Bits & Bytes

EC NEWSLETTER

Ocean Of Career Opportunity in Electronics & Communication

VISION

To impart excellent technical education for developing ethically sound and globally competent skills to girls opting for engineering as a career in the revolutionizing era of electronics and communication.

MISSION

- To provide a creative environment for innovation in the field of Electronics & Communication through structured teaching learning process.
- To create a platform for effective interaction between Industry and Institute.
- To contribute to societal needs through innovation.
- To inculcate a self-learning attitude, environment skills and professional ethics among students so as to enable them to contribute for sustainability of environment and serve the society.

ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

GOVERNMENT POLYTECHNIC FOR GIRLS
OPP. PRL, GUJARAT UNIVERSITY ROAD, NAVARANGPURA, AHMEDABAD – 380 015

या कुन्देन्दुतुषारहारधवला या शुभ्रवस्त्रावृताया
वीणावरदण्डमण्डितकरा या श्वेतपद्मासना।
या ब्रह्माच्युत शंकरप्रभृतिभि देँवै: सदा वन्दिता
सा मां पातु सरस्वती भगवती निःशेषजाड्यापहा ॥1॥

जो विद्या की देवी भगवती सरस्वती कुन्द के
फूल, चंद्रमा, हिमराशि और मोती के हार की तरह
धवल वर्ण की हैं और जो श्वेत वस्त्र धारण करती हैं,
जिनके हाथ में वीणादण्ड शोभायमान है,
जिन्होंने श्वेत कमलों पर आसन ग्रहण किया
है तथा ब्रह्मा, विष्णु एवं शंकर आदि देवताओं
द्वारा जो सदा पूजित हैं, वही संपूर्ण जड़ता
और अज्ञान को दूर कर देने वाली
माँ सरस्वती हमारी रक्षा करें॥1॥

<u>Acknowledgment</u>

Electronics and Communication Engineering Department of Government Polytechnic for Girls, Ahmedabad feels thrilled to present its genuine stakeholders "Bits & Bytes" a semester newsletter. This newsletter "Bits & Bytes" started with an objective of knowledge sharing and spreading divergent activities of Electronics and Communication Engineering Department. We would also like to focus on new developments in Electronics and Communication field, latest ongoing and upcoming trends and events, previous month's news and events.

We consider, a newsletter "Bits & Bytes" as a best place to appreciate the students, faculty members and stake holders for their achievements. We hope, this newsletter provides necessary motivation to the stake holders as well as also very much helpful to update our knowledge of fast growing Electronics and Communication field.

Finally, we would like to expand our deepest gratitude to all members who directly or indirectly involved and give their valuable support for making this newsletter "Bits & Bytes". We know that without grace of all mighty GOD this thing is not possible. So, here by we present the first Bit (Volume) of "Bits & Bytes".

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Message from Principal's Desk

Prof. Bhasker J. Iyer

"Technology is the Gift of God. After the gift of life, it is perhaps the greatest God's gifts. It is the mother of civilization, of arts and of sciences."

-Freeman Dyson

Government Polytechnic for Girls - Ahmedabad (GPGA), a premier diploma engineering institute was established in the year 1968 with the aim to provide technical education to girls in the heritage city of Ahmedabad. It is located right opposite to PRL and adjacent to ATIRA, in the throbbing educational hub within the heart of the city and in the vicinity of reputed institutes like L.D.College of Engg., Gujarat University, L.M.College of Pharmacy and the world renowned CEPT University. It is endowed with a beautiful green campus which has its own flora and fauna.

At present, GPGA offers 3-year diplomas in 6 programmes under Commissionerate of Technical Education and is affiliated with Gujarat Technological University (GTU). These are Diplomas in Architecture Assistantship (DAA), Biomedical Engineering (DBE), Computer Aided Costume Design and Dress Making (DCACDDM), Civil Engineering (DCE), Computer Engineering (DCoE), Electronics and Communication Engineering (DEC) and Information Technology Engineering (ITE).

GPGA has a tradition of imparting quality technical knowledge and ethical values to the students. No wonder GPGA is ranked among top 10 government diploma engineering colleges in Gujarat consistently over the last five years.

For years, the institute's major focus and concern have been our students and our institution strives to impart the best knowledge in respective fields for promoting and pursuing multidisciplinary diploma engineering in the most disciplined manner. Every student ofthe

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institute has been among some of the best talents of the vibrant state of Gujarat. Many of GPGA's alumnae have established themselves as entrepreneurs while some have continued higher studies with well-known engineering institutes of India as well as abroad. Thus, they have carved a niche for themselves in various technical fields throughout the state, our nation and even abroad.

