

School of Engineering
Department of Electronics and Communication Engineering

A Report
On
A Five Day Skill Development Programme
“Next-Gen Coding: Python for Future Engineers”

The NECodErs club under the Research Group Embedded Systems & IoT - Dept. of ECE successfully conducted a 5-day SDP on "Next-Gen Coding: Python for Future Engineers" for II B.Tech students from 05th January 2026 to 09th January 2026. This programme aims to introduce students to modern programming concepts used in industry and research. Python was selected as the core language because of its simple syntax, readability, and wide range of applications in fields such as software development, data science, artificial intelligence, IoT, and automation. The programme aimed to strengthen students' logical thinking, analytical ability, and problem-solving skills, which are essential for academic projects and future career opportunities.

During the programme, students were introduced to fundamental and intermediate concepts of Python programming. The sessions covered topics such as installation of Python and integrated development environments (IDEs), variables, data types, operators, input and output statements, conditional statements, loops, functions, modules, and data structures including lists, tuples, and dictionaries. Students were also given exposure to file handling, exception handling, and basic object-oriented programming concepts. The training was conducted through interactive lectures, live coding demonstrations, and hands-on laboratory sessions to ensure practical understanding.

Dr.Sk.Fairooz, Dr.P.Ashok Kumar, Mrs. K. Hemalatha & Mr. B.Saidulu worked as Faculty Coordinators for this SDP.



NALLA NARASIMHA REDDY
Education Society's Group of Institutions-Integrated Campus
(Approved by AICTE & PCI, New Delhi & Affiliated to JNTUH, Accredited by NAAC with A+ Grade)
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(UGC AUTONOMOUS INSTITUTION)

Department of Electronics & Communication Engineering
NECodErs Club
In association with IIC, ISTE & IETE Student forum (ISF)
Organizes
One Week
Skill Development Programme
on
“Next-Gen Coding: Python for Future Engineers”
05th January 2026 to 09th January 2026

Chief Patron Shri Nalla Narasimha Reddy Chairman	Patron Dr. C.V. Krishna Reddy Director	Co-Patron Mr. Nalla Prashanth Reddy Vice-Chairman	Co-Patron Dr. G. Janardhana Raju Dean - SoE	Convener Dr. B. Ravi HoD - ECE	Co-Conveners Dr. A. Gopal Mr. Koustubh K	Co-ordinators Team NECodErs Dr. Sk. Fairouz Ms. K. Hemalatha Mr. B. Saidulu
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Venue: ECE Seminar Hall

Python Programming (05-01-2026 to 09-01-2026)

The Student Development Programme (SDP) on Python Programming was conducted from 05th January 2026 to 09th January 2026. The training aimed to equip students with essential Python coding skills required for placement preparation. The sessions covered fundamental concepts such as variables, data types, operators, conditional statements, loops, functions, arrays, strings, file handling, Lists, Tuples, Sets, Dictionaries, Python modules and Packages. Practical demonstrations were given, and students actively participated in coding exercises to strengthen their problem-solving skills.

Inaugural Session by HoD : Dr. Ravi Bolimera

The SDP was inaugurated by HoD, ECE at the ECE seminar hall from 9:45 am to 11:00am. The session saw active participation from ECE department, with a total of 57 attendees:

- ECE Department: Sec A:15 Sec B:18 Sec C:24



Day-1(05.01.2026) Session 1: Awareness program by Dr. Mohan Pakalapati:

An awareness session was conducted by Dr. Mohan Pakalapati focusing on the importance of C programming fundamentals and the correct and responsible use of ChatGPT in academic learning.

Dr. Mohan Pakalapati began the session by explaining the significance of C programming as one of the foundational languages in computer science and engineering. He highlighted how C helps students understand core concepts such as variables, data types, operators, and program structure, which form the basis for learning other advanced programming languages. He encouraged students to practice coding regularly to strengthen their problem-solving and logical thinking skills. Overall, the awareness program was highly informative and motivating. It helped students understand the

value of strong programming fundamentals and the responsible use of AI tools in their academic and professional development.

