



Koneru Lakshmaiah Education Foundation

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Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. +91 8645 - 350 200; www.kluniversity.in

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Department of Mechanical Engineering

A.Y 2025-2026, Even Semester

Workshop Report on “Hands-on CNC Programming for Turning and Milling Operations”

The Department of Mechanical Engineering organized an online **workshop** on “**Hands-on CNC Programming for Turning and Milling Operations**” on **08-04-2026** for B.Tech students of KLEF. The workshop was delivered by **Mr. T. Krishna Kanth, Senior Training Officer, NTTF Gannavaram**. A total of 41 participants including 33 students and 8 faculty members actively participated in the session.

Link: <https://meet.google.com/eaz-qwgx-txd>

This report presents the detailed proceedings, objectives, content delivery, and outcomes of the workshop conducted for enhancing practical knowledge in CNC programming.



The Department of Mechanical Engineering organized a comprehensive workshop on CNC Programming to bridge the gap between theoretical knowledge and industrial practices. CNC technology plays a vital role in modern manufacturing industries, enabling precision, automation, and efficiency.



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The workshop focused on both turning and milling operations, providing participants with exposure to real-time industrial scenarios through demonstrations and live sessions. The session was conducted by an experienced industry expert - Mr. T. Krishna Kanth, Senior Training Officer, NTTF Gannavaram, ensuring practical insights along with conceptual clarity.

Objectives of the Workshop

The key objectives of the workshop were:

- To introduce participants to CNC machine fundamentals and industrial relevance.
- To develop understanding of CNC programming for turning operations.
- To provide knowledge on milling operations and tool path generation.
- To enhance practical skills through demonstrations.
- To familiarize participants with industrial standards and applications.

The workshop aimed to strengthen both theoretical and practical competencies required for modern manufacturing industries.





