Bits & Bytes

EC NEWSLETTER

Why EC?

Ocean Of Career Opportunity In Electronics & Communication

VISION

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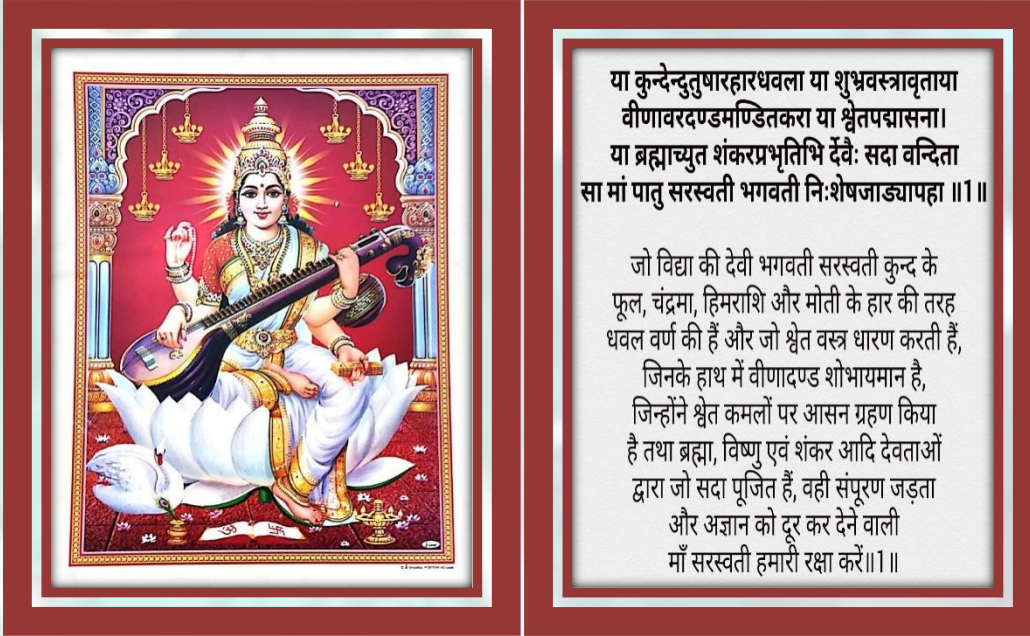
MISSION

- To provide a creative environment for new development in the electronics and communication field through structured teaching and learning process.
- To strive towards efficient interaction between industry and institute.
- To serve the needs of the society through innovations.
- To inculcate self-learning attitude, entrepreneurial skill and professional ethics

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 देवैः 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

Dr Ushma Anerao

Dear Readers,

Electronics and Communication Department of Government Polytechnic for Girls started in 1968 with the aim to provide globally competent skilled girls technocrat in the field of Electronics and Communication and it's diversified field in the vicinity of P.R.L. Initiating something new is always motto of EC department which is great!!!

It is my great pleasure to see the first bit (Volume 1) of Bits & Bytes newsletter of Electronics and Communication Department which is going to be launched in December-2019. The aim behind this newsletter of Electronics and Communication Department is to disseminate knowledge, skill and information amongst all stake holders. Students, Faculty members and Industrialists related to Electronics and Communication Department gets platform to share the upcoming technologies, events in the department and achievement of students and faculties by this newsletter. It clearly shows that the synergetic approach of Electronics and Communication Department to make better than the best platform for knowledge sharing.

Congratulations as we are having 51st batch going to pass in 2020 and we are having great alumnae for EC.

All the best and Keep better!!

Message from HOD's Desk

T. P. Chanpura

Dear Readers,

It gives me great pleasure to present you this first Bit (Volume 1)of December 2019.This is a platform for students as well as faculty members and other stake holders like industrialist, alumnae and other faculty members of peer institutes of electronics and communication engineering. At this juncture, I would like to thank all my faculty members those who have participated directly or indirectly in editing, proof reading and designing this Bit and implementing my idea and realizing thought in to reality with quite committed platform for technological, innovative, creative skills and forth coming development in field of electronics and communication as well as its diversification for enhancing lifelong learning and project management with team building skills. Bits & Bytes is a news letter of every Semester i.e. 4 months and even semester always starts from December so first Bit (First Volume) we starts from December 2019. Then Byte (Second Volume) will come in July 2020 is always bigger volume covers events for whole Year. This First Bit(First Volume) augments the events, activities done during last semester up to November 2019

I acknowledge the efforts put by my students team of Bits & Bytes and faculty members of electronics and communication engineering department. Especially I congratulate our department Faculty Member Nitam C Desai for working continuously behind converting ideation stage to implementation stage of Bits & Bytes. Now onwards N B Nadoda will coordinate the same with students and faculty team.

