

PYTHON PROGRAMMING 2

C_PHY2203



CERTIFICATE COURSE ON

PYTHON PROGRAMMING

Department of Physics
All Saints' College
Thiruvananthapuram

IN COLLABORATION
WITH

Networkz Systems

2022-2023

Python has emerged as one of the most exciting and lucrative 21st century programming languages. It is used in machine learning & artificial intelligence, fields at the cutting-edge of tech. It is is versatile in terms of platform and purpose



Eligibility: UG/PG ongoing students

Course period: 30 hrs

For more details contact

Course Coordinator/

HOD Physics,

All Saints' College,
Thiruvananthapuram

Or

Mail to

physicsallsaints@gmail.co

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Thiruvananthapuram

Department of Physics

Course Syllabus

Advanced Python Programming (PHY.C.22.1)

Course Objectives

The main objective of the course included:

- Build basic programs using programming constructs like variables, conditional logic, looping, and functions.
- Work with user input to create fun and interactive programs.
- To acquire programming skills in core Python.
- To acquire Object Oriented Skills in Python in advanced level
- To develop the skill of designing Graphical user Interfaces in Python
- To develop the ability to write database applications in Python

Course Objectives

At the completion of course, students will be able to:

- Provide students with knowledge, general competence, and analytical skills in Computer Science on an advanced level.
- Prepare them for academics and research.
- Provide hands-on experience to apply computing skills



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Syllabus (30hrs)

Unit - I : Introduction to Python (6 Hours)

Basic coding skills, working with data types and variables, working with numeric data, working with string data, Python functions, Boolean expressions, selection structure, iteration structure, Illustrative Programs, Exercises

Unit - II : Define and use functions and modules (6 Hours)

Working with recursion, Basic skills for working with lists, work with a list of lists, work with tuples, work with dates and times, get started with dictionaries, Illustrative programs, Exercises.

Unit - III : Object Oriented Programming (6 Hours)

An introduction to classes and objects, define a class, work with object composition, work with encapsulation, work with inheritance, override object methods, Illustrative programs, Exercises

Unit -IV : An introduction to relational databases (6 Hours)

SQL statements for data manipulation, Using SQLite Manager to work with a database, Using Python to work with a database, Creating a GUI that handles an event, working with components, Illustrative programs, Exercises

Unit -V : Advanced programming (6 Hours)

Map Function, Lambda Function, intertools, exception handling, decorators, collections, generators, regular expressions

Reference

- Head-First Python: A Brain-Friendly Guide (2nd Edition)
- Python Programming: An Introduction to Computer Science (3rd Edition)
- Programming Python: Powerful Object-Oriented Programming (4th Edition)

Evaluation : Exam Based evaluation

Theory: 50 Marks

Practical - 50 Marks



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**List of Students Attended Certificate Course on Advanced Python
Programming 2022-2023 - (27.02.23 to 03.03.23)**

Sl. No	Name of Candidate	Class
1	Alshifa Latheef	DC 3 Physics
2	Amritha G Babu	
3	Ancy Antony	
4	Archana P J	
5	Devi Kangan B S	
6	Gopika Krishna S S	
7	Sona R Suresh	
8	Theresa Mathew	
9	Arya S Prasad	
10	Aswathy B	
11	Felsa Ann	
12	Gopika B S	
13	Gopika M	
14	Lekshmi Balaji	
15	Manjima G Anil	
16	Megha Hari S	
17	Parvathy Venugopal	
18	Shibina Shehzadi	
19	Sneha Suresh	
20	Sradha Nair S	
21	Adithya B	
22	Ann Mary	
23	Dhara Krishnan B S	
24	Preethi Krishnan	
25	Ramya Daber	PG S1
26	Sania M Philip	
27	Abina Antony	
28	Aiswarya K.S.	
29	Amrutha C.A.	
30	Anamika A	
31	Anjana A.B.	
32	Beji Terense	
33	Gadha S Gopan	
34	Parvathy V.H.	
35	Princy P.L.	
36	Sangeetha E.	
37	Sheeba Sara Koshy	
38	Sreelekshmi S	



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TRIVANDRUM

Department of Physics

Course Summary

Advanced Python Programming (PHY.C.22.1)