The institute has an excellent track record of placements in past few years and students of GPGA have proved their mettle in industry, academics, and administration over the last many years. This glory has been due to the synergetic efforts of management, learned faculty, dedicated staff and sincere students over these years. I urge everyone, including staff and students, to make excellent careers by availing the unique opportunity that GPGA provides through classroom teaching, laboratory instructions, industrial trainings and participation in sports, cultural and other extra-curricular activities of interest. Recently, formation of GPGA's Alumnae Association has also been undertaken.

During the current academic year, three programmed of GPGA i.e. DCACDDM, DCE and DCoE have initiated the process of application for Accreditation with NBA. For the faculty and administrators, accreditation promotes ongoing self-evaluation and continuous improvement and provides an effective system for accountability. For the institute or programme, accreditation enhances its national reputation and represents peer recognition. Thus to further the institute's aim towards excellence, accreditation process has been undertaken. I extend my best wishes to all staff members and students of these programmes for getting accredited in the year 2021.

I express my sincere gratitude to all our stakeholders for their continued support, cooperation and active involvement to make GPGA a citadel of Technical Learning, which sets its own benchmark.

Message from HOD's Desk

Prof. T. P. Chanpura

Dear Readers,

It gives me great pleasure to present you this seventh Bit (Volume 7) of December 2022.

The future of AI hardware accelerators, quantum cryptography, and smart grids is here, and we are equipping our students with the necessary skills. Our placement fairs and entrepreneurship initiatives are shaping future leaders.

Heartfelt appreciation to K.N. Chaudhari, M.R. Panchal, and the newsletter team for making Bits and Bytes an insightful read. Thanks to N.B. Nadoda for his social contributions.N R Merchant and Girija Amin for spreading NBA flavor among students as being NBA Coordinators.

To our graduates—congratulations! Aim high, stay curious, and innovate.

Space Innovation is Really Taking Off and Here's What's Happening Around the World

A Big Step Forward with The Most Powerful Rocket Ever Made

Artemis 1 is NASA's first big step toward returning astronauts to the moon. It's also the first test flight of the new Space Launch System (also called SLS) mega-rocket and the Orion crew capsule. At 8.8 million pounds of thrust, the SLS is the most powerful rocket in the world to launch since NASA's final Saturn V "Moon rocket" took the Skylab space station into Earth orbit in 1973. The great Saturn V was responsible for carrying the first astronauts to the moon in the Apollo program of the '60s and '70s.

SLS is far more advanced than the Saturn V, technologically. But its main purpose is thrust which allows it to carry more weight into orbit. This year, it's expected to launch an unmanned spacecraft (carrying mannequins instead) on a 42-day mission, during which it will orbit the moon before returning to Earth. The first two attempts to launch the Artemis I were initially postponed, but NASA then launched the mission on November 16, 2022.

Source:
https://www.hermeticseal.com/news/blog/2022/november/space-innovation-is-really-taking-off-and-heres-whats-happening-around-the-world

A Deflected Asteroid

Unlike what we see in movies like Armageddon, we now have the skills and technology to shift a dangerous asteroid off-course, as long as it's spotted with enough lead time, experts say. In September 2022, NASA's Double Asteroid Redirection Test (DART) program successfully attempted the first-ever test of "planetary defense" by intentionally crashing a spacecraft into the asteroid Dimorphos.

Analysis of data obtained by the DART investigation team shows the spacecraft's kinetic impact with Dimorphos successfully altered the asteroid's orbit, officially marking the first full-scale demonstration of asteroid deflection technology. It's worth noting that Dimorphos was not an actual threat to the planet.
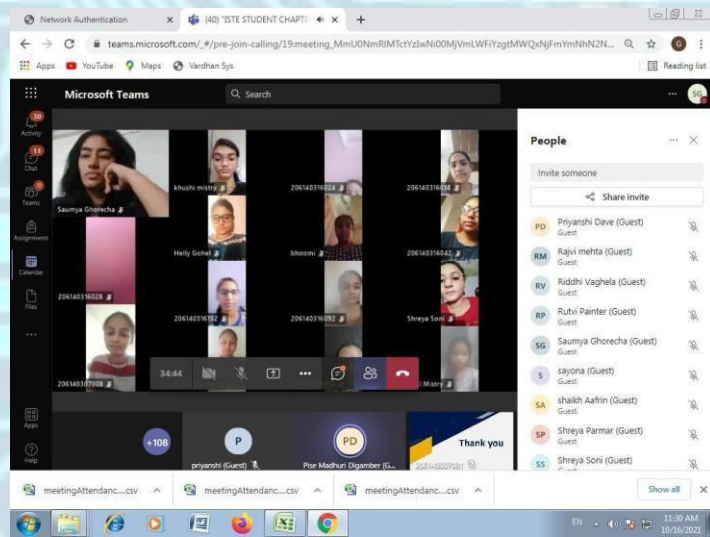
"All of us have a responsibility to protect our home planet. After all, it's the only one we have," said NASA Administrator Bill Nelson. "This mission shows that NASA is trying to be ready for whatever the universe throws at us. NASA has proven we are serious as a defender of the planet. This is a watershed moment for planetary defense and all of humanity, demonstrating commitment from NASA's exceptional team and partners from around the world."