I acknowledge my sincere thanks to Industry advisory Mr Ashwin Ruparelia, CEO- Eurotech power Controls and Mr Pratik Parmar,CEO- Crear Electronics for their continuous interaction with faculty members and EC students.

Keep it up!!!

Scope of Electronics and Communication :

This question may be asked most of the Electronics and Communications Engineering Graduates during the studies or after the graduation.

Studying electronics and communication engineering is the dream of every second aspirant due to a number of reasons – growth, job opportunities, salary range and continuous industry growth.

The major driving force for the present day Information Technology revolution is the development in Electronics Engineering. The advancements in microelectronics, satellite and optical fiber technology, analog and digital in communication techniques have resulted in developing complex electronics devices, circuits and equipment's capable of implementing fast and efficient telecommunication systems. Real time transfer of audio and video signals is now possible with recent trends in broad band technologies. Penetration of electronics has now revolutionized other areas like health care, instrumentation, automation, remote sensing, signal processing etc.

The basic principles and performance of electronic devices and circuits are introduced in the course. Design and analysis of different analog and digital circuits are considered in detail.

Different analog and digital modulation techniques used for communication, equipment's and systems involved in wireless communications, satellite and optical communication technologies, computer communication and networking, design and development of microelectronic circuits for computation and processing, components and systems for electronic instrumentation and control etc form major content of the course.

The course also covers the study of hardware and interfacing of computer systems, programming

skills and application of computers in signal processing and communication.

Graduates in Electronics Engineering have opportunities in Government and private companies for installation, operation and maintenance of electronics equipment's and systems.

Defense, space and other large research organizations employ electronics engineers in design and development of complex devices and systems for signal processing and telecommunication.

Industries involved in design and fabrication of devices, integrated circuits, embedded systems, electronic equipment's etc have also provide large scale placements for engineers with this specialization.

Installation and maintenance of electronic equipment's used for health care in hospitals, equipment's & systems for instrumentation and control in process industries automation systems of assembly line in production industries etc are also handled by electronics engineers.

Knowledge of computer hardware, networking equipment's and communication systems enables electronics engineering graduate helped them to annex an edge in the IT job market. The skills and understanding developed in the course enable them to be preferred, as software professionals by IT companies.

Core companies offer internships and jobs

Although there are numerous startups/small firms offering internships on specific domains, there

are quite a lot of private/public sector companies that too offer internship opportunities for engineering students.

Some of the top private sector companies are:

- Tata tele services (Telecommunications)
- Vodafone (Telecommunications & Networking)
- Samsung (Analog and Digital Communications
- Intel (Analog & Digital Electronics)
- Dell India (Networking)
- Reliance (Communications)
- LG Electronics (Analog & Digital Electronics)
- Wipro (Wireless Networking)
- Cisco Networking (Computer Networks)
- Infotech (Analog & Digital Electronics
- Redpine (Signal Processing)
- General Electric (Electronics & Comm.)
- Texas Instruments(Analog&Digital Electronics)
- Infosys
- TCS (Tata Consultancy Services)

Some of the public sector companies are:

- Bharat Electronics Limited (BEL)
- National Aluminium Company Ltd. (NALCO)
- Hindustan Petroleum Corporation Limited (HPCL)
- Bharat Heavy Electricals Limited (BHEL)
- National Thermal Power Corporation Ltd (NTPC)
- Power Grid Corporation of India Limited (POWERGRID)
- Bharat Sanchar Nigam Limited (BSNL)
- ISRO (Indian Space Research Organization)
- Railways

There are also other core companies other than these ones.

