



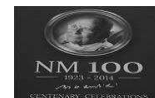
NGM COLLEGE, POLLACHI

**DEPARTMENT OF COMPUTER SCIENCE WITH
ARTIFICIAL INTELLIGENCE & MACHINE LEARNING**

VAC - Python for DataScience-Perspective of Cutting Edge Technology

Co-ordinators: Dr.S.Niraimathi & Dr.B.Azhagusundari

2023-2024



NALLAMUTHU GOUNDER MAHALINGAM COLLEGE, POLLACHI

(Affiliated to Bharathiar University, Coimbatore)

Re-Accredited by NAAC and ISO 9001:2015 Certified Institution

**DEPARTMENT OF COMPUTER SCIENCE WITH ARTIFICIAL
INTELLIGENCE & MACHINE LEARNING**

CIRCULAR

VALUE ADDED COURSE

The Department of Computer Science with Artificial Intelligence & Machine Learning (CS with AI & ML) has planned to offer a Value Added Course (VAC) on “**Python for Data Science - Perspective of Cutting Edge Technology**” for all UG Students. Those who wish to join the course can enroll their names with the Course Coordinator, Dept of CS with AI & ML on or before 20.12.2023.

Timing: 4.00 P.M – 5.00 P.M

Duration: 30 Hours

Venue: B115

Course Fee: Rs. 350

For Registration

Course Coordinator: Dr. S. Niraimathi & Dr.B.Azhagusundari

COURSE COORDINATOR

DEAN-ACADEMIC

PRINCIPAL

Syllabus

Programme Code:	B.Sc.			Programme Title:	AI and ML	
Course Code:	22VAD202					
Lecture Hrs./Week or Practical Hrs./Week		Tutorial Hrs./Sem.		Title Department Specific Value-Added Course- Python for DataScience	Credits:	2

Course Objective

- To impart knowledge in Core python,
- To inculcate the work definitions of Data structures such as Lists, Tuples, Dictionaries & Sets.
- To imbibe the knowledge of Data Science tools to prepare the studentsto be effective Python programmers.

Course Outcomes

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

CO Number	CO Statement	Knowledge Level
CO1	Understand the basics and core constructs of Python programming	K1
CO2	Express proficiency in the handling of functions, strings,lists, dictionaries, tuples and sets	K2
CO3	Apply the concepts of file system.	K3
CO4	Illustration of Object-oriented Programming conceptsin Python	K4
CO5	Realize the power of modules like CSV, NumPy, pandasin developing solutions to problems related to data science	K5

Unit	Course contents	Hours
I	Python Basics: Types - Expression and variables - Conditions and Branching- Loops-Functions	10
II	Python Data structures and object orientation: Strings operations - List and Tuple - Dictionaries and Set - Objects and Classes	10
III	Files and Introduction to Data Science: Types of Files - Creating and Reading Text Data - File Methods to Read and Write Data - Reading and Writing CSV Files - NumPy with Python – Pandas	10
Total		30

Text Book

S.NO	AUTHOR	TITLE OF THE BOOK	PUBLISHERS \ EDITION	YEAR OF PUBLICATION
1	S. Gowrishankar, A. Veena,	Introduction to Python Programming,	CRC Press Taylor and Francis Group, 1st Edition	2018

Reference Books

S.NO	AUTHOR	TITLE OF THE BOOK	PUBLISHERS \ EDITION	YEAR OF PUBLICATION
1	E.Balagurusamy	Introduction to Computing and Problem Solving Using Python	McGraw Hill Education 1st Edition	2016
2	Wesley J. Chun	Core Python Programming	, Pearson Education, 2nd Edition	2009

Web references

<https://www.tutorialspoint.com/python/index.htm>

<https://www.javatpoint.com/library-in-python>

<https://www.geeksforgeeks.org/libraries-in-python/>