

GURU NANAK INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING ICT TOOLS AND THEIR UTILIZATION

The Teaching and Learning process is given the foremost importance in the Department. Civil Engineering department is more focused on implementing OBE to nurture students' skills, knowledge and attitude. Learner centric pedagogical approaches are adopted by all the faculty members and they are trained to use ICT tools in the classroom for improved learning experience, reinforcement of the concepts and problem-solving. The department is equipped with the necessary tools, such as a large number of computers in the laboratory. Through training sessions at the institution and/or faculty development programmes, the faculty is prepared to use these tools effectively.

The students are given specific assignments or slip tests at the conclusion of each unit of instruction utilizing the Learning Management System or other ICT platforms, which enhances their learning by having them solve problems.

The ICT enabled Teaching-Learning Process is supported by Regular Practical Sessions, Digital Library Access, Online Courses including NPTEL and other MOOCs, Online Journals, Online Tests, Use of LCD Projectors for Seminars and Workshops, Effective Use of Educational Videos, and Accessibility of Non-Print Material for Students of different programs. The Information Communication Technology (ICT) tools used in Department includes LCD projector, Smart boards, GOOGLE MEET platforms and GNIT Learning Management System.



GURU NANAK INSTITUTE OF TECHNOLOGY



Signature
HOD-CE

**HEAD OF THE CIVIL ENGINEERING DEPARTMENT
GURU NANAK INSTITUTE OF TECHNOLOGY
Ibrahimpattam, R.R. Dist., T.S.-501 508**

GURU NANAK INSTITUTE OF TECHNOLOGY

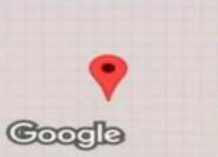
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ICT TOOLS AND THEIR UTILIZATION

ICT (Information and Communication Technology) tools are essential in Electrical and Electronics Engineering (EEE) for enhancing education, research, and project development. These tools simplify learning and improve efficiency through simulations, virtual labs, and design platforms. Key tools include simulation software like MATLAB/Simulink and Multisim for circuit design and analysis, and design tools like AutoCAD Electrical and Proteus for embedded systems. Programming tools such as Python and Arduino IDE are widely used in automation and microcontroller programming. Virtual labs like LabVIEW allow experiments without physical setups, while platforms like Google Classroom support online learning. ICT tools are utilized in education for interactive teaching, in research for data analysis, and in projects for designing systems. Challenges like high costs and training needs exist, but their benefits far outweigh them. Investing in these tools significantly enhances learning and professional readiness in the field of EEE.




GURU NANAK INSTITUTE OF TECHNOLOGY



Rangareddy, Telangana, India
Gnit Idea Lab 202000245, Guru Nanak Institute Of Technology,
Near Department Of Eee, Telangana 501506, India
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Ibrahimpattam, Telangana, India
Gnit A Block EEE DEPARTMENT Ibrahimpattam,
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HOD EEE
Guru Nanak Institute of Technology
IBRAHIMPATTAM