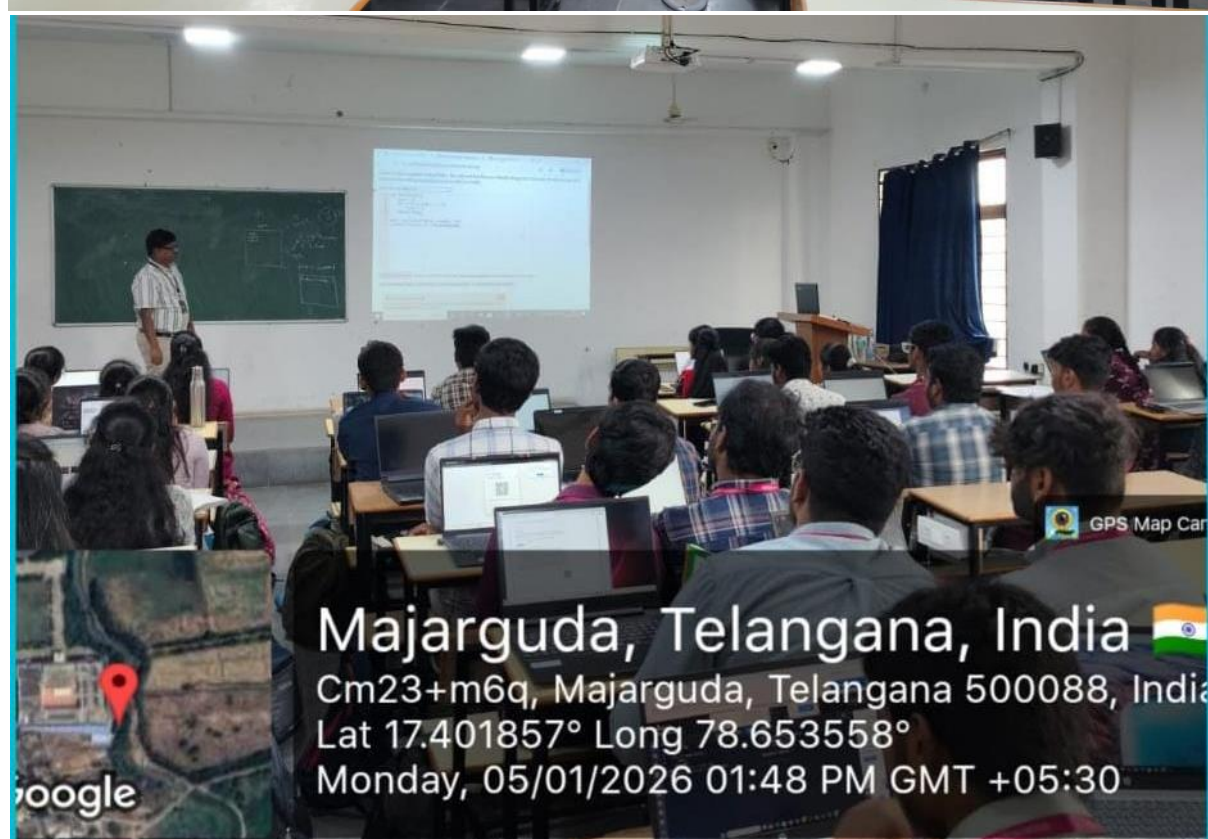


The department expressed its sincere gratitude to Dr. Mohan Pakalapati for delivering an insightful awareness session, as a token of appreciation, the department felicitated him for sharing his valuable knowledge and guidance with the students. His session greatly benefited the participants and inspired them to strengthen their programming skills while using modern AI tools responsibly. The department thanked him for his time, support, and contribution to the success of the program.



Day-1(05.01.2026) Session 2: Introduction to Python, Data Types, Variables, Expressions:

In the afternoon session, **Dr.Sk.Fairooz** handled the session on "**Introduction to Python**", students will learn the basic concepts of python like variables, data types and expressions and their implementation in programming. Followed by practical sessions.



