

PYTHON APPLICATION PROGRAMMING [As per Choice Based Credit System (CBCS) scheme] (Effective from the academic year 2016 -2017) SEMESTER – VI			
Subject Code	15CS664	IA Marks	20
Number of Lecture Hours/Week	3	Exam Marks	80
Total Number of Lecture Hours	40	Exam Hours	03
CREDITS – 03			
Course objectives: This course will enable students to <ul style="list-style-type: none"> • Learn Syntax and Semantics and create Functions in Python. • Handle Strings and Files in Python. • Understand Lists, Dictionaries and Regular expressions in Python. • Implement Object Oriented Programming concepts in Python • Build Web Services and introduction to Network and Database Programming in Python. 			
Module – 1			Teaching Hours
Why should you learn to write programs, Variables, expressions and statements, Conditional execution, Functions			8 Hours
Module – 2			
Iteration, Strings, Files			8 Hours
Module – 3			
Lists, Dictionaries, Tuples, Regular Expressions			8 Hours
Module – 4			
Classes and objects, Classes and functions, Classes and methods			8 Hours
Module – 5			
Networked programs, Using Web Services, Using databases and SQL			8 Hours
Course outcomes: The students should be able to: <ul style="list-style-type: none"> • Examine Python syntax and semantics and be fluent in the use of Python flow control and functions. • Demonstrate proficiency in handling Strings and File Systems. • Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions. • Interpret the concepts of Object-Oriented Programming as used in Python. • Implement exemplary applications related to Network Programming, Web Services and Databases in Python. 			
Question paper pattern: The question paper will have TEN questions. There will be TWO questions from each module. Each question will have questions covering all the topics under a module. The students will have to answer FIVE full questions, selecting ONE full question from each module.			
Text Books:			
1. Charles R. Severance, “Python for Everybody: Exploring Data Using Python 3”, 1 st Edition, CreateSpace Independent Publishing Platform, 2016. (http://do1.dr-chuck.com/pythonlearn/EN_us/pythonlearn.pdf) (Chapters 1 – 13, 15) 2. Allen B. Downey, "Think Python: How to Think Like a Computer Scientist", 2 nd Edition, Green Tea Press, 2015.			

(<http://greenteapress.com/thinkpython2/thinkpython2.pdf>) (Chapters 15, 16, 17)
(Download pdf files from the above links)

Reference Books:

1. Charles Dierbach, "Introduction to Computer Science Using Python", 1st Edition, Wiley India Pvt Ltd. ISBN-13: 978-8126556014
2. Mark Lutz, "Programming Python", 4th Edition, O'Reilly Media, 2011. ISBN-13: 978-9350232873
3. Wesley J Chun, "Core Python Applications Programming", 3rd Edition, Pearson Education India, 2015. ISBN-13: 978-9332555365
4. Roberto Tamassia, Michael H Goldwasser, Michael T Goodrich, "Data Structures and Algorithms in Python", 1st Edition, Wiley India Pvt Ltd, 2016. ISBN-13: 978-8126562176
5. Reema Thareja, "Python Programming using problem solving approach", Oxford university press, 2017