



KONGU ENGINEERING COLLEGE
(Autonomous)
PERUNDURAI - 638060
INTERNAL QUALITY ASSURANCE CELL

Approval for Value Added Course (Two Credits)



Academic Year: 2021-2022 EVEN Semester

DEPARTMENT OF CSE

for 2021

Date: 07.04.2022

1	Academic Year	2021-2022		Semester: EVEN			
2	Course Title	Go Programming		Credit(s): Two			
3	Type of Course	New Course					
4	• If - Already offered course	Course Code		Version:			
5	Course Coordinator(s)	Ms S Anbukkarasi Ms S.Gayathri					
6	Course offered by	External faculty					
7	Name and designation of external resource persons	S.Nandhini Software Developer in Test					
8	Details about external organization	Kumaran Systems, Chennai					
9	Course fee for external experts		Max. number of students/Batch		Course fee / student		
	5,000		50		100		
10	No. of days	Period		No. of hours			Venue/ Meet ID
		From	To	Lecture	Practical	Total	
	30	21.03.2022	31.05.2022	30	20	50	IT Park
11	Pre-requisites for offering the course						
12	Course offered to	Programme		Branch		Year/Semester	
		BE		CSE		II/IV	
13	Course Main Contents	Day 1		Introduction-Data Type-constants			
		Day 2		Map Go Control Statements: If, switch, for, break, continue			
		Day 3		Create a "Hello world" application using Go Programming			
		Day 4		Type Casting Array-Slices-Command Args			

Day 5	Write a program to ship an xxxx Golang
Day 6	String
Day 7	Packages-Regular expression
Day 8	Implement student mark analysis using Packages
Day 9	Go Variadic functions
Day 10	Create a variadic function that prints the names of students.
Day 11	recursive-closure-Hash Table-Structure-Interface
Day 12	Create area calculation of different shapes application using Interfaces
Day 13	Write a program that counts the occurrences of each distinct Unicode code point in its input using Hash table.
Day 14	Pointer - Exception Handling - Error - recover - Concurrency
Day 15	Race-Mutex-Channel-File-
Day 16	Go Http Server-Go JSON
Day 17	Implement the counting semaphore to ensure that no more than 20 Goroutines made simultaneous HTTP requests in banking applications.
Day 18	Implement a binary tree to implement an insertion sort using Struct.
Day 19	Convert any Go data structure to JSON using marshaling technique.
Day 20	Write a program to reads a sequence of lines and prints only the first occurrence of each distinct line using MAP.
Day 21	Compute the 50th Fibonacci number using recursive function and Goroutine.
Day 22	Write a program that prints a list of cities to a new file.
Day 23	Create a channel using make function using short hand declaration and display the capacity of the channel.
Day 24	Create a login form and validate email id using regexp.
Day 25	Create multiple Go routines which prints name of the authors, ID of the authors concurrently.

Course Outcomes		CO1 demonstrate data types, control structures, arrays and functions with simple application	
		CO2 implement basic applications using strings, structures, packages and interfaces	
		CO3 apply JSON, Race, Mutex and Concurrency for a real world application	
11	Course Assessment (Min. 2)	S. No.	Type
		1	Multiple Choice Questions
		2	Mini project
		Total	
		Max. Marks	
		50	50
		100 Marks	
15	Verified that the content of this course is not offered to students partially/fully in regular curriculum of respective programme of the student. Certify that the course content, credits and grade are approved in the BOS meeting or approved by internal BOS members and will be ratified in the next BOS meeting		<i>[Signature]</i> 30/4/22 (Signature of the HoD after verification)
16	Any other details		

The above proposal may kindly be approved.

[Signature]
S. Gayatri
Course co-ordinator (s)

[Signature]
30/4/22
HOD

[Signature]
6/5/22
Chief Coordinator/Academic

Encl:

1. Copy of the syllabus of the course

L	T	P	Credit
2	0	1	2

Preamble This course provides an introduction to Go language basic data types, functions, arrays, pointers, maps, strings and implements concurrency model to demonstrate parallel execution.

Unit – I Fundamentals of Go Programming

15

Introduction-Data Type-constants - Map Go Control Statements: If, switch, for, break, continue-Type Casting-Array-Slices-Command Args

Unit – II Strings and packages

15

String-Packages-Regular expression- Go Variadic functions -recursive-closure-Hash Table -Structure-Interface-pointer-Exception Handling-Error-recover-Concurrency-Race-Mutex-Channel-File-Go Http Server-Go JSON

List of Exercises / Experiments:

1. Create a "Hello world" application using Go Programming
2. Write a program to shift all zero to the end of array in Golang
3. Create a variadic function that prints the names of students
4. Implement student mark analysis using Packages
5. Create area calculation of different shapes application using Interfaces
6. Implement a binary tree to implement an insertion sort using Struct.
7. Convert any Go data structure to JSON using marshalling technique.
8. Write a program to reads a sequence of lines and prints only the first occurrence of each distinct line using MAP
9. Compute the 50th Fibonacci number using recursive function and Goroutine.
10. Write a program that prints a list of cities to a new file
11. Create a channel using make function using short hand declaration and display the capacity of the channel.
12. Create a login form and validate email id using regexp.
13. Create multiple Go routines which prints name of the authors, ID of the authors concurrently.

