L. D. College of Engineering. Ahmedabad
COMPUTER ENGINEERING Department
PYTHON PROGRAMMING

Syllabus Mapping to Books *NOTE : Use This mapping as guideline. Other books and resources can be used to prepare subject.*

Sr	Unit / Topic Name	Syllabus Coverage from Reference Books and web resources
1	**Introduction to Python**	Book 1 : Chapter 2
1.1	The basic elements of python	https://www.astro.ufl.edu/~warner/prog/python.html
1.2	Branching Programs	John v guttag topic 2.2
1.3	Control Structures	Book 2: Chapter 6 https://www.youtube.com/watch?v=kIPpTYjareA
1.4	Strings and Input	Book 2: Chapter 5 and Chapter 8
1.5	Iteration	John v guttag topic 2.4
2	**Functions, Scoping and Abstraction**	Book 1 : Chapter 4
2.1	Functions and scoping	John v guttag topic 4.1
2.2	Specifications	John v guttag topic 4.2
2.3	Recursion	Book 2: Chapter 9
2.4	Global variables	Book 2: Chapter 9
2.5	Modules	Bucky's room
2.6	Files	Book2: Chapter 17
2.7	System Functions and Parameters	
3	**Structured Types, Mutability and Higher-Order Functions**	**Book 1 : Chapter 5**
3.1	Strings, Tuples, Lists and Dictionaries	Bucky's room
3.2	Lists and Mutability	Bucky's room
3.3	Functions as Objects	Book 2: Chapter 9 http://interactivepython.org/courselib/static/thinkcspy/Lists/ListsareMutable.html
4	**Testing, Debugging, Exceptions and Assertions**	**Book 1 : Chapter 6**
4.1	Types of testing – Black-box and Glass-box	John v guttag 6.1
4.2	Debugging	John v guttag 6.2
4.3	Handling Exceptions	**Book 2: Chapter 16** http://www.pythonforbeginners.com/error-handling/exception-handling-in-python
4.4	Assertions	John v guttag
5	**Classes and Object-Oriented Programming**	**Book 1 : Chapter 8 Book 2: Chapter 12,13,14,15**
6	**Simple Algorithms and Data structures**	**Book 1: Chapter 10**
6.1	Search Algorithms	Geeks for geeks
6.2	Sorting Algorithms	Geeks for geeks
6.3	Hash Tables	Technical publications
7	**Advance Topics I**	
7.1	Regular Expressions – REs and Python	**Book 2: Chapter 18**
7.2	Plotting using PyLab	**Book 1: Chapter 11**
7.3	Networking and Multithreaded Programming – Sockets, Threads and Processes, Chat Application	**Book 2: Chapter 23** https://en.wikibooks.org/wiki/Python_Programming/Threading https://www.python-course.eu/threads.php https://www.tutorialspoint.com/python/python_multithreading.htm
8	**Advance Topics II**	
8.1	Security – Encryption and Decryption, Classical Cyphers	https://pythonprogramming.net/encryption-and-decryption-in-python-code-example-with-explanation/
8.2	Graphics and GUI Programming – Drawing using Turtle, Tkinter and Python, Other GUIs	**Book 2: Chapter 22** Web resources (Google)

Books in Syllabus:

SrNo	Book Title
1	John V Guttag. "Introduction to Computation and Programming Using Python", Prentice Hall of India
2	R. Nageswara Rao, "Core Python Programming", Dreamtech

Important Links Related to Python Programming:

https://github.com/in28minutes/python-tutorial-for-beginners

https://github.com/PythonProgramming

https://opensource.com/article/18/9/python-programming-book-list

https://github.com/satwikkansal/wtfpython#-well-something-is-fishy

https://opensource.com/article/18/9/python-programming-book-list