



GOVERNMENT ENGINEERING COLLEGE, MODASA

SINCE 1984



EC ENGINEERING DEPARTMENT INFORMATION BOOKLET

VOL.2

■ Dec ■
2024



TABLE OF **CONTENTS**

- 01** MESSAGE FROM THE HEAD OF DEPARTMENT
 - 02** ABOUT THE INSTITUTE
 - 03** ABOUT THE DEPARTMENT
 - 04** VISSION AND MISSION OF THE DEPARTMENT
 - 05** FACULTY AND STAFF
 - 06** LABORATORIES
 - 07** NEWSLETTER
- 



Prof. C. R. Parekh

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.

VISSION 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 conducive 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.



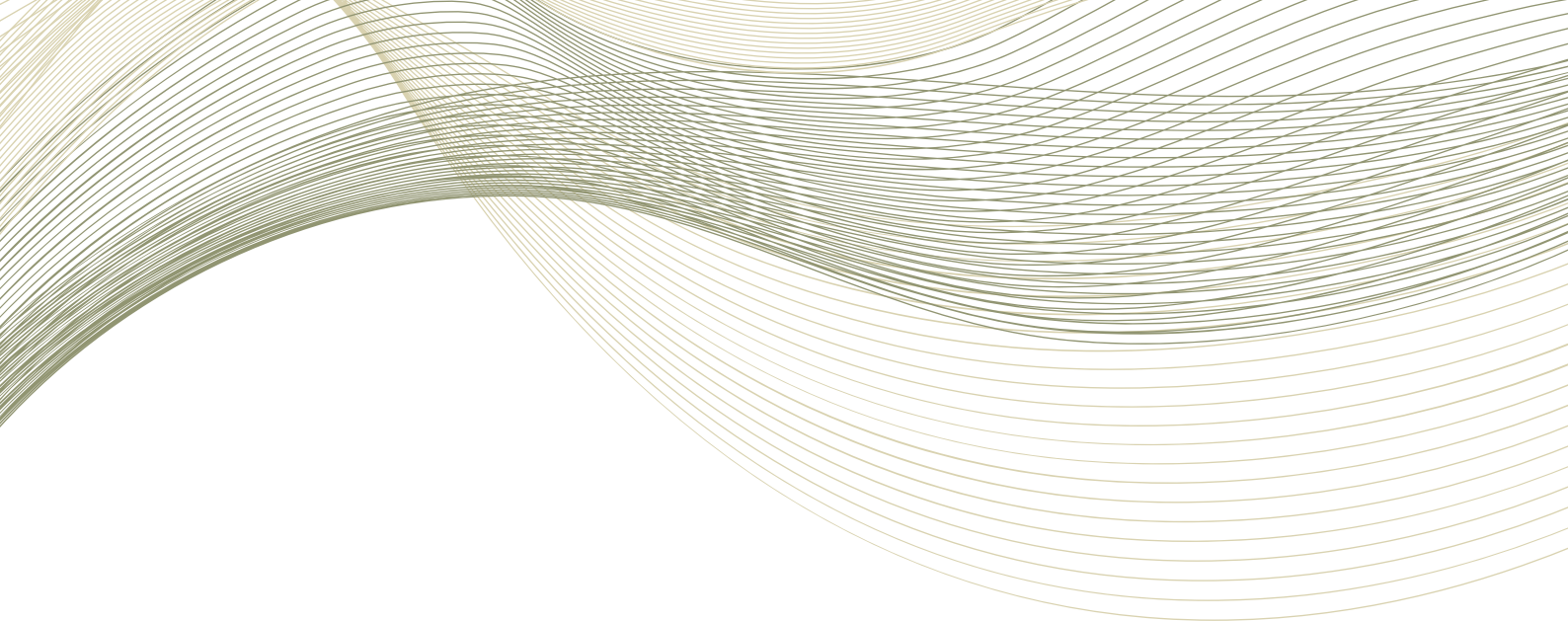
ABOUT THE DEPARTMENT

➤ 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.