Lecture:30, Practical:20, Total: 50

REFERENCES:

1. Caleb Doxsey, "Introducing Go", O'Reilly Publication, 2016.
2. Alan A. A. Donovan, Brian W. Kernighan, "The Go Programming Language", Pearson Education, 2015.
3. William Kennedy, Brian Ketelsen, Erik St. Martin, Erik Saint Martin, "Go in Action", Manning Publications, 2015.

COURSE OUTCOMES:

On completion of the course, the students will be able to

CO1 demonstrate data types, control structures, arrays and functions with simple application

CO2 implement basic applications using strings, structures, packages and interfaces

CO3 apply Reflect, Rune, Map and Concurrency for a real world application

BT Mapped
(Highest Level)

Applying (K3)
Precision (S3)

Applying (K3)
Precision (S3)

Applying (K3)
Precision (S3)

Mapping of COs with POs and PSOs

COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	1		1								1	1
CO2	3	2	1		1								1	1
CO3	3	2	1		1								1	1

1 - Slight, 2 - Moderate, 3 - Substantial, BT- Bloom's Taxonomy

ASSESSMENT PATTERN

Test / Bloom's Category*	Remembering (K1) %	Understanding (K2) %	Applying (K3) %	Analyzing (K4) %	Evaluating (K5) %	Creating (K6) %	Total %
MCQ (50 marks)	10	20	70				100
Miniproject (50 marks)		30	70				100
						Total	100

 Estd : 1984	KONGU ENGINEERING COLLEGE (Autonomous) PERUNDURAI - 638060 INTERNAL QUALITY ASSURANCE CELL		 CERT No. 59-109-20706 ISO 9001:2015
	Department Computer Science and Engineering Attendance Sheet		

Title of the Course: Go Programming
Date: 01.05.2022 to 19.06.2022

Date: 01.03.2022 to 19.06.2022

S. No.	Name of the Participants	Date/Sign																Attendance %	
		01/5 /22 (4hrs)	02/5 /22 (4 hrs)	08/5 /22 (4hrs)	15/5/22 (3hrs)	22/5/22 (4hrs)	23/5/22 (2hrs)	24/5/22 (2hrs)	26/5 /22 (2hrs)	27/5/22 (2hrs)	03/6/22 (2hrs)	05/6/22 (7hrs)	07/6/22 (2hrs)	08/6/22 (2hrs)	09/6/22 (2hrs)	11/6/22 (3hrs)	12/6/22 (3hrs)		19/6/22 (2hrs)
1.	AADISH N	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	96
2.	AAKHILA HAYATHUNISA M	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	96
3.	AANANDHENE M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
4.	AATARSH K M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
5.	ABHIMANYU V	P	P	P	P	P	P	A	P	P	A	P	P	P	P	P	P	P	92
6.	ABINAYA A	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	92

S. No.	Name of the Participants	Date/Sign															Attendance %		
		01/5 /22 (4hrs)	02/5 /22 (4 hrs)	08/5 /22 (4hrs)	15/5/22 (3hrs)	22/5/22 (4hrs)	23/5/22 (2hrs)	24/5/22 (2hrs)	26/5 /22 (2hrs)	27/5/22 (2hrs)	03/6/22 (2hrs)	05/6/22 (7hrs)	07/6/22 (2hrs)	08/6/22 (2hrs)	09/6/22 (2hrs)	11/6/22 (3hrs)		12/6/22 (3hrs)	19/6/22 (2hrs)
7.	ADHARSHINI G	P	P	P	P	P	A	A	A	A	A	P	P	P	P	P	P	P	88
8.	ADITHIYAA T	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	96
9.	AFEEF THAMEEM S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
10.	AGALYA E P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
11.	AJAY SURYAS	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	92
12.	AJI ASHWATHRAM S P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	88
13.	ANISH R M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
14.	ARAVINDH S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
15.	ARUNAA S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
16.	ARUNKARTHI T	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	88
17.	ASHOK KUMAR S A	P	P	P	P	P	A	P	A	P	A	P	P	P	P	P	P	P	96
18.	ASHWINTH K	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	

[illegible]

[illegible]

