



Bit – IV
JUNE-2021
Bits & Bytes

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 शंकरप्रभृतिभिर्देवैः 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॥

Acknowledgment

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.

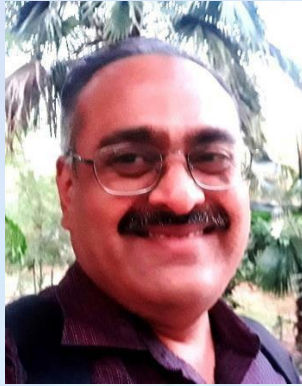
We consider, a newsletter "Bits & Bytes" as a best place to appreciate the students, faculty members and stake holders for their achievements. We hope, this newsletter provides necessary motivation to the stake holders as well as also very much helpful to update our knowledge of fast-growing Electronics 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 strive to impart the best knowledge in respective fields for promoting and pursuing multidisciplinary diploma engineering in the most disciplined manner. Every student of the

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 fourth Bit (Volume 4) of June 2021.

With the rapid evolution of quantum electronics, smart sensors, and bio-inspired circuits, our students are preparing for a dynamic future. Our internship program has further strengthened industry interaction, helping students gain real-world exposure.

I extend my gratitude to K.N. Chaudhari, M.R. Panchal, and the editorial team, as well as N.B. Nadoda for his selfless social service during natural calamities. Your contributions define our department's excellence.

We will continue to implement OBE principles, alumni feedback, and skill-based learning to ensure students succeed. Congratulations to our graduates!

Your journey has just begun.

New Technologies

GPT-3

Large natural-language computer models that learn to write and speak are a big step toward AI that can better understand and interact with the world. GPT-3 is by far the largest—and most literate—to date. Trained on the text of thousands of books and most of the internet, GPT-3 can mimic human-written text with uncanny—and at times bizarre—realism, making it the most impressive language model yet produced using machine learning.



SIERRA LENNY

But GPT-3 doesn't understand what it's writing, so sometimes the results are garbled and nonsensical. It takes an enormous amount of computation power, data, and money to train, creating a large carbon footprint and restricting the development of similar models to those labs with extraordinary resources. And since it is trained on text from the internet, which is filled with misinformation and prejudice, it often produces similarly biased passages. Will Douglas Heaven shows

off a sample of GPT-3's clever writing and explains why some are ambivalent about its achievements.

Lithium-metal batteries

Electric vehicles come with a tough sales pitch; they're relatively expensive, and you can drive them only a few hundred miles before they need to recharge—which takes far longer than stopping for gas. All these drawbacks have to do with the limitations of lithium-ion batteries. A well-funded Silicon Valley startup now says it has a battery that will make electric vehicles far more palatable for the mass consumer.

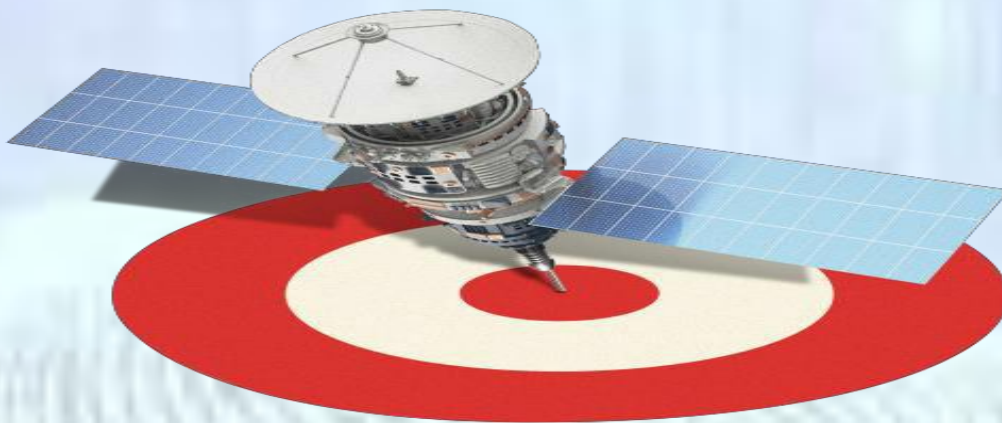


It's called a lithium-metal battery and is being developed by QuantumScape. According to early test results, the battery could boost the range of an EV by 80% and can be rapidly recharged. The startup has a deal with VW, which says it will be selling EVs with the new type of battery by 2025.

The battery is still just a prototype that's much smaller than one needed for a car. But if QuantumScape and others working on lithium-metal batteries succeed, it could finally make EVs attractive to millions of consumers. James Temple describes how a lithium-metal battery works, and why scientists are so excited by recent results.