An MoU has been signed with Network systems and the department of Physics, All Saints' College, Thiruvananthapuram and they have agreed to conduct a Certificate course on "Advanced Python Programming" for the final year Physics UG and first year PG students of All Saints' College on payment of a fee amount of Rs. 1500/- per student. The course was conducted during 27.02.23 - 03.03.23. the main focus of the course was to acquire programming skills in core Python, Object Oriented Skills in Python, develop the skill of designing Graphical user Interfaces in Python and to develop the ability to write database applications in Python. A trainer was assigned to students and training was given on latest tools and techniques. Periodic assessment was also conducted to monitor the progress of students and participation certificate was issued to all participants based on their attendance and assessment. Course was oriented on the essential concepts of advanced level of Python programming, provided students with knowledge, general competence, and analytical skills in Computer Science on an advanced level and hands-on experience to apply computing skills



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Course Report


Python Programming (PHY.C.22.1)

A Certificate course on "Python Programming" for the final year Physics UG and first year PG students of All Saints' College on payment of a fee amount of Rs. 1500/- per student. The course was conducted during 27.02.23 - 03.03.23. They have followed a unique step by step, systematic and employable skill development program. As part of this, 30 hours training sessions were conducted in both offline mode. Five hour sessions were conducted on each day for 6 working days which was indeed a great platform for our students to develop an industry integrated awareness and meet the expectations on python programming. A trainer was assigned to students and training was given on latest tools and techniques. Periodic assessment was also conducted to monitor the progress of students and participation certificate was issued to all participants based on their attendance and assessment. Course was oriented on the essential concepts of Python programming, and gave an in-depth knowledge in data analytics, machine learning, data visualization, web scraping, and natural language processing etc.



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 **GPS Map Camera**

Thiruvananthapuram, Kerala, India

FWW5+C89, Palayam Airport Rd, Vettukadu,

Thiruvananthapuram, Kerala 695008, India

Lat 8.496648°

Long 76.909361°

01/02/23 12:24 PM GMT +05:30

Google



Rashmi

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All Saint's College
Thiruvananthapuram



GPS Map Camera

Google

Thiruvananthapuram, Kerala, India

FWW5+C85, All Saints' College, Palayam Airport Rd,

Thiruvananthapuram, Kerala 695008, India

Lat 8.496651°

Long 76.908663°

29/03/23 11:51 AM GMT +05:30



GPS Map Camera

Google

Thiruvananthapuram, Kerala, India

FWW5+C85, All Saints' College, Palayam Airport Rd,

Thiruvananthapuram, Kerala 695008, India

Lat 8.496651°

Long 76.908663°

29/03/23 11:52 AM GMT +05:30



Kulani

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Leslie
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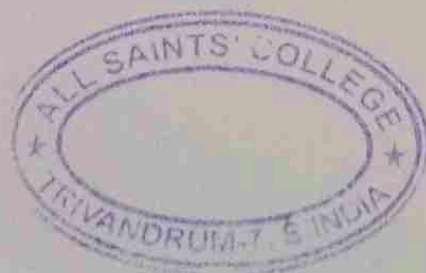
Staff Attendance Register

for

[illegible]

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Reshma
Signature of Principal
Principal
Principal's Office
All Saints College
Mumbai



PRINCIPAL,
All Saint's College,
Thiruvananthapuram

CERTIFICATE

This is to certify that Mr/Ms SREELEKSHMI S, of III Year Bsc Physics,
All Saints' College, has successfully completed the certificate course on
Advanced Python Programming jointly organized by Networkz Systems &
Department of Physics, All Saints' College, Trivandrum during the
academic year 2022-2023.

Date of issue: 31.03.2023




Executive Director


H.O.D, All Saints' College
(Dept. of Physics)

www.networkzsystems.com



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CERTIFICATE

This is to certify that Mr/Ms **GADHA S GOPAN**, of III Year Bsc Physics,
All Saints' College, has successfully completed the certificate course on
Advanced Python Programming jointly organized by Networkz Systems &
Department of Physics, All Saints' College, Trivandrum during the
academic year 2022-2023.

Date of issue: 31.03.2023




Executive Director

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CERTIFICATE

This is to certify that Mr/Ms **SONA R SURESH** of III Year Bsc Physics,

All Saints' College, has successfully completed the certificate course on
Advanced Python Programming jointly organized by Networkz Systems &
Networkz Systems & Department of Mathematics, All Saints' College,
Trivandrum during the academic year 2022-2023.

Date of issue: 31.03.2023



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CERTIFICATE

This is to certify that Mr/Ms THERESA MATHEW, of III Year Bsc Physics,
All Saints' College, has successfully completed the certificate course on
Advanced Python Programming jointly organized by Networkz Systems &
Department of Physics, All Saints' College, Trivandrum during the
academic year 2022-2023.

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CERTIFICATE

This is to certify that Mr/Ms SRADHA NAIR S, of III Year Bsc Physics,
All Saints' College, has successfully completed the certificate course on
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