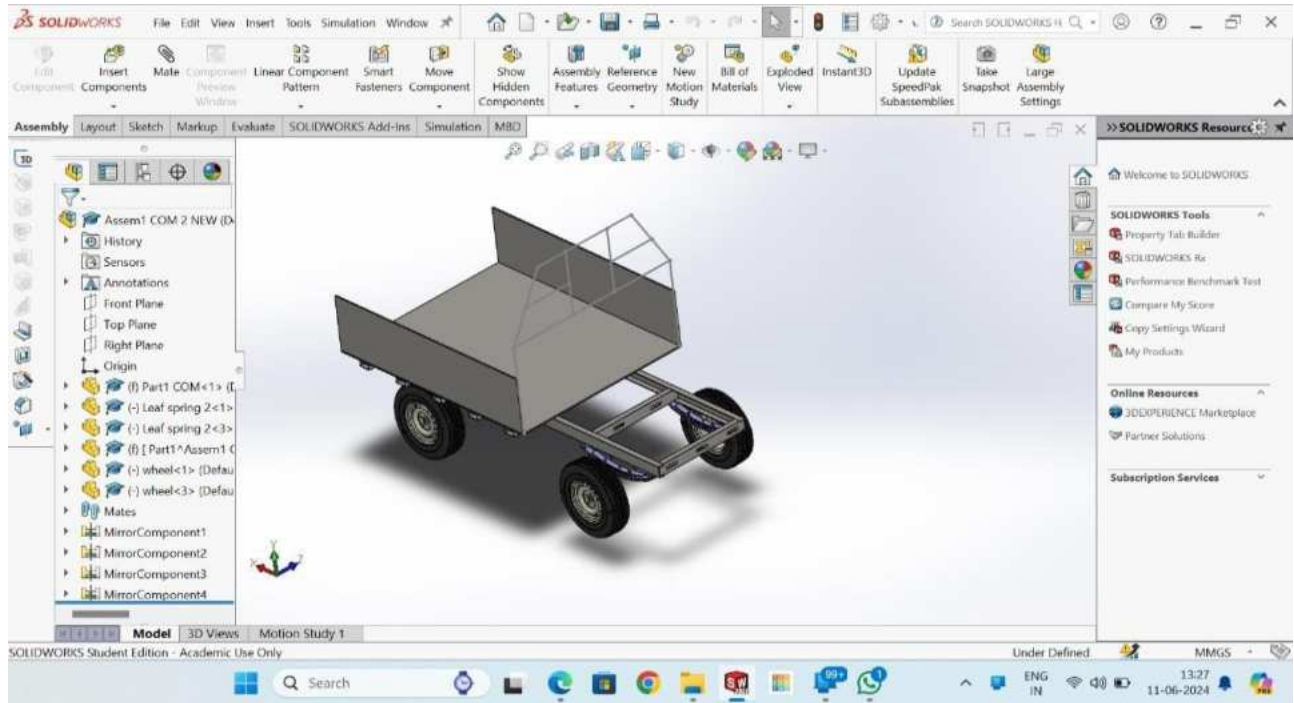
DEPARTMENT OF MECHANICAL ENGINEERING

ICT TOOLS AND THEIR UTILIZATION

In the modern Mechanical Automation landscape, the role of technology in education is pivotal. The integration of projectors into classrooms and laboratories has significantly enhanced teaching and learning experiences within the Mechanical Engineering Department. ICT tools facilitate the effective delivery of complex topics such as Problem Solving Techniques, Design and Analysis. This report explores the use of ICT tools which emphasizing how they contribute to an enriched educational experience for students and instructors.



Dr. Sreenatha Reddy conducting lecture on Refrigeration and Air Conditioning



Design of Trolley by Solid Works



Laptop Utilization for Online Classes by Dr. B. Vijaya Kumar



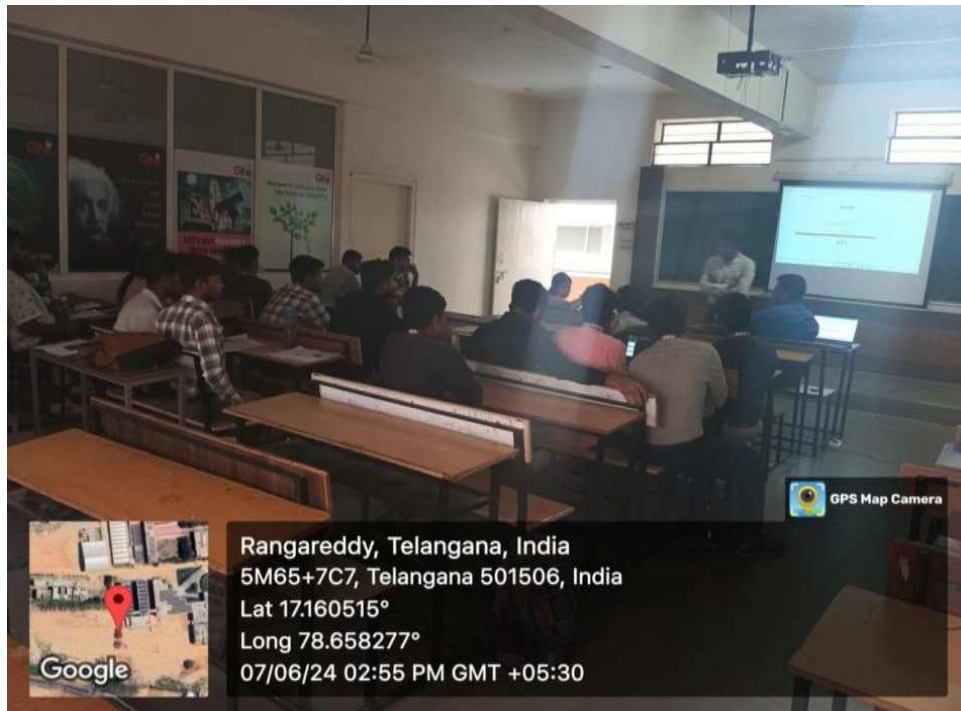
Phase Diagrams Explanation through presentation by Mr. N. Yadagiri




Additive Manufacturing Techniques through presentation by Mrs. P. Vara Lakshmi



Thermodynamic Laws Explanation by Mr. S. Madhu



Project reviews are conducting


Dr. B. Vijaya Kumar
HOD-MECHANICAL DEPARTMENT
Guru Nanak Institute of Technology
Khanapur (V), Ibrahimpatnam,
R.R. Dist-501506