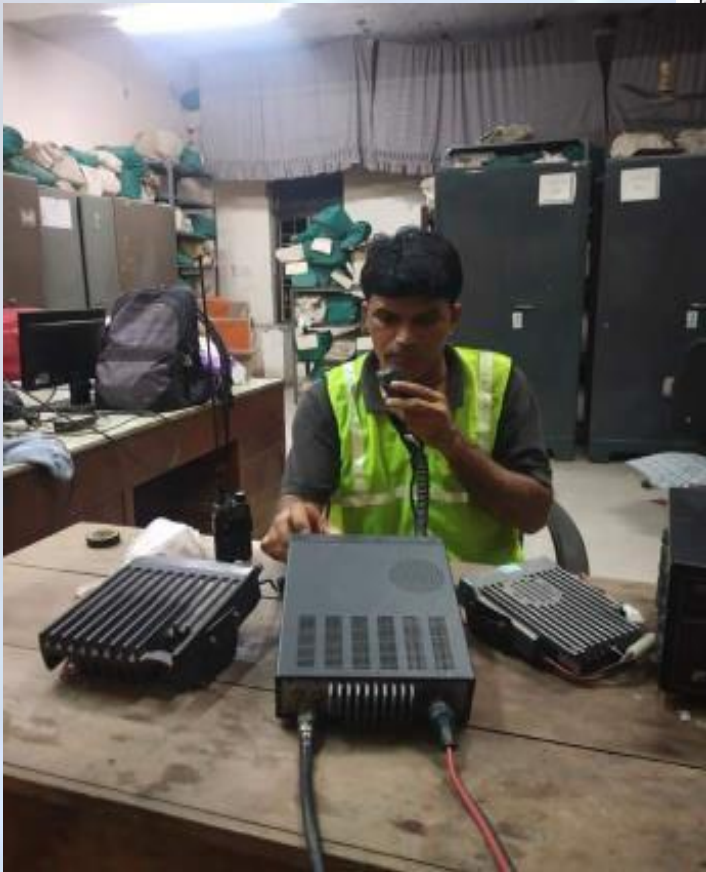
Hyper-accurate positioning

We all use GPS every day; it has transformed our lives and many of our businesses. But while today's GPS is accurate to within 5 to 10 meters, new hyper-accurate positioning technologies have accuracies within a few centimeters or millimeters. That's opening up new possibilities, from landslide warnings to delivery robots and self-driving cars that can safely navigate streets.



China's BeiDou (Big Dipper) global navigation system was completed in June 2020 and is part of what's making all this possible. It provides positioning accuracy of 1.5 to two meters to anyone in the world. Using ground-based augmentation, it can get down to millimeter-level accuracy. Meanwhile, GPS, which has been around since the early 1990s, is getting an upgrade: four new satellites for GPS III launched in November and more are expected in orbit by 2023. **Ling Xin reports on how the greatly increased accuracy of these systems is already proving useful.**

FACULTY'S CONTRIBUTION



Mr. N.B. Nadoda Sir has worked for operating Ham Radio for emergency communication during Tauktae cyclone 2021

STUDENT ACHIEVMENT:

Term : Even 2020-21 (202)						
Semester: 4 th						
Sr. No.	Enrolment No.	Name of Student	SPI	CPI	CGPA	Remark
1	196140311025	PATEL KRUPA MAHESHKUMAR	9.53	9.03	9.41	
2	196140311007	ISRANI SONALI	9	9.05	9.34	
3	196140311041	SHRUTI TENGURIYA	9	9.13	9.16	

E.C. Department is having some of the brightest student who has secured their rank at the UNIVERSITY LEVEL despite of COVID pandemic.

Term: Even 2020-21 (202)						
Semester: 6 th						
Sr. No.	Enrolment No.	Name of Student	SPI	CPI	CGPA	Remark
1	186140311018	GIDWANI MUSKAN RAJESH	9.67	9.05	9.37	
2	186140311010	BOSE HETVI RAMKRISHNA	9.6	9.14	9.35	
3	186140311058	PATEL JANKI HASMUKHLAL	9.2	8.42	8.69	

Curricular Activities

EC DEPARTMENT

SR. No.	Title of Program/Name of Industry	Name of Speaker/Name of Industr	Date	No of beneficiaries/No of students
1	Basics and application of Ardiuno by Archit Somani	Mr. Archit Somani	8/1/2021	23
2	Shodhyatra	MR. T.P.CHANPURA	21/6/2021	26




 Government Polytechnic for Girls, Ahmedabad

Invites You

BASICS & APPLICATIONS OF ARDUINO WORKSHOP ONLINE

TOPICS TO BE COVERED

1. ARDUINO BUILD & IDE
2. I2C BASED ANALOG READING
3. SWITCHING OF LIGHTS
4. I2C INTERFACING
5. I/O INTERFACING

8th Jan, 2021
2 pm onwards

REGISTER ONLINE

Event Co-ordinator
M.R.PANCHAL

Facilitator:
DR. ARCHIT SOMANI
DIRECTOR & CHAIRMAN
TraCoMo

Prof. T.P.Chanpura
HEAD, E.C.

Prof. Bhaskar J. IYER,
Principal, GPGA

DOWNLOAD THE BROCHURE
SCAN QR CODE TO JOIN THE WORKSHOP


 GOVERNMENT POLYTECHNIC FOR GIRLS
AHMEDABAD

E.C. DEPARTMENT

TOPIC
BASICS OF ENTREPRENEURSHIP

WEDNESDAY JANUARY 6, 2021

PROF U.V.BUCH
ME EC, MBA
Associate Dean, Zone-1
GPG, Ahmedabad

EVENT COORDINATOR: 4:00 PM-6:00 PM
MS. K.N.CHAUDHARI,
LECTURER E.C.

FACILITATOR
Prof. T.P.Chanpura
Head, EC
Prof. Bhaskar J. Iyer
Principal

REGISTER NOW

<https://www.facebook.com/GPG-EC-101615894922331>

Sr. No.	Name Of Faculty	Department	Name of Training	Organising Insitute	Duration	
					From	To
1	Nanubhai B. Nadoda	EC	FDP on Innovation & Enterpreneurship	ATAL Academy , New Delhi	21/06/2021	25/06/2021
2	Pinkesh G. Kalariya	EC	FDP on Innovation & Enterpreneurship	ATAL Academy , New Delhi	21/06/2021	25/06/2021

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.





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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NAVARANGPURA, AhmedAbAd-380 015.***

Website: <http://www.ggpa.cteguj.in>

CONTACT for Query or Suggestions:

**Electronics AND Communication
Engineering DEPARTMENT, Government
Polytechnic for Girls, AhmedAbAD**

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Our blog: ecggpblogspot.com

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