



# Gopalan College of Engineering and Management

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Approved by AICTE, New Delhi.

Accredited by NAAC, Affiliated to VTU, Belegavi. Recognized by Govt. of Karnataka

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Department of Electronics & Communication Engineering

NEWS LETTER - 2022-23

## GOPIONICS HARBINGER

| AY : 2022-23       | EDITION : MARCH 2023 | EDITOR : R NAVEENA NESAN   | ISSUE - 01 |
|--------------------|----------------------|--|------------|
| <b>Editor</b>      |                      | <b>Editorial Board</b>   |            |
| Mr. R NaveenaNesan |                      | Dr. Krishna Kumar N J<br>Mr. Murali Shayan H<br>Mr. Senthil Kumar H<br>Student Member : Mr. Nikhil R V |            |

### Editor's Corner

It is my pleasure to pen down my sincere thanks and appreciation to all the family members of the department of ECE for their support in bringing out this newsletter. The department of ECE under the visionary of Dr. S Anantha Padmanabhan (HoD), is always known for constant endeavor, towards innovative thinking and implementation for the progress of the students. The activities like aiming for the enhancement of the Academic Skills, Technical know-how, Hands-on experience, development of Soft Skills Guest Lectures, Industrial Visits etc. Some of the highlights of the departmental activities of the Academic Year 2023-24 are being compiled here in brief

### About GCEM

The Gopalan College of Engineering and Management (GCEM), Whitefield, Bangalore is an institute which provides quality education in a diverse and multi-cultural environment. GCEM is started by the Gopalan Foundation; immerse students in academics, which has a lot outside the classroom. Student life includes participation in sports, recreational, co-curricular activities and cultural.

At CCEM, students will find an academic and social environment where everyone helps and shape their future. Guidance from the motivated and quality faculty students displays consistently high academic performance.

GCEM has state-of-the-art infrastructure, creating an environment for progressive learning and development. It also has computer and internet facilities, modern workshops, seminar halls, auditoriums and well stocked libraries, sports and games fields including indoor Football and Cricket ground.

## **ECE - The Path Provider**

The department has a well-equipped laboratory with authentic software's like Keil-c, Msp-430, MATLAB and the same holds promise in both research and education across a full spectrum with a well-qualified staff and published eight papers in reputed international journals (Science and Scopus) and also three papers in international conference, one in Springer and other in IEEE conference in the last three years. The department staff has also attended various technical workshops and technical seminars outside the college as a process of quality improving programmed.

The students of the department have also presented paper in technical paper presentation and have won all the first three places. The department also had a project exhibition where innovative projects were demonstrated. The department conducted many technical workshops and seminars by experts.

| <b>Vision and Mission of G C E M</b>   |   |
|--|---|
| <b>Vision</b>  | <b>Mission</b>  |
| To be the institution of choice with contemporary knowledge coupled with values contributes to the society through excellence in technical education and research by continuous innovation.  | Achieving Excellence in Teaching Learning Process Using State-Of-The-Art Resources.<br><br>Develop industrial collaborations to promote research and innovation capabilities of faculty and students.<br><br>Inculcate entrepreneur skills with high integrity to serve the society.  |
| <b>Vision and Mission of ECE Department</b>  |   |
| <b>Vision</b>  | <b>Mission</b>  |
| To excel in technical education and research in the area of electronics and communication engineering to produce skilled, trained and competent individuals with motivation to meet the present day challenges of the society.   | M1: To impart quality education to enable students to face the challenge in the fields of Electronics and Communication.<br>M2: To develop spirit of innovation, creativities, and research among students and faculty members.<br>M3: To inculcate ethical, moral values and lifelong learning skills in students to address the societal needs. |
| <b>Program Educational Objectives (PEOs)</b>   |   |
| PEO1: Recognize, synthesize and apply the acquired knowledge in basic sciences and mathematics in solving Electronics and Communication Engineering problems.<br>PEO2: Inculcate the habit of team work using modern methods to achieve project objectives.<br>PEO3: Involve in lifelong self-learning, career enhancement and adapt to changing multidisciplinary professional and social needs |   |

## Messages



I take this opportunity to convey my happiness towards the systematic approach of the ECE department in bringing out the excellence of the students through various activities. I wish all the students to effectively use and excel in their professional life. I congratulate and appreciate all the staff of ECE.

