



Spectrum

Band II

Electronics & Communication Engineering

Government Polytechnic, Palanpur





Academic Year 2022-23



Excellence in Technical Education Since 1984

About This Newsletter

Welcome to **Spectrum - Band II**, the official newsletter of the Electronics & Communication Engineering Department. This edition showcases our department's achievements, student accomplishments, faculty contributions, and major events from the academic year 2022-23.

-  Comprehensive Coverage
-  Student Achievements
-  Faculty Research
-  Department Events



Outstanding Academic Achievement

Dev Kiritbhai Patel achieved remarkable 9.71 SPI, showcasing department's commitment to academic excellence



Premier College Admissions

Students secured admissions to LD College of Engineering and Government Engineering College Gandhinagar



Industry Expert Sessions

Comprehensive workshops on communication skills and cybersecurity by Bank of America security expert



Industrial Learning

Strategic industrial visits to Samsung Service Centre and Community Radio for practical exposure



Technology Integration

Curriculum focus on IoT, AI in electronics, and sustainable design practices for future-ready engineers



Faculty Leadership

Comprehensive administrative roles from IQAC coordination to SSIP innovation management across faculty

8

Events



2

Industry Visits



5

Expert Lectures & Workshops



2

FDP Participation



2

Placements & Higher Education



4

Books, Papers & Patents



8

Industry Partnerships



18

Innovation Projects



Department Overview

Electronics & Communication Engineering - Government Polytechnic, Palanpur

Electronics & Communication Engineering

Government Polytechnic, Palanpur

The Electronics & Communication Engineering Department at Government Polytechnic Palanpur offers two diploma programs: Electronics & Communication Engineering (ECE) with 38 students intake and Information & Communication Technology (ICT) with 78 students. Our department is led by a Head of Department and supported by 7 qualified faculty members, including 2 Ph.D. holders, 1 pursuing doctoral studies, 3 with M.E. degrees, and 1 with B.E. degree, along with 1 lab assistant and 1 support staff. We are committed to holistic education that blends cutting-edge technology with practical applications, integrating emerging technologies like AI, IoT, and sustainable electronics. Through industry partnerships, expert lectures, and innovation projects, we prepare students as competent engineers and future leaders who will drive technological advancement.



Vision

To prepare competent diploma level electronics and communication engineers, catering the needs of industries and society as an excellent employee, innovator and entrepreneur with moral values.



Mission

- M1: Provide quality education in the field of EC engineering.
- M2: Develop state of art laboratories, classrooms and upgradation of Faculties.
- M3: Strengthen industrial liaison by offering mutual beneficiaries services.
- M4: Execute extra curricular and co-curricular activities to inculcate innovation, entrepreneurship and moral values.



Electronics & Communication

38 Students Intake

Advanced EC Engineering



Information & Communication Technology

78 Students Intake

Modern ICT Solutions

Head of Department's Message

Message from the HOD



Shri Sunilkumar J. Chauhan

Head of Department, Electronics & Communication Engineering

Dear EC Family,

The academic year 2022-23 has been a year of remarkable achievements and foundational growth for our department. Our students have demonstrated exceptional academic excellence, with Patel Dev Kiritbhai achieving an outstanding 9.71 SPI and Raval Stutiben Amitkumar consistently topping her semesters, showcasing the caliber of talent we nurture.

What defines this year is our faculty's comprehensive engagement in institutional leadership. From IQAC coordination to SSIP innovation initiatives, our team has balanced significant administrative responsibilities with teaching excellence. The successful expert sessions on communication skills and cybersecurity, along with valuable industrial visits to Samsung Service Centre and Community Radio, have enriched our students' practical learning experience.

Our curriculum emphasis on emerging technologies - IoT integration, AI applications in electronics, sustainable design practices, and advanced communication systems - positions our graduates at the forefront of technological innovation. The strong placement support and successful admissions to premier institutions like LD College of Engineering and GEC Gandhinagar reflect our commitment to student success.

I'm proud of our collaborative educational approach that seamlessly blends academic rigor with industry relevance, preparing competent engineers for tomorrow's challenges.