GURU NANAK INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ICT TOOLS AND THEIR UTILIZATION

In the modern landscape, the role of Electronics and Communication Engineering Technology in education is pivotal. The integration of projectors into classrooms and laboratories has significantly enhanced teaching and learning experiences within the Electronics and Communication Engineering Department. The Information and Communication Technology (ICT) tools facilitate the effective delivery of complex topics such as IIoT with 5G, 6G Services, Implementation of VLSI Design with AI/ML, Sustainable Energy and Low Power Design, and Photonics and Optoelectronics. This report explores the use of ICT tools which emphasizing how they contribute to an enriched educational experience for students and instructors.





GPS Map Camera



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Syada V

Dr. S. P. Yadav
HOD-ECE

Head of the Department
Electronics & Comm. Engineering
Guru Nanak Institute of Technology
Banapur, Ibrahimpatnam, R. R. Dist. - 501506.

GURU NANAK INSTITUTE OF TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

In the CSE (Computer Science and Engineering) Department, projectors, digital pads, and Google Meet serve specific and impactful purposes. The use of Projectors are Code Demonstration, Presentation of Concepts, Live Tools and Software Demos & Seminars and Conferences.

The Benefits are like

- Visual clarity in understanding algorithms and system architectures.
- Simplifies complex topics like network topologies and database schemas.



GURU NANAK INSTITUTE OF TECHNOLOGY

Ibrahimpattam, Telangana, India
GNIT E Block 1st year block, Ibrahimpattam, Telangana 501506, India
Lat 17.160398°
Long 78.659149°
23/02/24 04:00 PM GMT +05:30

Digital Pads use for Live Coding, Problem Solving, Graphical Illustrations & Collaborative Design.

Benefits:

- Encourages interactive learning, especially for algorithm design and debugging.
- Facilitates a paperless environment for brainstorming and design activities.



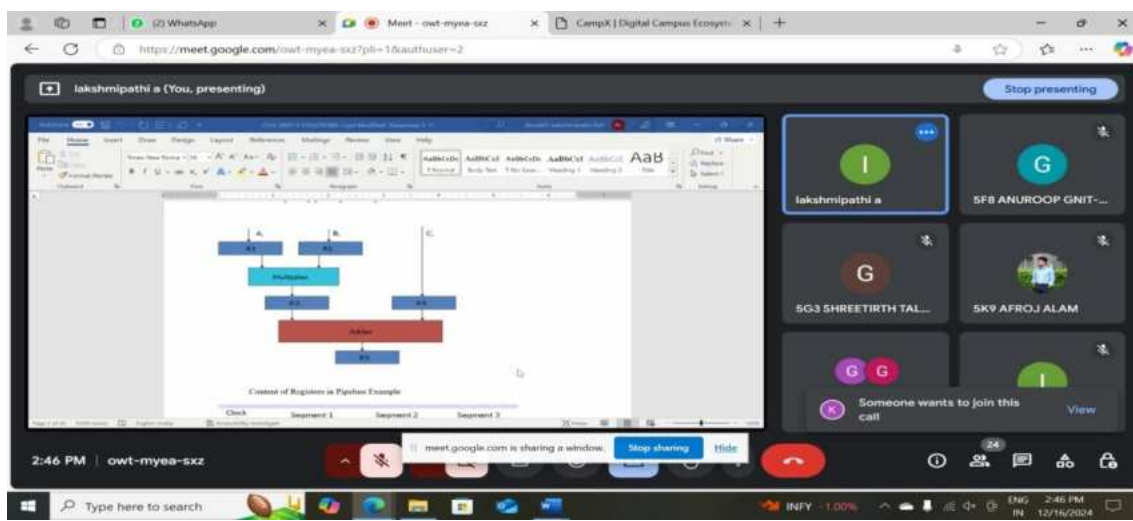
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GURU NANAK INSTITUTE OF TECHNOLOGY

Google Meet is used for Virtual Coding Workshops, Guest Lectures, Online Collaboration, Record and Replay.

Benefits:

- Bridges gaps in learning through remote collaboration.
- Makes learning flexible and accessible, especially for working students or during disruptions.
- Encourages global learning opportunities by connecting with industry professionals.