**Dr. Basavaraju C, Principal, GCEM**



I am extremely happy to convey the overwhelming response from everyone associated with me especially the students' community who really takes the effort put forth to build their career by various activities in right way. I wish each and every student to utilize all the available resources and boost their academic caliber for their better professional career.

**Dr. S Anantha Padmanabhan, HoD, ECE**

## Inter College and Intra College EVENTS

### ISKON Visit (21 Oct 2022)



As part of Social Connect Responsibility visit to ISKON temple has been organized for the students on 21 Oct. 2022. The mission of this visit is to bring awareness about the societal life and building team work among the students. The students also volunteered in serving the meals to the devotees.

Resource Person - Dr. Krishna Kumar N J

### Setting up of IoT Skill Lab (24 & 25 Jan 2023)

**GOPALAN COLLEGE OF  
ENGINEERING AND MANAGEMENT**  
(Affiliated to VTU, Approved by AICTE, ISO : 9001:2015, NAAC Accredited with B+ Grade)

**Department of Electronics and Communication Engineering**  
Organising two days Training on

**“IOT SKILL LAB”**  
in association with  
**Centre for Development of Advanced Computing (C-DAC)**  
On 24th & 25th January 2023

**Chief Guest**  
**Prof. C. Murali**  
Former Vice-president & Distinguished Fellow IETE, New Delhi

**Guest of Honor**  
**Shrikrishna**  
Joint Director, IOT group C-DAC Bangalore

**Venue : Seminar Hall** **Time : 8.45 am**



Inauguration of IoT lab and Two days hands-on training on IoT was organized by the department in associate with C-DAC while Technical Talk on the topic "Advancements in 5G and 6G Mobile Communication" was delivered by Professor C Murali, (Former Vice President and Distinguished Fellow IETE, New Delhi) on 24/01/2023 was held in 6th Floor Seminar Hall at 9:30 AM. Students of (2nd, 3rd, and 4th Year) and Faculties of ECE Department attended the program.





Resource Person – Harsha Jeeth



## FRESHERS' DAY (31 Jan 2023)



Fresher's Day has been organized on 31<sup>st</sup> Jan 2023 for welcoming the newly joined ECE students for the A Y 2022-23 by the II year ECE students. This program has motivated the students and made them aware of the scope and opportunities in the area of ECE.

Resource Person - R Naveena Nesan

## BRIDGE COURSE (07 Mar 2023)

**GOPALAN COLLEGE OF  
ENGINEERING AND MANAGEMENT**  
(Affiliated to VTU, Approved by ACET, ISO : 9001:2015, NAAC Accredited with B+ Grade)

**Department of Electronics and Communication Engineering**

Organizing Inaugural talk on  
**"Bridge Course for IoT Software Analyst under FutureSkills Prime India"**  
in Association with  
Centre for Development of Advanced Computing (C-DAC) on "07<sup>th</sup> March 2023"

**Guest Speaker**  
**Shri Krishna**  
Joint Director, IoT group CDAC Bangalore

**Director**  
**Dr. C. Prabhakar**  
GCEM

**Principal**  
Dr. Basavaraju C  
GCEM

**Academic Administrator**  
Dr. Karunamoorthy  
GCEM

**HOD**  
Dr. Ananthpadmanabhan  
GCEM

**Venue:** Seminar Hall, 6<sup>th</sup> Floor  
**Time:** 2:30 PM



The Department organized an Inaugural talk on "Bridge Course for IoT Software Analyst under FutureSkills Prime India" in association with C-DAC by Mr. Shri Krishna (Joint Director, IoT group CDAC Bangalore) on 07/03/2023 in 6th floor seminar hall at 2:30 pm. The talk provided a general insight on basic and advance online courses provided by C-DAC in association with NASSCOM certification and its benefits. This indeed provided valuable information to our students of 2nd, 3rd & 4th year to opt courses of their interest.

Resource Person - Harsha Jeeth

## GETOCS V.3.0 (28 & 29 Mar 2023)



The Tech Fest GETOCS is being organized every year and in that series GETOCS V3.0 was conducted on 28 & 29 Mar 2023. This comprises events like Technical Debate, Project Exhibition, Circuit Debugging, Paper Presentation, Technical Quiz etc. Dr. C Prabhakar, General Secretary of Gopalan Foundation visited the Project Exhibition Gallery and encouraged the participants not only of GCEM and also student participants of various other colleges.

