



राष्ट्रीयइलेक्ट्रॉनिकीएवंसूचनाप्रौद्योगिकीसंस्थान, कालीकट
National Institute of Electronics & Information Technology, Calicut



सत्यमेव जयते

Ministry of Electronics and
Information Technology
Government of India

Online Course Prospectus

ISO 9001-2015 Certified

Certified Python Programmer

Starting Date: 25th June 2024
(6 weeks, 5 Hours Daily)

Course Description

This course is designed to make the participants capable of solving problems using shell (bash) programming in Linux. Linux shell script writers are needed because they can help to automate tasks, improve efficiency, increase accuracy, simplify complex tasks, and create custom tools and utilities. Shell scripts are a powerful tool that can be used to make Linux systems more efficient and productive.

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Course Name: Certified Python Programmer

Course Code: LSW902

Duration: 6 weeks / 150 Hours

5 Hours per day (Live sessions, Recorded sessions, Assignments etc.)

Online class Timing: 2:30 PM onwards

Course Fee: ₹6,000/- (Including GST)

Starting Date: 25th June 2024

Coordinator: Shri. Prasoon Kumar K G, 9447305951, prasoon@calicut.nielit.in

Who can attend?

Anyone who is interested in Python programming & designed for.

- Students pursuing engineering or any computer science degree
- Working Professionals (Programmers)
- Research students
- Teachers

Course Content:

Introduction to Python Programming (1 day)

Python as interpreter , history of Python, features and different implementations of Python, Python-2 and Python-3 differences Installing Python and Environment Setup, IDLE and other IDEs, Running python programs.

Python Basics (2 days)

Print function, Identifiers, keywords, Indentation, comments, operators, basic data types for numbers and strings, introducing functions – built-in and user- defined, getting input from user.

Control structures in python (2 days)

Simple if statement, if-else, if-elif-else, while loop general format and loop else, for loop general format and loop else, break & continue statements. If/else ternary expression.

Data structures in Python (3 days)

Numeric types – int, float, Decimal, Fraction etc. Strings – Unicode concepts, quoting, raw strings, string methods, string formatting, indexing

and slicing. Byte strings. Lists and list operations, list comprehension. Dictionaries and dictionary operations. Tuples, sets, collections. Date and Datetime objects.

Functions and Generators (2 days)

Function definition and call, scope and nested functions, function arguments, Recursive functions, Anonymous functions-lambda, Generator functions and expressions

Files, Modules and Packages (2 days)

Files- Opening and using files, text and binary files, storing python objects in files.

Standard library modules, Import statements, reloading modules, module search path, Namespace packages

Classes and OOP (2 days)

Classes and instances, constructor and other methods, inheritance and method resolution order, operator overloading, abstract classes, decorators and metaclasses.

Exception handling (1 day)

The try/except/else/finally statement, catching exceptions, raising exceptions, user-defined exceptions.

Regular Expressions (2 days)

Regular expressions introduction, re module and functions in re for matching searching and substitution, extended regular expressions, meta characters, special sequences and sets.

Misc Utilities (3 days)

Database access using pymysql, GUI programming using tkinter, xml parsing using sax and minidom.

Project Work (2 Weeks).

The participants have to do industry relevant project using real data.

Prerequisite (optional):

Nil

*In case students are not able to attend online live classes, the recorded lectures of all major classes are available in our Learning Management System (LMS). Students can access LMS by entering their **user name** and **password** and they can do offline reference and learn at their own pace and timings, during the course period. After attending the recorded lectures students can submit their assignments and interact through email / LMS / WhatsApp.*

Course Fee and important dates:

| | |
|--|---------------------------------------|
| Course fee | ₹6,000/- (Including GST) |
| Last date for registration & payment | 24 th June 2024 |
| Sharing of online Link / passwords & other details | 25 th June 2024 @ 11:00 AM |

Faculty Profile:

All faculty members involved in the course are having post graduate degrees in computer applications with several years of experience in the IT field.

Course Coordinator:

Shri. Prasoon Kumar K G

Scientist-D

9447305951, 0495-2287266 (O)

E-mail: prasoon@calicut.nielit.in

Certificate:

Digitally signed certificate of successful completion will be mailed to the registered email id after completion of course.

(Courses having evaluation in the end are entitled for successfully completed certification. In other cases only participation certificate will be issued. In both cases 60% attendance and feedback are mandatory.)

Terms and Conditions:

- 1. In case any registered candidate could not attend the online session due to technical issue at their side there will not be any refund of the course fee and the sessions will not be repeated*
- 2. In case the online course is cancelled /postponed due to some technical issue at NIELIT side and new date is not convenient to the candidate, our liability is limited to the refund of the course fee and NIELIT shall not be responsible for any consequential damages.*
- 3. 60% attendance and feedback submission are mandatory for awarding 'participation' certificate. For courses with assessment, 'successfully completed certificate' will be awarded subject to the candidate passing the test with minimum 50% marks, minimum 60% attendance and feedback submission.*

For more details about our institution and facilities visit us

Website: <https://www.calicut.nielit.in/>

Twitter: https://twitter.com/CAL_NIELIT

Facebook: <https://www.facebook.com/CAL.NIELIT>

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Ministry of Electronics & Information Technology,
Govt. of India*



NIELIT Calicut

Post Box No. 5, P. O. NIT Campus,

CALICUT – 673601, Kerala

Mob. : 9447305951

Tel.: 0495-2287266

Reach Us on WhatsApp 9446711666

e-mail: prasoon@calicut.nielit.in /

trng@calicut.nielit.in

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