Proposal for New Course		
Course Number	**:**	MB511
Course Name	**:**	Python Programming
Credits	**:**	2-0-0-2 (L-T-P-C)[1]
Prerequisites	**:**	Preferably having sound knowledge in programming
Intended for	**:**	MBA
Distribution	**:**	Compulsory
Semester	**:**	Even

Preamble
This course helps a motivated student with little or no prior programming experience with working knowledge of the Python programming language for the purpose of data analytics. These skills are foundational for anyone interested in a career in data science. This course is very essential for every manager in today's data-rich economy. Python is one of the world's most popular programming languages due to its simplicity, versatility, efficiency, and community support. Recent surveys have found it to be the most highly demanded programming language among job postings in data science. More importantly than covering the technical tools, this course focuses on how to apply the tools for business applications.

Objective
Upon successful completion of the course, students will be able to: ● Predict the result of a given piece of Python code. ● Write Python code to read, write, filter, merge, summarize, and draw graph in a given dataset. ● Analyse data from a variety of domains and uncover business insights.

[1] L= Lectures per week, T=Tutorials per week – P = Practical/Lab session per week – C = Credits for course

- Communicate effectively the purpose, methodology, and result of an analysis involving Python to a non-technical business audience.

Course Modules with Quantitative lecture hours		
Module 1	**Basics of Programming**	**(5 hours)**
This module presents a primer on the building blocks of a program and how to logically sequence the components to perform a complex task. The following topics will be covered: 1. Introduction to Programming 2. Variables, Statements and Conditional Execution 3. Functions 4. Iterations		
Module 2	Data Structures	**(8 hours)**
This module introduces the fundamental data structures in Python and Panda. This module helps the students to learn "How should data be stored in a particular business setting and what are the trade-offs involved?". The following topics will be covered: 1. Strings and Files 2. Lists and Dictionaries 3. Pandas DataFrame Basics 4. Pandas Data Structure		
Module 3	Basic Analysis	**(8 hours)**
This module introduces the basic techniques in Pandas for plotting, assembling, and handling missing data. The following topics will be covered: 1. Introduction to Plotting 2. Data Assembly 3. Missing Data		
Module 4	Data Munging	**(7 hours)**
Data munging, also known as data wrangling, is the process of transforming raw data into another		

format with the intent of making it more appropriate for analysis. It is one of the very important steps in data analysis. The following topics will be covered:

1. Tidy Data and Data Types
2. Text Data
3. Pandas Apply and Group-by Operations

Lab Exercises (If applicable):

Lab to be conducted on a 2-hour slot. It will be conducted in tandem with the theory course so the topics for problems given in the lab are already initiated in the theory class. The topics taught in the theory course should appropriately be sequenced for synchronization with the laboratory.

Textbooks:	
1.	Charles R. Severance. *Python for Everybody: Exploring Data in Python 3,* Amazon Digital Services, 2016, ISBN-13 : 978-1530051120
2.	Daniel Y. Chen. *Pandas for Everyone: Python Data Analysis*, Pearson Education, 2018, ISBN-13 : 978-9352869169
Reference Book:	
1.	Michael Dawson. Python Programming for the Absolute Beginners, Cengage, 2020.