

# **Certificate Course on Python Programming**

## **Organised by: Department of Physics**

The Department of Physics of Goalpara College has organised a 36 hour long certificate course on Python Programming starting from 7<sup>th</sup> December to 13<sup>th</sup> December of 2021. This workshop was carried out under the guidance of Dr. Subhash Barman (Principal) and Dr. Ranjit Choudhury (HoD, Physics Department). The course coordinator of this workshop was Dr. Manjit Borah and the course supervisors cum instructors were Dr. Yoshiko Bailung and Dr. Bijay Kumar Sah. Over 100+ students enrolled in the Workshop from different colleges and universities like Bhattadev University, Dudhnoi college, West Goalpara college and Goalpara college.

Python is a widely used high-level programming language. Google makes extensive use of Python in its web search system, and employs Python's creator. Intel, Cisco, Hewlett-Packard, Seagate, Qualcomm, and IBM use Python for hardware testing. The YouTube video sharing service is largely written in Python. The design of Python basically emphasizes code readability, and programmers find its syntax easy to express concept in fewer lines of code than would be possible in other languages like Java, C or C++. This language provides constructs that are intended to enable clear programs on a small as well as on a large scale. Python supports multiple programming paradigms, including object-oriented, imperative and functional programming or procedural styles. It features a dynamic type system and automatic memory management and has a large and comprehensive standard library. Python interpreters are available for installation on many operating systems, allowing Python code execution on a wide variety of systems.

The aim of this course was to provide a basic understanding of the python programming language. The course was designed in such a way that the students could read and write codes of their own by the end of the course. The basics that was covered during the course included installation, variables and data types, list, dictionaries, loops, functions, etc. Apart from that the course also included various computational methods to solve scientific and physical problems such as Newton Raphson method, Euler method, Simpson 1/3 rule, Runge-Kutta method etc. All the coding was done in the Spyder Integrated Development Environment (IDE). This IDE comes with Anaconda Navigator. It includes editing, interactive testing, debugging, and introspection features. Conclusively it is desirable to use Python as the principal teaching language as it is free from both source code and cost perspective. It is also trivial to install on a Windows PC and is flexible as it allows both traditional procedural programming and modern object orient programming. At the end quicker to learn and in combination with its many libraries, this offers the possibility of more rapid student development.

## Some of the glimpses of the “Certificate course on Python Programming”



The poster features the Python logo on the left and the Goalpara College logo on the right. The text is centered and reads: **GOALPARA COLLEGE**, **DEPARTMENT OF PHYSICS**, **GOALPARA-783101**, **CERTIFICATE COURSE ON PYTHON PROGRAMMING**. A QR code is labeled "SCAN ME" with a link: [https://docs.google.com/forms/d/e/1FAIpQL5c4oqirPg3qu\\_C7-yb2Xkv\\_9fjVUDDHQb7Ge43cLI34CZyG-A/viewform](https://docs.google.com/forms/d/e/1FAIpQL5c4oqirPg3qu_C7-yb2Xkv_9fjVUDDHQb7Ge43cLI34CZyG-A/viewform). A blue circle on the right says "Register on or before 5.12.2021". Below the title, it lists: **\*REGISTRATION FEE RS. 250/- PER HEAD**, **\*CERTIFICATE WILL BE PROVIDED**, and **\*7 DEC 2021 - 13 DEC 2021**. At the bottom left, the **Helpdesk number: 7002853963** is provided. The background includes a laptop, a calendar, and a pen holder.

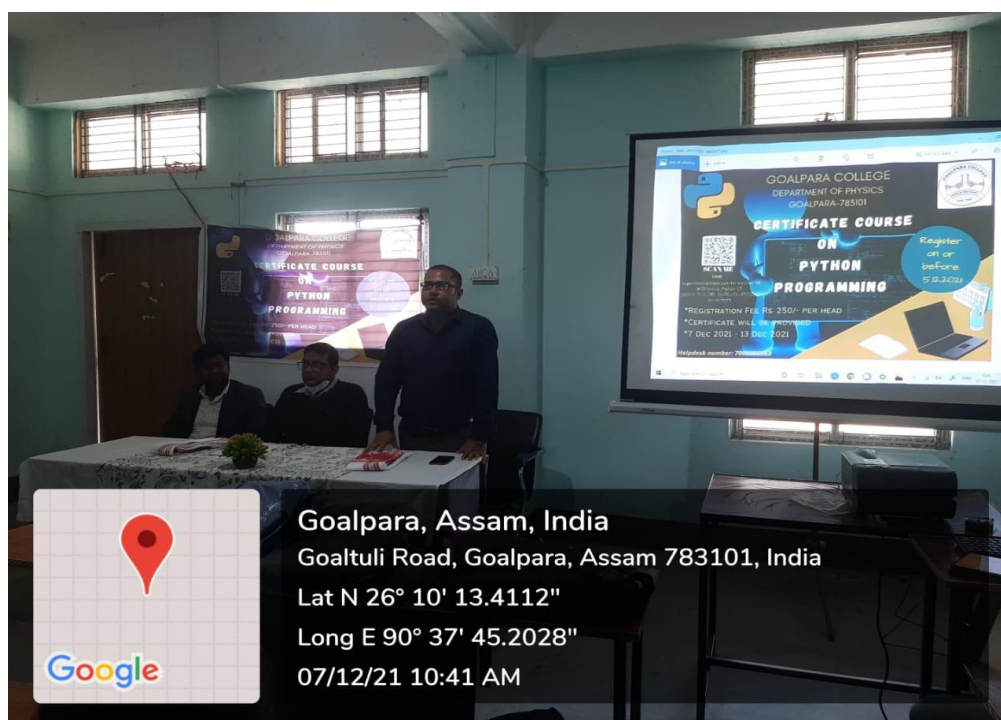
**GOALPARA COLLEGE**  
DEPARTMENT OF PHYSICS  
GOALPARA-783101

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**ON**  
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Long E 90° 37' 40.6668"  
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