Course Code	UCA20S02J	Course Name	GO PROGRAMMING	Course Category	S	Skill Enhancement Course	L	T	P	C
							1	0	1	2

Pre-requisite Courses	Nil	Co-requisite Courses	Nil	Progressive Courses	Nil
Course Offering Department	Computer Applications	Data Book / Codes/Standards	Nil		

Course Learning Rationale (CLR):	The purpose of learning this course is to:			Learning			Program Learning Outcomes (PLO)														
				1	2	3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CLR-1 :	Learn Go fundamentals and apply them in real world scenarios																				
CLR-2 :	Understand and develop your knowledge of programming fundamentals																				
CLR-3 :	Learn to handle the data with various data types.																				
CLR-4 :	Learn the importance of interfaces																				
CLR-5 :	Learn the Concept of Server Programming																				
CLR-6 :	Get to grip with advanced features like Channels and routines																				

Course Learning Outcomes (CLO):	At the end of this course, learners will be able to:	Level of Thinking (Bloom)	Expected Proficiency (%)	Expected Attainment (%)	Fundamental Knowledge	Application of Concepts	Link with Related Disciplines	Procedural Knowledge	Skills in Specialization	Ability to Utilize Knowledge	Skills in Modeling	Analyze, Interpret Data	Investigative Skills	Problem Solving Skills	Communication Skills	Analytical Skills	ICT Skills	Professional Behavior	Life Long Learning
CLO-1 :	Understand the Programming concepts in free form environment	3	80	70	L	H	-	H	L	-	-	-	L	L	-	H	-	-	-
CLO-2 :	Know how to use the slices and maps	3	85	75	M	H	L	M	L	-	-	-	M	L	-	H	-	-	-
CLO-3 :	Understand to handle the data using pointers	3	75	70	M	H	M	H	L	-	-	-	M	L	-	H	-	-	-
CLO-4 :	Usage of Structs and Interfaces etc.,	3	85	80	M	H	M	H	L	-	-	-	M	L	-	H	-	-	-
CLO-5 :	Write basic applications in Go	3	85	75	H	H	M	H	L	-	-	-	M	L	-	H	-	-	-
CLO-6 :	Understand the concept of Concurrent Programming environment	3	80	70	L	H	-	H	L	-	-	-	L	L	-	H	-	-	-

Duration (hour)		06	06	06	06	06
S-1	SLO-1	Introduction to Go Programming	Arrays	Function Declaration, Recursion	Structs	File operations
	SLO-2	Understanding Program Structure		Returning Multiple Values		Writing Data into a File and Reading Data from a File
S-2	SLO-1	Hello World Program	Write a program to find sum, minimum and maximum of n numbers?	Write a recursive function to find factorial value of a number?	Write a program that illustrates how to create and access a struct?	Write a program to write a list of cities to a new file.
	SLO-2			Write a function that will accept 2 numbers and performs addition and subtraction and returns both values?		
S-3	SLO-1	Data Types, Variables & Constants	Slices	Variadic Functions,	Interfaces	Go routines
	SLO-2	Operators		Deferred Function Calls		
S-4	SLO-1	Write a program to display sum, difference, product and quotient of two numbers	Write a program to create a slice using make function?	Write a function with one variadic parameter that finds the greatest number in a list of numbers?	Write a program that illustrates the concept interfaces?	Developing Concurrent Clock Server
	SLO-2					
S-5	SLO-1	Decision control statements – If, switch	Maps	Pointers	String Operations	Channels

	SLO-2	Iteration Statements – for, while		The * and & operators		
S-6	SLO-1	Write a program to get a number from console and check if it's between 1 and 10?	Write a program to illustrate how to create and initialize a map Using make() function?	Write a program that can swap two integers?	Write a program that inputs the string 'hello world' and slice it in two.	Send and receive data from a channel
	SLO-2	Write a program to calculate sum of first n numbers?				

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Learning Resources	1. Caleb Doxsey, (2012), "An Introduction to Programming in Go" 2. Mark Summerfield, (2012), "Programming in Go: Creating Applications for the 21st Century", Addison-Wesley Professional	3. Alan A. A. Donovan and Brian W. Kernighan, (2016), "The Go Programming Language", Addison-Wesley Professional Computing Series

Learning Assessment

Level	Bloom's Level of Thinking	Continuous Learning Assessment (50% weightage)								Final Examination (50% weightage)	
		CLA – 1 (10%)		CLA – 2 (10%)		CLA – 3 (20%)		CLA – 4 (10%) #			
		Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice	Theory	Practice
Level 1	Remember	20%	20%	15%	15%	15%	15%	15%	15%	-	30%
	Understand										
Level 2	Apply	20%	20%	20%	20%	20%	20%	20%	20%	-	40%
	Analyze										
Level 3	Evaluate	10%	10%	15%	15%	15%	15%	15%	15%	-	30%
	Create										
	Total	100 %		100 %		100 %		100 %		100 %	

CLA – 4 can be from any combination of these: Assignments, Seminars, Short Talks, Mini-Projects, Case-Studies, Self-Study, MOOCs, Certifications, Conf. Paper etc.,

Course Designers

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