



Electronics & ICT Academy IIT Roorkee



An Initiative of
**Ministry of Electronics
& Information
Technology (MeitY)**
Government of India

A Joint Faculty Development Programme on

Python Programming for Engineering Applications

In association with



Jul 28 – Aug 11, 2025

Register Before: July 26, 2025

Mode of Delivery is Online

Course Outcomes

- Understand core Python programming principles and best practices.
- Solve engineering problems using computational methods in Python.
- Analyze and visualize engineering data effectively.
- Simulate real-world systems using Python libraries.
- Create scripts for automation of engineering tasks.
- Interface Python with hardware and sensors for practical applications.
- Integrate Python projects into teaching and student research initiatives.



About E&ICT Academy

Electronics and ICT Academy is an initiative of Ministry of Electronics & Information Technology (MeitY), Govt. of India for conducting various Faculty/Research Scholar Development Programme. Academy has planned short-term training programs on fundamental and advanced topics in IT, Electronics & Communication, Product Design, and Manufacturing with hands-on training and project work using the latest software tools and systems. In addition, the Academy will conduct specialized/customized training programs and research promotion workshops for corporate sector & educational institutions.

Prerequisites

Basic knowledge of semiconductor physics, electronic circuits, and familiarity with simulation or programming tools.

Experts from Academia/Industry

Who Should Register?

Any Interested Faculty/PhD-Scholars
UG/PG/ & Industry Persons can register

Registration Fee

Fees: ₹ 500/- Faculty/Research Scholar/ Students
₹ 1000/- Industry/Others
Note: Refund will be done in case of course cancellation only, within 20 working days

How to make Payment

Please make the payment first using the below link
upload the payment receipt when filling out the
Google registration form.

<https://eict.iitr.ac.in/instruction-for-payment/>

Conference Code: EICTIITR-JFDP-NKN-11

Registration Link

<https://forms.gle/JDeSBsHQD1kqpzVo8>



Scan QR for
registration

Register before:
July 26, 2025

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Objectives of the course

- To introduce Python fundamentals and its syntax for engineering applications.
- To develop problem-solving and algorithmic thinking using Python.
- To apply Python libraries such as NumPy, Pandas, and Matplotlib.
- To simulate engineering problems using Python-based tools.
- To demonstrate automation and scripting for data analysis and visualization.
- To enable handling of real-time data and interfacing with hardware.
- To prepare faculty to incorporate Python in academic curriculum and projects.

Focus Areas

- Python basics: data types, functions, loops, and file handling.
- Numerical computation with NumPy and SciPy.
- Data analysis and visualization using Pandas and Matplotlib.
- Python for control systems and simulations
- Automation and scripting for engineering workflows.
- Hardware interfacing and data acquisition.
- Python in AI/ML and IoT contexts for engineering solutions.

Course Features

- 40 Hours of Lectures, Hands-on, and Pedagogy/Industry sessions.
- Lectures from Expert Speakers, Hands-on from industry/Academia experts.
- Access to learning material and video lectures
- Certificate by E&ICT Academy IIT Roorkee

Principal Coordinator

- **IIT Guwahati**

Joint Principal Coordinator

- Prof. Sanjeev Manhas, IIT Roorkee
- Prof. Partha Pratim Roy, IIT Roorkee
- Dr. Bhaskar Mondal, NIT Patna
- Prof. Atul Gupta, IIITDM Jabalpur

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