

SCHOOL OF ARTIFICIAL INTELLIGENCE AND ROBOTICS

M.Sc. Artificial Intelligence and Machine Learning (2025 -27)

Schedule for Bridge Course

Sl. No.	Topic	Faculty	Day
1	Introduction to python - Installing python - Python syntax & Variables - Data Types - Type casting (input/output)	Atul Anilkumar	1
2	Control Structures - Conditional Statements (if , elif, else) - Loops (for, while, break, continue)		2
3	Functions & Scopes - Defining and calling functions - Parameter and return values - Variable scope - Lambda functions		3
4	Data Structures – Lists & Tuples - Creating and accessing lists. - List operations and slicing - Tuples: immutability and use cases		4
5	Data Structures – Dictionaries & Sets - Dictionary operations - Set operations - Nested data structures		5
6	String Manipulations - String methods and formatting - Regular expressions intro		6

7	File handling - Reading/writing text and CSV files	Atul Anilkumar	7
8	Modules & Packages - Importing built-in modules - Installing external packages with pip - Creating custom module		8
9	NumPy Basics - Arrays vs Lists - Array creation and operations - Indexing, Slicing and reshaping		9
10	Pandas Basics - DataFrames and Series - Reading from CSV, Excel - Filtering, sorting and aggregation		10
11	Data Visualization - Matplotlib and seaborn		11
12	Object-Oriented Programming (OOP) - Classes objects - Inheritance, encapsulation, polymorphism		12