

BA Topics	Subtopics	Duration	
		Weekday	Weekend
<i>Basic Python</i>			
1 Introduction	1.1 Introduction to Python	1st class	1st class
	1.2 Origin of Python		
	1.3 Key features in Python		
	1.4 Areas of applications of Python		
	1.5 Installation & Environment setup		
	1.6 "Hello World" program		
	1.7 Python programming syntaxes		
2 Variables & Operators	2.1 Variable properties	2nd class	
	2.2 Scope of variable		
	2.3 Operators in Python		
	2.4 Operator precedence		
	2.5 Basic I/O using <i>input()</i> and <i>print()</i>		
3 Control-flow statement	3.1 Decision making using <i>if-elif-else</i>	3rd class	2nd class
	3.2 Iteration using for loop and <i>range()</i>		
	3.3 <i>while</i> loop and <i>while-else</i>		
	3.4 <i>break, continue</i> and <i>pass</i>		
4 Numbers	4.1 integers and float	4th class	
	4.2 complex numbers		
	4.3 random numbers		
	4.4 <i>math</i> library		
5 Strings	5.1 String overview & properties	5th class	3rd class
	5.2 String formatting		
	5.3 String functions		
6 Lists	6.1 List overview & properties	6th class	
	6.2 List functions		
	6.3 List comprehension		
7 Tuples	7.1 Tuple overview & properties	7th class	
	7.2 Tuple functions		
8 Dictionary	8.1 Dictionary overview & properties	8th class	4th class
	8.2 Dictionary functions		
	8.3 Dictionary comprehensions		
9 Sets	9.1 Set overview & properties	9th class	
	9.2 Set functions		
10 Functions & Modules	10.1 Functions overview	10th class	5th class
	10.2 <i>lambda</i> function		
	10.3 Recursive functions		

	10.4 <i>map, filter and reduce</i>		
	10.5 Modules and packages		
<i>Advance Python</i>			
11 Exception handling	11.1 Exceptions & Errors	11th class	
	11.2 Handling exceptions using <i>try-except-else-finally</i>		
	11.3 Causing exceptions using raise-assert		
	11.4 Making your own exception object		
	11.5 Python exception hierarchy		
	11.5 Logging & Debugging		
12 File I/O	12.1 Working with files <i>open(), close(), closed, with, access modes</i>	12th class	6th class
	12.2 Working with file cursor <i>seek(), tell()</i>		
	12.3 Reading text files <i>readable(), read(), readline(), readlines()</i>		
	12.4 Writing into text files <i>writable(), write(), writelines()</i>		
	12.5 Working with CSV files <i>reader(), writer(), writerow(), writerows()</i>		
13 XML & JSON parsing	13.1 Working with xml files	13th class	
	13.2 etree parsing		
	13.3 XML to CSV convertor		
	13.4 <i>Web scraping of sitemap.xml</i>		
	13.5 Working with JSON files		
14 Database connectivity	14.1 Understanding database i/o	14th class	
	14.2 Working with sqlite3 database		
	14.3 Working with MySQL database		
	14.4 Working with MongoDB		
15 Regular expressions	15.1 Pattern matching	15th class	
	15.2 Understanding meta characters		
	15.3 <i>re</i> functions and flags		
16 Standard libraries	16.1 Operating System Interface	16th class	8th class
	16.2 Command Line Arguments		
	16.3 Error Output Redirection and Program Termination		
	16.4 Dates and Times		
	16.5 Data Compression		
	16.6 Performance Measurement		
	16.7 Output Formatting		

17 Classes & Objects	17.1 Object oriented terminologies	17th class	9th class
	17.2 Python Scopes and Namespaces		
	17.3 Static and Instance Variables		
	17.4 Inheritance and Overriding		
	17.5 Overloading	18th class	
	17.6 Data abstraction and hiding		
	17.7 Iterators, Generators & Decorators		
	17.8 Multi-threading and multi-processing		
	17.9 Locks in thread		
18 Socket programming	18.1 Overview of socket programming	19th class	10th class
	18.2 Client-server architecture		
	18.3 Message sharing using client-server		
19 Email automation	19.1 Working with SMTP object	20th class	
	19.2 Email sending automation		
20 GUI programming	20.1 Using tkinter library for app GUI	21th class	
	20.2 App 1: <i>YouTube Downloader</i>		
	20.3 App 2: <i>Data convertors</i>		
	20.4 App 3: <i>File zip/unzip</i>	22th class	
	20.5 App 4: <i>Bulk e-mailer</i>		
	20.6 App 5: <i>Chat application</i>		