## MEDICAL PHYSICS CLUB



Project spotlights: Our Medical Physics Club students explored the vital role of ultrasound technology in modern healthcare. They conducted in-depth research on the principle of ultrasound, reflection of sound waves, image formation, and medical applications such as pregnancy scanning and organ imaging. The project also highlighted the advantages of ultrasound as a safe, non-invasive, and radiationfree diagnostic tool, along with clearing common myths and misconceptions. To present their learning, students created an engaging and informative digital presentation on ultrasound imaging.









Student Voices: Students found the ultrasound project highly engaging and informative. Learning how sound waves are used to create images of internal body organs helped them connect physics concepts with reallife medical applications. The activity enhanced their scientific curiosity, strengthened conceptual understanding, and inspired interest in careers that combine physics, healthcare, and technology.

## **Project Report and Skill Development**

**Science talk: Myths and Facts** 

## Ishita Sharma- 10/12/2025

**Project Goals:** 

To understand how ultrasound works, explore common myths, facts and research how future technologies like Al and portable devices can improve ultrasound imaging.

**Process/ Steps:** 

The students divided themselves into two teams for the We collected information on ultrasound, discussed myths and facts, studied how ultrasonic waves are produced, and researched future improvements such as AI, cost reduction, and 3D imaging.

**Skills Learned:** 

Critical thinking, research skills, scientific literacy, communication skills.

Findings:

The research showed that ultrasound can become smarter, more affordable, and easier to use in the future. All can improve accuracy, portable devices can increase access, and new technology can make images clearer and even help in non-invasive treatments.

**Conclusion:** 

The future of ultrasound will be shaped by major advancements that make the technology smarter, more portable, and more affordable. Al will play a key role by improving image interpretation and reducing human error, while compact and low-cost devices will increase accessibility in hospitals, rural areas, and emergency settings. Enhanced 3D and 4D imaging will offer clearer and more detailed views of internal organs, and therapeutic ultrasound will expand its use in non-invasive treatments. Additionally, the integration of VR and AR will make ultrasound more interactive and easier to use for both doctors and students. Together, these developments will make ultrasound a more efficient and powerful tool in healthcare.





Meet the Team:



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Janvi 9-C

Club Name : Medical Physics Club Motto: Feel the pulse of physics

Manager: Ms. Ishita Sharma