Anthony Kumar

Dr. B. Santhosh Kumar
HOD-CSE

Head of the Dept - CSE
Guru Nanak Institute of Technology
Khanapur, Ibrahimpatnam
R.R. Dist - '11'

GURU NANAK INSTITUTE OF TECHNOLOGY**DEPARTMENT OF INFORMATION TECHNOLOGY
ICT TOOLS AND THEIR UTILIZATION**

The Teaching and Learning process is given the foremost importance in the Information Technology department is more focused on implementing OBE to nurture students' skills, knowledge and attitude. Learner centric pedagogical approaches are adopted by all the faculty members and they are trained to use ICT tools in the classroom for improved learning experience, reinforcement of the concepts and problem-solving. The department is equipped with the necessary tools, such as a large number of computers in the laboratory . Through training sessions at the institution and/or faculty development programmes, the faculty is prepared to use these tools effectively.

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[Handwritten Signature]
Head of the Dept - IT
Guru Nanak Institute of Technology
Khanapur Ibrahimpet
Dist - 501506

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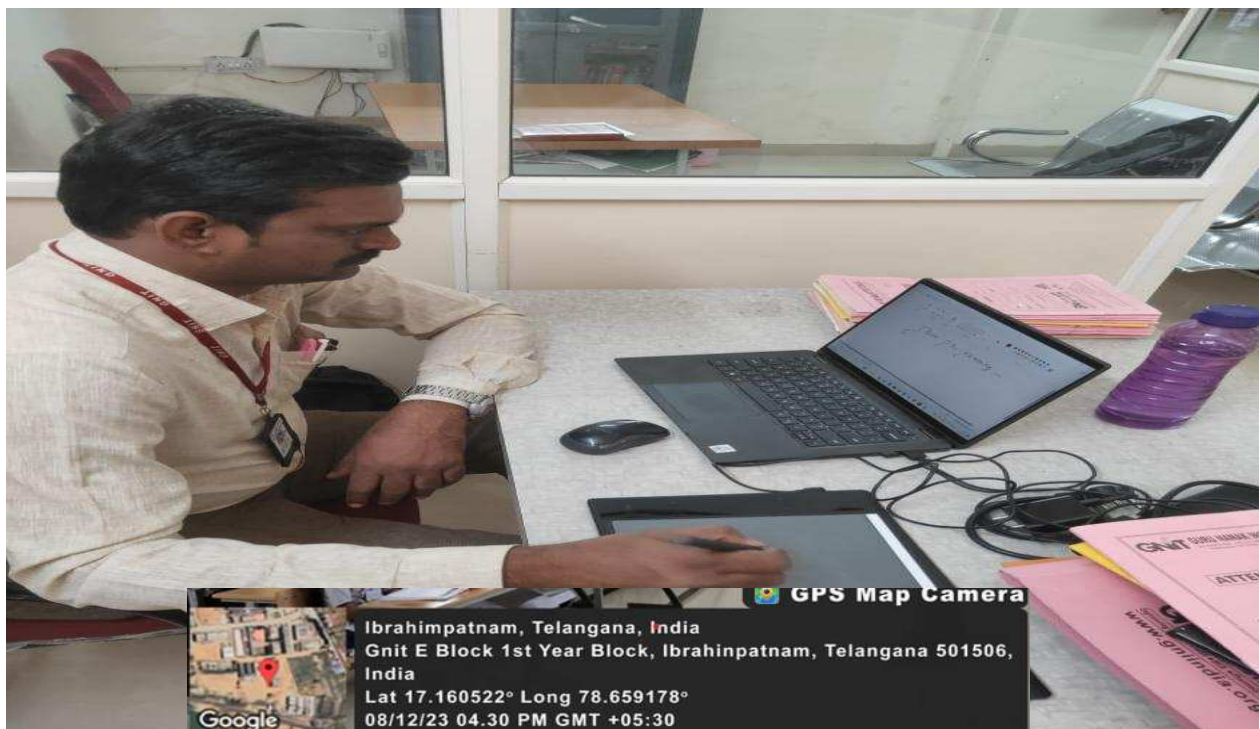
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (CYBER SECURITY)

ICT TOOLS AND THEIR UTILIZATION

In the modern cyber security landscape, the role of technology in education is pivotal. The integration of projectors into classrooms and laboratories has significantly enhanced teaching and learning experiences within the Cyber security Department. ICT tools facilitate the effective delivery of complex topics such as network security, cryptography, ethical hacking, and malware analysis. This report explores the use of ICT tools which emphasizing how they contribute to an enriched educational experience for students and instructors.



GURU NANAK INSTITUTE OF TECHNOLOGY



Using Digital Pad and Pen while teaching

Ch. Balakrishna

Dr. Ch. Balakrishna
HOD-CS

Head of the Department
Department of C.S.E(Cyber Security)
Guru Nanak Institute of Technology
Ibrahimpatnam,Hyderabad - 501506.

