COURSE GUIDE 2026

PYTHON TRAINING (ADVANCED LEVEL)

ATN
Campus

Route to the IT World

DESCRIPTION

The Python Programming – Advanced Level course is designed for students who already have basic knowledge of Python and wish to enhance their programming skills. This program focuses on advanced concepts, efficient coding practices, and real-world application development. Students will learn how to write optimized, structured, and scalable Python programs used in professional software development environments.

WHAT ARE THE BENEFITS IN STUDYING PYTHON (ADVANCED LEVEL) AT ATN?

1. DEVELOPS PROFESSIONAL-LEVEL PROGRAMMING SKILLS

Advanced Python helps students write efficient, structured, and scalable programs that meet industry standards and professional software development practices.

2. ENHANCES PROBLEM-SOLVING AND ANALYTICAL THINKING

Students learn to analyze complex problems, design logical solutions, and implement optimized code using advanced programming techniques.

3. STRONG UNDERSTANDING OF OBJECT-ORIENTED PROGRAMMING (OOP)

The course strengthens knowledge of OOP concepts such as classes, inheritance, and polymorphism, which are essential for large-scale and real-world application development.

4. PREPARES STUDENTS FOR REAL-WORLD SOFTWARE DEVELOPMENT

Through practical projects, database connectivity, and web development concepts, students gain experience in building real-world applications.

WHAT ARE THE BENEFITS IN STUDYING PYTHON (ADVANCED LEVEL) AT ATN?

5. SUPPORTS CAREERS IN MULTIPLE IT DOMAINS

Advanced Python skills are applicable in software development, web development, automation, data processing, and backend system development.

6. IMPROVES CODE EFFICIENCY AND PERFORMANCE

Students learn best coding practices, debugging techniques, and optimization methods that help improve program performance and reliability.

7. HIGH DEMAND SKILL IN THE GLOBAL JOB MARKET

Advanced Python is widely used by leading technology companies. Mastery of Python increases employability and career advancement opportunities worldwide.

8. ENABLES AUTOMATION AND PRODUCTIVITY IMPROVEMENT

Students learn how to automate repetitive tasks, saving time and increasing productivity in both academic and professional environments.

9. BUILDS CONFIDENCE TO LEARN ADVANCED TECHNOLOGIES

Advanced Python provides a strong base for learning emerging technologies such as data science, machine learning, artificial intelligence, and cloud computing.

COURSE DETAILS

Course Name	Python Programming – Advanced Level
Duration	03 Months
Class	One Day Class Per Week / 4 Hours
Language	English
Certificate	TVEC & ATN
Class Mode	Online / In-Person
Practical Training	Yes Available

COURSE CERTIFICATE

TVEC

This Course is verified by TVEC, which is the main government entity controlling the activities of education providers in the Sri Lanka. The verification guarantees that this training course meets all the required standards and criteria in accordance with the highest educational regulations.

