

Date : 02.05.2022

Station : Hosur

To

The Principal,

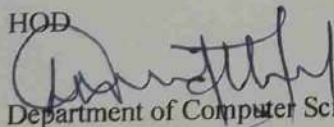
St. Joseph's College of Arts and Science for Women, Hosur.

Respected Madam,

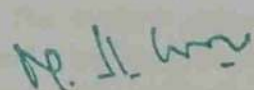
Sub: Seeking permission to conduct certificate course in PYTHON for second year students of B.Sc[CS] and BCA – Reg.

I hereby request your permission for department of computer Science to conduct 30 Hours course on "PYTHON PROGRAMMING" for second year students of B.Sc[CS] and BCA. The course will be conducted by AJR Institute, Chennai.

HOD

  
Department of Computer Science

Head and Assistant Professor  
Department of Computer Science  
St. Joseph's College of Arts and Science for Women  
SIPCOT, Hosur - 635 126.

  
PRINCIPAL  
ST. JOSEPH'S COLLEGE OF ARTS  
& SCIENCE FOR WOMEN  
Mookandapalli, Sipcot,  
HOSUR - 635 126, Krishnagiri - Dist.





**St. JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN**  
(Affiliated to Periyar University, Salem)  
Mookandapalli, Sipcot, Hosur – 635126

**Report for Certificate Course on Python Programming**



This course is designed to teach all the basics of computer programming in Python. A total of 51 students from second-year BCA and B.Sc(CS) took part. The training was handled by two trainers. In this course, they cover the basics of building a program using a set of simple Python instructions. Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding; make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together.



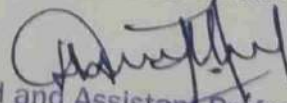
Python is a powerful, flexible, and easy-to-use language. In addition, the community is very active there. It is used in many organizations as it supports multiple programming paradigms. It also performs

automatic memory management. Python has simpler syntax similar to the English language and also the syntax allows developers to write programs with fewer lines of code. Since it is open-source there are many libraries available that make developers' jobs easy ultimately results in high productivity.



Anyone with moderate computer experience should be able to master the materials in this course. The resource person demonstrated each concept. He explained the stand-alone programs; Web service programs and database concepts. Finally the course was explained with 30 hours theory through online mode and at the end of the course; trainer gave the students practical session with 10 hours. The students enjoyed the session and learned a lot. Students can now apply the concepts in advanced applications.

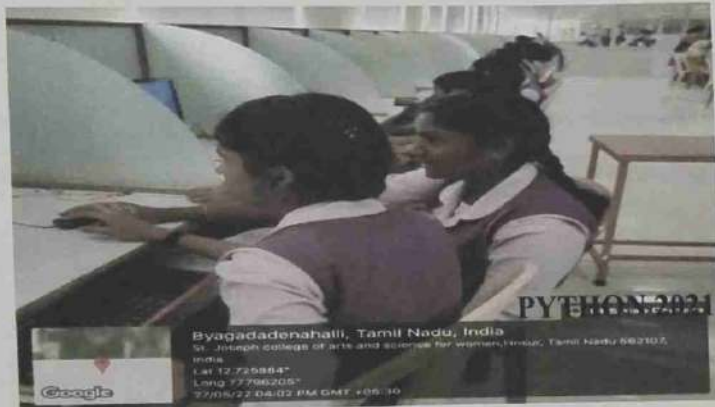
**Signature of the HOD : Dr. Dhina Suresh**

  
Head and Assistant Professor  
Department of Computer Science  
St. Joseph's College of Arts and Science for Women  
SIPCOT, Hosur - 635 126.





## PYTHON 2022



Syllabus :

### **Module 1: Introduction to Python**

Introduction to Python Programming: History of Python, features of Python, applications of Python

Installing Python: Setting up the Python environment, installing Python IDLE and Anaconda

Python Basics: Data types (numbers, strings, lists, tuples, dictionaries), variables, operators

### **Module 2: Control Flow and Functions**

Control Flow Statements: Conditional statements (if, elif, else), looping statements (for, while)

Functions: Defining functions, calling functions, function arguments and return values

Object-Oriented Programming (OOP) Concepts: Classes, objects, methods, inheritance, polymorphism

### **Module 3: Data Structures**

Lists: Creating and accessing elements, modifying lists, common list operations

Tuples: Creating and accessing elements, immutability of tuples, common tuple operations

Dictionaries: Creating and accessing key-value pairs, modifying dictionaries, common dictionary operations

### **Module 4: Modules and Packages**

Modules: Importing modules, using module functions and variables

Packages: Structure of packages, importing packages, using package modules

External Libraries: Introduction to popular Python libraries (NumPy, Pandas, Matplotlib)

### **Module 5: Project Development**

Project Planning: Defining project goals, breaking down project tasks

Project Implementation: Applying Python concepts to solve real-world problems

Project Documentation: Writing clear and concise project documentation

