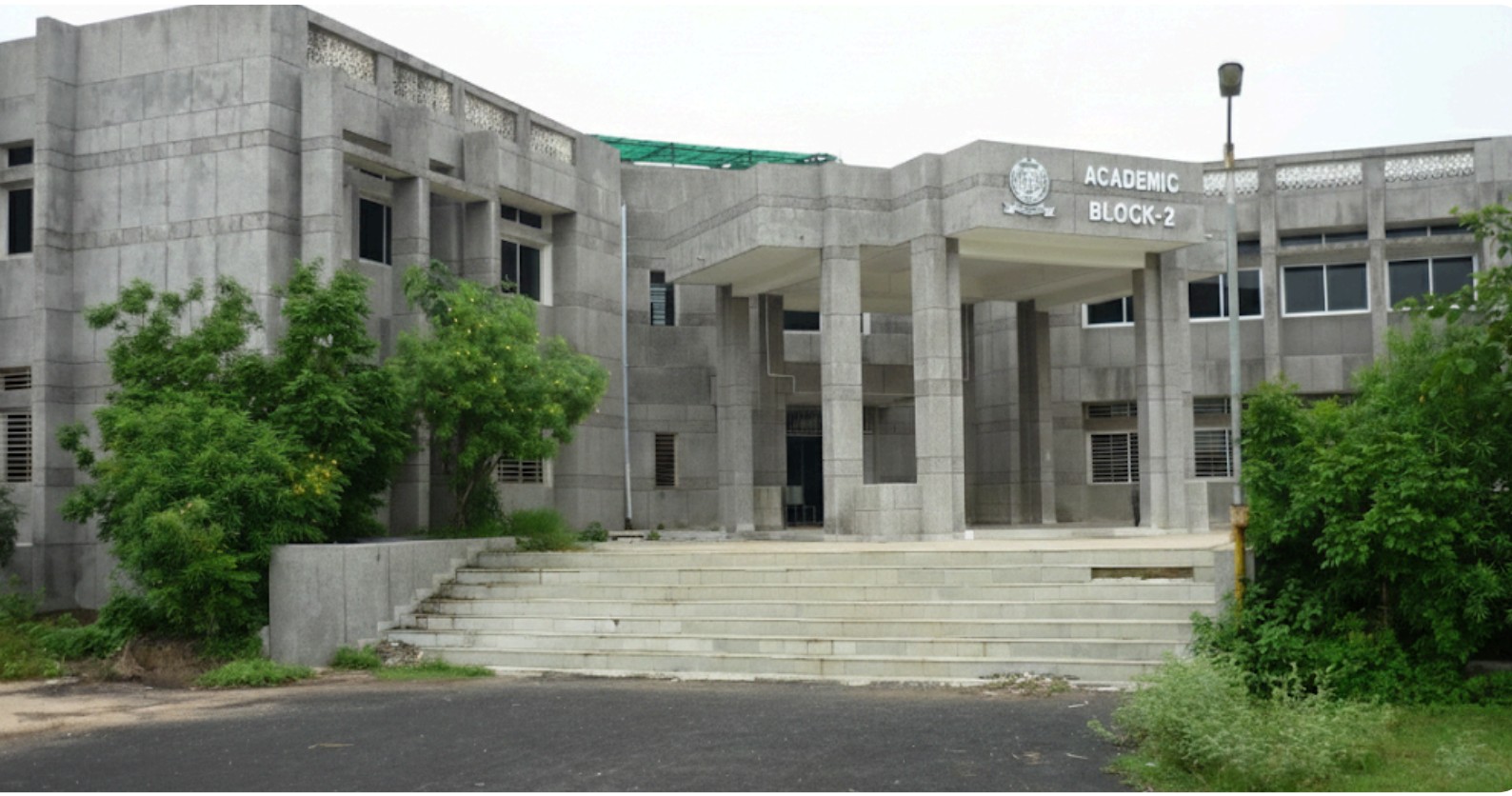
GOVERNMENT ENGINEERING COLLEGE, MODASA



EC ENGINEERING DEPARTMENT

INFORMATION BOOKLET

VOL.2

DEC

2025

www.gecmodasa.ac.in gec.modasa_ec gec_modasa_ec

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Dr. Alpesh H. Dafda

MESSAGE FROM THE HEAD OF DEPARTMENT

Electronics & Communication Department

Dear Students & Faculty members, Warm greetings to all.