Spotlight

Achievements, accomplishments, and success stories



Shri Sunilkumar J. Chauhan

Head of Department, EC Department

IQAC & Audit Para Coordination

Internal Quality Assurance Cell coordination and audit para management with multi-committee leadership

Role & Contribution: Co-convener of IQAC, Convener of Audit Para, Co-convener of Anti Ragging Squad

- ★ Co-convener of Internal Quality Assurance Cell (IQAC)
- ★ Convener of Audit Para management
- ★ Co-convener of Anti Ragging Squad
- ★ Administrative leadership and quality assurance

faculty contribution

2022-23



Ms. Mittal K. Pedhadiya

Lecturer, EC Department

Student Affairs & Hostel Management

Student section coordination, hostel rector duties, and student welfare activities

Role & Contribution: Member of Student Section, Women Development Cell, and Internal Complaint Committee

- ★ Student Section coordination and management
- ★ Women Development Cell member
- ★ Internal Complaint Committee participation
- ★ Student welfare and hostel management

faculty contribution

2022-23



Dr. Laukik K. Patel

Lecturer, EC Department

Training & Placement Cell Leadership

Training and Placement Cell coordination with industry outreach and student development

Role & Contribution: Convener of GTU coordination, Member of Training & Placement Cell, Website management

- ★ Convener of GTU coordination activities
- ★ Member of Training & Placement Cell
- ★ Website management and maintenance

faculty contribution

2022-23

★ Industry outreach and student placement support



Mr. Nikunj M. Patel

Lecturer, EC Department

faculty contribution

2022-23

Alumni Association & Student Activities

Alumni association coordination and gymkhana activities management

Role & Contribution: Member of Hostel Rector, Student Section, and Gymkhana activities

- ★ Alumni association coordination
- ★ Hostel Rector duties and responsibilities
- ★ Student Section activities management
- ★ Gymkhana and extracurricular activities coordination



Dr. Ratansing N. Patel

Lecturer, EC Department

faculty contribution

2022-23

Human Resource & Multi-Committee Role

Human Resource management, establishment section coordination, and SATHI portal management

Role & Contribution: Convener of Head Human Resource, Co-convener of SATHI Karmyogi Portal, Member of CAS

- ★ Convener of Head Human Resource management
- ★ Co-convener of SATHI Karmyogi Portal
- ★ Member of Career Advancement Scheme (CAS)
- ★ Establishment section coordination



Mr. Milav J. Dabgar

Lecturer, EC Department

faculty contribution

2022-23

Industry Outreach & SSIP Coordination

Industry linkages, website management, and startup innovation coordination

Role & Contribution: Member of Training & Placement Cell, Convener of CWAN & Website, Member of SSIP

- ★ Training & Placement Cell member
- ★ Convener of Campus Wide Area Network (CWAN)
- ★ Website management and coordination
- ★ Student Startup and Innovation Policy (SSIP) member



Mr. Rahul C. Parmar

Lecturer, EC Department

faculty contribution

2022-23

Academic Coordination & Time Table Management

Institute time table coordination and academic calendar management

Role & Contribution: Member of Institute Time table committee, Student Section, and SATHI portal

- ★ Institute Time Table committee member
- ★ Academic calendar coordination
- ★ Student Section activities support
- ★ SATHI portal management



Mr. Snehil P. Joshiara

Lecturer, EC Department

faculty contribution

2022-23

E-Mail & Communication Systems

Institutional email handling and communication systems management

Role & Contribution: Convener of E-Mail Handling, Co-convener of GTU, Member of CWAN and Website committees

- ★ Convener of E-Mail Handling systems
- ★ Co-convener of GTU coordination
- ★ CWAN committee member
- ★ Website committee participation



Mr. Nirav J. Chauhan

Lecturer, EC Department

faculty contribution

2022-23

Gymkhana Activities & NSS Coordination

Student co-curricular activities coordination and National Service Scheme management

Role & Contribution: Member of Gymkhana/Co-curricular activities, NSS, Ek Bharat Shrestha Bharat (EBSB)

- ★ Gymkhana and co-curricular activities coordination
- ★ National Service Scheme (NSS) member
- ★ Ek Bharat Shrestha Bharat (EBSB) program participation
- ★ Student development and community service activities



Semester Toppers - DIPL SEM 1 - Regular (DEC 2022)

Outstanding academic performance across all semesters

star performer

December 2022

- ★ Panchal Shubh Kiranbhai (226260311003) - 8.0 SPI (Sem 1)
- ★ Lokhandwala Mahammadtaukir Taiyabbhai (226260311002) - 7.86 SPI (Sem 1)
- ★ Patel Dev Kiritbhai (226260332015) - 9.42 SPI (Sem 1)
- ★ Ansari Mohammad Sadik Ansar Ahmed (226260332002) - 8.63 SPI (Sem 1)



Semester Toppers - DIPL SEM 2 - Regular (MAY 2023)

star performer

May 2023

Outstanding academic performance across all semesters

- ★ Suthar Bharat Vishnubhai (226260311009) - 8.16 SPI (Sem 2)
- ★ Patel Akshar Dilipkumar (226260311004) - 7.68 SPI (Sem 2)
- ★ Patel Dev Kiritbhai (226260332015) - 9.71 SPI (Sem 2)
- ★ Ansari Mohammad Sadik Ansar Ahmed (226260332002) - 8.81 SPI (Sem 2)