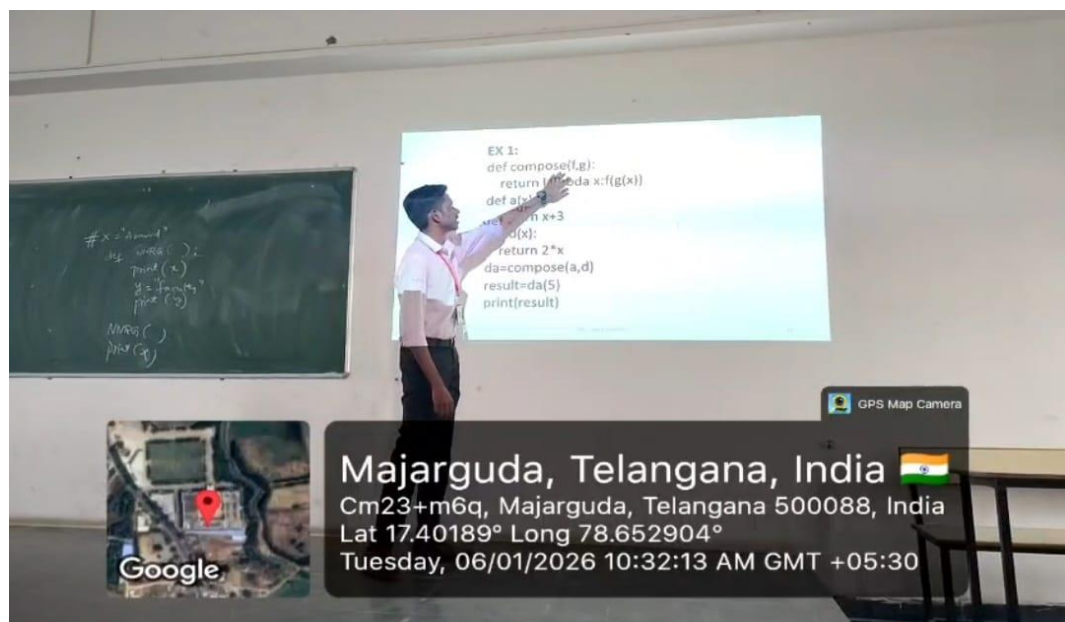
Day-2(06.01.2026) Session 1: Parameters and arguments, Functions, Arrays:

The morning session was conducted by Mr. A. Aravind, who delivered an informative lecture on the topics Parameters and Arguments, Functions, and Arrays in programming. He began the session by explaining the concept of functions, highlighting how functions help in organizing programs into

smaller, reusable blocks of code. He described how functions improve code readability, reduce repetition, and make programs easier to maintain.