An image of Earth captured by Lucy from 380,000 miles away on October 15, 2022. Image Source: NASA

College News and Events
INDUSTRY MEET 2022

The Electronics and Communication Department of Government Polytechnic for Girls Ahmedabad organized an Industry Meet in the year 2022. This event served as a pivotal platform for fostering strong academic and industry relationships. With participation from leading professionals and industry experts, the meet emphasized collaborative learning, knowledge exchange, and bridging the gap between academic curricula and real-world industrial practices.

ISTE AWARENESS PROGRAMME:

The Electronics and Communication Department of Government Polytechnic for Girls Ahmedabad has consistently focused on enhancing the knowledge and professional growth of its students and faculty. In line with this vision, the department organized an ISTE (Indian Society for Technical Education) Awareness Program to promote the importance of technical education and professional development among its members.

The ISTE Awareness Program aimed to familiarize participants with the mission and benefits of ISTE, which include access to a network of technical professionals, opportunities for skill enhancement, and staying updated with technological advancements. The event featured sessions on the significance of being an ISTE member, opportunities for research and innovation, and the role of ISTE in bridging academia and industry.

PROFFESIONAL DEVELOPMENT

1. Mr. P. G. KALARIA have successfully completed 1 weeks NITTTR certification course which is approved for faculty development program by AICTE on "MEDIA RESOURCES FOR LABORATORY INSTRUCTIONS" during AUGUST 2022 conducted by NITTTR, Bhopal.
2. Mr. G M. MAKWANA, NPTEL 8 weeks ONLINE training on "ACADEMIC RESEARCH REPORT WRITING".
3. Mr. M R. PANCHAL, NPTEL 8 weeks ONLINE training on "E-CONTENT DEVELOPEMENT".
4. Ms. V. L. GANGANI, NPTEL 8 weeks ONLINE training on "ACADEMIC RESEARCH REPORT WRITING".

AWARDS AND ACHIEVEMENTS

- Two SSIP projects are selected for POC:
  1. Fingerprint based EVM machine.
  2. Adaptive Smart Parking for Commercial and Residential buildings.
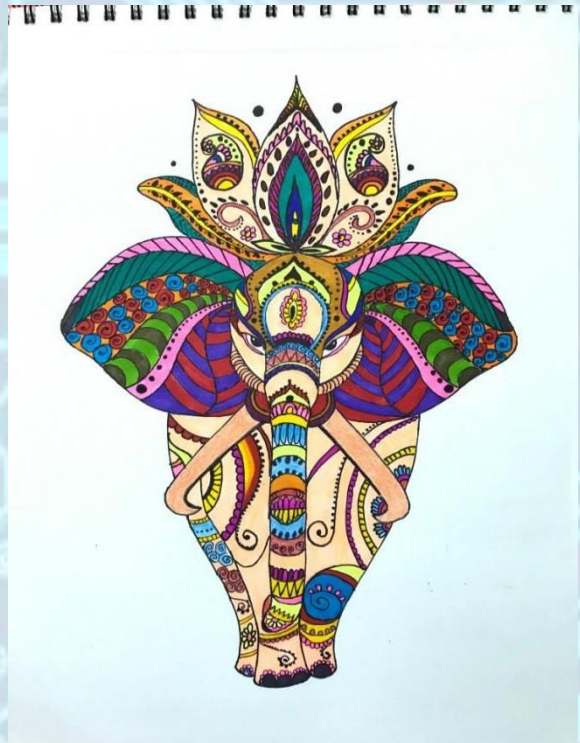
CO-CURRICULAR ACTIVITIES

1	Tree Plantation	07-07-2022	Competition
2	AI for ALL	08-07-2022	webinar
3	Disaster Management Training	14-09-2022	Workshop
4	Life Skill Training Programme	26-9-2022 to 28-9-2022	Workshop
5	Orientation Programme	23-09-2022	Seminar
6	SSIRF Ideation	06-10-2022	Seminar