The Electronics & Communication Engineering Department was established in the year 1984 and is considered one of the oldest and most successful concrete pillars of Government Engineering College, Modasa. The department offers a Bachelor of Engineering in Electronics & Communication with an intake capacity of 30 students. The department has highly qualified faculty members and all 16 laboratories are equipped with the latest technology equipment and instruments. The department provides teaching in the area of Analog and Digital Communication, VLSI Design, Embedded Systems, Signal Processing, Antenna and Microwave Engineering, and Microprocessors. The Department of Electronics & Communication Engineering has a vision to deliver technical programs that meet the changing needs of society and industry, preparing determined and goal-oriented engineers with high ethical values and strong analytical skills.

The Department of Electronics & Communication Engineering emphasizes developing technical skills and creating awareness about the needs of industries through industry-institute interaction, technical seminars, workshops, and specialized training in thrust areas. Students are encouraged to think innovatively through project works and research in fields like satellite communication and wireless networks, with the department providing a full-fledged departmental library and computer center to support overall personality and technical development.

The Electronics & Communication Engineering program is committed to maintaining high academic standards and quality assurance. The department consistently works towards excellence in technical education and infrastructure to ensure our students remain in tune with the rapid advancements in the global electronics field.

ABOUT THE INSTITUTE

Government Engineering College, Modasa was established in 1984 under the Directorate of Technical Education, Gujarat State, Gandhinagar in North Gujarat region with a view to spread out technical education in the region and hence promote industrial development. The institute was affiliated with Hemchandracharya North Gujarat University (HNGU), Patan from 1984 to 2007. The institute is affiliated to Gujarat Technological University; Ahmedabad from 2008. It is recognized by All India Council for Technical Education (AICTE), New Delhi.

The institute was started with two undergraduate courses, with an intake of 60 each. At present it runs seven under graduate courses and two post graduate courses. Each department has well established laboratories, computer centers and well qualified staff.

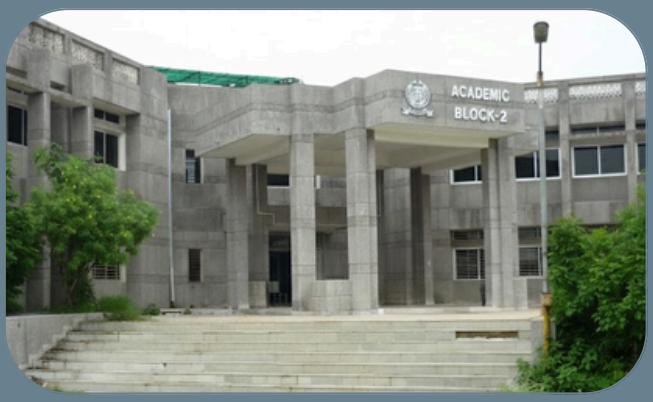
VISION AND MISSION

VISSION

To be a Leading Institution on Ensuring Academic Excellence, Research, Nurturing Innovation and Entrepreneurial Attitude to produce competent technocrats for service to Nation.

MISSION

- To be a student centric institute imbibing experimental, innovative and lifelong learning skills, addressing societal problems.
- To create a conductive ecosystem for research, innovation and extension services.
- To inculcate entrepreneurial attitude and values amongst learners.
- To collaborate with Industries and other institutions to strengthen symbiotic relations.
- To mentor aspiring Institutions to unleash their potential, towards nation building.



ABOUT THE DEPARTMENT

ELECTRONICS & COMMUNICATIONS DEPARTMENT

The department of Electronics & Communication was established in the year 1984 is one of the oldest and successfully running the engineering branch of G.E.C. Modasa. The Department offers a four-year course in electronics and communication with 120 intakes.