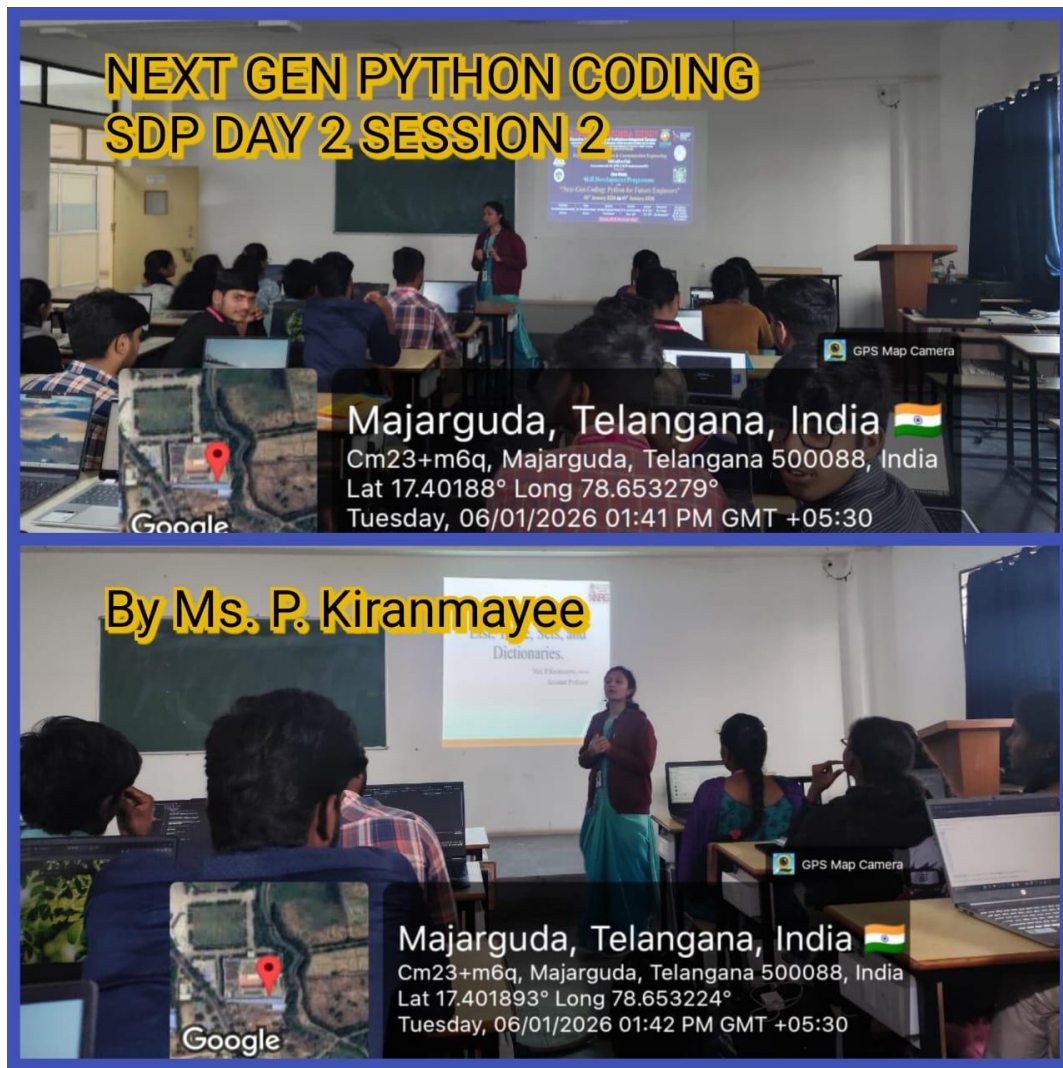
As part of the learning activity, students delivered presentations on the topics Parameters and Arguments, Functions, and Arrays. The objective of the presentation was to help students improve their understanding of programming concepts and enhance their communication and presentation skills.



Day-2(06.01.2026) Session 2: Lists, Tuples, Dictionaries, Sets, Exceptions

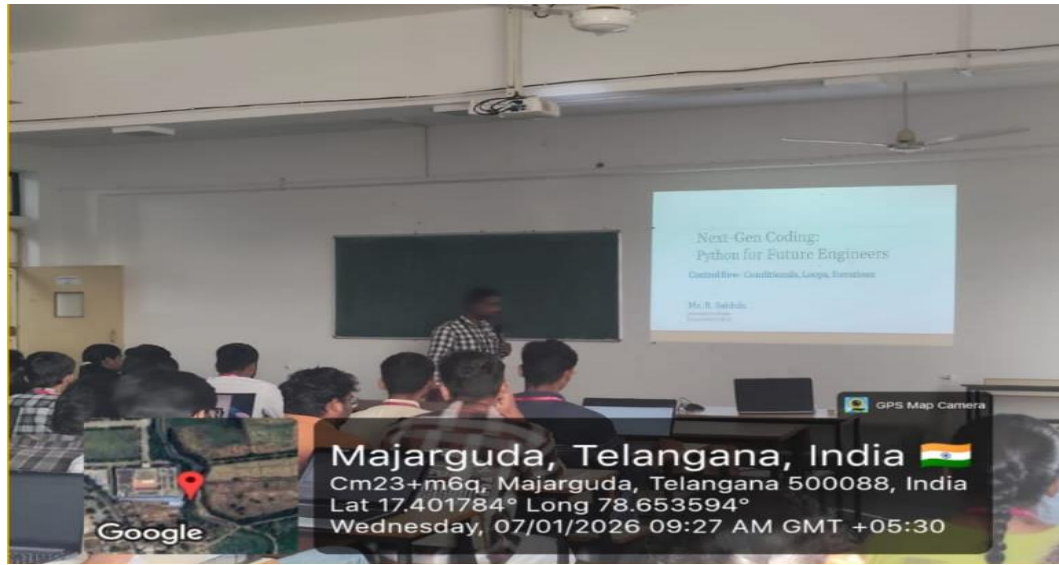
The second day afternoon session of the program featured an informative session conducted by Mrs. P. Kiranmayee on important Python programming concepts including Lists, Tuples,

