Vishnu Waman Thakur Charitable Trust's

**Bhaskar Waman Thakur College of Science,**
**Yashvant Keshav Patil College of Commerce,**
**Vidhya Dayanand Patil College of Arts,**
( ▽I▽△ College)



# Introduction to Python (CC-IP)

Late Shri. Vishnu Waman Thakur Charitable Trust's
# Bhaskar Waman Thakur College of Science,
# Yashvant Keshav Patil College of Commerce,
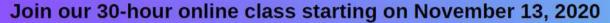# Vidhya Dayanand Patil College of Arts,
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python™

**Join our 30-hour online class starting on November 13, 2020**

- **Are you interested in learning Python programming from the comfort of your home?**
- **Do you want to enhance your skills and boost your career prospects?**
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- **The class starts on November 13, 2020, and is open to beginners and advanced learners.**
- **Don't miss this opportunity to improve your skills and make new connections in the tech industry.**

**Introduction to Python certificate course**
**(Department of I.T. & C.S.)**

Learning Outcomes
 Introduction to Python:
  Overview, applications
  Set up Python environment
Basic Syntax and Data Types:
  Variables, strings, numbers
 Control Flow and Functions:
  Conditionals, loops
  Functions, scope
Data Structures:
  Lists, tuples, sets
  Dictionaries
 File Handling:
  Read/write files
  Exception handling
 Object-oriented Programming (OOP):
  Classes, objects
  Inheritance, encapsulation
 Libraries and Modules:
 Standard libraries, external modules
 Intro to popular libraries (NumPy, Pandas)

| Unit | Topics | No. of Lectures |
|---|---|---|
| UNIT 1 | Overview of Python and its applications<br> Setting up Python environment (IDEs, Jupyter Notebooks)<br> Basic Python syntax and data types (variables, strings, numbers)<br> Conditional statements (if, elif, else)<br> Looping structures (for, while) | 10 |
| UNIT 2 | Functions and their usage<br> Scope and lifetime of variables<br> Lists, tuples, and sets<br> Dictionaries and their operations | 10 |

| | | |
|---|---|---|
| | Working with sequences and collections<br>Reading and writing files in Python<br>File modes and operations<br>Handling exceptions and errors | |
| UNIT 3 | Object Oriented Programming (OOP)<br>  Introduction to OOP concepts (classes and objects)<br>  Inheritance, encapsulation, and polymorphism<br>  Creating and using classes in Python<br>Libraries and Modules<br>  Introduction to Python standard libraries<br>  Installing and using external libraries (pip)<br>  Exploring popular Python libraries (e.g., NumPy, Pandas) | 10 |
| References:<br>Python: The Complete Reference Martin Brown; McGraw Hill Education<br><br>1. Python Official YouTube Channel:<br>  - Link: [Python YouTube Channel](https://www.youtube.com/user/python)<br><br>2. Python Documentation:<br>  - Python's official documentation includes tutorials and guides.<br>  - Link: [Python Documentation](https://docs.python.org/3/) | | |