New Technologies:

These new Technologies will become mainstream in nearest future hence one can make proper planning their career and prepare themselves as per the need of that field.

- Location-based technology
- Syncing wearable technology with mobile devices
- Revenue from mobile applications
- Mobile devices syncing with homes
- Increased mobile payments
- Smart glasses
- Smart data
- Internet Of Things
- Wearable electronics
- Smart houses
- Virtual reality gaming
- Screenless displays
- Brain-Computer interfaces
- Universally available services
- Digital downloads will kill physical objects
- Robots will be everywhere
- Biofuels and renewable energy
- Wireless energy transfer
- 5G mobile data
- Artificial Intelligence

Upcoming Events:

- International Conference on Civil, Mechanical, Robotics, Electronics and Electrical Engineering - Sun, 01 Dec 2019 - Cambay Sapphire, Ahmedabad

International Conference on Civil, Mechanical, Robotics, Electronics and Electrical Engineering will feature scientists, scholars, engineers, and students from the Universities all around the world and the industry to present ongoing research activities, and hence to foster research relations between the Universities and the industry.

- Self-Actualized Leadership Development Workshop - Sun, 08 Dec 2019 - Novotel Ahmedabad, Ahmedabad

This high-value leadership workshop is being conducted across all major cities of the country to make participants realize their Self-Actualization needs and how aligning the decision-making with Universal Principles results into very high performance in personal and professional life of a person.

- International Conference on Recent Advances in Engineering Science and Technology (ICRAEST) - Sun, 15 Dec 2019 - Cambay Sapphire, Ahmedabad

International Conference on Recent Advances in Engineering Science and Technology will bring together innovative academics and industrial experts in the field of Science, Engineering, and Technology to a common forum. The idea of the conference is for the scientists, scholars, engineers, and students from the Universities all around the world and the industry to present ongoing research activities, and hence to foster research relations between the Universities and the industry.

College News and Events

- Two buildings (Workshop and Main) were declared danger for use by PWD.
- Academic inspection was held on 22nd November, 2019 and inspection committee appreciates our dedication and work as academic is not suffered due to infrastructural limitation.
- GTU End semester exam for 3rd and 5th semester is completed.
- 4th and 6th semester term starts from 09th December, 2019.
- Three departments of our collage are going to apply for NBA this year.
- Term end date for 1st semester is 20th December, 2019.
- GTU End semester exam start from 24th December, 2019.

GPG, Ahmedabad
DEC

Training:

- Mr. G. M. Makwana completed online training on "Principles of Modern CDMA/MIMO/OFDM Wireless Communications"
- Ms. G. D. Amin completed online training on "Fabrication of MEM sensor for clinical perspective"
- Ms. G. D. Amin completed online training on "Microwave and Technique"
- Ms. V. L. Gangani completed NITTTR training of "Induction Phase-II"

Quote:

An investment in knowledge pays the best interest.

Benjamin Franklin

Brain Exercise

What you know about BrainPort?

Check Your Knowledge:

Across

2 Is a measure of a material's ability to oppose the flow of electricity. It is measured in Ohms.

3 Is a measure of the magnitude of the flow of electrons in a circuit. It is measured in Amperes, or Amps. Many people explain electrical flow by using water flow as an analogy.

6 Is a measure of the electrical energy of a circuit. It is measured in Volts. In the water analogy, it would be the water pressure.

8 A semiconductor diode that emits light when conducting current and is used in electronic equipment, especially for displaying readings on digital watches, calculators, etc.

Down

1 Is the flow of electrical energy through some conductive material.

4 It is a simple electro-mechanical transducer. It converts rotary or linear motion from the operator into a change of resistance, and this change is (or can be) used to control anything from the volume of a hi-fi system to the direction of a huge container

5 Is a construction base for a one-of-a-kind electronic circuit, a prototype. Doesn't need soldering.

7 Is a closed loop containing a source of electrical energy (like a battery) and a load (like a light bulb).

VISION

To carve a brighter prospect for the nation through excellence in technical education to foster skills, ethicalvalues and environmental consciousness among girls 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 promote care for sustainability of environment and social responsibility.

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Over all Convener Now onwards : N B Nadoda