S. No.	Name of the Participants	Date/Sign																	Attendance %
		01/5 /22 (4hrs)	02/5 /22 (4 hrs)	08/5 /22 (4hrs)	15/5/22 (3hrs)	22/5/22 (4hrs)	23/5/22 (2hrs)	24/5/22 (2hrs)	26/5 /22 (2hrs)	27/5/22 (2hrs)	03/6/22 (2hrs)	05/6/22 (7hrs)	07/6/22 (2hrs)	08/6/22 (2hrs)	09/6/22 (2hrs)	11/6/22 (3hrs)	12/6/22 (3hrs)	19/6/22 (2hrs)	
43.	GOKUL K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
44.	GOKUL P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
45.	GOKUL R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
46.	GOKUL S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
47.	GOKUL S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
48.	GOKULAKANNAN A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	96
49.	GOKULKRISHNA R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
50.	HARIHARASUDHAN S	P	P	P	P	P	A	P	P	A	A	P	P	P	P	P	P	P	88
51.	JEEVANANTHAM J	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	92

S. Giddayi
Course Coordinator
[S. GAYATHRI]

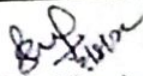
Dr. J. J. J.
HOD

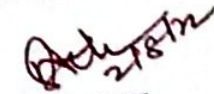
KONGU ENGINEERING COLLEGE PERUNDURAI ERODE - 638060
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

20VC027 - GO PROGRAMMING

S.No	Roll No	Name of the Student	MCQ (50)	Project (50)	Total (100)
1	20CSR001	AADISH N	34	44	78
2	20CSR002	AAKHILA HAYATHUNISA M	40	50	90
3	20CSR003	AANANDHENE M	38	48	86
4	20CSR004	AATARSH K M	32	42	74
5	20CSR005	ABHIMANYU V	38	48	86
6	20CSR007	ABINAYA A	40	50	90
7	20CSR008	ADHARSHINI G	34	44	78
8	20CSR009	ADITHIYAA T	38	48	86
9	20CSR010	AFEEF THAMEEM S	38	48	86
10	20CSR011	AGALYA E P	40	50	90
11	20CSR013	AJAY SURYA S	34	44	78
12	20CSR014	AJI ASHWATHRAM S P	36	46	82
13	20CSR016	ANISH R M	40	50	90
14	20CSR018	ARAVINDH S	40	50	90
15	20CSR020	ARUNAA S	34	44	78
16	20CSR021	ARUNKARTHI T	34	44	78
17	20CSR022	ASHOK KUMAR S A	34	44	78
18	20CSR023	ASHWINTH K	32	42	74
19	20CSR025	BALAJI K	40	50	90
20	20CSR026	BALAJI S	34	44	78
21	20CSR027	BALAMURUGAN R	38	48	86
22	20CSR028	BHARANIDHARAN R	34	44	78
23	20CSR029	BHAVISHYA C	36	46	82
24	20CSR030	BHUVANESHWARI R	32	42	74
25	20CSR031	BRINDHA V	38	48	86
26	20CSR035	CIVIYA K	32	42	74
27	20CSR037	DEV R B	38	48	86
28	20CSR038	DEVAK A	38	48	86
29	20CSR039	DHANUSH K	40	50	90
30	20CSR040	DHARSHAN S S	38	48	86
31	20CSR041	DHARSHINI T S	36	46	82
32	20CSR043	DHILEEP A	38	48	86
33	20CSR044	DINESH BABU R	38	48	86
34	20CSR046	DINESHBABU R	40	50	90
35	20CSR047	DURGASHREE V	32	42	74
36	20CSR048	FREDOLIN TIBBA B	34	44	78
37	20CSR049	GAJALAKSHMI K	36	46	82
38	20CSR050	GANASRI S	36	46	82
39	20CSR051	GANDHAMATHAN V	36	46	82
40	20CSR052	GANESHKUMAAR S	34	44	78
41	20CSR053	GAYATHRI R	34	44	78
42	20CSR054	GIRIMURUGAN M	38	48	86
43	20CSR057	GOKUL K	38	48	86
44	20CSR058	GOKUL P	36	46	82

45	20CSR059	GOKUL R	34	44	78
46	20CSR060	GOKUL S	36	46	82
47	20CSR061	GOKUL S	36	46	82
48	20CSR062	GOKULAKANNAN A	28	38	66
49	20CSR063	GOKULKRISHNA R	34	44	78
50	20CSL248	HARIHARASUDHAN S	38	48	86
51	20CSL249	JEEVANANTHAM J	38	48	86


 S. Anbukkarasi
 Course Co-ordinators
 Ms. S. Anbukkarasi
 Ms. S. Gayathri


 HoD / CSE