Resource Person – R Naveena Nesan

## WEBINAR/SEMINAR/FDP Conducted “Electronic Product Design and Embedded system IoT Technology”



Department of ECE and Department of Aeronautical Engineering had organized one-day event on “Electronic Product Design and Embedded system IoT Technology” and eminent namely Dr. Ashok Rao (Founder, Vidyakosa Pvt. Ltd. Bangalore, Formerly Head, Network Project, CEDT, IISc), Dr. Sachidananda (Formerly Dept. of Aerospace Engg IISc Bangalore), Mr. M Krishna Kumar (Advisor, Vidyakosa PVT LTD), Mr. Shreyas Kulur (Head Electronics design, Vidya Kosa Pvt. Ltd, Co-Founder Ixetronics & Consultant, Neuroics Lab, DESE IISc bangalore), Mr. S M Narasimhan (Head Electronics design, Vidya Kosa Pvt. Ltd.), Mr. Rishi Velicherla (Consultant, Vidyakosa, Collins Aerospace, Bangalore) were invited as guests to address both the department students on product design and development. While Dr. Ashok Rao gave a Technical talk on IoT and latest trends providing an insight on current developments happening in the field of IoT and IIoT. Mr. Shreyas Kulur and Mr. S M Narasimha spoke about product design for Entrepreneurial pursuit and End to End Product design which gave a valuable data on the hierarchy and required tools for the same.

Resource Person – Harsha Jeeth



## FDP on Probability and Linear Algebra in Electronics Engineering (06 - 10 Jun 2022)



Department of ECE organized Faculty Development Program (FDP) from 06 - 10 June 2022 on Probability and Linear Algebra in Electronics Engineering. Dr. Ashok Rao (Founder, Vidyakosa Pvt. Ltd. Bangalore, Formerly Head, Network Project, CEDT, IISC), was the Resource Person.






## Students' Achievements



The Electronics and Communication Engineering department of Sambhram Institute of Technology, Bangalore organized "National level Inter College Project Competition (PRATIRA -2022) on 27<sup>th</sup> June 2022. The students Harshitha C (1GD19EC017), Kavitha H T (1GD19EC020), Kiran S (1GD19EC052) and Sanjana T (1GD19EC042) have participated and secure First Place.



## FACULTY ACHIEVEMENTS

| Sl. No. | Name of the Faculty     | Achievements  | Faculty Photo   |
|---------|-------------------------|---|---|
|         | Dr. Anantha Padmanabhan | 1 Springer conference best paper presentation<br>2. Best teacher Award<br>3. Reviewer Award Elsevier journals                     |    |
|         | Dr. Krishna Kumar N J   | Invited Talk on “ Innovation in Household Appliances” organized by Cauvery College for Women, Trichy on 25 <sup>th</sup> Jan 2022 |    |
| 1.      | Dr. Deepa A             | Published a paper in SCI Journal  |    |
| 2.      | Dr. Raja Thejaswini     | Thesis Submitted and Awaiting for Ph. D. Viva-voce  |  |
| 3.      | Mr.H.Senthil Kumar      | Registered for Ph. D. in Anna University, Chennai in July -.2023 Session  |  |

| Details of Training /FDP /Project Exhibition, etc..attended by faculty during the AY 2022 - 23 |              |  |
|--|--------------|--|
| Sl. No.  | Faculty Name | Type of Programme (Workshop/FDP/ Seminar/Webinar)                        |
| 1  | Dr.Deepa A   | 1. FDP on IoT and its Applications, Conducted by NITTTR, Chandigarh      |
|  |              | 2. Webinar on Introduction to kaizen and its applications through online |

