ANTONIA MANAGERY OF TECHT	MOLOGO WE WAY NO.	National Institute of Technology Meghalaya  An Institute of National Importance												CURRICULUM		
Prograr	mme <b>r</b>	Master of Computer Applications Academic Year of Regul											ation	2024-25		
Departr	ment (	t Computer Science and Engineering Semester												III		
Course		Course Name							Credit Str	ucture			Marks Distribution			
Code		Course Name Pre					Pre-Requisite	e L	Т	Р	С	INT	MID	END	Total	
CA573		Advanced Python Programming						2	0	0	2	50	50	100	200	
									CO's	Statement				Bloom's Taxonon		
	To lea	To learn how to design object-oriented programs with Python classes.  CA573.1  Able to understand basic conce Python programming.											pts of	Underst	and	
	To lea	To learn about reading, writing and implementing other operation on files  CA573.2 Able to demonstrate working with the company of the compan												I Analyse		
		in Python. perform operations on it using To implement threading concept and multithreading on Python CA573.3 Able to implement regular exp										-	ytnon.			
Course bjective		Outcomes concept of threads for develop										ing efficient	ent Apply			
	Pytho	To design GUI Programs and implement database interaction using Python.  To know about use of regular expression and handling exceptions for							CA573.4 CA573.5	Python a	o implement exception handling in applications for error handling. to work with databases, designing			Apply		
		To know about use of regular expression and handling exceptions for writing robust python programs.							CA373.3	GUI in Python			aesigning	Create		
COs		Mapping with Program Outcomes (POs)											Мар	Mapping with PSOs		
	PO <sup>2</sup>	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	
CA573.1			1		1					1	1	1				
CA573.2		3	3	2	1				1					1		
CA573.3		3	3	2	1				1					3		
CA573.4 CA573.5		2 2	2	2	1				1					2	2	
CA573.3					'											
CASTS	2.80	2.50	2.40	2.00	1.00		SY	 ′LLABUS	1.00	1.00	1.00	1.00		1.75	2.00	
No.						Co		LLADOO					Hours		COs	
l Fu Ge Da	enerators ate and t	Content actional Programming: Arrays, Lambdas, List Comprehensions, Set and Dictionary Comprehensions, Closures and Decorators, nerators and Co-routines, Generator Expressions, Declarative Programming.  The and time in python: Date and time now, combining date and time, formatting dates and times, finding durations using "time ta", comparing two dates, sorting dates, stopping execution temporarily, knowing the time taken by a program, calendar dule.												CA573.1		
W	orking w	orking with files: Files, opening and closing a file, working with text files containing strings, knowing whether a file exists or not, rking with binary files, the "with" statement, the seek() and tell() methods, random accessing of binary files, zipping and zipping files, working with directories, running other programs from python program													CA573.2	
ex Th	kpressions	<b>cular expressions</b> : Sequence characters in regular expressions, quantifiers in regular expressions, special characters in regular ressions, using regular expression on files, retrieving information from an html file. <b>eads:</b> Difference between process and thread, types of threads, benefits of threads, creating threads, single tasking and titasking, thread synchronization, deadlock in threads, daemon threads.													CA573.3	
	-	eptions in python: Errors in a python program, compile & run-time errors, logical error, exceptions-exception handling, types of eptions, the except block, the assert statement, user-defined exceptions, logging the exceptions												CA573.4		
սր <b>G</b> ı	odating ro raphical u	rabase in python: Using SQL with python, retrieving rows from a table, inserting rows into a table, deleting rows from a table, lating rows in a table, creating database tables through python, Exception handling in databases.  Sphical user interface: Creating a GUI in python, Widget classes, Working with Fonts and Colours, working with Frames, Layout nager, Event handling.												CA573.5		
					-	Total Ho	urs						28			
	I Readin	~~											<u>I</u>	1		

## **Supplementary Readings**

1. Programming in Python 3, Mark Summerfield, Pearson Education, 2nd Ed, 2018

3. Advanced Python Programming, Dr. Gabriele Lanaro, Quan Nguyen, SakisKasampalis, Packt Publishing, 2019

- 2. Python: The Complete Reference, Martin C. Brown, McGraw Hill, 2018
- 3. Beginning Python: From Novice to Professional, Magnus Lie Hetland, Apress, 2017
- 4. Programming in Python 3, Mark Summerfield, Pearson Education, 2nd Ed, 2018