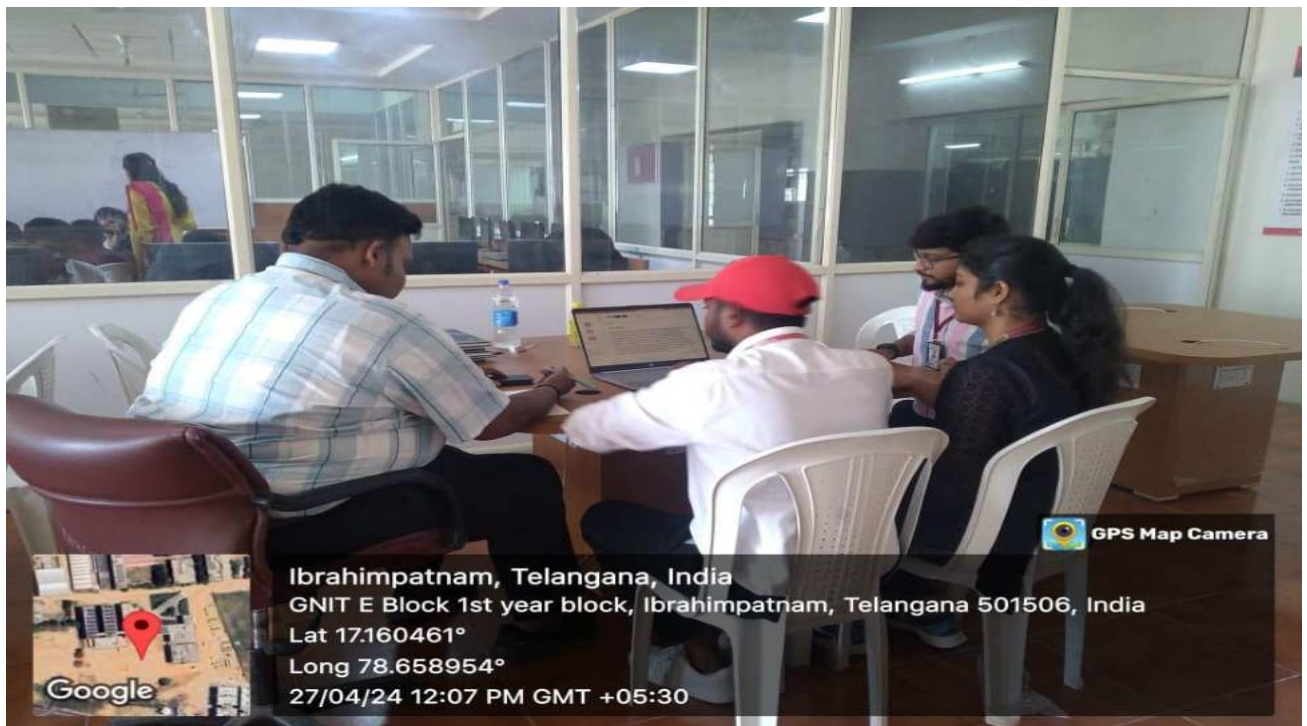
GURU NANAK INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

In the CSE (Artificial Intelligence and Machine Learning) Department, projectors, digital pads, and Google Meet serve specific and impactful purposes. The use of Projectors are Code Demonstration, Presentation of Concepts, Live Tools and Software Demos&Seminars and Conferences.

The Benefits are like

- Visual clarity in understanding algorithms and system architectures.
- Simplifies complex topics like network topologies and database schemas.



GURU NANAK INSTITUTE OF TECHNOLOGY





Digital Pads use for Live Coding, Problem Solving, Graphical Illustrations & Collaborative Design.

Benefits:

