

3rd Semester MBA Business Analytics Electives

Introduction to Python, Data and Control Systems			
Course Code	22MBABA303	CIE Marks	50
Teaching Hours/Week (L:P:SDA)	3:0:1	SEE Marks	50
Total Hours of Pedagogy	50	Total Marks	100
Credits	04	Exam Hours	03
Course Learning objectives: <ul style="list-style-type: none"> To understand python programming To develop Python programs with conditionals and loops. To define Python functions and call them. To use Python data structures – lists, tuples, dictionaries and do with input / output with files in Python. 			
Module-1 Introduction to Python Program 8Hrs			
Introduction to Python Program: Creativity and motivation, Computer hardware architecture, understanding programming, word and sentence, Conversing with Python, Terminology, Debugging, The learning journey.			
Module-2 8Hrs			
Variables, Expressions and Statements: Python installation data types: Int, float, Boolean, string, and list; variables, expressions, statements, precedence of operators, comments; modules, function and its use, flow of execution, parameters and arguments.			
Module-3 8Hrs			
Control Flow, Loops and Conditionals: Boolean values and operators, conditional (if), alternative (if-else), chained conditional (if-elif-else); Iteration: while, for, break, continue.			
Module-4 8Hrs			
Functions, Arrays and Fruitful functions: return values, parameters, local and global scope, function composition, recursion; Strings: string slices, immutability, string functions and methods, string module; Python arrays, Access the Elements of an Array, array methods.			
Module-5 10Hrs			
Lists, Tuples, Dictionaries: list operations, list slices, list methods, list loop, mutability, aliasing, cloning lists, list parameters, list comprehension; Tuples: tuple assignment, tuple as return value, tuple comprehension; Dictionaries: operations and methods, comprehension;			
Module-6 8 Hrs			
Files, Exception, Modules, Packages : text files, reading and writing files, command line arguments, errors and exceptions, handling exceptions, modules (datetime, time, OS , calendar, math module), Explore packages.			

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing marks for the CIE is 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. A student shall be deemed to have satisfied the academic requirements (passed) and earned the credits allotted to each course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

There shall be a maximum of 50 CIE Marks. A candidate shall obtain not less than 50% of the maximum marks prescribed for the CIE.

CIE Marks shall be based on:

- a) Tests (for 25Marks) and
- b) Assignments, presentations, Quiz, Simulation, Experimentation, Mini project, oral examination, field work and class participation etc., (for 25 Marks) conducted in the respective course. Course instructors are given autonomy in choosing a few of the above based on the subject relevance and should maintain necessary supporting documents for same.

Semester End Examination:

The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.

- The question paper will have 8 full questions carrying equal marks.
- Each full question is for 20 marks with 3 sub questions.
- Each full question will have sub question covering all the topics.
- The students will have to answer five full questions; selecting four full questions from question number one to seven in the pattern of 3, 7 & 10 Marks and question number eight is compulsory.

Suggested Learning Resources:Books

1. ``Think Python: How to Think like a Computer Scientist``, Allen B. Downey, 2nd edition.
2. Updated for Python 3, Shroff/O'Reilly Publishers, 2016.
3. "Core Python Programming", R.Nageswara Rao dream tech.
4. Python Programming: A Modern Approach, Vamsi Kurama, Pearson.
5. Core Python Programming, W.Chun, Pearson.
6. Introduction to Python, Kenneth A. Lambert, Cengage
7. Learning Python, Mark Lutz, Orielly

Web links and Video Lectures (e-Resources):

- www.Programiz.com.
- www.CodeCademy.com
- www.FreeCodeCamp.com

Note: The aforesaid links and study materials are suggestive in nature, they may be used with due regards to copy rights, patenting and other IPR rules.

Skill Development Activities Suggested to:

- Practice on Python software to become Expertise in data visualization process.
- Access to web-frameworks and get motivated to work on analytical tools
- Analyse any big retail chain data using python

Course outcome:

At the end of the course the student will be able to :

Sl. No.	Description	Blooms Level
CO1	Understand the concepts of python programming	L1
CO2	Structure a simple Python programs for solving problems.	L2
CO3	Apply the knowledge to decompose a Python program into functions.	L3
CO4	Analyse and Represent compound data using Python lists, tuples, dictionaries.	L4
CO5	Read and write data form/to files in Python Program.	

Mapping of COS and Pos

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
CO1	1				2	3			
CO2		2	2				2		
CO3				3		3		2	
CO4		2		2			1		2

[Signature]

HOD
PG Dept of Business Administration
Alva's Institute of Engineering & Technology
Mijar - 574225