

SOUTH EAST ASIAN EDUCATION TRUST[®] S.E.A. COLLEGE OF ENGINEERING & TECHNOLOGY

(Approved by All India Council for Technical Education (AICTE), New Delhi Affiliated to Visvesvaraya Technological University (VTU), Belagavi, Accredited B++ by NAAC)

Orientation Report - "Education Convention and Activity"

Date: 07/03/2024 Venue: AC Seminar Hall









Title: Exploring Emerging Technologies in Engineering: IoT, 5G, Wind Energy, and Hydrogen Technology

Certainly! Here's an outline for an orientation class covering IoT, 5G technology, wind energy, and hydrogen technology for engineering students:

Objective: To introduce engineering students to the latest advancements in IoT, 5G technology, wind energy, and hydrogen technology and their applications in various engineering fields.

Agenda:

Introduction to Emerging Technologies

Definition and importance of emerging technologies in engineering. Overview of how emerging technologies are shaping the future of various industries.

Internet of Things (IoT)

Definition and basic concepts of IoT.

Applications of IoT in engineering, such as smart cities, healthcare, agriculture, manufacturing, etc.

Challenges and opportunities in IoT implementation.

Case studies showcasing successful IoT implementations.

5G Technology

Understanding the basics of 5G technology and its evolution from previous generations. Exploring the potential applications of 5G in engineering, including Internet of Things, autonomous vehicles, augmented reality, etc.

Comparison of 5G with previous generations of wireless technology.

Future prospects and challenges in the adoption of 5G technology.

Wind Energy

Introduction to wind energy and its significance in the renewable energy sector. Understanding the principles of wind turbine operation.

Analysis of wind energy potential and its role in reducing carbon emissions.

Case studies of successful wind energy projects around the world.

Challenges and innovations in wind energy technology.

Hydrogen Technology

Overview of hydrogen as a clean and renewable energy carrier.

Different methods of hydrogen production, such as electrolysis, steam methane reforming, etc.

Applications of hydrogen technology in transportation, energy storage, and industrial processes.

Advantages and challenges of hydrogen technology adoption.

Recent advancements and research in the field of hydrogen technology.

Future Directions and Career Opportunities

Discussion on the future prospects of these emerging technologies.

Career opportunities for engineering graduates in IoT, 5G technology, wind energy, and hydrogen technology sectors.

Tips for students interested in pursuing further studies or research in these areas.

Interactive Session

Q&A session to address any queries or concerns from the students.

Group discussions on potential project ideas related to IoT, 5G, wind energy, or hydrogen technology.

Conclusion: Wrap up the session by summarizing key takeaways and encouraging students to explore further resources to deepen their understanding of these emerging technologies. Emphasize the importance of staying updated with the latest advancements in the field of engineering to excel in their careers.

This orientation class will provide students with a comprehensive overview of IoT, 5G technology, wind energy, and hydrogen technology, equipping them with the knowledge and skills necessary to thrive in the ever-evolving engineering landscape.

No. of students attended: 140 students.