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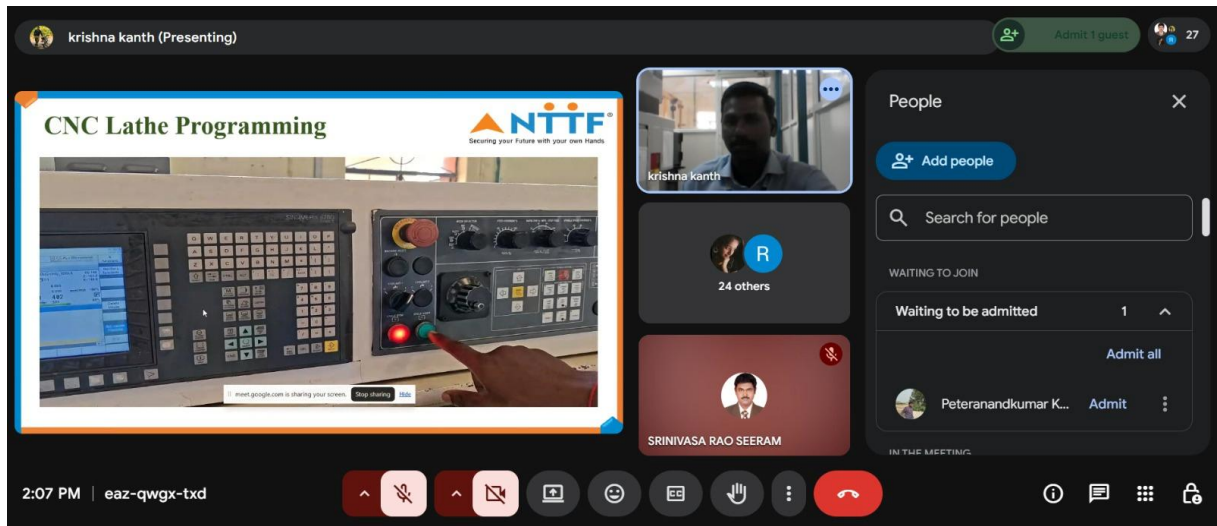
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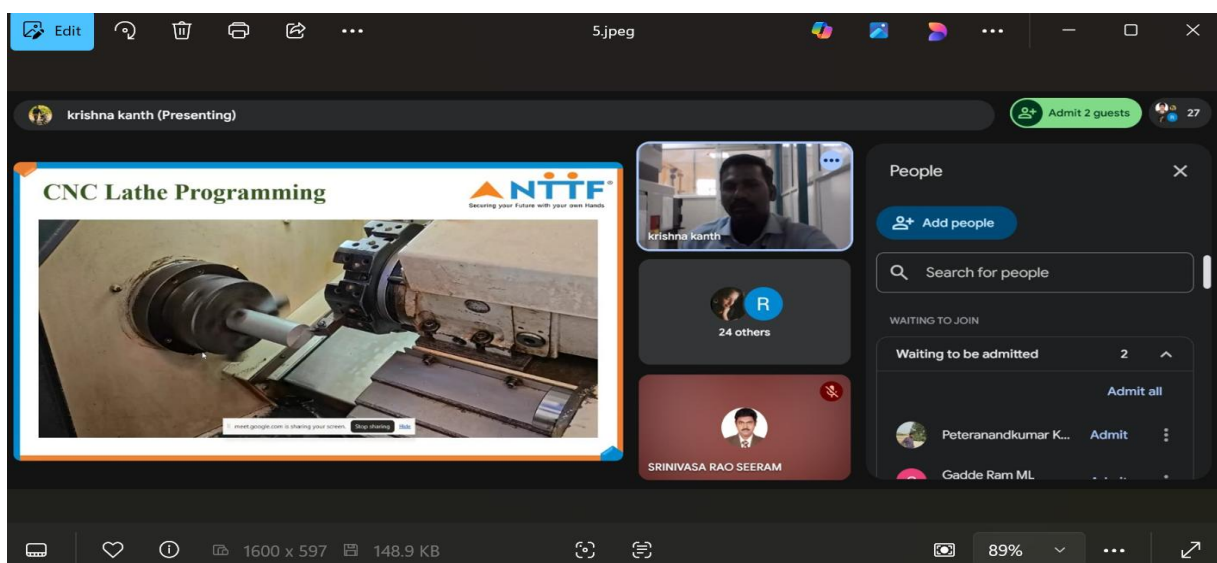
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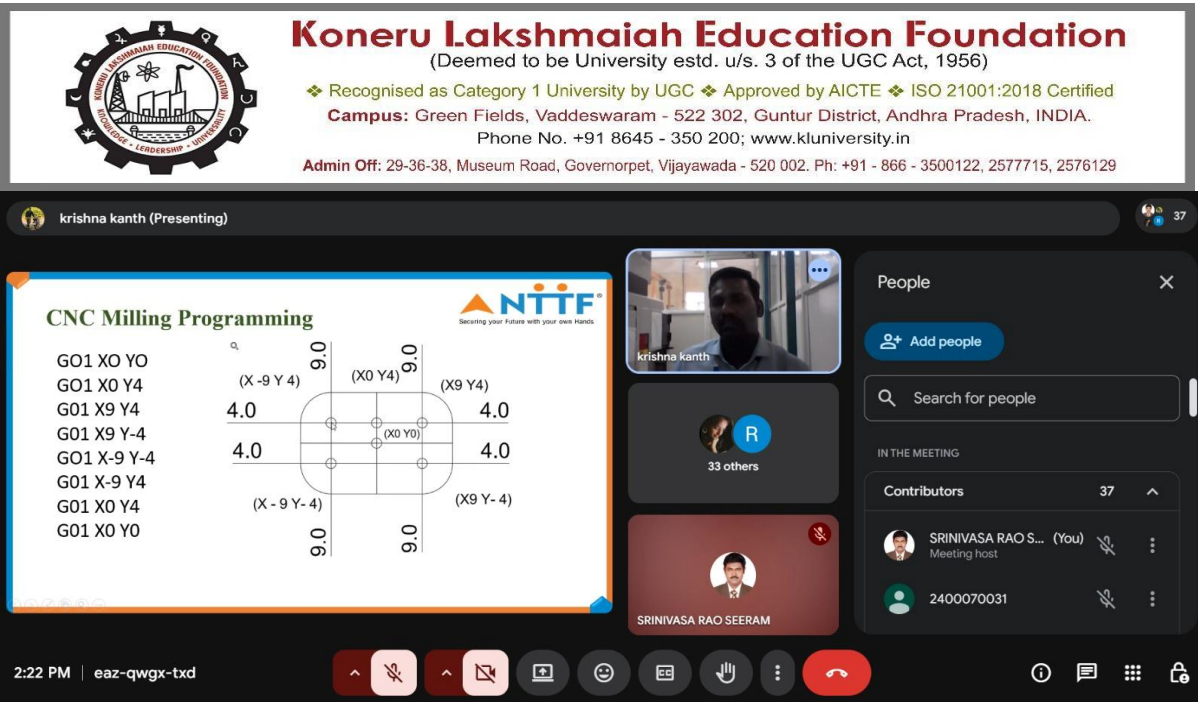
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The workshop covered a wide range of topics related to CNC technology including introduction to CNC machines and their components, CNC Lathe Programming (G-codes and M-codes), CNC Milling Programming and coordinate systems, Tool selection and cutting parameters, Simulation and verification of CNC programs, Industrial applications and case studies.

