MAHARAJA AGRASEN INSTITUTE OF TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
Outcome Based Learning
Course Outcomes (Revision)

Subject:	Principles of Programming Languages	Max Marks External	60 Marks
Subject Code:	ETCS-458 Elective II	Max Marks Internal	40 Marks
Total Credit:	1	**Evaluation Scheme**	
Contact Hours:	L 0	Theory/ Lab	Practical
	P 2		

Course Objectives:

The objective of the course is to facilitate the student with the principles of programming languages that are required for an engineering student.

S.NO	Course Outcomes	Experiment no.	BL	PO	PI Code
ETCS458.1	To apply programming concept for solving computational problem using basic knowledge of control Structures, strings, and function for developing skills of logic building activity.	1	3	1, 2, 3, 4, 10, 12	1.6.1, 1.7.1, 2.5(1,2), 3.5.1, 4.4(1,2), 4.5.1, 10.4.1, 12.4.2
ETCS458.2	Demonstrate the concept of subprogram sequence control i.e. recursion.	2,3	3	1, 2, 3, 4, 5, 10, 12	1.6.1, 1.7.1, 2.5.1, 2.6.2, 3.5.1, 4.4(1,2), 4.5.1, 5.4(1,2), 10.4.1, 12.4.2, 12.5.1
ETCS458.3	Recall and apply the concepts of Object-oriented programming approach and design programs to **solve** real world problems with appropriate memory allocation technique.	4,5,6	3	1,2, 3, 4, 5, 10, 12	1.6.1, 1.7.1, 2.5.1, 2.6.2, 3.5.1, 3.6.2, 4.4(1,2), 4.5.1, 5.4(1,2), 10.4.1, 12.4.2, 12.5.1
ETCS458.4	Apply multi-threading to implement the concept of parallel programming and process synchronization.	7,9,10	3	1, 2, 3, 4, 5, 10, 12	1.6.1, 1.7.1, 2.5(1,3), 2.6.2, 3.5.1, 3.6(1,2), 4.4(1,2), 4.5.1, 5.4(1,2), 10.4.1, 12.4.2, 12.5.1

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1	1	2	-	-	-	-	-	1	-	1
CO2	2	2	1	2	1	-	-	-	-	1	-	2
CO3	2	2	2	2	1	-	-	-	-	1	-	2
CO4	2	2	2	2	1	-	-	-	-	1	-	2

Name of the Coordinator: Ms. Deepti Gupta   Name and Signature of the Subject Teachers

Signature   1. Ms. Savita Sharma

Date of Revision of Course Outcomes   2. Ms. Ruchi Goel

     3. Dr. Sandeep Tayal

	PO1 4	PO2 4	PO3 4	PO4 3	PO5 3	PO6 2	PO7 2	PO8 2	PO9 3	PO10 3	PO11 3	PO12 3
CO1	1.6.1 1.7.1	2.5(1,2)	3.5.1	4.4(1,2) 4.5.1	-	-	-	-	-	10.4.1		12.4.2
CO2	1.6.1 1.7.1	2.5.1 2.6.2	3.5.1	4.4(1,2) 4.5.1	5.4(1,2)	-	-	-	-	10.4.1		12.4.2 12.5.1
CO3	1.6.1 1.7.1	2.5.1 2.6.2	3.5.1 3.6.2	4.4(1,2) 4.5.1	5.4(1,2)	-	-	-	-	10.4.1		12.4.2 12.5.1
CO4	1.6.1 1.7.1	2.5(1,3) 2.6.2	3.5.1 3.6(1,2)	4.4(1,2) 4.5.1	5.4(1,2)	-	-	-	--	10.4.1		12.4.2 12.5.1