

| PYTHON APPLICATION PROGRAMMING [As per Choice Based Credit System (CBCS) scheme] (Effective from the academic year 2017 -2018) SEMESTER – VI | | | |
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| Subject Code | 17CS664 | IA Marks | 40 |
| Number of Lecture Hours/Week | 3 | Exam Marks | 60 |
| Total Number of Lecture Hours | 40 | Exam Hours | 03 |
| CREDITS – 03 | | | |
| 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"> Understand Python syntax and semantics and be fluent in the use of Python flow control and functions. Demonstrate proficiency in handling Strings and File Systems. Implement 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", 1 st Edition, Wiley India Pvt Ltd. ISBN-13: 978-8126556014 2. Mark Lutz, “Programming Python”, 4 th 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. ReemaThareja, “Python Programming using problem solving approach”, Oxford university press, 2017