



RV Educational Institutions

**RV Institute of Technology and Management** ®

**Bangalore – 560076**

**Department of Information Science Engineering**

<b>Event Name</b>	<b>Industrial Visit to U R Rao Satellite Centre, Bengaluru ISRO</b>
<b>Date</b>	26th June 2024
<b>Duration:</b>	One Day - 11 am to 4 pm
<b>Organizer:</b>	Dr.Vinoth Kumar, Associate Professor, ISE Dept
<b>Programme</b>	Dr.Vinoth Kumar, Associate Professor, ISE Dept
<b>Coordinators:</b>	Prof. Samatha R. Swamy, Assistant Prof., ISE Dept
<b>Visit Conducted for:</b>	ISE Dept 6 <sup>th</sup> Sem (Batch 2021)

**Objectives of the Program:**

- Industrial visits help students pursuing professional education gain hands-on experience in executing industry operations.
- Industry visits bridge the gap between theoretical training and practical learning in a real-life environment.
- Industry visits provide opportunities for active/interactive learning experiences in class as well as outside the classroom environment.
- With industry visits, students can better identify their prospective areas of work in the overall organizational function.
- Industry visits help enhance interpersonal skills and communication techniques.
- Students become more aware of industry practices and regulations during industry visits.

**Details On Our Visit**

On 26th June 2024, students of the ISE Department assembled near the U R Rao Satellite Centre by 2:00 PM. The air was filled with excitement and curiosity as we prepared to visit one of the premier satellite development centres in the country.

**Part 1: Introduction and Overview**

Upon arrival, we were guided to a seminar hall where we watched an informative video presentation on the satellite assembly process, including how satellites are placed into rockets

and launched into orbit. The video also showcased the various applications of satellites in communication, navigation, and Earth observation.

#### Part 2:

Tour of the White Room Next, we were taken to the "White Room," also known as a clean room, where satellites and rocket parts are assembled and tested. This area is maintained at a constant temperature of 22 degrees Celsius and is kept extremely clean to ensure no contaminants affect the sensitive equipment. We observed the assembly of satellite components and the data centre, gaining insights into the meticulous processes involved in preparing satellites for launch.

#### Part 3: Visit to the Mini Museum

The final part of our visit was a tour of the mini museum, which houses models of all the working and existing satellites, as well as components such as fuel tanks, pressure tanks, and various alloys and semiconductors used in satellite construction. We saw models of historic satellites, including Aryabhata, India's first satellite, and the communication satellite Apple.

Students were led into the massive Global Education Center (GEC-1) within which the trainees were trained in the well-equipped Classrooms, each having the capacity to seat 200 Trainees at a time. There is a central library on the topmost floor in this GEC center. Later students were asked to gather in the AV Room and were shown a video clip of Infosys History. After a brief campus tour, the students were led to the Cafeteria and after lunch, we logged out of the Infosys Campus and returned to our RVITM college.

#### **Q&A Interaction section:**

The visit concluded with an interactive Q&A session where students actively participated, and the dignitaries ensured all our questions were thoroughly answered. We learned several fascinating facts, such as: The centre was named after Prof. U R Rao, a prominent Indian space

scientist. There are four main ISRO centres in India: Bengaluru (satellites), Kerala (rockets), Visakhapatnam (launching rockets), and Ahmedabad (payloads). PSLV (Polar Satellite Launch Vehicle) is used for carrying lightweight satellites. Indian scientists are currently working on reusable satellite technology. Fuel tanks are sphere-shaped to maximize fuel utilization. ISRO is training astronauts for space missions. The golden sheets covering satellite models are used to protect them from extreme temperatures, ranging from  $-120^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$ . Each satellite has four mini rockets to maintain its position. Honeycomb structures provide multi-layer insulation for satellites.

## Conclusion

The industrial visit to the U R Rao Satellite Centre was an eye-opening experience. It provided us with valuable insights into the intricate processes of satellite development and the cutting-edge technologies employed by ISRO. The visit inspired us to further explore careers in space technology and contribute to India's advancements in space exploration. We extend our heartfelt gratitude to the faculty coordinators, ISRO officials, and the management of RV Institute of Technology and Management for organizing this educational and inspiring visit.

## Photos



**Coordinator Signature**

**HOD's Signature**