Semester Toppers - DIPL SEM 3 - Regular (DEC 2022)

star performer

December 2022

Outstanding academic performance across all semesters

- ★ Raval Stutiben Amitkumar (216260311005) - 8.2 SPI (Sem 3)
- ★ Pawar Bharat Shankarlal (216260311003) - 5.45 SPI (Sem 3)



Semester Toppers - DIPL SEM 4 - Regular (MAY 2023)

star performer

May 2023

Outstanding academic performance across all semesters

- ★ Raval Stutiben Amitkumar (216260311005) - 9.32 SPI (Sem 4)
- ★ Pawar Bharat Shankarlal (216260311003) - 7.95 SPI (Sem 4)



Semester Toppers - DIPL SEM 5 - Regular (DEC 2022)

star performer

December 2022

Outstanding academic performance across all semesters

- ★ Chaudhary Adarsh Premjibhai (206260311005) - 9.2 SPI (Sem 5)
- ★ Chaudhary Piyushbhai Nagjibhai (206260311003) - 7.8 SPI (Sem 5)



Semester Toppers - DIPL SEM 6 - Regular (MAY 2023)

star performer

May 2023

Outstanding academic performance across all semesters

- ★ Chaudhary Adarsh Premjibhai (206260311005) - 9.0 SPI (Sem 6)
- ★ Rajput Yuvrajsinh Narendrasinh (196260311015) - 7.73 SPI (Sem 6)



Piyushbhai Chaudhary

Government Engineering College Gandhinagar Admission

Student secured admission to premier government engineering college

Student ID: 206260311502

higher education

2023

Institution: Government Engineering College, Gandhinagar - B.E. in Electronics & Communication Engineering

- ★ Admission to Government Engineering College, Gandhinagar
- ★ Pursuing B.E. in Electronics & Communication Engineering
- ★ Merit-based selection for degree program
- ★ Continuation of technical education journey



Adarsh Chaudhary

LD College of Engineering Admission

Student admitted to prestigious LD College of Engineering, Ahmedabad

Student ID: 206260311501

higher education

2023

Institution: LD College of Engineering, Ahmedabad - B.E. in Electronics & Communication Engineering

- ★ Admission to LD College of Engineering, Ahmedabad
- ★ Pursuing B.E. in Electronics & Communication Engineering
- ★ Merit-based selection through ACPC
- ★ Academic excellence and career advancement

Major Events & Activities

Key departmental events, workshops, and student activities

August 9, 2022

Expert Talk: Importance of Communication in Industries

Expert session conducted by Mr. Jaimin Rami, Station Controller at JMR Ahmedabad, focusing on effective communication skills essential for engineering professionals, including workplace interactions, presentations, and teamwork strategies.

Expert Session

Communication Skills

Professional Development

Industry Insights

September 21, 2022

Industrial Visit: Bajrang Paper Products

23 students from 1st semester EC department visited Bajrang Paper Products, Palanpur, to observe paper manufacturing processes and industrial automation systems.

Industrial Visit

Manufacturing Process

Paper Industry

Practical Learning

March 31, 2023

Expert Session on Cyber Security

Comprehensive session conducted by Mr. Sagar Hajare, Security Expert at Bank of America, with 35 participants. Students learned about cyber threats, ethical hacking, and preventive measures against cyber-attacks through real-world case studies.

Cyber Security

Expert Session

Ethical Hacking

Information Security

May 4, 2023

Industrial Visit: Samsung Service Centre

39 students from 2nd semester EC department visited Samsung Service Centre, Palanpur, gaining practical exposure to consumer electronics servicing, troubleshooting techniques, and customer service operations.

Industrial Visit

Consumer Electronics

Service Operations

Troubleshooting

May 10, 2023

Industrial Visit: Community Radio Station

11 students from 4th semester EC department visited Community Radio Station, Palanpur, to understand radio broadcasting operations, transmission systems, and community engagement through radio programming.

Industrial Visit

Radio Broadcasting

Transmission Systems

Community Radio

Internet of Things in Smart Cities

Faculty

article

 Shri Sunilkumar J. Chauhan - Head of Department, EC Department  November 2022

The Internet of Things (IoT) is revolutionizing urban infrastructure through smart city initiatives. From intelligent traffic management systems to automated waste collection, IoT sensors and devices are creating interconnected networks that improve quality of life. As electronics engineers, we must understand protocols like LoRaWAN, Zigbee, and 6LoWPAN that enable these massive sensor networks. The integration of edge computing with IoT devices is reducing latency and improving real-time decision making in critical city services.

The Future is 5G: Beyond Speed

Faculty

article

 Dr. Laukik K. Patel - Lecturer, EC Department  December 2022

While 5G promises incredible speeds, its true potential lies in ultra-low latency and massive device connectivity. Network slicing allows operators to create virtual networks optimized for specific applications - from autonomous vehicles requiring millisecond response times to IoT sensors that need minimal bandwidth. The implementation of mmWave technology and beamforming is enabling these advanced capabilities, fundamentally changing how we think about wireless communication.

