Bridge Course

Python Programming Language

Class: SE – IT (A&B)   **Date: 20-07-2017**

Gap Identification:

- Subjects like Data Structures from academics providing only core implementation of Abstract Data Types(ADT's)
- Python will enhance scope to implement the ADT's easily using inbuilt plugins designed with number of methods
- To design GUI based applications with database connectivity, there is no scope in academic courses. So the same can be easily done using python programming language
- Scope to learn alternate object oriented programming language to Java Programming language included in academic syllabus

Course Description:

This is an introductory and semi advanced course designed for any student interested in using computation to enhance their problem solving abilities. No prior experience in programming is necessary actually. Students will use their problem solving abilities to implement programs in Python.

Prerequisites:

No explicit prerequisite course work is required, but students are expected to have an experience to use personal computer.

Course Objectives:

1. Develop a basic understanding of programming and the Python programming language.
2. See the value of programming in a variety of different disciplines—especially as it relates to our other college courses.
3. Appreciate the value of experimentation.
4. Be comfortable with the fact that there is more than one right solution to solve a problem.

Course Outcomes:

Students will be able to,
1. Confident to learn any programming languages
2. Enhance problem solving ability
3. Use object oriented paradigms to design and develop applications
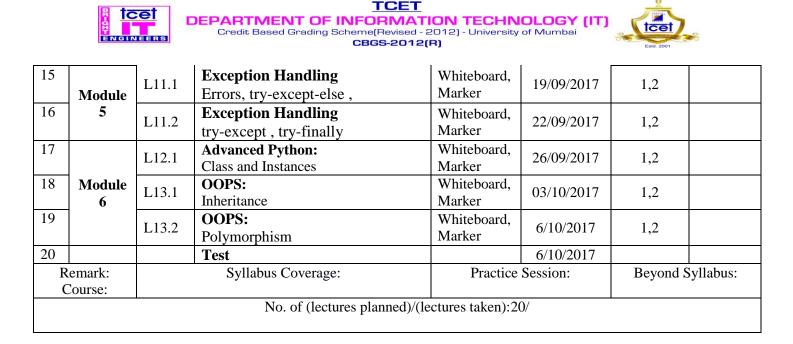4. Enhance their learning in advanced python

TCET/FRM/IP-02/09   Revision: A

Basic Skill based Bridge Course (BBC) Plan

Python Programming Language

Sr. No	Module No.	Lesson No.	Topics Planned (Technology to be used)	Teaching Aids Required	Planned / Completion Date	Resource Book Reference	Remarks
1	Module 1	L 3.1	**Introduction** History , Features, Setting up Path, Working with Python	Whiteboard, Marker	25/07/2017	1,2	
2		L 3.2	Basic Syntax, variable and Data Types , Operator	Whiteboard, Marker	28/07/2017	1,2	
3	Module 2	L 4.1	**Conditional Statements** IF , IF-else	Whiteboard, Marker	01/08/2017	1,2	
4		L4.2	**Conditional Statements** Nested if –else	Whiteboard, Marker	04/08/2017	1,2	
5		L5.1	**Looping and Control Statements** For , While	Whiteboard, Marker	08/08/2017	1,2	
6		L5.2	**Looping and Control Statements** Range, Break , Continue , Pass	Whiteboard, Marker	08/08/2017	1,2	
7	Module 3	L5.1	**Data Structures** String ,Lists	Whiteboard, Marker	11/08/2017	1,2	
8		L6.1	**ta Structures** Tuple, Set, Dictionary	Whiteboard, Marker	18/08/2017	1,2	
9	Module 4	L8.1	**Function** Defining a function, Calling a function, Types of functions,	Whiteboard, Marker	01/09/2017	1,2	
10		L8.2	**Function** Function Arguments, Global and local variables,Recursion		05/09/2017	1,2	
11	Module 4	L8.3	**Module & Regular Expression** Importing module , math module,	Whiteboard, Marker	05/09/2017	1,2	
12		L9.1	**Module & Regular Expression** random Module, packages, Composition	Whiteboard, Marker	08/09/2017	1,2	
13		L10.1	**Input –Output** Printing on screen, Reading data from keyboard,	Whiteboard, Marker	12/09/2017	1,2	
14	Module 4	L10.2	**Input –Output** opening and closing file reading and writing files , Functions	Whiteboard, Marker	15/09/2017	1,2	

15	**Module 5**	L11.1	**Exception Handling** Errors, try-except-else ,	Whiteboard, Marker	19/09/2017	1,2	
16		L11.2	**Exception Handling** try-except , try-finally	Whiteboard, Marker	22/09/2017	1,2	
17		L12.1	**Advanced Python:** Class and Instances	Whiteboard, Marker	26/09/2017	1,2	
18	**Module 6**	L13.1	**OOPS:** Inheritance	Whiteboard, Marker	03/10/2017	1,2	
19		L13.2	**OOPS:** Polymorphism	Whiteboard, Marker	6/10/2017	1,2	
20			**Test**		6/10/2017		
Remark: Course:		Syllabus Coverage:		Practice Session:		Beyond Syllabus:	
No. of (lectures planned)/(lectures taken):20/							

Note:

1. Plan date and completion date should be in compliance.

2. Course are required to be taught with emphasis Text books, digital references etc.

Reference Books:

1. Head First Programming ,Apress Publications

2.Head First Python ,Apress Publications

E-Books:http://www.diveintopython3.net

Digital Reference:

1. http://www.pythontutor.com
2. http://www.learnpython.org

Name & Signature of Faculty   Signature of HOD   Signature of Principal/Dean(Academic)

Date: Date: Date:

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Credit Based Grading Scheme[Revised - 2012] - University of Mumbai
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Estd. 2001