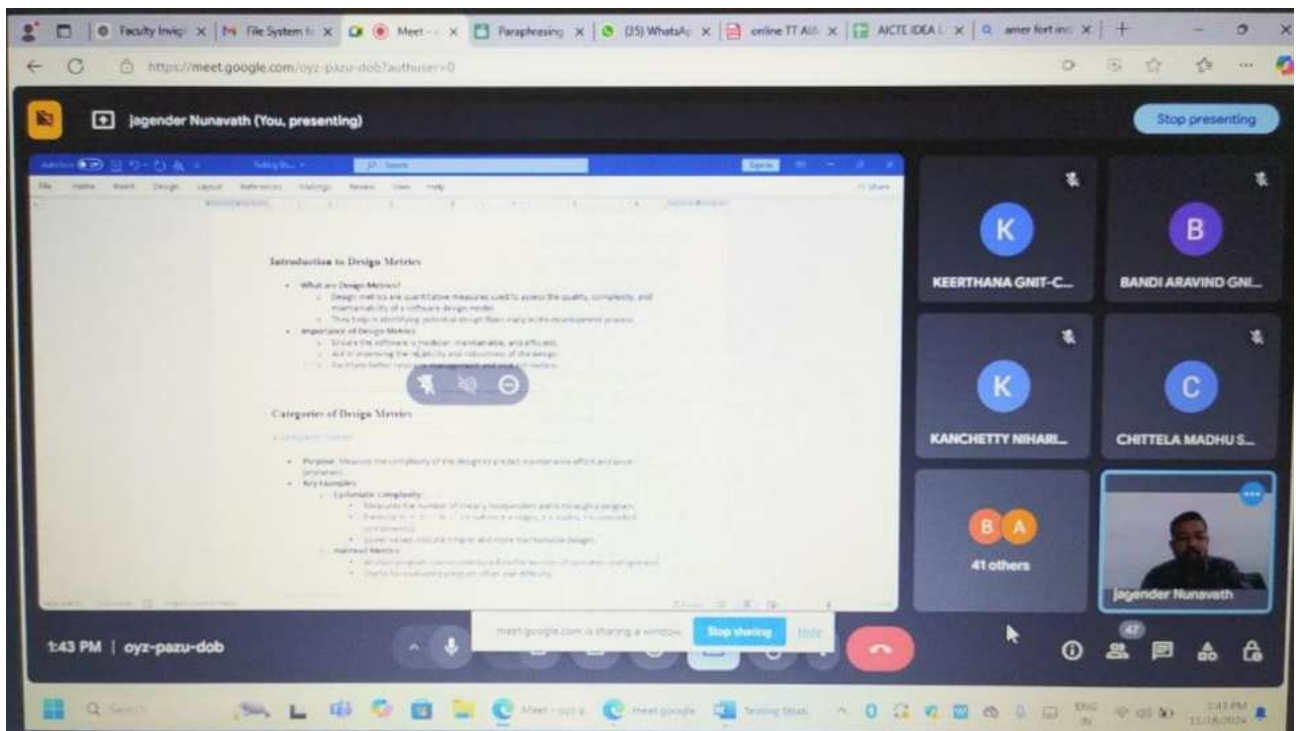
- Encourages interactive learning, especially for algorithm design and debugging.
- Facilitates a paperless environment for brainstorming and design activities.

GURU NANAK INSTITUTE OF TECHNOLOGY

Google Meet is used for Virtual Coding Workshops, Guest Lectures, Online Collaboration, Record and Replay.

Benefits:

- Bridges gaps in learning through remote collaboration.
- Makes learning flexible and accessible, especially for working students or during disruptions.
- Encourages global learning opportunities by connecting with industry professionals.



SADISH SENDIL MURUGARAJ

Professor and Head
Department of Emerging Technologies
Guru Nanak Institute of Technology
Ibrahimpattam, Hyderabad-501506