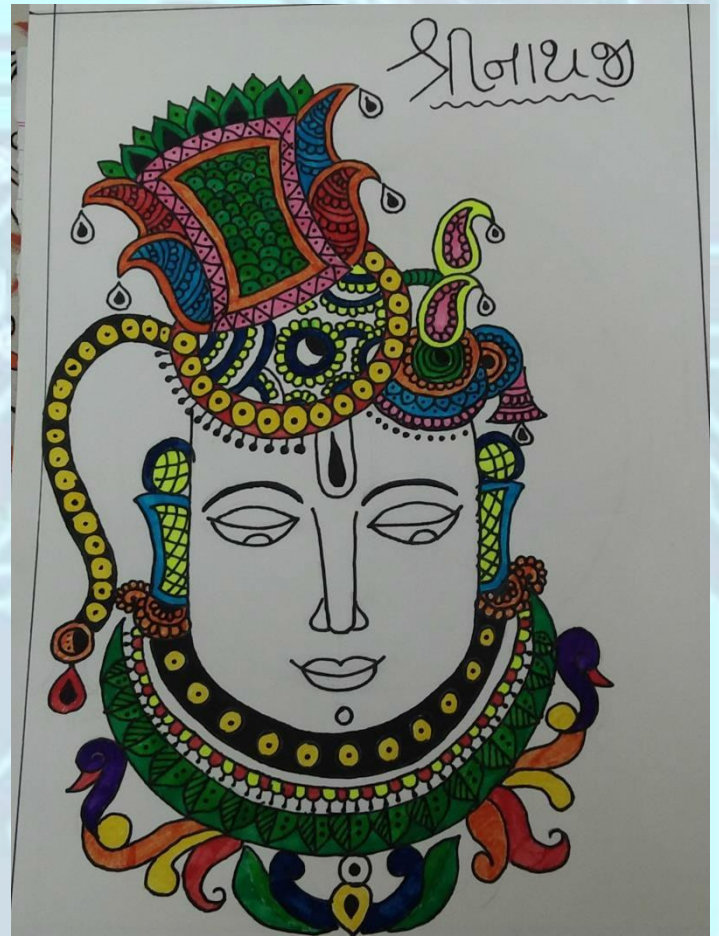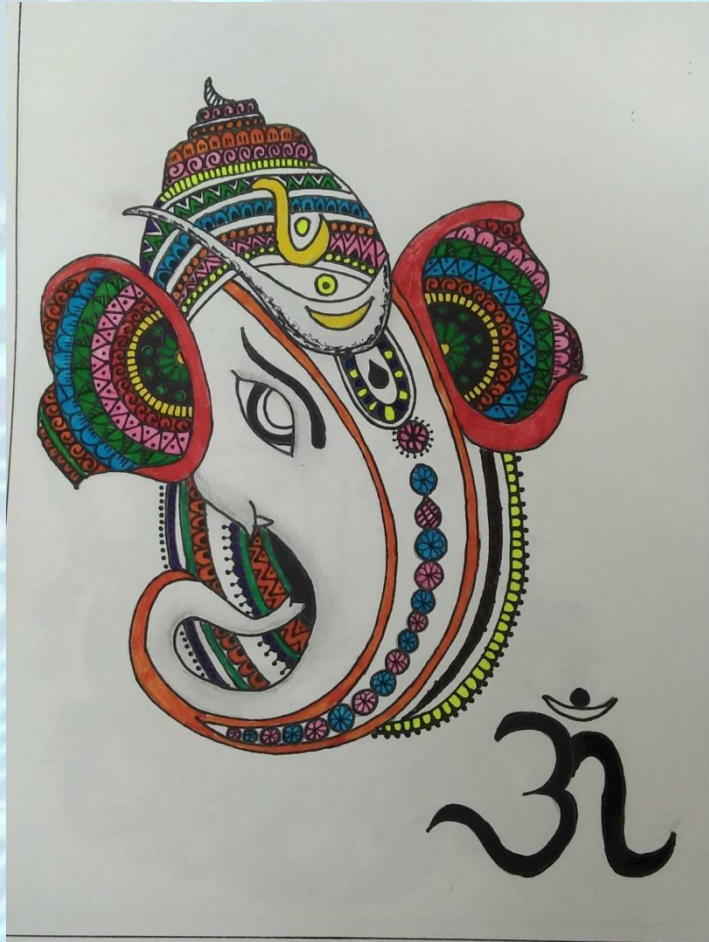### ONLY YOUR TIME ACTIVITY:

The ART and The Artist :

Apart from the daily routine life some of the faculties are creative in their own way. One of the Faculty from EC , Ms Krishna N. Chaudhari is spending her time for Doodle and different art. She believes this activity is actually a stress reliever. Have a look of her art work.

Art brings Joy and Happiness.

ARTS MADE BY STUDENT
Dhruva, Anushka

VISION

To carve a brighter prospect for the nation through excellence in technical education for fostering skills, ethical values and environmental consciousness among girl students while undertaking existing and forthcoming challenges.

MISSION

- To nurture technical and creative skills through quality education.
- To strengthen industries interaction.
- To impart real life problem solving skills.
- To foster care for sustainability of environment and importance of social responsibility among girl students.

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