The department was established with the mission to deliver technical programs and services to meet the changing needs of the society and industry, thereby contribute to the overall techno-economical development of the state. The department is persistently committed to enhancing technical knowledge with high ethical values.

The department of E.C. is accommodated in building No. 4. It has laboratories in thrust areas of Analog and Digital Electronics, Communications, Antenna, Microwave, VLSI Design, and Signal Processing. Department has a Computer Center with the latest computer facilities. All labs are well equipped with the latest types of equipment to keep the students in tune with the advancement in the field of Electronics & Communication. The department is also equipped with a full-fledged departmental library.

VISION AND MISSION OF THE DEPARTMENT

VISION

To strive for academic excellence, enhance industry- institute interaction to create competent technocrats in relevant areas for addressing ever changing needs of society.

MISSION

- To ensure dissemination of knowledge through effective teaching and learning process.
- To strengthen collaboration with industries.
- To prepare the students with multidisciplinary competence for their successful career and service to the society.

FACULTY AND STAFF (EC ENGINEERING)

DR. JEETENDRAKUMAR VADHER

Designation : Principal
Qualification : M. Tech. (IIT-Madras), Ph.D. (HNGU-Patan)
Experience : 28 Years
Area of Interest : Production, Manufacturing, CAD/CAM Industrial Engineering, Automation
Email : jeetendra.vadher@gecmodasa.ac.in
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DR. ALPESH H. DAFDA

Designation : Associate Professor and Head
Qualification : Ph.D
Experience : 24Years
Area of Interest : Wireless and Wired Communication Image Processing and Applications and ML.
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SHILPA K RANA

Designation : Assistant Professor
Qualification : M.Tech (ECSE)
Experience : 11 Years
Area of Interest : RF and Microwave
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PROF. (DR.) NIRAV D. PATEL

Designation : Assistant Professor
Qualification : Ph.D.
Experience : 15 Years
Area of Interest : Wireless Communication
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MR. KETU RAMANBHAI PATEL

Designation : Assistant Professor
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Experience : 12 Years
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DR. BHAVIK ARVINDBHAI BRAHMBHATT

Designation : Assistant Professor
Qualification : Ph.D.
Experience : 07 Years
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SAMEER H. MANSURI

Designation : Assistant Professor
Qualification : M. E. (Communication Engg.)
Experience : 10 Years
Area of Interest : RF and Microwave, Embedded System design
Email : mansurisameer@gmail.com

PRIYANK V PATEL

Designation : Assistant Professor
Qualification : M.E.E.C.
Experience : 09 year
Area of Interest : VLSI , IMAGE Processing ,Sports
Email : pvp.fetr@gmail.com
Website : https://sites.google.com/view/priyankpatelgec/home

MANISH CHAUHAN

Designation : Assistant Professor
Qualification : M. E.
Experience : 05 Years
Area of Interest : Digital Electronics, Micro Processor and Controller, Optical Communication, Linear IC
Email : manish68848@gmail.com

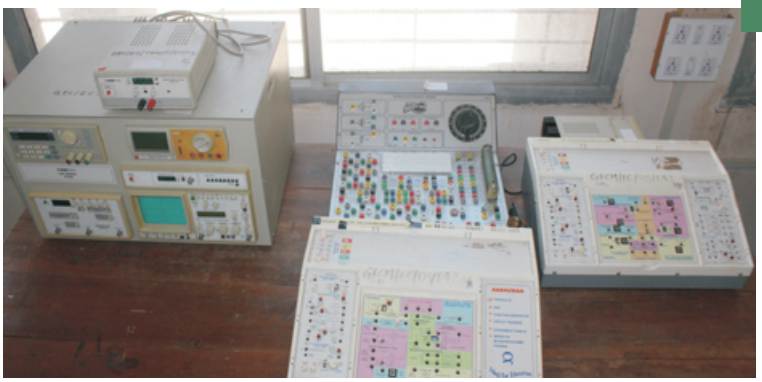
LABORATORIES

ANALOG ELECTRONICS AND DIGITAL ELECTRONICS LABORATORY

Analog Electronics and Digital Electronics laboratory provides the platform for the students to understand the behavior of the circuit related to Analog Electronics and Digital Electronics. The laboratory is equipped with the different experimental set-ups like Lab Station, digital trainer kits provided to the students to do hands on for observing the response of the circuits and to carry out the testing of the circuits.