Dictionaries, Sets, and Exception Handling. Overall, the session was interactive and insightful, enabling participants to strengthen their understanding of Python data structures and error handling techniques.



Day-3(07-01-2026)Session 1: Control flow, Loops, Conditionals, Iterations:

The third session of the day was conducted by Mr. B. Saidhulu, who delivered an engaging lecture on the fundamental programming concepts of Control Flow, Loops, Conditionals, and Iterations in Python, where students learned how the order of execution of statements in a program can be controlled using different programming structures, explained how control flow helps in making programs more logical and efficient. Finally, the concept of Iterations was explained, highlighting how loops repeatedly execute a block of code until a specified condition is met. Practical examples and demonstrations helped students understand how iteration works in real programming scenarios.



Overall, the session was highly informative and interactive, providing students with a clear understanding of the basic programming structures required to write efficient Python programs.



Day-3(07-01-2026)Session 2: Modules, Packages

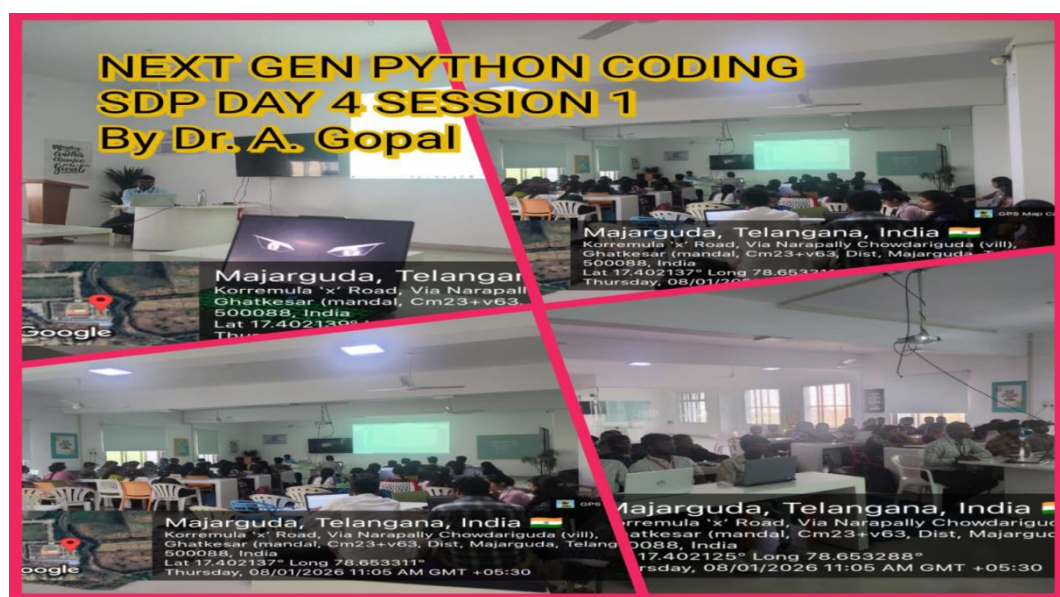
The session on Modules and Packages was conducted by Dr. Appaji. The session aimed to help students understand how large programs can be organized into smaller and manageable components in Python. He explained the concept of modules, describing them as separate files that contain Python code such as functions, variables, and classes. He demonstrated how modules can be

imported into programs using the import statement, which allows programmers to reuse code and avoid repetition.