ATN CAMPUS

The ATN Campus Certificate is awarded to students who successfully complete approved short-term, diploma, professional, or preparatory programs at ATN Campus, in line with its academic structure and assessment standards. The certificate confirms that recipients have gained the necessary theoretical knowledge, practical skills, and academic competencies relevant to their chosen field of study. It serves as formal recognition of academic achievement and is intended to support students' career development, professional growth, and opportunities for further education both locally and internationally.
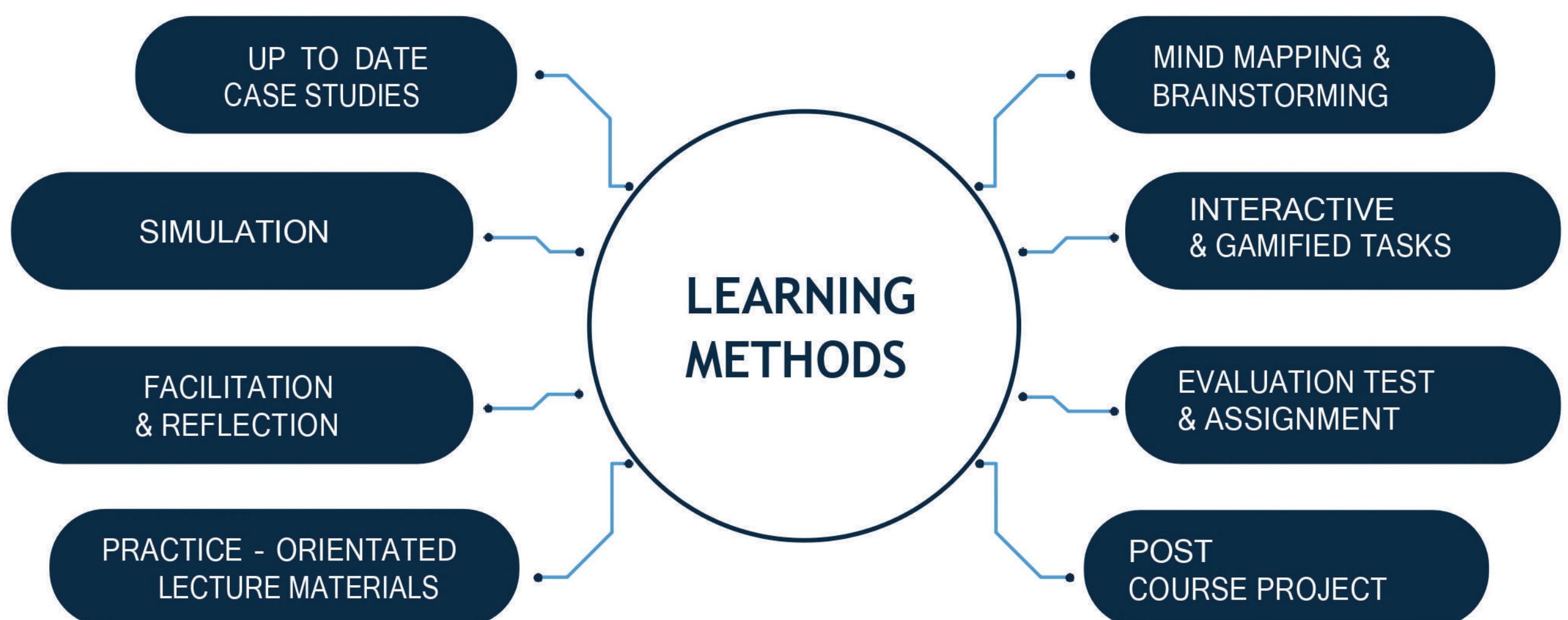
PREREQUISITES

Students must have successfully completed a Python Beginner Level course or possess equivalent knowledge of Python programming. A good understanding of basic programming concepts such as variables, data types, conditional statements, loops, functions, and basic data structures is required. Familiarity with writing and executing simple Python programs and basic problem-solving skills are essential to follow this advanced-level course effectively.

WHO CAN ATTEND

This program is suitable for students who wish to enhance their Python programming skills beyond the beginner level. It is ideal for undergraduates, IT and computing students, aspiring software developers, and individuals preparing for advanced IT or software development careers. Working professionals, programmers, and career changers who want to strengthen their Python expertise for automation, web development, or backend development can also attend this program.

LEARNING METHODOLOGIES

All our courses include the most effective adult learning methodology and techniques. Our experience shows that only a combination of these methods can guarantee the best learning outcomes for attendees.

