

**ST.ANN'S COLLEGE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**LESSON PLAN**

SUBJECT: Python Programming

Academic Year: 2017-18

Name: K.SUBBA RAO

Year&Sem/Section: II-I/'B'

No. of Lectures per week : 4+1\* (Tutorial)

Unit	Topics	No. of Periods Required
I	<b>Introduction:</b> History of Python, Need of Python Programming, Applications Basics of Python Programming Using the REPL(Shell), Running Python Scripts, Variables, Assignment, Keywords, Input-Output, Indentation.	6
II	<b>Types, Operators and Expressions:</b> Types - Integers, Strings, Booleans; Operators- Arithmetic Operators, Comparison (Relational) Operators, Assignment Operators, Logical Operators, Bitwise Operators, Membership Operators, Identity Operators, Expressions and order of evaluations Control Flow- if, if-elif-else, for, while, break, continue, pass	5
III	<b>Data Structures</b> Lists - Operations, Slicing, Methods; Tuples, Sets, Dictionaries, Sequences.Comprehensions.	6
IV	<b>Functions</b> - Defining Functions, Calling Functions, Passing Arguments, Keyword Arguments, Default Arguments, Variable-length arguments, Anonymous Functions, Fruitful Functions(Function Returning Values), Scope of the Variables in a Function - Global and Local Variables. <b>Modules:</b> Creating modules, import statement, from. Import statement, name spacing, <b>Python packages</b> , Introduction to PIP, Installing Packages via PIP, Using Python Packages	8
V	<b>Object Oriented Programming OOP in Python:</b> Classes, 'self variable', Methods, Constructor Method, Inheritance, Overriding Methods, Datahiding, <b>Error and Exceptions:</b> Difference between an error and Exception, Handling Exception, try except block, Raising Exceptions, User Defined Exceptions	9
VI	<b>Brief Tour of the Standard Library</b> - Operating System Interface - String Pattern Matching, Mathematics, Internet Access, Dates and Times, Data Compression, Multithreading, GUI Programming, Turtle Graphics <b>Testing:</b> Why testing is required ?, Basic concepts of testing, Unit testing in Python, Writing Test cases, Running Tests.	11
<b>TOTAL</b>		44

**TOTAL NO. OF CLASSES REQUIRED: 49**

**TEXT BOOKS**

1. Python Programming: A Modern Approach, Vamsi Kurama, Pearson
2. Learning Python, Mark Lutz, Orielly

**Reference Books:**

1. Think Python, Allen Downey, Green Tea Press
2. Core Python Programming, W.Chun, Pearson.
3. Introduction to Python, Kenneth A. Lambert, Cengage

**Signature of the Faculty**

**Signature of HOD**

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