FACULTY OF COMPUTER SCIENCE
Master Of Computer Application (Integrated) (Sem-IV)
In Effect from Academic Year 2023-24

Branch Name:	IMCA
Program Code:	CS201
Course Name:	Python Programming Practical
Course Code:	1CS3010402P
Pre-requisite Course:	Knowledge of some programming language like C, Java

Course Objective:

1. To be able to understand the various data structures available in Python programming language.
2. To be able to apply them in solving computational problems.
3. To be able to develop proficiency in creating applications using the Python Programming Language.
4. To understand and implement the notion of an abstract data type.
5. To learn how to build and package Python modules for reusability.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
				Theory		Practical		
Lecture	Tutorial	Practical	Credit	University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Total
-	-	3	3	-	-	25	25	50

Practical List:

1	Add Two Numbers in Python.
2	Write a Python program to find the area of a triangle.
3	Write a Python Program to Convert Celsius to Fahrenheit and vice a versa.
4	Write a Python program in python to swap two variables.
5	Write a Python program to display calendar.
6	Write a Python Program to Convert Decimal to Binary, Octal and Hexadecimal.
7	Write a Python program to make a simple calculator (using functions).
8	Write a Python program Python program to convert kilometers to miles.
9	Write a program in python to find out maximum and minimum number out of three user entered number.
10	Write a program which will allow user to enter 10 numbers and display largest odd number from them. It will display appropriate message in case if no odd number is found.
11	Write a Python program to check if the number provided by the user is an Armstrong number or not.
12	Write a Python program to display all the prime numbers in user entered range.
13	Write a Python program to check if the number provided by the user is a palindrome or not.
14	Write a Python program to perform following operation on given string input: a) Count Number of Vowel in given string b) Count Length of string (donot use len()) c) Reverse string d) Find and replace operation e) check whether string entered is a palindrome or not
15	Write a program in python to implement Fibonacci series up to user entered number. (Use recursive Function)
16	Write a Python Program to Find LCM and HCF.
17	Write a program in Python to implement read lines, write line using file handling mechanisms.

18	Write a program in python to implement Salary printing file read operation. (File format: EmployeeNo, name, deptno, basic, DA, HRA, Conveyance) should perform below operations. a) Print Salary Slip for given Employee Number b) Print Employee List for Given Department Number
19	Write a program in python to implement Railway Reservation System using file handling technique. System should perform below operations. a. Reserve a ticket for a passenger. b. List information all reservations done for today's trains.
20	Write a program in Python Program to Remove Punctuation From a String.
21	Write a program in Python to generate a Random String.
22	Write a program in Python to Merge two Dictionaries.
23	Write a program in Python to Find the Sum of Natural Numbers.
24	Write a program to print an Inverted Star Pattern.
25	Write a program to print an Inverted Star Pattern.

Text Books:

1. Allen B. Downey, ``Think Python: How to Think Like a Computer Scientist‘‘, 2nd edition, updated for Python 3, Shroff/O‘Reilly Publishers, 2016.
2. R. Nageswara Rao, “Core Python Programming”, dreamtech
3. Python Programming: A Modern Approach, Vamsi Kurama, Pearson

References Books:

1. Core Python Programming, W.Chun, Pearson.
2. Introduction to Python, Kenneth A. Lambert, Cengage
3. Learning Python, Mark Lutz, Orielly

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	To **read, write, execute** by hand simple Python programs.	2 Understanding
CLO2	To **study** simple Python programs for solving problems.	1 Remembering 2 Understanding 3 Applying
CLO3	To **decompose** a Python program into functions.	3 Applying 2 Remembering
CLO4	To **represent** compound data using Python lists, tuples, and dictionaries.	2 Understanding,
CLO5	To **read and write** data from/to files in Python Programs	1 Remembering 2 Understanding
CLO6	To **understand** Exception handling and **create** a program using it.	3 Applying

Mapping of CLOs with Pos & PSOs

Course Learning Outcomes	Program Out comes(POs)												Program Specific Outcomes(PSO)	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CLO1		M	L	M		M	H	L	M		M		H	M
CLO2	M	L			H	L		L		M	L	L	M	M
CLO3		L	M		M	M		L	M	M		L	M	L
CLO4	L		M	L	M		M		L		L		M	M
CLO5	M	L		M	L			M		L		L	M	L
CLO6	M		M		L	M			M	M		L	L	M

H:High, M:Medium, L:Low