



**CERTIFICATE COURSE**  
**IN**  
**PYTHON**  
**FUNDAMENTALS**



**2022-23**

**OFFERED BY**  
**PG DEPARTMENT OF**  
**COMPUTER SCIENCE**

**NAM COLLEGE**

**KALLIKKANDY**



**CERTIFICATE COURSE IN PYTHON FUNDAMENTALS**

**Offered by**

**PG Dept.of Computer Science**

# **CERTIFICATE COURSE IN PYTHON FUNDAMENTALS**

## **REGULATIONS AND SYLLABUS:**

### **REGULATIONS:-**

1. Description of course/objective of the course:

This course is designed to students to do program development using python language.

2. Duration of the Course:

30Hours

3. Classification of successful candidate

Successful candidates shall be declared to have passed in the model examination.

A candidate who has passed the examinations shall be eligible to receive the “CERTIFICATE COURSE IN PYTHON FUNDAMENTALS” from the College.

## **SYLLABUS:**

### **Core Python**

- Introduction of Python
- Installing Python IDEs – Python IDLE and Anaconda
- Writing Your First Python Program
- Data-types in Python
- Variables in Python – Declaration and Use
- Typecasting in Python
- Operators in Python – Assignment, Logical, Arithmetic etc.
- Taking User Input (Console)
- Conditional Statements – If else and Nested If else and elif
- Python Collections (Arrays) – List, Tuple, Sets and Dictionary
- Loops in Python – For Loop, While Loop & Nested Loops
- String Manipulation – Basic Operations, Slicing & Functions and Methods
- User Defined Functions – Defining, Calling, Types of Functions, Arguments
- Lambda Function
- Importing Modules – Math Module

### **Object Oriented Programming in Python**

- Basics of Object Oriented Programming
- Creating Class and Object
- Constructors in Python – Parameterized and Non-parameterized
- Inheritance in Python
- In built class methods and attributes
- Multi-Level and Multiple Inheritance
- Method Overriding and Data Abstraction
- Encapsulation and Polymorphism