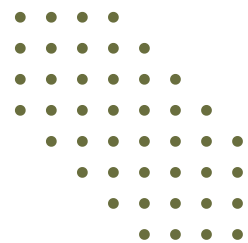
VISSION AND MISSION OF THE DEPARTMENT

VISSION

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
Website : <http://jeetendravadher.in/>

PROF. (DR.) NIRAV D. PATEL

Designation : Assistant Professor
Qualification : Ph.D.
Experience : 15 Years
Area of Interest : Wireless Communication
Email : nirav@gecmodasa.org

SHILPA K RANA

Designation : Assistant Professor
Qualification : M.Tech (ECSE)
Experience : 11 Years
Area of Interest : RF and Microwave
Email : shilprana@gmail.com

DR. BHAVIK ARVINDBHAI BRAHMBHATT

Designation : Assistant Professor
Qualification : Ph.D.
Experience : 07 Years
Area of Interest : Power Electronics, Digital Signal
Processing, Embedded System
Email : bhavik.brahmbhatt@gecmodasa.ac.in

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>

PROF. CHANDRESH R. PAREKH

Designation : Associate Professor and Head
Qualification : M.Tech. (Comm. Engg.)
Experience : 23Years
Area of Interest : Communication Engg.
Email : hod.ec@gecmodasa.ac.in

PROF. (DR.) NITINKUMAR J. BATHANI

Designation : Assistant Professor
Qualification : Ph.D.
Experience : 10 Years
Area of Interest : Antenna, Freq. selective
surface and absorber design
Email : nitinkumar@gecmodasa.org

MR. KETU RAMANBHAI PATEL

Designation : Assistant Professor
Qualification : M.E. (CSE)
Experience : 12 Years
Area of Interest : Analog and Digital Communication,
Wireless Communication,
Electromagnetics
Email : ketu@gecmodasa.org

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

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.

GOVERNMENT ENGINEERING COLLEGE,MODASA

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.



Tree Plantation and Campus Cleaning Drive

The NSS and Gymkhana team of GEC Modasa organized a successful tree plantation and cleaning drive on October 5, 2024. The initiative aimed to enhance environmental awareness, contribute to campus greenery, and promote a clean and sustainable environment. The enthusiastic participation of students and faculty members made the event impactful, reinforcing the institution's commitment to environmental responsibility.



DEPARTMENTAL ACTIVITIES

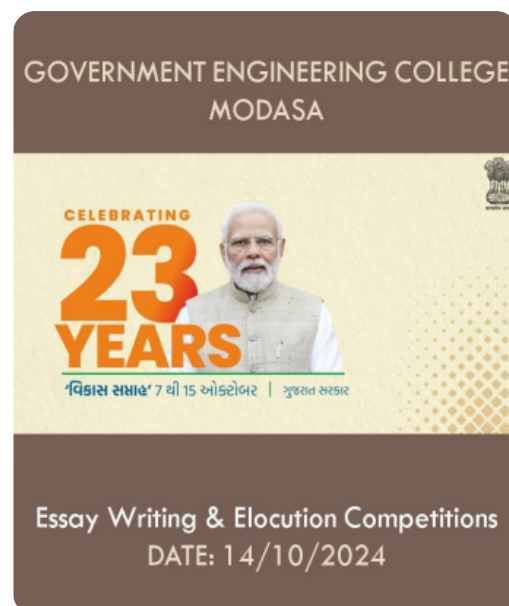


VIKSIT BHARAT PLEDGE AT GEC MODASA

Students and staff of GEC Modasa actively participated in the Viksit Bharat pledge campaign on October 8, 2024, reaffirming their commitment to nation-building and a progressive future. The pledge symbolized collective dedication towards the development and prosperity of the country.

ELOCUTION, ESSAY WRITING, AND QUIZ COMPETITION

As part of the Vikas Saptah celebrations marking 23 years of progress, the NSS and Gymkhana team organized an Elocution, Essay Writing, and Quiz Competition on October 14, 2024. The event provided a platform for students to showcase their knowledge, creativity, and public speaking skills while fostering a spirit of learning and intellectual engagement.



"VIKSIT BHARAT QUIZ" AT GEC MODASA

The Viksit Bharat Quiz, organized as part of the Viksit Bharat Young Leaders Dialogue, was an intellectually engaging event. This initiative, a transformative extension of the National Youth Festival (NYF) 2025, reflects the Prime Minister's vision of empowering youth to contribute to India's development.