VLSI & EMBEDDED SYSTEMS LAB

It provides the platform for the students to understand the architecture and interfacing of microprocessor, microcontroller, Field Programmable Gate Array (FPGA) and Complex Programmable Logic Device (CPLD). This laboratory is equipped with the different experimental set-ups. Facility is provided to the students to do hands on for testing their programming codes



DIGITAL COMMUNICATION LAB

It deals with the analysis and manipulation of signals. The equipments like Digital Storage Oscilloscope (DSO), Lab Station Amplitude, frequency and phase shift keying Trainer Kits and modulation kits for mobile communication, AM-FM Modulation-Demodulation kits are available in this laboratory.

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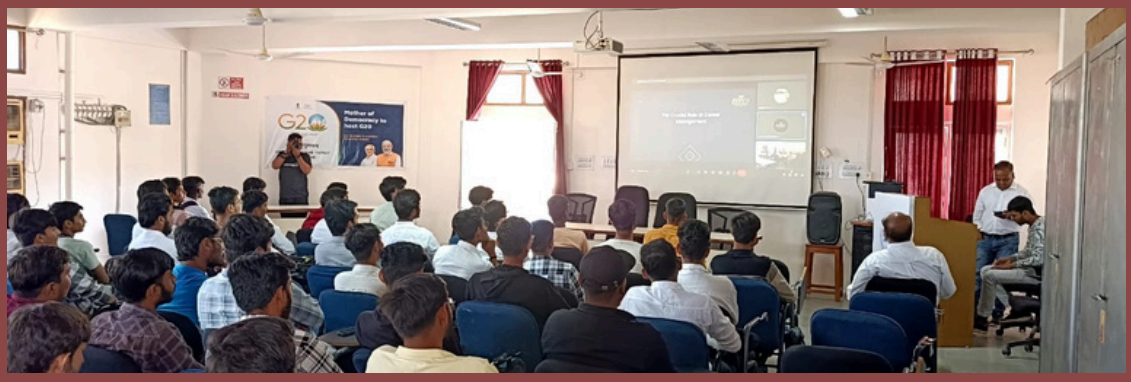
EC ENGINEERING DEPARTMENT

NEWSLETTER



Inside The Issue

- **Departmental Activities**

The Departmental Activities takes initiatives for overall development of students and give them a practical orientation to inculcate employability skills which will help them to face this competitive world. The department activities conducted are focused on imparting technical knowledge along with its application in the practical world. Simultaneously personality development of students is also given priority. It includes major activities conducted such as Quiz Competition, Expert Lectures, Workshops, Seminars, Industrial Visits.

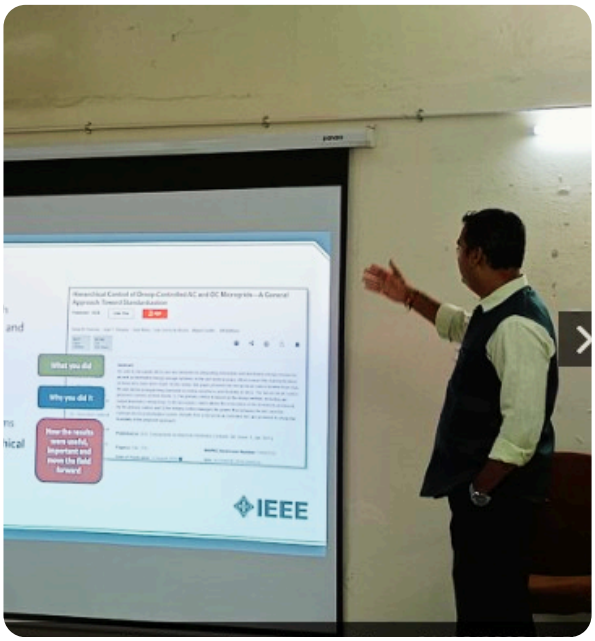
- **Faculty Activities**

Educational activity of the Faculty is performed through studies, including the special forms of study for knowledge upgrading and continuous professional education and training. Scientific work is performed through basic, applied and development research, which is carried out for the purpose of developing the profession, raising the quality of teaching, upgrading the scientific and professional level.

