SRM UNIVERSITY
FACULTY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
COURSE PLAN – EVEN SEMESTER (2017 -2018)

Course Name/Code: PYTHON PROGRAMMING / 15IT322E
Staff Names: Dr. Thenmozhi, Dr.Maragatham, Ms.Sornalakshmi, Ms.Kirthiga Devi
L/T/P/C : 2/2/0/0
Course : B. Tech **Semester/Year :** VI/III

PURPOSE

Python has evolved into a powerful high level language that implements a deliberately clear syntax and a highly coherent programming model. Python is more preferred for its features of portability, productivity and extensive support libraries and seamless integration with components coded in any other programming language. As an information technology undergraduate student, knowledge of Python is highly required for scientific computing and efficient software development

INSTRUCTIONAL OBJECTIVES

IO1. Appreciate the basic and advanced features of core language built ins
IO2. Handle and control system/OS level features
IO3. Communicate using sockets, write client and server side scripts
IO4. Design and implement basic applications with database connectivity

STUDENT OUTCOMES:

i. An ability to use current techniques, skills, and tools necessary for computing practice.
- i1. An ability to understand current techniques and Skills
- i2. An ability to understand tools necessary for computing practice

c. An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- c1. An ability to integrate prior knowledge into a new problem
- c2. An ability to recognize practical significance of design outcome/answer

Sessions	Description of Topic (Theory)	Contact Hours	IOs	SOs	Reference
	UNIT I: CORE PYTHON : BASICS	**6**			
1	Introduction to Python, Python Interpreter and its working, Syntax and Semantics	1	1	i1	1
2	Data Types, Assignments and Expressions, Control Flow Statements	2	1	i1	1
3	Sequences and Dictionaries	2	1	i1	1
4	Functions and lambda expressions	1	1	i1	1
	UNIT II: CORE PYTHON : ADVANCED FEATURES	**6**			
5	Iterations and Comprehensions	1	1	i1	1
6	Handling text files	1	1	i1	1,2
7	Modules, Classes and OOP	2	1	i1	1

8	Exception Handling	1	1	i1	1
9	Strings and Regular Expressions	1	1	i1	1,2
	UNIT III: SYSTEM PROGRAMING	**7**			
10	System tools : OS and System(sys) modules	2	2	c1	2
11	Directory Traversal tools	2	2	c1	2
12	Parallel System tools : threading and queue, Program Exits	3	2	c1	2
	UNIT IV: NETWORK AND WEB PROGRAMMING	**5**			
14	Socket Programming : Handling Multiple Clients	1	3	c2	2
15	Client side scripting, urllib	1	3	c2	2
16	Server Side Scripting : CGI Scripts with User Interaction, Passing Parameters	3	3	c2	2
	UNIT V: GUI PROGRAMMING AND DATABASE CONNECTIVITY	**6**			
17	Introduction to tkinter, Top Level Windows, Dialogs, Message and Entry	2	4	i2	2
18	Event Handling, Menus, Listboxes and Scrollbars, Text	2	4	i2	2
19	SQL Database interfaces with sqlite3 : Basic operations and table load scripts	2	4	i2	2
TOTAL CONTACT HOURS		**30**			
TUTORIAL HOURS		**30**			

Sl. No.	**LEARNING RESOURCES**
1.	Mark Lutz ,"Learning Python", O Reily, 4th Edition, 2009, ISBN: 978-0-596-15806-4
2.	Mark Lutz ,"Programming Python ", O Reily, 4th Edition, 2010, ISBN 9780596158118
3.	Tim Hall and J-P Stacey ,"Python 3 for Absolute Beginners" , 2009, SBN:9781430216322
4.	Magnus Lie Hetland , "Beginning Python: From Novice to Professional", 2nd Edition, 2009, ISBN:9781590599822