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K. S. SCHOOL OF ENGINEERING AND MANAGEMENT

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

A Report on Industrial Visit to LEOS-ISRO Centre"

Event Name: Industrial Visit to Laboratory for Electro-optics Systems (LEOS)-ISRO Center

Date of Event: 3 September 2025

Venue: LEOS-ISRO Center, Peenya Industrial Area, Bangalore

Number of Participants: 60

Targeted Audience: Final year ECE students

Coordinator: Dr. Renuka V Tali, Associate Professor, Dept. of ECE, KSSEM

Objective:

- To expose students to real-time research and development in electro-optics and satellite technologies.
- To understand the role of sensors, optics, and payloads in satellite design, navigation, and space missions.
- To complement classroom learning with practical insights into advanced laboratory facilities.
- To inspire students by showcasing India's progress in space research and the legacy of milestones like Aryabhata satellite.
- To motivate students to pursue careers, internships, and higher studies in aerospace, optics, and advanced communication systems.

The Department of Electronics and Communication Engineering, in association with the KSSEM IEEE Student Branch, organized an industrial visit to the Laboratory for Electro-Optics Systems (LEOS), ISRO, on 3rd September 2025 for final-year students. The visit provided an invaluable opportunity to witness cutting-edge space research and electro-optical systems that contribute to India's satellite missions.

Students and staff reached the LEOS campus by 12:30 PM. After completing the stringent security formalities, the team was escorted inside the premises. The visit began with a comprehensive presentation about LEOS, highlighting its contributions to India's space program, sensor development, and role in satellite technology. As LEOS is celebrating the golden jubilee of Aryabhata – India's first satellite, a special photo session was arranged, making the occasion both memorable and historic.

Students were taken on a guided tour of key laboratories, where they witnessed **Applied Optics Area, Attitude Sensors & Payloads for Nano-Satellites, Sun Simulator Laboratory, Thermo-Vacuum Chambers, Vibration Labs, and Earth, Sun, and Star Sensor Laboratories.** A formal refreshment session was organized at 3 pm, providing time for informal interactions and

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reflections. After a thorough security check, the team concluded the visit and departed with rich learning.



Fig 1: Picture at college premises before departure to LEOS-ISRO Center

Outcome:

- Students gained first-hand exposure to applied optics, attitude sensors, and nano-satellite payload testing.
- Students developed a deeper understanding of how theoretical concepts in ECE are applied in space missions.
- Enhanced awareness of testing environments such as thermo-vacuum, vibration, and sun simulation labs.
- The visit instilled professional pride and responsibility towards contributing to India's space technology initiatives.
- Students were inspired to explore interdisciplinary research opportunities and innovation in sensor technologies.
- The experience fostered team spirit, curiosity, and motivation to engage in project work aligned with real-world applications.

The visit to LEOS – ISRO was an extraordinary and inspiring experience that left a profound impact on the students. It not only deepened their understanding of space technologies but also instilled pride in India's achievements in space exploration. Such initiatives by the Department of ECE and KSSEM IEEE Student Branch serve as a catalyst in nurturing future innovators, researchers, and technology leaders.