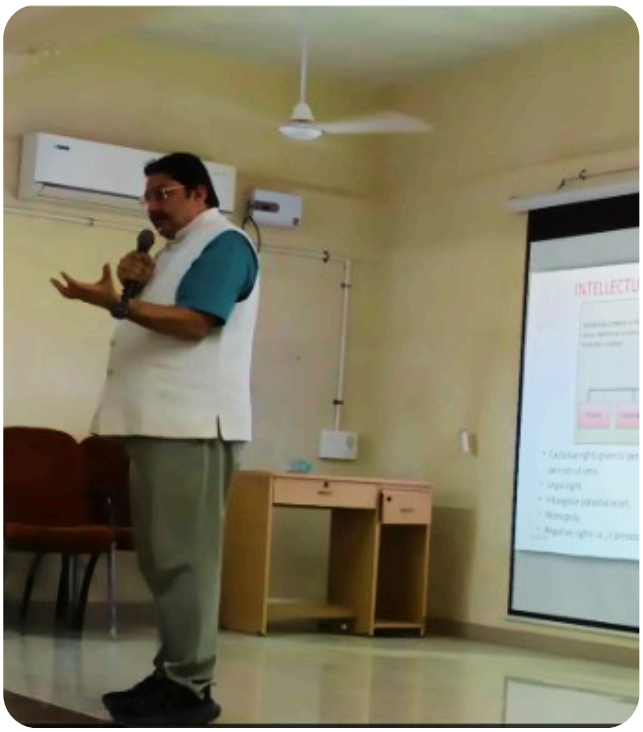
DEPARTMENTAL ACTIVITIES

EXPERT SESSION ON EFFECTIVE STRATEGIES FOR WRITING HIGH-QUALITY RESEARCH PAPER.

The expert session was conducted by Dr. Darshan C. Dalwadi, Associate Professor in the EC Department at BVM. Held on September 6, 2025, at the Seminar Hall, LRC Block, the session was specifically organized by the EC Department of GEC, Modasa, to provide guidance on "Effective Strategies for Writing High-Quality Research Paper." The program aimed to raise awareness among the academic community regarding the methodologies, tools, and strategies necessary for producing impactful research publications. A large number of faculties and students participated in the session, which ran from 02:00 PM to 03:30 PM, successfully benefiting from the speaker's expertise in academic writing.



EXPERT SESSION ON INTELLECTUAL PROPERTY RIGHT AND ITS DRAFTING PROCESS



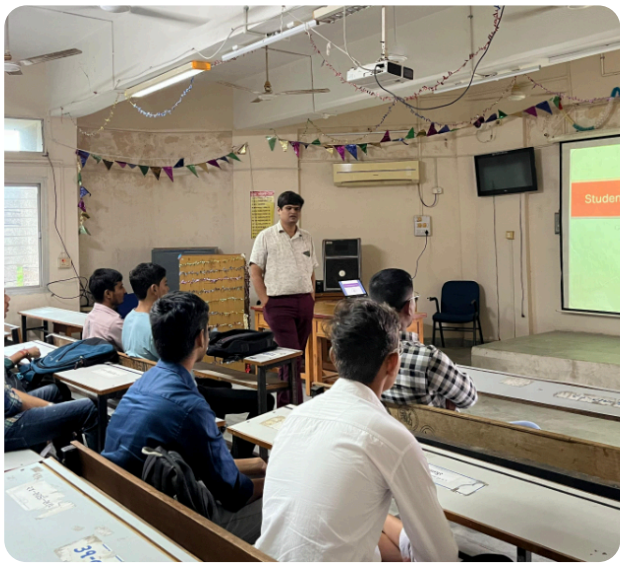
The expert session on "Intellectual Property Rights and Its Drafting Process" was conducted by Prof. Dr. Jagdish M. Rathod, Professor at BVM and Associate Dean of GTU, Zone-3. Held on September 6, 2025, at GEC Modasa, the session leveraged Dr. Rathod's expertise as a committee member of the GUJCOST Design Lab to guide attendees through the legalities of innovation. More than 50 participants, including faculty and students, attended the program to gain a deeper understanding of patenting and copyright protections. The primary objective was to provide direct support and handholding throughout the technical IPR drafting process, transforming academic concepts into protected assets. By the end of the session, participants were equipped with the necessary tools to navigate the complexities of intellectual property with professional confidence.