My Journey Through Diploma Years

Student

experience

 Panchal Shubh Kiranbhai (226260311003) - 2nd Semester  January 2023

Starting my diploma journey in Electronics & Communication has been an incredible experience. The hands-on labs, especially working with microcontrollers and communication systems, have made theoretical concepts come alive. Our faculty's guidance during project work has helped me understand the practical applications of what we learn in textbooks. I'm excited about the opportunities ahead and grateful for the strong foundation we're building here.

Artificial Intelligence in Electronics Design

Faculty

innovation


 Dr. Ratansing N. Patel - Lecturer, EC Department  February 2023

AI is transforming electronics design from PCB layout optimization to automated testing protocols. Machine learning algorithms can now predict component failures, optimize power consumption, and even design antenna patterns. Tools like Cadence's AI-driven design platforms are reducing development time while improving product reliability. As educators, we must prepare students for this AI-integrated future of electronics engineering.

Dreams of Innovation

Student

poem

 Raval Stutiben Amitkumar (216260311005) - 4th Semester  March 2023

*In circuits I find my peace,
In voltages that never cease,
Ohm's law guides my every thought,
In resistors, wisdom is caught.*

*From amplifiers to digital gates,
Knowledge within me generates,
My professors light the way,
Towards a brighter engineering day.*

*Electronics is not just a field,
It's the power that dreams can wield,
With every project, every test,
I'm building skills to be my best.*

Sustainable Electronics: The Green Revolution

Faculty

article

 Mr. Milav J. Dabgar - Lecturer, EC Department  April 2023

The electronics industry is undergoing a green revolution. From biodegradable printed circuit boards to energy harvesting systems, sustainable design is becoming crucial. Our department is incorporating environmental consciousness into project work, encouraging students to consider the lifecycle impact of their designs. The future belongs to engineers who can innovate while protecting our planet.

My Laboratory Adventures

Student

experience

 Patel Dev Kiritbhai (226260332015) - 2nd Semester  May 2023

The EC laboratory has been my second home this year. From my first LED blinking circuit to complex communication system experiments, every session has been a learning adventure. The moment when theory clicks with practical implementation is magical. I've learned that patience and systematic troubleshooting are as important as technical knowledge. Our lab instructors have been incredibly supportive in guiding us through complex experiments.

Digital Signal Processing: Transforming Audio Engineering

Faculty

article

 Mr. Nirav J. Chauhan - Lecturer, EC Department  June 2023

Digital Signal Processing (DSP) is revolutionizing audio engineering and multimedia applications. From noise cancellation in headphones to real-time audio effects in concerts, DSP algorithms are everywhere. Our students are exploring MATLAB and Python implementations of filters, transforms, and audio processing techniques. Understanding DSP fundamentals opens doors to careers in telecommunications, entertainment, and emerging AR/VR technologies.

A Teacher's Day Tribute

Student

poem

 Suthar Bharat Vishnubhai (226260311009) - 4th Semester  September 2022

*To our beloved teachers, on this special day,
We express gratitude in every way,
You've shaped our minds with knowledge true,
Guided our paths when skies weren't blue.*


*From basic circuits to complex design,
You've helped our technical skills to shine,
Not just subjects, but life you teach,
Making excellence within our reach.*

*Thank you for your patience and care,
For being with us everywhere,
This Teacher's Day we proudly say,
You've illuminated our learning way.*

Industry 4.0 and Electronics Engineering

Faculty

innovation

 Mr. Rahul C. Parmar - Lecturer, EC Department  October 2022

Industry 4.0 is transforming manufacturing through smart automation, IoT integration, and data analytics. Electronics engineers are at the forefront of this revolution, designing sensors, actuators, and control systems that enable predictive maintenance and autonomous production. Our curriculum emphasizes practical skills in industrial automation, preparing students for careers in smart manufacturing environments.

Connect With Us

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Visit Us

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Electronics & Communication Engineering Department

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Our Programs



Electronics & Communication

3-Year Diploma • 38 Students Intake



Information & Communication Technology

3-Year Diploma • 78 Students Intake

Quick Information



Established

1984 (EC Dept: 1994)



Total Intake

116 (Both Programs)



Faculty

GPSc Qualified Staff



GTU Affiliated

Gujarat Technological University

Legacy of Excellence

40+

Years of Excellence

100+

Alumni Network

116

Total Intake

100%

Placement Focus

Editorial Team



Mr. Milav J. Dabgar

Newsletter Editor



Mr. Nirav J. Chauhan

Newsletter Co-Editor