| Details of Training/ FDP/ Project Exhibition organised by faculties during the AY 2022 - 23 |                                |  |  |                    |
|---|--------------------------------|--|--|--------------------|
| Sl. No.   | Name of the Programme          | Organizing Body  | Date of the Program  | No of Participants |
| 1   | GETOCS V3.0-TECHNICAL DEBATE   | Dr.Deepa.A,<br>Dept of ECE, GCEM   | 29 <sup>th</sup> March 2023  | 25                 |
| 2   | GETOCS V3.0-TECHNICAL QUIZ     | Mr.H. Senthil Kumar,<br>Dept of ECE, GCEM  | 29 <sup>th</sup> March 2023  | 25                 |
| 3   | GETOCS V3.0-PROJECT EXHIBITION | Dr. Raja Thejaswini<br>Dept of ECE, GCEM   | 29 <sup>th</sup> March 2023  | 25                 |
| 4   | GETOCS V3.0-Line Follower      | Mr.Murali Shayan H<br>Dept of ECE, GCEM  | 28 <sup>th</sup> March 2023  | 25                 |
| Journal Publications  |                                |  |  |                    |
| Sl. No.   | Faculty                        | Title of Publication   | Details  |                    |
| 1   | Dr. Anantha Padhmanabhan       | 1. Provable, Reliable And Secure Data Aggregation Through Integrated Distributed Mechanism In Iot Based WSN Environment  | Scopus Indexed   |                    |
| 2   | Dr. Krishna Kumar N J          | 1. Abnormal Crowd Behaviour Detection in Surveillance Video Using Spatiotemporal Inter-Fused Autoencoder<br><br>2. Emotion Identification and Detection from Multichannel EEG Signals using Artificial Neural Networks<br><br>3. Development of Detection & Recognition of Abnormal Human Crowd Behaviour using Supervised Entropy Technique<br><br>4. Impact of Online Based Education System | International Journal of Intelligent Engineering & System, 2023.<br><br>IEEE xplore, ISBN:979-8-3503-9827-4, 2023<br><br>Gradiva Review Journal, ISBN: 0363-8057, 2022.<br><br>Webology, ISBN: 1735-188X,2022. |                    |



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|---|--------------------------|---|--|
| 3 | Raja Thejaswini Nandyala | High uncertainty aware localization and error optimization of mobile nodes for wireless sensor networks                   | IAES International Journal of Artificial Intelligence (IJ-AI) 12(4):2022<br>DOI: <a href="http://doi.org/10.11591/ijai.v12.i4.pp2022-2032">http://doi.org/10.11591/ijai.v12.i4.pp2022-2032</a> |
|   |                          | Dynamic Noisy Measurement Aware Localization Model for Wireless Sensor Networks   | Journal of Interconnection Networks Vol. 22, No. 04, 2150032 (2022)<br><a href="https://doi.org/10.1142/S0219265921500328">https://doi.org/10.1142/S0219265921500328</a>                       |
| 4 | Deepa A                  | An Optimized Frequency Control of Green Energy Integrated Microgrid Power System using Modified SSO Algorithm             | Soft computing ,26 December 2023<br><a href="https://doi.org/10.1007/s00500-023-09504-y">https://doi.org/10.1007/s00500-023-09504-y</a>  |
| 5 | Murali Shayan H          | Enhancing Medical Image Segmentation Accuracy through Fuzzy C- Means with Spatial Probability and De-noising Augmentation | NLSSSPR Journal Jan 2024. ISSN 2583-2654   |

### Conference Publications

| S.No. | Faculty            | Title of Publication   | DETAILS   |
|-------|--------------------|--|---|
| 1     | Mr.H.Senthil Kumar | Fall Detection & Activity Recognition using Hybrid Convolution Neural Network & Extreme Gradient Boosting Classifier | Presented a paper entitled “Fall Detection & Activity Recognition using Hybrid Convolution Neural Network & Extreme Gradient Boosting Classifier” in 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES)and Published in IEEE Explorer (DOI: 10.1109/ICSES55317.2022.9914322) |
| 2     |                    | Maximize the Production Process by Using a Novel Hybrid Model to Predict the Failure of Machine                      | Presented a paper entitled “Maximize the Production Process by Using a Novel Hybrid Model to Predict the Failure of Machine” in 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES)and Published in IEEE Explorer (DOI:10.1109/ICSES55317.2022.9914172)                       |
| 3     |                    | An Intelligent stacking Ensemble based machine learning model for Heart Ab Normality                                 | Presented a paper entitled “An Intelligent stacking Ensemble based machine learning model for Heart Abnormality” in 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES)and Published in IEEE Explorer (DOI:10.1109/ICSES55317.2022.9914250)                                   |