The quiz aimed to foster active participation among students in shaping a Viksit Bharat by enhancing their knowledge of India's growth journey, government initiatives, and their role in nation-building. The event successfully inspired young leaders to engage with the nation's progress and take responsibility for its future.

FACULTY ACTIVITIES

FACULTY ACHIEVEMENTS



Prof. P. V. Patel from electronics & communication department secured 2nd position in both singles and doubles at the GECTGOA Badminton Tournament held on 19th October 2024 at Gymkhana, Sector-21, Gandhinagar

FACULTY ACTIVITIES

RESEARCH & PUBLICATIONS

PROF. BHAVIK BRAHMBHATT, PROF. PRIYANK PATEL, PROF. NITIN BATHANI, PROF. KETU PATEL, PROF. NIRAV PATEL, AND PROF. SAMEER MANSURI

Published a research paper titled "Implementation of Reconfigurable Modified Advanced Encryption Algorithm with Area Optimization" in the International Journal of Intelligent Systems and Applications in Engineering (IJISAE) (ISSN: 2147- 67992), Volume 12, Issue 21s, Pages 2824-2832

PROF. B. A. BRAHMBHATT

published a research paper titled "Metaheuristic Optimization Algorithms Comparison Adopted for the Profit Maximization of Electricity Market Participants" in the Journal of Electrical Systems (ISSN: 1112- 5209), Volume 20, Issue 6s, Pages 1032-1042.

PROF. B. A. BRAHMBHATT

Published a research paper titled "Indirect Field Oriented Control of Induction Motor" in the Journal of Electrical Systems, Volume 20, Issue 3s, Pages 2013-2021

PARTICIPATION

Faculty Name	Training/Program	Organization	Duration
Prof. S. H. Mansuri	Hands-on Industrial Training on Manufacturing, Fabrication ,and Design Optimization of Solar Panels	Australian Premium Solar, Tajpur	August 5, 2024- August 17, 2024
Prof. B. A. Brahmbhatt	Hands-on Industrial Training on Manufacturing, Fabrication ,and Design Optimization of Solar Panels	Australian Premium Solar, Tajpur	August 5, 2024- August 17, 2024
Prof. P. V. Patel	Hands-on Industrial Training on Manufacturing, Fabrication ,and Design Optimization of Solar Panels	Australian Premium Solar, Tajpur	August 5, 2024- August 17, 2024
Prof. S. H. Mansuri	Workshop on Antenna Measurement Techniques	Birla Vishvakarma Mahavidyalaya (BVM), Anand	December 21, 2024
Prof. K. R. Patel	Training Program on Advances in VLSI System Design	e-Infochips, An Arrow Company, Ahmedabad	July 1, 2024 – July 14, 2024
Prof. N. D. Patel	Training Program on Advances in VLSI System Design	e-Infochips, An Arrow Company, Ahmedabad	July 1, 2024 – July 14, 2024
Prof. N. D. Patel	Training Program on Latest Advancement in DTH TV-based Satellite Comm. Systems and Educational AV Content Development	BISAG-N, Gandhinagar	July 15, 2024 – July 27, 2024
Prof. K. R. Patel	Training Program on Latest Advancement in DTH TV-based Satellite Comm. Systems and Educational AV Content Development	BISAG-N, Gandhinagar	July 15, 2024 – July 27, 2024

PARTICIPATION

Faculty Name	Training/Program	Organization	Duration
Prof. B. A. Brahmbhatt	Training Program on SCADA-based Communication in Transmission Lines	Om Power Transmission Ltd.	July 1, 2024 – July 14, 2024
Prof. P. V. Patel	Training Program on SCADA-based Communication in Transmission Lines	Om Power Transmission Ltd.	July 1, 2024 – July 14, 2024
Prof. S. K. Rana	Training Program on Advances in VLSI System Design	e-Infochips, An Arrow Company, Ahmedabad	July 1, 2024 – July 14, 2024
Prof. S. K. Rana	Training Program on Latest Advancement in DTH TV-based Satellite Comm. Systems and Educational AV Content Development	BISAG-N, Gandhinagar	July 15, 2024 – July 27, 2024

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