

STATE INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Computer Engineering

LESSON PLAN

Subject Name: IT Workshop (Python)

Subject Code: B23-CSE-207

Year:-2nd

Semester: 3rd

Teacher Name: Dr. Rama Rani, Mr. Ashish Kharb

Lecture No	Unit No	Topic	COs Covered
L 1	Unit-I	Introduction to Python, Features of Python	CO1
L 2		Execution modes: interactive mode and script mode, Python character set	
L 3		use of indentation, Python tokens(keyword, identifier, literal, operator, punctuator)	
L 4		variables, use of comments, Knowledge of data types: Number(Integer, Floating point, Complex)	
L 5		Errors: syntax errors, logical errors, and run-time errors	
L 6		Revision	
L 7	Unit-II	Precedence of Operators, Arithmetic operators	CO2
L 8		relational operators, logical operators, assignment operators, augmented assignment operators	
L 9		identity operators (is, is not), Expression, evaluation of an expression	
L 10		type-conversion, Flow of Control	
L 11		Conditional statements, Iterative Statements	
L 12		Strings: Introduction, string operations concatenation	
L 13		repetition, membership and slicing	
L 14		traversing a string using loops	
L 15		built-in functions/methods-len(), capitalize(), title(), lower(), upper()	
L 16		count(), find(), index(), endswith(), startswith()	
L 17		isalnum(), isalpha(), isdigit()	
L 18		islower(), isupper(), isspace()	
L 19		,lstrip(), rstrip(), strip()	

L20		replace(), join(), partition(), split()	
L21		Revision	
L22		Array: Access the Elements of an Array, Length of an Array	
L23		Adding Array Elements, Removing Array Elements	
L24	Unit-III	Adds and remove the element at the specified position	CO3
L25		Lists, Tuples, Dictionary: introduction	
L26		indexing, list operations, traversing a list using loops	
L27		built-in functions/methods–len(), list()	
L28		append(), extend(), insert(), count()	
L29		index(), remove(), pop(),min(), max(), sum()	
L30		Introduction to Python modules: Importing module using ‘import ’ and using from statement	
L31		importing math module (pi, e, sqrt(), ceil(), floor(),pow(), fabs(), sin(), cos(), tan())	
L32		random module (random(), randint(), randrange())	
L33		statistics module (mean(), median(), mode())	
L34		Functions and its types (Built-in Functions, Functions defined in Module, User Defined Functions)	
L35		arguments, default parameters, positional parameters	
L36		Function Returning Value(s), Recursion, Scope of a Variable	
L 37		Revision	
L 38	Unit-IV	Introduction to files, types of files (Text file, Binary file, CSV file)	CO4
L 39		Text file: opening a text file	
L40		file open modes (r, r+, w, w+, a, a+ etc), closing a text file	
L 41		opening a file using with clause	
L 42		writing/appending data to a text file using write() and writelines()	
L 43		writing/appending data to a text file using write() and writelines()	

L 44		reading from a text file using read(), readline() and readlines	
L45		Revision	

Text Books:

1. The Complete Reference Python By Martin C Brown Publication by McGraw Hill.
2. Let us Python By Yashwant Kanetkar

Web resources:

1. <https://www.geeksforgeeks.org/python/python-programming-language-tutorial/>
2. <https://www.tutorialspoint.com/python/index.htm>