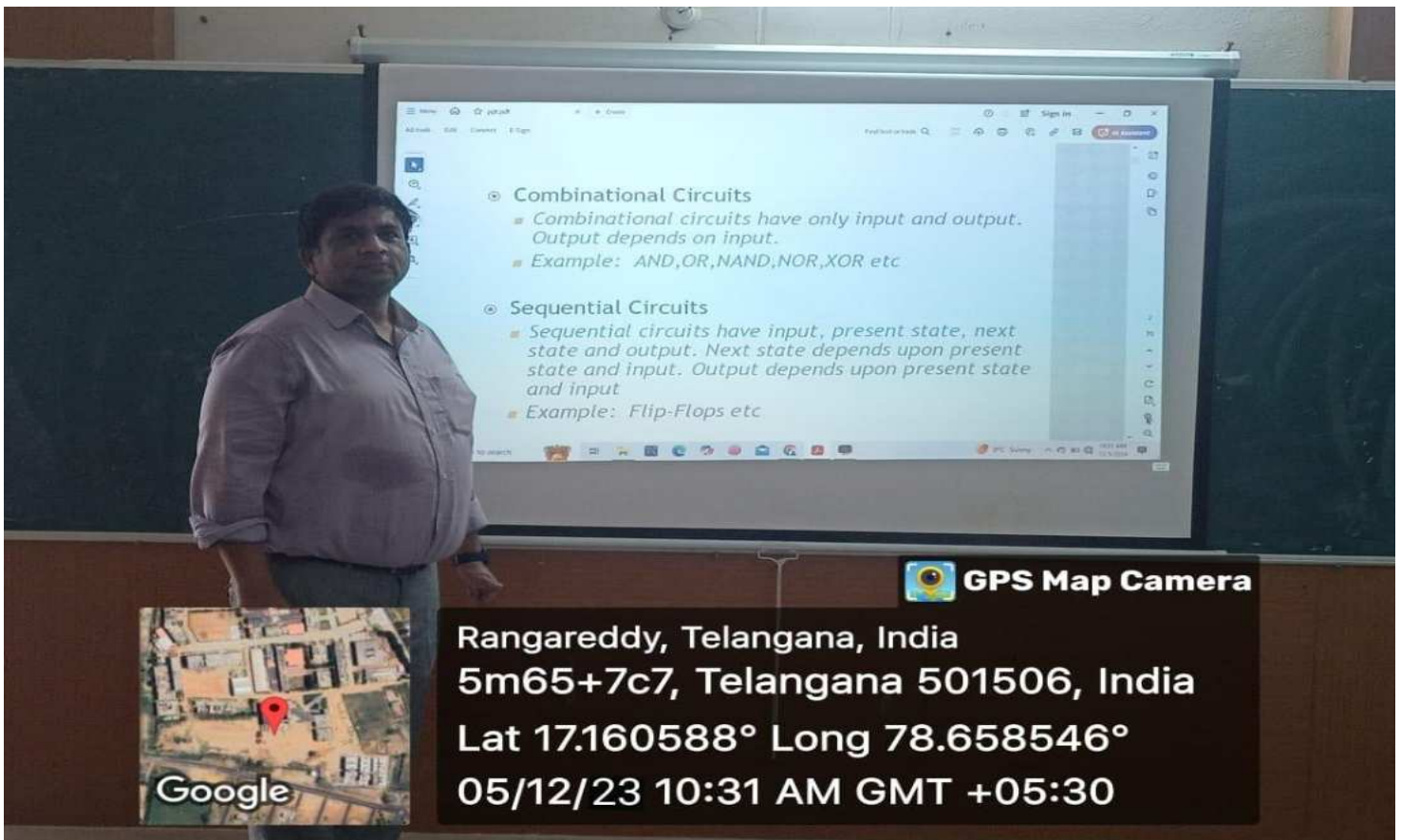
GURU NANAK INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ARTIFICIAL INTELLIGENCE & DATA SCIENCE

ICT TOOLS AND THEIR UTILIZATION

Technology plays a pivotal role in modern education, especially in the Artificial Intelligence & Data Science Department. The use of ICT tools like projectors and interactive software has revolutionized teaching and learning by simplifying complex topics such as machine learning, deep learning, big data analytics, and neural networks.

These tools enable real-time demonstrations, data visualizations, and hands-on coding sessions, fostering deeper understanding and practical skills. They also promote interactive learning and collaboration, preparing students to tackle real-world challenges with confidence and expertise.




GURU NANAK INSTITUTE OF TECHNOLOGY

Java programming

UNIT V

- The AWT class hierarchy
- AWT Example by Association
- Let's see a simple example of AWT where we are creating instance of Frame class. Here, we are showing Button component on the Frame.

```
import java.awt.*;
class AwtExample2{
    AwtExample2(){
        Frame f=new Frame();
        Button b=new Button("click me");
        b.setBounds(10,50,80,30);
        f.add(b);
        f.setSize(300,300);
        f.setLayout(null);
        f.setVisible(true);
    }
    public static void main(String args[]){
        AwtExample2 f=new AwtExample2();
    }
}
```



 **GPS Map Camera**



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GURU NANAK INSTITUTE OF TECHNOLOGY

Swing Menus

- The Swing menu system supports several key elements, including
 - The menu bar, which is the main menu for an application.
 - The standard menu, which can contain either items to be selected or other menus (submenus).
 - The popup menu, which is usually activated by right-clicking the mouse.
 - The toolbar, which provides rapid access to program functions, often paralleling menu items.
 - The action, which enables two or more different components managed by a single object. Actions are commonly used with menus and toolbars.
 - Swing menus also support accelerator keys, which allow a menu item to be selected without having to activate the menu. Accelerators are used with menus and toolbars.

 **GPS Map Camera**



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P G Block, Telangana 501506, India
Lat 17.162134° Long 78.659412°
05/12/23 10:24 AM GMT +05:30

Sheetal Kundra

Dr. Sheetal Kundra
HOD-AI&DS

Professor and Head of the Department
Department of Artificial Intelligence
and Data Science
Guru Nanak Institute of Technology
Ibrahimpattanam, Hyderabad
R. R. Dist, Telangana-501506



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DEPARTMENT OF MANAGEMENT OF BUSINESS ADMINISTRATION

ICT TOOLS AND THEIR UTILIZATION

In the modern landscape, the role of management technology in education is pivotal.

The integration of projectors into classrooms and laboratories has significantly enhanced teaching and learning experiences within the Management Department.