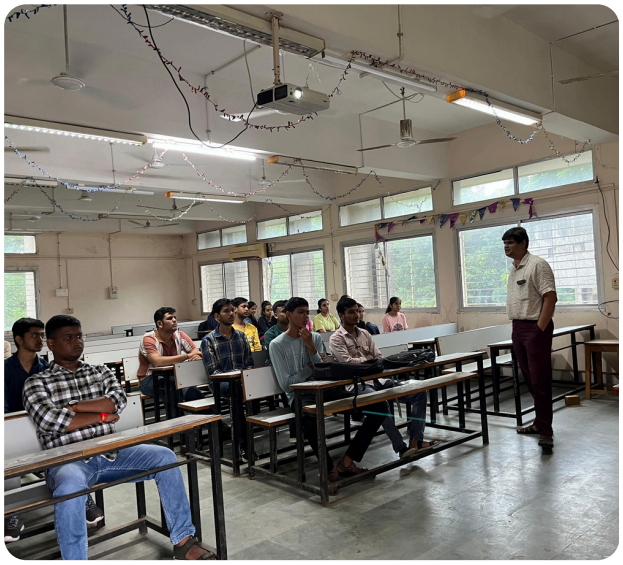
DEPARTMENTAL ACTIVITIES

EMPOWERING THE NEXT GENERATION OF INNOVATORS: SSIP AWARENESS SESSION

On August 25, 2025, the EC Department organized a pivotal SSIP awareness session conducted by Prof. Nirav D. Patel. Attended by 10 faculty members and 30 students from the D2D 3rd and 1st semesters, the program aimed to expose participants to the Student Startup and Innovation Policy. Prof. Patel motivated students to transform their innovative concepts into reality by explaining the essential role of startups and the specific institutional support available through the SSIP scheme.

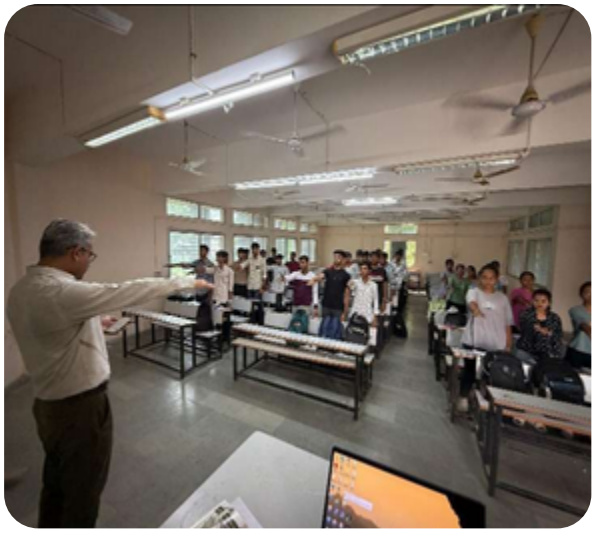
The session provided a technical roadmap, covering the Preliminary Screening Evaluation and formal proposal submission formats. Detailed financial guidelines were discussed, alongside a clear strategy for the post-PoC approval phase to ensure project sustainability. The event concluded with an interactive Q&A session, successfully demystifying the path from a student idea to a funded innovation.





