Report on

Let's Build Nano Satellite

Under

GTU – Nano Satellite Technology Centre

20th January, 2026

Coordinated By

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Gujarat Technological University – School of Engineering and Technology (GTU-SET), R & D Cell, Ahmedabad, and Space Application Centre SAC), Ahmedabad jointly organized one day event on **"Lets' Build Nano Satellite" on 20 January 2026, SAC, Ahmedabad** under GTU- Nano Satellite Technology Center. Dr. N. M. Desai, Director SAC and Prof. (Dr.) Rajul Gajjar, Hon'ble Vice Chancellor, GTU, and other renowned scientists of SAC remained presence at the event. The objectives of the events are to aware various technologies required in design and development of nano satellites for various applications, fundamentals and practical understanding of the satellites developed by SAC. For development of the student-centric nano satellite, the University has selected 38 students of various disciplines from 615 registrations from the affiliated colleges of the University to build student-centric nano satellite.

Details of Participated students

No	Name of Affiliated College	Disciplines	No. of Students
01	L. D. College of Engineering	EC, Mechanical & CE/IT	13
02	GTU – School of Engineering and Technology	EC, & CE/IT	07
03	GEC, Gandhinagar	EC, Mechanical & CE/IT	01
04	Vishwakarma Govt. Engg. College, Chandkheda	EC, Mechanical	05
05	Dr. S. & S.S. Ghandhi Government Engineering College Surat.	EC,	02
06	GEC Bharuch	EC,	01
07	GEC, Rajkot	EC, Mechanical &	02
08	GEC Valsad	Chemical	03
09	GEC, Bhavnagar	CE/IT	01
10	VVP Engineering College, Rajkot	EC	01
11	Sal Institute of Technology and Engineering Research, Ahmedabad	CE/IT	01

Facilitation of Dr. N. M. Desai, Director SAC

Facilitation of Prof. (Dr.) Rajul Gajjar, Hon'ble Vice Chancellor, GTU

Mr. Jaimin Desai, Professor of Practice, GTU & Retired Scientist, SAC, delivered talk and discussed following points.

- Purpose of the collaboration for the nano satellite
- Overview process of design, development, testing, validation and launching of satellite
- Briefing of various technologies used in the satellite

Dr. N. M. Desai, Director, SAC delivered talk and discussed following aspects

- Aware various milestones achieved by SAC, ISRO
- Explore contribution of various sectors involved in the development of satellite
- Future need in context of national integrity in domain of space technologies
- Various payloads with different applications, and targets

Mr. Ankush Kumar, Scientist - SF, SEDA-EOSDIG-SSD, SAC delivered a short talk and discussed various aspects

- Insights on sensor designs, IR and optical camera,
- Assembly, Integration and Testing process.
- Environmental and reliability testing procedures

Mr. Ritesh Kumar Sharma, Scientist-G and Head, MRSA-MSDG-MSSPD, SAC, delivered that talk and explored following aspects related to satellite

- Advanced imaging for day and night images for remote sensing
- Issue related cloud and fog penetration during imaging
- Role of active and passive radar systems
- Various payload applications
- Pathway for the development of the satellite

Mr. Pranav Prakash Singh, Scientist – SG, SNPA-SNSICG-AITD delivered talk and aware following aspect to the students

- Standards, authorization, policy, framework for high-reliability testing of satellite
- Permission procedure from SAC, regulatory compliance, collision avoidance norms and orbital clearance processes.
- Roles of In-SPACE facilities, POEM platforms, frequency band norms related to nano satellite.

Mr. Nikhil Desai, Scientist -SG, MRSA-MSIG, SAG delivered a short talk and discussed following

- Payload mass constraints, power consumption and related alternatives
- Discussed other small-satellite success-stories of other countries
- Insights on solar-panel nano satellites and battery-operated satellites
- Costing considerations of the satellites

Mr. Rahul Jain, Scientist – SG, SNPA-SNSICG-AITD, SAC delivered talk and highlighted followings

- Overview of Assembly, Integration, and Testing (AIT) Processes for space systems and their significance in satellites
- Various constrains such as vibration, thermal and volumes in nano-staellites
- Various payloads for disaster scenarios such as floods, and earthquakes, and water-resource monitoring

Mr. Saket Buch, Scientist -SF, SNPA-RFSG-AD, SAC explored various following aspects

- Engineering aspects of satellite design, material selections,
- Space-based networking, amateur radio, SSTV signal reception, IoT applications in VHF band
- Discussed satellite application such as AIS-based automatic identification system and water-level monitoring in various locations
- Harsh space environments and their impact on satellites

Dr. R. A. Thakker, Director, R & D Cell, GTU offer votes of thanks and expressed sincere gratitude to Dr. N. M. Desai, Director, SAC and other invited scientists. He also discussed the mission of GTU to launch of nano satellites and thanks to Prof. (Dr.) Rajul K. Gajjar, Hon'ble Vice Chancellor, GTU, Dr. K.N. Kher, Registrar, GTU and team of NSTC, team of the students.

Student Team with Prof. (Dr.) Rajul Gajjar, Hon'ble Vice Chancellor & Dr. N. M. Desai, Director, SAC

Menor Team