

PYTHON APPLICATION PROGRAMMING (OPEN ELECTIVE) (Effective from the academic year 2018 -2019) SEMESTER – VI			
Course Code	18CS752	IA Marks	40
Number of Lecture Hours/Week	3:0:0	Exam Marks	60
Total Number of Lecture Hours	40	Exam Hours	03
CREDITS – 03			
Course Learning Objectives: This course (18CS752) 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 Textbook 1: Chapters 1 – 4 RBT: L1, L2, L3			08
Module – 2			
Iteration, Strings, Files Textbook 1: Chapters 5– 7 RBT: L1, L2, L3			08
Module – 3			
Lists, Dictionaries, Tuples, Regular Expressions Textbook 1: Chapters 8 - 11 RBT: L1, L2, L3			08
Module – 4			
Classes and objects, Classes and functions, Classes and methods Textbook 2: Chapters 15 – 17 RBT: L1, L2, L3			08
Module – 5			
Networked programs, Using Web Services, Using databases and SQL Textbook 1: Chapters 12– 13, 15 RBT: L1, L2, L3			08
Course Outcomes: After studying this course, students will 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:			
<ul style="list-style-type: none"> • The question paper will have ten questions. • Each full Question consisting of 20 marks • There will be 2 full questions (with a maximum of four sub questions) from each module. 			

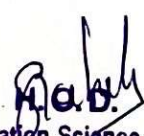
- Each full question will have sub questions covering all the topics under a module.
- The students will have to answer 5 full questions, selecting one full question from each module.

Text Books:

1. Charles R. Severance, **"Python for Everybody: Exploring Data Using Python 3"**, 1st Edition, CreateSpace Independent Publishing Platform, 2016. (http://do1.dr-chuck.com/pythonlearn/EN_us/pythonlearn.pdf)
2. Allen B. Downey, **"Think Python: How to Think Like a Computer Scientist"**, 2nd Edition, Green Tea Press, 2015. (<http://greenteapress.com/thinkpython2/thinkpython2.pdf>) (Download pdf files from the above links)

Reference Books:

1. Charles Dierbach, **"Introduction to Computer Science Using Python"**, 1st Edition, Wiley India Pvt Ltd, 2015. ISBN-13: 978-8126556014
2. Gowrishankar S, Veena A, **"Introduction to Python Programming"**, 1st Edition, CRC Press/Taylor & Francis, 2018. ISBN-13: 978-0815394372
3. Mark Lutz, **"Programming Python"**, 4th Edition, O'Reilly Media, 2011. ISBN-13: 978-9350232873
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. ISBN-13: 978-0199480173


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