

2-DAY WORKSHOP
ON
Transforming Agriculture
with IoT, Automation &
Smart Irrigation



11th -12th
March, 2025
Timing: 9 AM to 5 PM

Organized By



Khalsa College of Engineering and
Technology, Amritsar

Governed by Khalsa College Charitable Society
(Accredited by NAAC Grade "A")

In association with



Ihub-AWaDH

Indian Institute of Technology, Ropar



About KCET

Established by the legendary Khalsa College Charitable Society in 2009, the college has rapidly grown to become the institution of choice for students in Amritsar who are interested in earning a technical degree. A beautiful college building, hostels, workshops, a cutting-edge fully automated library, seminar rooms, large classrooms, and laboratories equipped with cutting-edge recent software, instruments, and machines can all be found on the college's 17-acre campus, which is located in the affluent community of Ranjit Avenue. Students from all across India and the rest of the world come to our institute to study because of our forward-thinking instructional strategies, and emphasis on additional skills to complement the primary curriculum. The state-of-the-art facilities and committed teaching personnel at KCET are increasing the frontiers of engineering education as well as the opportunities.

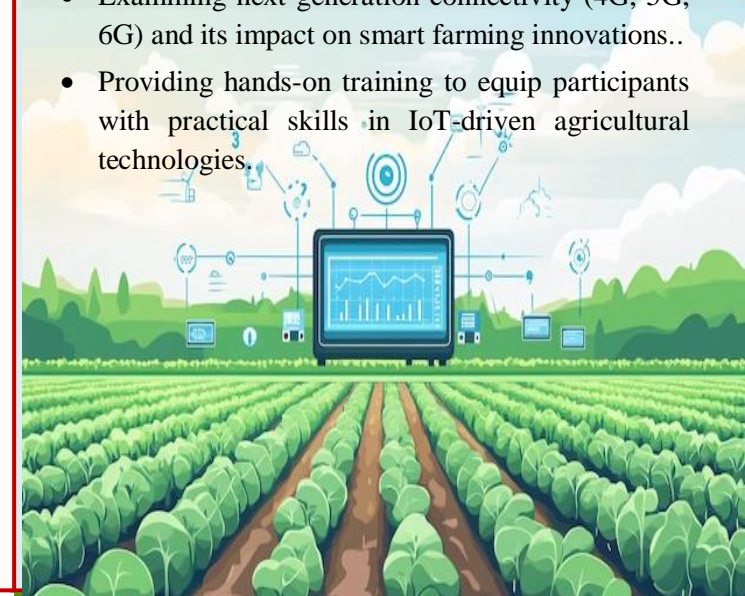
Objectives of Workshop

- ❖ Gained insights into IoT-based precision irrigation and automation for effective water management.
- ❖ Explored GPS and RFID technologies for livestock tracking and virtual fencing applications.

- ❖ Engaged in hands-on activities with soil moisture, temperature, and environmental sensors.
- ❖ Learned about AI-powered crop prediction, pest detection, and farm optimization strategies.
- ❖ Examined the role of 4G, 5G, and 6G connectivity in real-time agricultural monitoring.
- ❖ Observed demonstrations of automated drip irrigation and smart water conservation techniques.

Outcome of Workshop

- Enhancing efficient water management by implementing precision irrigation and automation techniques.
- Exploring smart livestock management with virtual fencing and sensor-based monitoring solutions.
- Understanding the role of IoT and sensors in advancing modern agriculture and optimizing water usage.
- Demonstrating AI and machine learning applications for improving farm decision-making and efficiency.
- Examining next-generation connectivity (4G, 5G, 6G) and its impact on smart farming innovations..
- Providing hands-on training to equip participants with practical skills in IoT-driven agricultural technologies.



Course Content

The two-day workshop on Transforming Agriculture with IoT, Automation & Smart Irrigation provided hands-on experience and technical insights into modern farming technologies. Through expert sessions, discussions the following key topics are covered:

- **IoT in Agriculture:** Role, applications, and impact on productivity.
- **Precision Irrigation:** Automated techniques using moisture, temperature, and environmental sensors for efficient water management.
- **Smart Livestock Management:** GPS, RFID, and virtual fencing for real-time tracking and health monitoring.
- **Soil Health Monitoring:** Using sensors for continuous soil analysis to optimize crop growth.
- **AI & Machine Learning:** Crop prediction, pest detection, and data-driven decision-making.
- **Advanced Communication Technologies:** Impact of 4G, 5G, and 6G on real-time monitoring and automation.
- **Drip Irrigation & Water Conservation:** IoT-enabled automation for sustainable water use.
- **Hands-on Training & Case Studies:** Practical deployment of IoT solutions in agriculture.



Our Experts



Dr. Dilip Kumar

Professor
Sant Longowal Institute of
Engineering and Technology, Sangrur



Dr. Sandeep Kumar Sood

Associate Professor
National Institute of Engineering
and Technology, Kurukshetra



Er. Tansihk Singhal

Master Trainer
Bhavya Technologies India Private
Limited, Chandigarh

Targeted Participants

The workshop targets UG/PG students (SC/ST Category) of computer science and agriculture branches of educational institutes.

Workshop Highlight

- ❖ No Registration Fee
- ❖ A certificate will be provided to all participants upon successful completion of the workshop.
- ❖ Refreshments provided for all students.

Registration Link



Visit Us

Venue: Conference Hall,

**Khalsa College of Engineering and
Technology, C-Block, Ranjit Avenue,
Amritsar**

Course Coordinator

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