The Information and Communication Technology (ICT) tools have revolutionized the way management departments operate, enhancing efficiency, productivity, and decision-making processes. This report explores various ICT tools used in management, their functionalities, and their impact on organizational performance.



Utilization of ICT Tools in Management

Enhanced Decision-Making: By providing real-time data and analytics, ICT tools help managers make informed decisions quickly.

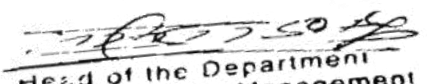
Improved Efficiency: Automation of routine tasks and processes reduces manual effort and increases productivity.

Better Collaboration: Communication and collaboration tools enable seamless interaction among team members, fostering a collaborative work environment.

Data-Driven Strategies: Data analytics tools help in identifying trends, patterns, and insights that can be used to develop effective business strategies.

The integration of ICT tools in management departments not only streamlines operations but also supports strategic planning and innovation.




Head of the Department
Dept. of Business Management
Guru Nanak Institute Of Technolog,
Ibrahimpattam, R.R. Dist. Hyd

Dr. B. Madhusudhan Reddy
HOD-MBA

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DEPARTMENT OF HUMANITIES AND SCIENCES

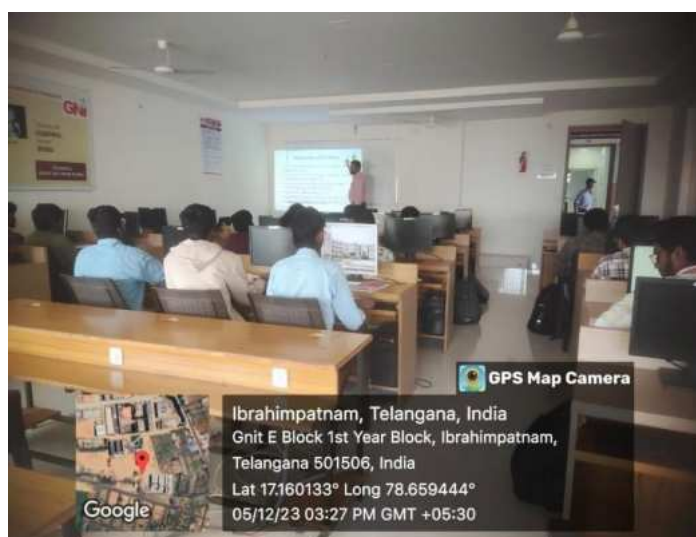
ICT TOOLS AND THEIR UTILIZATION

ICT tools in education can help students receive a high-quality education by providing flexibility, accessibility, and cost-effectiveness. They can also help students develop skills to become competent, creative, and ethical users of ICT. GNIT always encourages the faculty to use ICT tools for effective teaching from First year itself. Every class room of First year is equipped with LCD projector and Screen. Apart from Course file, the teaching material such as Power Point Presentations, Downloaded Animations, Handouts, Previous year Question papers are uploaded at Google class room by each faculty member at the beginning of the semester. These are reviewed by the Academic Audit Committee (AAC) and Program Monitoring and assessment Committee (PMAC) before giving access to the students. In addition to it, the interactive Smart Board is also available for use. High speed LAN connection, accessibility to wifi , Digital Library resources are some of the aids provided for both students and faculty. All students and Staff are provided with Office Mail IDs for accessing these resources safely. To improve the Quality of Learning, the institution implements the online feedback system with the help of ERP portal / CAMPX software. The results of the examinations are published in Campus ERP portal to be checked by the students.

<https://www.gnithyd.ac.in/student-feedback.php>

<https://gnitexamresults.org/StudentLogin/MainStud.aspx>

Attached are some of the Pictures taken while the ICT tools implementation at the department



Faculty Explaining Concepts on LCD projectors

The Computer Labs are provided with Good Computer systems. The Department is provided with Advanced English Communication skills lab with all sufficient equipment to enhance the Communication skills of the students. The Department Seminar Hall is equipped with all facilities like Overhead LCD projector, Computer system, Audio system with adequate seating capacity.



Professors Explaining Concepts using interactive Board/ Projector

The faculties are encouraged to take online classes during monsoon season and during rise of pandemic conditions such as COVID 19, when there is no possibility to conduct physical class work and provided with Subsidized Laptops This shows the commitment of GNIT management to implement and encourage ICT tools in technical Education while implementing Teaching Learning Process.




Activity Based Learning using ICT Tools



Activities in Advanced English Communication Skills Laboratory

In Summary, GNIT H&S Department is Committed in providing Quality Technical Education Using ICT Tools in Teaching Learning Process.


HOD-H&S Department
Guru Nanak Institute of Technology
Ibrahimpattam, R.R.Dist.-501506.

HOD-H&S