Code:1BPLC105E/205E **Course:IntroductiontoC**

Credits:4 **L: T:P–3:0:0**

SEE:50 Marks **CIE: 50Marks**

SEEHours:3 **Max.Marks:100**

Prerequisitesifany	NIL
Learningobjectives	Toacquirefundamentalprogrammingconcepts,methodologies,and structuresthatareessentialfordevelopingefficient andreliableCprograms.

CourseOutcomes:

Onthesuccessful completionofthe course,thestudent willbeable to

COs	**CourseOutcomes**	**Bloom'slevel**
CO1	Explainthefundamental structureof aCprogramandprimitiveconstructs.	Understanding
CO2	Applydecisionmakinganditerativecontrolstructurestosolvecomputational problems.	Apply
CO3	Develop programs using arrays, functions and string operations to solve real-world problems.	Apply
CO4	Implementstructuresand pointersforcomplex datarepresentation.	Analyze

MappingwithPOsandPSOs:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11		PSO1	PSO2	PSO3
CO1	3	2	0	0	0	-	-	0	2	-	1		DepartmentSpecific		
CO2	3	3	3	2	2	-	-	1	2	-	2				
CO3	3	3	3	3	3	-	-	2	2	-	2				
CO4	3	3	3	3	3	-	-	2	2	-	2				

Mapping Strength: Strong– 3 Medium–2 Low–1

CourseStructure

No.	Modules	No. of Lecture Hours	No. of Tutorial Hours	No. of Practical Hours
Module1				
1.1	**OverviewofC:**HistoryofC,ImportanceofC,Basic Structure of C Programs	1		
1.2	ProgrammingStyle,CompilingandExecutinga‘C’Program.	1		
1.3	**Constants,VariablesandDataTypes:**CharacterSet,C Tokens	1		
1.4	KeywordsandIdentifiers,Constants,Variables,	1		
1.5	DataTypes,Declaration of Variables,	1		
1.6	AssigningValuestoVariables,DefiningSymbolicConstants	1		
1.7	DeclaringaVariablesas ConstantsandVolatile	1		
1.8	Input/OutputStatements inC	1		
Module2				
2.1	Operators:IntroductiontoOperators,Arithmetic Operators	1		
2.2	Relational Operators, Logical Operators, Assignment Operators,	1		
2.3	DecrementOperators,Conditional Operators,	1		
2.4	PrecedenceofArithmeticOperators.Introduction,Decision Makingwith IFStatement,	1		
2.5	SimpleIFStatement,TheIF-ELSEStatement,NestingofIF-ELSEStatements	1		
2.6	TheELSEIFLadder,TheSwitch Statement	1		
2.7	The?: Operator, TheGOTOStatement	1		
2.8	WHILE,DO,FOR,Jumps inLOOPS	1		
Module3				
3.1	ArraysandStrings:Introduction,DeclarationandInitialization ofOne-dimensionalandTwo-DimensionalArrays	1		
3.2	DeclaringandInitializingStringVariables	1		

3.3	Exampleprogramsusingarrays	1		
3.4	ReadingStringsfrom Terminal	1		
3.5	WritingStringsto Screen	1		
3.6	ArithmeticOperationsonCharacters	1		
3.7	ComparisonofTwoStrings	1		
3.8	String-handlingFunctions	1		
Module4				
4.1	User-definedFunctions:Introduction,NeedforUser-defined Functions	1		
4.2	A Multi-functional Program, Elements of User-defined Functions,	1		
4.3	DefinitionofFunction,,	1		
4.4	ReturnValuesandtheir Types	1		
4.5	FunctionCalls,FunctionDeclaration	1		
4.6	NoArgumentsandnoReturnValues	1		
4.7	ArgumentsbutnoReturnValues	1		
4.8	NestingofFunctions.	1		
Module5				
5.1	StructuresandPointers: Introduction	1		
5.2	DefiningaStructure&DeclaringandAccessingStructure VariablesandMembers,	1		
5.3	StructureInitializationandCopyingandComparingStructure Variables	1		
5.4	ArrayofStructures,ArrayswithinStructures.	1		
5.5	Pointers:Introduction,UnderstandingPointers	1		
5.6	AccessingtheAddressofVariable	1		
5.7	Declaringpointervariables,initialization ofpointers,	1		
5.8	accessingvariablesthroughitspointer	1		
	TotalNo.ofLecture Hours	40	-	-
	TotalNo. ofTutorialHours		00	-
	TotalNo.ofPractical Hours			10

Textbook:

1. ProgramminginANSIC,9e, EBalaguruswamy,TataMcGrawHill Education.

ReferenceBook:

1. PROGRAMMING INC,ReemaThareja,OxfordUniversity,ThirdEdition,2023.
2. The‘C’ProgrammingLanguage,BrianW.KernighanandDennisM.Ritchie, SecondEdition, Prentice Hall of India, 2015

Online Resources:

1. Elearning.vtu.ac.in/econtent/courses/video/BS/15PCD23.html
2. https://nptel.ac.in/courses/106/105/106105171/MOOC