DEPARTMENTAL ACTIVITIES

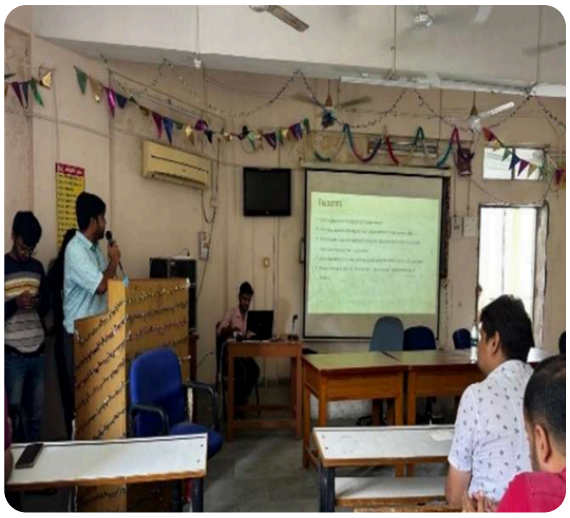
NASHA MUKTA BHARAT ABHIYAN EVENT



A “Nasha Mukta Bharat Abhiyan” awareness event was organized on 13/08/2025 to sensitize students about the harmful effects of drug and substance abuse and to promote a healthy, addiction-free lifestyle. The program included awareness activities emphasizing prevention, community participation, and personal responsibility in building a drug-free society. Around 35 students actively participated in the pledge ceremony, guided by faculty members, demonstrating their commitment to avoid substance abuse and support positive social change.

The event encouraged students to adopt healthy habits, make informed choices, and contribute toward a healthier and more responsible nation through collective effort and awareness.

KNOW YOUR COLLEGE, KNOW YOUR BRANCH, KNOW YOUR COURSE



The orientation program “Know Your College, Know Your Branch, Know Your Course” was conducted on 19/08/2025 for newly admitted first-year and D2D students, along with their parents. The event aimed to introduce participants to the academic environment, departmental structure, and curriculum framework. Faculty members explained the department’s vision and mission, laboratory facilities, academic regulations, and co-curricular opportunities. The sessions also provided guidance on training and placement support, skill expectations for EC engineers, career prospects, higher education pathways, and emerging technology areas.

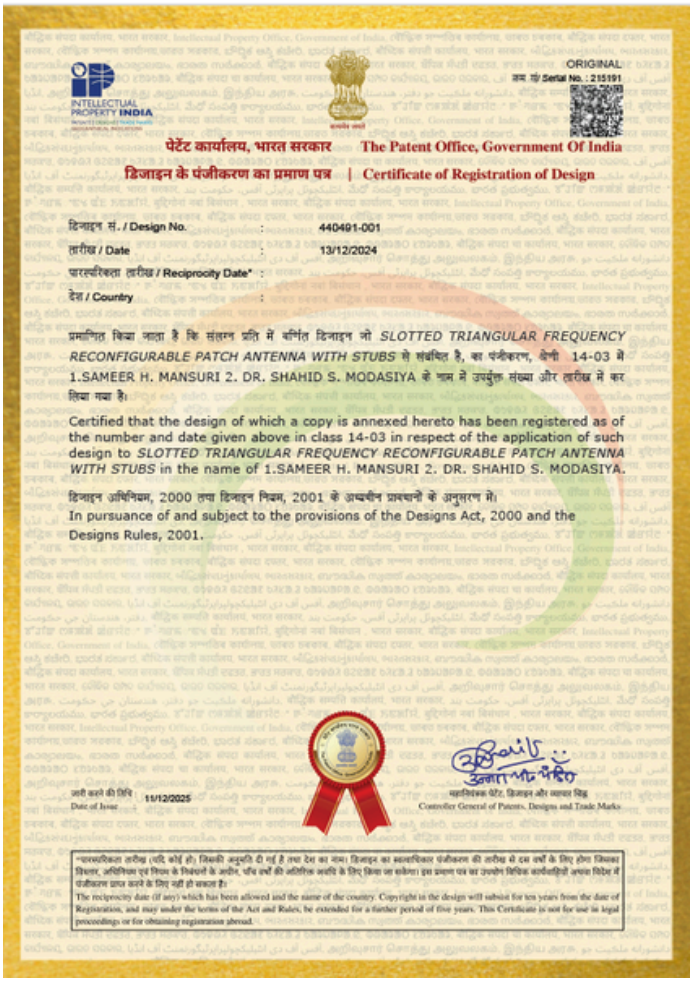
The program strengthened student–faculty interaction, encouraged participation in academic and departmental activities, and provided a clear roadmap for academic excellence and professional development.

