0133985078.					
Programming Fundamentals- Lab					
Credit Hours:	1	Course Code:	COSC-1101	Prerequisites:	None

Course Learning Outcomes (CLOs):		
At the end of the course the students will be able to:	Domain	BT Level
1. Understand basic problem-solving steps and logic constructs	C	2
2. Apply basic programming concepts	C	3
3. Design and implement algorithms to solve real world problems.	C	3
* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain		
#	SDGs	Relevant CLOs
1	SDG 4: Quality Education	CLO 1: Understand basic problem-solving steps and logic constructs.
2	SDG 9: Industry, Innovation and Infrastructure	CLO 3: Design and implement algorithms to solve real world problems.
Course Content:		
Introduction to Problem Solving, Introduction to Algorithms, Basic Data Types and Variables, Input/Output Constructs, Arithmetic, Comparison and Logical Operators, Conditional Statements and Execution Flow for Conditional Statements, Repetitive Statements and Execution Flow for Repetitive Statements, Array and Their Memory Organization, Multi-Dimensional Arrays, Introduction to Modular Programming, Function Definition and Calling, Recursion, String and String Operations, Structures.		
Teaching Methodology:		
Lectures, Written Assignments, Practical labs, Semester Project, Presentations		
Course Assessment:		
Sessional, Mid Exam, Assignments, Quizzes, Presentation, Final Exam		
Reference Material:		
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