Day-4(08-01-2026) Session 1: NumPy, Files, Pandas

The session on NumPy, Files, and Pandas was conducted by Dr. A. Gopal. The session focused on introducing students to important Python libraries and concepts used in data handling and analysis, explaining that it is a powerful Python library used for numerical computing and working with arrays. He demonstrated how NumPy arrays allow faster mathematical operations and efficient handling of large datasets.



The session then covered File Handling in Python, where students learned how to create, read, write, and append data in files using different file modes. Practical examples were shown to explain how files are used to store and manage data in real-world applications.

Day-4(08-01-2026) Session 2: Real time Projects

The session on Real-Time Projects was conducted by Dr.Sk. Fairoz and Mr. B. Saidhulu. The session aimed to introduce students to the importance of applying programming knowledge to solve real-world problems. During the session, the speakers explained how programming concepts learned in class can be implemented in real-time projects. They discussed various project ideas related to software development, data analysis, and problem-solving applications, encouraging students to think creatively and develop practical solutions.



Day-5(09-01-2026) Session 1: Real time Projects

Examples of simple project models were discussed to help students understand how theoretical concepts can be converted into practical applications. The session motivated students to actively participate in project development and enhance their technical and analytical skills.



Overall, the session was very inspiring and provided valuable insights into how students can work on real-time projects to gain practical experience and industry-oriented skills.

Day-5(09-01-2026) Session 2: Assessment Test

On the final day of the program, an assessment test was conducted to evaluate the understanding and learning outcomes of the participants. The test covered the various topics discussed throughout the sessions, including Python programming concepts, control flow, functions, arrays, modules, packages, and data handling libraries.



The test included a mix of conceptual questions, programming-based questions, and problem-solving tasks. Students actively participated in the assessment and attempted the questions with enthusiasm. The test provided an opportunity for them to reflect on their learning and demonstrate their skills.

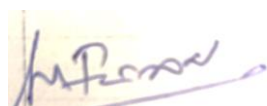


Conclusion:

The five-day Skill Development Program on Python Programming was a highly enriching and productive learning experience for all the participants. Throughout the program, students were introduced to the fundamentals of Python, including syntax, data types, control structures, functions, and basic problem-solving techniques. The hands-on sessions and practical exercises helped students gain confidence in writing and understanding Python code. The program not only enhanced students' technical skills but also improved their logical thinking and analytical abilities. Interactive sessions, real-time examples, and guided practice encouraged active participation and made learning engaging and effective. By the end of the program, students developed a strong foundation in Python programming, which will be beneficial for their academic projects, competitive exams, and future career opportunities.

Impact Analysis:

Category	Details	Count	Percentage / Outcome
Programme Duration	Skill Development Programme	5 Days	Successfully conducted
Participants	II B.Tech Students	All Registered	100% Participation
Topics Covered	Python fundamentals, Functions, Data Structures, File Handling, OOP	10+ Topics	Strong programming foundation
Practical Sessions	Hands-on coding and exercises	Daily	Improved coding skills
Skill Development	Logical thinking, debugging, problem-solving	All Participants	Enhanced analytical ability
Technology Exposure	AI, IoT, Data Science, Automation	All Participants	Increased awareness of Python applications
Learning Outcome	Programming confidence and practical knowledge	All Participants	Better readiness for projects and placements
Overall Outcome	Successful completion of the programme	All Participants	Improved Python programming competency



Dr. Sk. Fairouz

Coordinator



Dr. Ravi Bolimera

HoD-ECE