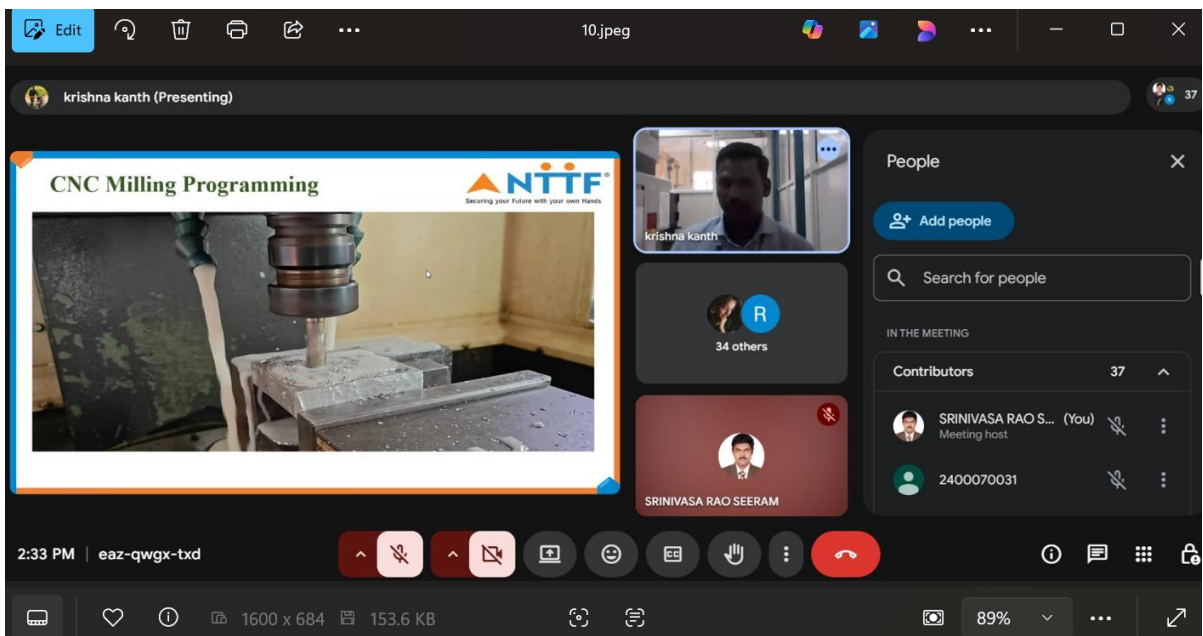


CNC Lathe Programming provided participants with a comprehensive understanding of the fundamentals and practical aspects of computer numerical control in turning operations. It covered part programming using G-codes and M-codes, tool selection, coordinate systems, and machining cycles. Hands-on sessions enabled students to develop, simulate, and execute programs for various turning operations.





CNC Milling Programming offered participants a clear understanding of programming techniques used in modern milling operations. It included topics such as G-codes, M-codes, coordinate systems, tool path planning, and canned cycles. Participants gained practical exposure through hands-on exercises in writing, simulating, and executing milling programs. The session emphasized accuracy, surface finish, and efficient material removal.





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The workshop witnessed active participation from 33 students and 8 faculty members. Participants were engaged throughout the session by interacting with the resource person and clarifying doubts.

Learning outcomes achieved include:

- Understanding of CNC machine operations.
- Ability to write basic CNC programs.
- Knowledge of industrial practices in machining.
- Awareness of automation in manufacturing.

The workshop was highly successful in achieving its objectives. It provided valuable insights into CNC programming and its industrial applications. Participants appreciated the practical approach and interactive nature of the session. Such workshops are essential for enhancing employability and technical competence among students. The Department of Mechanical Engineering expresses gratitude to the resource person and all participants for making the event successful.

Prepared by

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