**G. Narayanamma Institute of Technology and Science**

(For Women)

**VALUE ADDED COURSE ON PYTHON PROGRAMMING**

**IT/CST**

**(**GNITS/IT/VAC/2024-25/ **)**

**III Year B.Tech. I-Sem**

**Objectives:**

* Learn core syntax and semantics of Swift programming language..
* Variables and functions, Arrays and enumerations, Type methods, guards and

String interpolation.

* Structures, inheritance, And errors handling
* Develop the skills of using Swift programming libraries

**Syllabus:**

**UNIT I:** (~7 Hours)

**Introduction to Xcode**: Getting started with Xcode, Using Xcode's code signing feature, Command Line Tools, Creating Custom Controls in Interface Builder with @IBDesignable,

Customizing Xcode IDE

**Introduction to Swift:** Variables- optional, Functions, Arrays, Enumerations, Range operators,

**UNIT II:** (~7 Hours)

Python Functions: Function definition and calling, arguments, lambda function.

Modules: Namespaces, importing modules

Files: Opening and closing files, reading and writing files.

**UNIT III:** (~8 Hours)

GUI: Introduction, tkinter and python programming

Database Handling: DB-API

**UNIT IV:** (~8 Hours)

Python Libraries: Numpy, Matplotlib, Pandas

**Hands-on Project**

**TEXT BOOKS:**

1. Core Python Programming, Wesley J. Chun, Second Edition.
2. Starting Out with Python, Tony Gaddis, Pearson.

**Online RESOURCES:**

1. <https://docs.python.org/3/tutorial/index.html>
2. <https://numpy.org/doc>
3. <https://matplotlib.org/>
4. <https://pandas.pydata.org/docs/>

**Course Outcomes(COs)**

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| **Course Name: Value Added Course On Python Programming – Classroom Course** | |
| **CO1** | Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements. |
| **CO2** | Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples, sets and strings. |
| **CO3** | Develop the proficiency in handling of files and modules. |
| **CO4** | Design and Develop GUI based applications along with database connectivity. |
| **CO5** | Make use of python libraries. |
| **CO6** | Apply the knowledge and develop simple projects. |

**Mapping of Course Outcomes (COs) with Program Outcomes (POs)**

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| **CO** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** | **PSO1** | **PSO2** |
| **CO1** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **CO2** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **CO3** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **CO4** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **CO5** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **CO6** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| **Assessment Method:** |

**Course Coordinator: Module Coordinator Program Coordinator**

**V.Usha, Asst.Professor Dr. I. Ravi Prakash Reddy**

**K.Sridevi, Asst. Professor Professor& HOD IT**

**P.N.Ramya, Asst.Professor**

**Dept. of IT Dept. of IT**