



Department of Electronics & Communication Engineering

GOVERNMENT POLYTECHNIC FOR GIRLS, SURAT

SEPTEMBER 2023 Vol.-02

EC TRENDS

E-Newsletter



Electronics and Communication

Vision:

Be an excellent department for girls to empower them in the field of Electronics and Communication engineering to excel in industry and serve society.

Mission:

- To prepare professionally competent students and staff through academic excellence.
- To create a conducive environment in the department for exchange of ideas and knowledge.
- To provide opportunities in the department for skill development and innovation.
- To provide resources and infrastructure for best learning experience in the department.

Message from Head of Department



Smt. K. N. Vaghela

Dear Readers,

It gives me great pleasure to present you this volume 2 of SEPTEMBER 2023. This is a platform for students as well as faculty members and other stakeholders like industrialist, alumni and other faculty members of peer institutes of electronics and communication engineering. Our department is dedicated to more than just imparting knowledge; we are committed to building careers and enriching minds. The experiences gained here go beyond the classroom, providing a foundation for a lifetime of success.

Together, let's shape a future that's bright, dynamic, and filled with endless possibilities.

I am confident that the students of the department would justify the credibility of the department by showing a high level of professional competence in their respective field. I highly acknowledge the efforts put by my students' and faculty members of electronics and communication engineering department.

Keep it up!!!

Nidhi Agarwal have published a document in electronics4u on “Saltwater: The Future of Green Hydrogen Production” @ 10 July 2023. Here we have taken this document so that all can be aware of latest trends in electronics/technology.

TRENDS IN ELECTRONICS FIELD

SALTWATER: THE FUTURE OF GREEN HYDROGEN PRODUCTION

By Nidhi Agarwal

India currently consumes six million tons of grey hydrogen from natural gas with low-carbon methods. However, generating an equivalent amount of green hydrogen would require around 132-192 million tons of water. Globally, researchers explore two ways to use seawater for GH₂ production: desalination to remove salt before electrolysis or direct use of seawater. The researchers explain that desalination is an established method to produce clean water from seawater for GH₂ production. However, splitting seawater poses challenges. Most projects use renewable-powered electrolysis for hydrogen extraction. Yet, desalination and purification technologies are costly for efficient electrolysis. Green hydrogen is produced by electrolysis, using renewable energy to split water into hydrogen and oxygen. It's clean and vital for decarbonizing heavy industries. However, scaling up the process may worsen freshwater shortages.

Researchers from the Department of Physics at the Indian Institute of Technology (IIT) Madras have created a low-cost prototype to generate green hydrogen (GH₂) from seawater. The researchers aim to produce GH₂ from seawater, reducing freshwater dependency. The prototype electrolyzer is under development, and commercialization may take time. Global commercialization of similar prototypes is limited. The team has replaced metals with carbon-based electrode support material, minimizing corrosion risks.

Seawater electrolysis for hydrogen production faces challenges of chlorine corrosion and slow hydrogen evolution, hindering its potential. Addressing these issues is crucial to enhance efficiency and effectiveness. The researchers have utilized transition metals (iron, copper, etc.) as catalysts to improve oxygen and hydrogen production. These metals have various industrial applications, like electronics and alloys. These innovations allow seawater to be used similarly to regular water for hydrogen and oxygen generation.

IIT-Madras researchers have created alkaline water electrolysis to produce green hydrogen from seawater, reducing freshwater dependency. The technology is in its early stages and will require a few more years to be commercially implemented, provided it proves successful.

Reference:

<https://www.electronicsforu.com/news/saltwater-the-future-of-green-hydrogen-production>

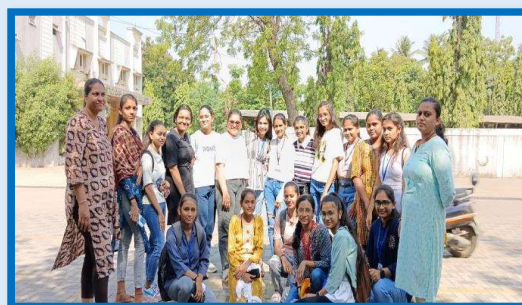
EVENTS

A wide and diversified range of extracurricular activities exists on GGP, SURAT campuses. Students become involved in co-curricular & extra-curricular activities not only for entertainment, social, and enjoyment purposes, but most important, to gain and improve skills and offer many social opportunities while also promoting service.