FACULTY ACTIVITIES

ACHIVEMENTS

A design patent has been granted to Sameer H. Mansuri and Dr. Shahid S. Modasiya for a design entitled **SLOTTED TRIANGULAR FREQUENCY RECONFIGURABLE PATCH ANTENNA WITH STUBS** in accordance with the provisions of the Designs Act, 2000 and the Designs Rules, 2001 by the Patent Office, Government of India.

Design No.: 440491-001
Registration Date: 13/12/2024



ORIGINAL

पेटेंट कार्यालय, भारत सरकार The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. : 440491-001

तारीख / Date : 13/12/2024

पारस्परिकता तारीख / Reciprocity Date* :

देश / Country :

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *SLOTTED TRIANGULAR FREQUENCY RECONFIGURABLE PATCH ANTENNA WITH STUBS* से संबंधित है, का पंजीकरण, श्रेणी 14-03 में 1.SAMEER H. MANSURI 2. DR. SHAHID S. MODASIYA के नाम से उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-03 in respect of the application of such design to *SLOTTED TRIANGULAR FREQUENCY RECONFIGURABLE PATCH ANTENNA WITH STUBS* in the name of 1.SAMEER H. MANSURI 2. DR. SHAHID S. MODASIYA.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अधीन प्रावधानों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि Date of Issue : 11/12/2025

Controller General of Patents, Designs and Trade Marks

*पारस्परिकता तारीख (यदि कोई हो) जिसकी अनुमति दी गई है तथा देश का नाम। डिजाइन का रजिस्ट्रीकरण की तारीख से दस वर्षों के लिए होगा जिसका विस्तार, अधिनियम एवं नियम के निबंधनों के अधीन, पाँच वर्षों की अतिरिक्त अवधि के लिए किया जा सकेगा। इस प्रमाण पत्र का उपयोग विधिक कार्यवाहियों अथवा विदेश में रजिस्ट्रीकरण प्राप्त करने के लिए नहीं हो सकता है।

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

Prof. Sameer H. Mansuri received an Elite grade by securing a position among the top 5% toppers in the SWAYAM–NPTEL online MOOC proctored examination. The achievement was earned in the course titled “Physical Modelling for Electronics Enclosures
using Rapid prototyping”, completed during the period 18/08/2025 to 10/10/2025.

Dr. N. D. Patel received an Elite-Gold grade by securing a position among the top 5% toppers in the SWAYAM–NPTEL online MOOC proctored examination. The achievement was earned in the course titled “Artificial Intelligence, Law and Justice”, completed during the period 18/08/2025 to 10/10/2025.

Prof. Sameer H. Mansuri received an Elite grade by securing a position among the top 5% toppers in the SWAYAM–NPTEL online MOOC proctored examination. The achievement was earned in the course titled “Psychology of Learning”, completed during the period 21/07/2025 to 10/10/2025.

PARTICIPATION

Faculty Name	Training/Induction Phase/FDP/Workshop/ Seminar	Starting Date	Ending Date	Hosting Institution	Venue
Prof. N. D. Patel	Artificial Intelligence, Law and Justice	18/08/2025	10/10/2025	SWAYAM NPTEL	Online
Prof. S. H. Mansuri	Physical Modelling for Electronics Enclosures using Rapid prototyping	18/08/2025	10/10/2025	SWAYAM NPTEL	Online
Prof. S. H. Mansuri	Psychology of Learning	21/07/2025	10/10/2025	SWAYAM NPTEL	Online

FACULTIES PURSUING PH.D

Faculty Name	Research Area	Ph.D Pursuing from University
Prof. Shilpa Rana	Microwave Filter Design	Gujarat Technological University
Prof. Sameer Mansuri	Antenna Design	Gujarat Technological University