

Program Schedule for the Workshop

Instructors

1. Mr. M. Sudhakar., M.Tech, (Ph.D.), Research Associate, VIT University, Chennai.
2. Mr. R. John Wesley., M.Tech, (Ph.D.), Research Associate, VIT University, Chennai.

Day 1: 03-10-2018

Time	Instructor	Topic	Sub Topics include:
09:00 AM – 11:15 AM	1	Python Overview	Introduction, History of Python, Features of Python, Applications, Setting up the Environment Variables, First Python Program, Modes of Execution, IDEs, Compiler Vs Interpreter, Comparison with “C” and “Java”
11:15 AM – 11:30 AM	(Tea Break)		
11:30 AM – 01:00 PM	1	I/O functions	Identifiers, Reserved words, Indentation, Comments, Input/ Output functions, Data types, Variables and assignments, Operators, Type Coercion.
01:00 PM – 02:00 PM	(Lunch Break)		
02:00 PM – 03:15 PM	1	Indentation with control structures	Decision Making, Looping Constructs, Loop termination Statements: break, continue, pass, Example Programs
03:15 PM – 03:25 PM	(Tea Break)		
03:25 PM – 04:30 PM	1	Strings in Python	Strings: Immutability, String Slices, Searching, Looping and Counting, String Methods, The in Operator, String Comparison.
04:30 PM – 05:00 PM	Summary, Queries & Discussion		

Day 2: 04-10-2018

Time	Instructor	Topic	Sub Topics include:
09:00 AM – 11:15 AM	1	Lists	Lists: Mutability, Traversing, List Operations, List Slices, List Methods, Map, Filter and Reduce, Deleting Elements, Aliasing, List arguments, Example Programs.
11:15 AM – 11:30 AM	(Tea Break)		
11:30 AM – 01:00 PM	2	Tuples and Sets	Tuples: Immutability, Tuple assignments, Accessing Values, Updating Tuples, Delete Tuple elements, Tuple Operations, Built in Tuple Functions. Sets and Set operations, frozen sets.
01:00 PM – 02:00 PM	(Lunch Break)		
02:00 PM – 03:15 PM	2	Dictionaries	Dictionaries: Accessing values in a Dictionary, Updating a Dictionary, Delete Dictionary Elements, Built in Dictionary Functions and Methods.
03:15 PM – 03:25 PM	(Tea Break)		
03:25 PM – 04:30 PM	2	Functions	Functions: Defining Functions, Calling Functions, Passing Arguments, Keyword Arguments, Default Arguments, Variable-length arguments, Anonymous Functions, Fruitful Functions (Function Returning Values), Scope of the Variables in a Function - Global and Local Variables.
04:30 PM – 05:00 PM	Summary, Queries & Discussion		

Day 3: 05-10-2018

Time	Instructor	Topic	Sub Topics include:
09:00 AM – 11:15 AM	2	Modular Programming	Modules: Creating, Importing, using from statement, name spacing, Examples; Date and Time Module, Calendar Module, Math Module. Installing User defined Modules using PIP.
11:15 AM – 11:30 AM	(Tea Break)		
11:30 AM – 01:00 PM	2	File I/O	File modes and File handling Methods.
01:00 PM – 02:00 PM	(Lunch Break)		
02:00 PM – 03:15 PM	2	Regular Expressions	String Patterns, re modules, match function, search function, and replace functions, modifiers and special characters.
03:15 PM – 03:25 PM	(Tea Break)		
03:25 PM – 04:30 PM	1	Tour of Other Packages	GUI Programming: Tkinter Widgets, Standard Attributes, Dimensions. Example programs of Creating Graphical User Interfaces i.e. Buttons, Text boxes, Text fields etc.
04:30 PM – 05:00 PM	Summary, Queries & Discussion		

Day 4: 06-10-2018

Time	Instructor	Topic	Sub Topics include:
09:00 AM – 11:15 AM	2	Graphics with Python	Drawing lines, arcs, curves, patterns and other graphics using turtle module.
11:15 AM – 11:30 AM	(Tea Break)		
11:30 AM – 01:00 PM	1	Concept of Classes	Creating class, object and methods, 'self-variable', calling methods and passing arguments and exceptions
01:00 PM – 02:00 PM	(Lunch Break)		
02:00 PM – 03:15 PM	1	Inheritance	Constructors, Difference between methods and Constructors, Inheritance, Overriding and Data hiding
03:15 PM – 03:25 PM	(Tea Break)		
03:25 PM – 04:30 PM	1	Testing	Why testing is required ?, Basic concepts of testing, Unit testing in Python, Writing Test cases, Running Tests
04:30 PM – 05:00 PM	Summary, Queries & Discussion		