EC/ICT Department



Visit to Uttran power station of EC 6 th semester students Dt.: 20/05/2023



Visit of SUMUL DAIRY of EC 4 th & 6 th semester students Dt.: 22.05.2023



TREE PLANTATION by EC staff Dt.: 07.07.2023



TREE PLANTATION by EC students Dt.: 27.07.2023



INDUCTION PROGRAM ACTIVITIES @GPG SURAT Dt.: 20/07/2023 to 02/08/2023



**Cultural Event "PATRIOTIC SONG" Singing Competition @V.K. Hall, GPG
SURAT Dt.: 11-08-2023**

Institute Activities/Visits/Seminars/Workshops



Cyber Security Awareness Program Dt.: 05/04/2023



THELESEMIA TESTING Dt.: 02.05.2023



Project Exhibition Dt.: 15/04/2023



International Yoga Day Celebration Dt.: 21/06/2023



Visit of "SEMICON INDIA 2023" @ Mahatma Mandier, Gandhinagar, Gujarat Dt.: 30/07/2023



NCC AWARENESS at GPG SURAT Dt.: 11/08/2023



INDEPENDENCE DAY CELEBRATION Dt.: 15/08/2023



ANTI-RAGGING WEEK CELEBRATION Dt.: 12/08/2023 to 18/08/2023



WORLD ENTREPRENEURSHIP DAY @GPG SURAT Dt.: 22-08-2023



1. Training organized by NITTTR, Bhopal on “ICT Tools for Teaching Learning” is taken by Ms. K. K. Desai during 31/07/2023 to 04/08/2023.
2. Training organized by NITTTR, Bhopal on “Developing Entrepreneurship & Vocational Skills” is taken by Mr. S. M. Gheewala during 17/07/2023 to 21/07/2023.
3. Training organized by NITTTR, Bhopal on “Curriculum Design for Holistic and Multidisciplinary Education” is taken by Mr. D. Y. Vankawala during 24/07/2023 to 28/07/2023.
4. Training organized by MOOC, NPTEL on “Joy of Python Programming” is taken by Mr. D. U. Patel during 23/01/2023 to 14/04/2023.
5. Training organized by NITTTR, Bhopal on “Green Technology for Sustainable Development” is taken by Mr. D. U. Patel during 24/07/2023 to 28/07/2023.



Ms. K. K. Desai



Mr. S. M. Gheewala



Mr. D. Y. Vankawala



Mr. D. U. Patel



**GOVERNMENT POLYTECHNIC FOR GIRLS,
SURAT**
*Electronics & Communication Engineering
Department*



DEPARTMENT TOPPERS OF GTU EXAM TERM 222

Wishing all of you a heartfelt congratulation for putting up such an extraordinary performance in your exam.

3rd YEAR SEM-06 EC TOPPERS



**RANK: 1ST SPI -9.33
PADHIYAR KOMALBEN
S (206150311002)**



**RANK: 2ND SPI -9.27
RIYA PATEL
(206150311005)**



**RANK 3RD SPI - 8.53
NEEVA VALVI
(206150311009)**

2nd YEAR SEM-04 EC TOPPERS



**RANK : 1ST SPI - 8.86
SAHANI PRABHA P.
(216150311016)**



**RANK 2ND SPI -8.05
P. SHUKAL MAITRY
(216150311001)**



**RANK 3RD SPI - 7.95
H. YADAV SHUBHAM R.
(216150311007)**

1st YEAR SEM-02 EC TOPPERS



**RANK 1ST SPI - 8.58
PANCHAL RIYA K.
(226150311012)**



**RANK 2ND SPI - 7.32
PATEL PRAGNIKA D.
(226150311014)**



**RANK 3RD SPI - 7.21
RAJPUROHIT SHRIYAM S.
(226150311019)**

1st YEAR SEM-02 ICT TOPPERS



**1ST RANK SPI - 8.62
SHUKLA RASHI
OMPRAKASH
(226150332064)**



**RANK 2ND SPI - 8.29
SAHANI NANDA PRAHLAD
(226150332058)**



**RANK 3RD SPI - 8.24
CHAUDHRI VAISHNAVI
SHAILESH (226150311019)**