UP TO DATE CASE STUDIES

MIND MAPPING & BRAINSTORMING

SIMULATION

INTERACTIVE & GAMIFIED TASKS

LEARNING METHODS

FACILITATION & REFLECTION

EVALUATION TEST & ASSIGNMENT

PRACTICE - ORIENTATED LECTURE MATERIALS

POST COURSE PROJECT

VENUE - ATN CAMPUS Colombo / Kurunegala / batticaloa

ADDRESS : 507, GALLE ROAD, COLOMBO 06

COURSE MODULES

Module 1: Advanced Python Fundamentals

- Review of core Python concepts
- Advanced data types and operations
- Python coding standards and best practices
- Memory management basics

Module 2: Object-Oriented Programming (OOP)

- Classes and objects
- Constructors and destructors
- Inheritance and polymorphism
- Encapsulation and abstraction
- Method overriding

Module 3: Advanced Data Structures and Algorithms

- Lists, tuples, sets, and dictionaries (advanced usage)
- Custom data structures
- Introduction to algorithms
- Searching and sorting techniques
- Algorithm efficiency basics

Module 4: File Handling and Data Processing

- Advanced file handling techniques
- Working with text and CSV files
- Reading and writing large data files
- Data processing and validation

Module 5: Exception Handling and Debugging

- Types of errors and exceptions
- try, except, else, and finally blocks
- Custom exceptions
- Debugging techniques and tools

COURSE MODULES

Module 6: Modules, Packages, and Virtual Environments

- Creating and using Python modules
- Python packages and package structure
- Installing third-party libraries
- Virtual environments and dependency management

Module 7: Database Connectivity with Python

- Introduction to databases
- Python database connectivity (SQLite / MySQL concepts)
- CRUD operations (Create, Read, Update, Delete)
- Basic SQL queries using Python

Module 8: Web Development with Python

- Introduction to web development concepts
- Python web frameworks (Flask / Django overview)
- Routing and templates
- Handling forms and user input

Module 9: Automation and Scripting

- Python scripting concepts
- Automating file and folder operations
- Task automation examples
- Scheduling scripts

Module 10: Final Project and Practical Application

- Project planning and design
- Implementation using advanced Python concepts
- Testing and debugging
- Project presentation and documentation

Course code :

PARTICIPANTS DETAILS

☐ MR.   ☐ MS.   FIRST NAME: _____   LAST NAME: _____

COMPANY: _____   JOB TITLE : _____

COUNTRY _____   CITY: _____

ADDRESS: _____   PO BOX: _____

MOBILE: _____   EMAIL: _____

COMPANY DETAILS

COMPANY: _____   LANDLINE : _____

COUNTRY _____   CITY: _____

ADDRESS: _____   PO BOX: _____

☐ MR.   ☐ MS.   FIRST NAME: _____   LAST NAME: _____

JOB TITLE: _____   MOBILE: _____

EMAIL: _____

COURSE STARTING DATE

| DAY | — | MONTH | — | YEAR |

For course dates contact Us or see courses calendar on www.atnedu.lk

YOU CAN REGISTER BY

📞 +94 11 4 848481

🌐 www.atnedu.lk

📘📷🐦 #ATNCAMPUS

IN - HOUSE AND LIVE ONLINE

If you are interested in conducting this Training course at a location of your choice or Online, you can contact us, and we will create A unique in-house or online training solution

PAYMENT OPTIONS	APPLICATION FEE	REGISTRATION FEE	MONTHLY TUITION FEE
INSTALLMENT PAYMENT	5000 LKR	20,000 LKR	20,000 LKR × 2 MONTHS
ONE TIME PAYMENT	N/A	N/A	N/A

SPECIAL OFFER

2 + 20%
Discount

(BOOK TWO SEATS GET 20% OFF ON FOR 3RD REGISTRATION)

FOR THIS AND OTHER DISCOUNTS CONTACT US

LIVE ONLINE TRAINING FEES

INTERACTIVE ONLINE TRAINING	SAME FEES

TERMS & CONDITIONS
1. We reserve the right to modify the course topic or its date or location.
2. We reserve the right to modify the course topic or its date or location.
3. Only one type of discount can be applied at a time to the same course.
4. All ATN Campus bank account details will be provided on the invoice.
5. Payment can be made via bank transfer, credit card or cheque to ATN Campus.
6. Your registration will be fully valid only after the payment has been received in full.
7. The regular, special and early bird courses fees exclude the applicable 5% VAT.

DATE:_____/_____/_____

SIGNATURE: _____