Electronica Newsletter

JULY 2024 to DECEMBER 2024

Marathwada Shikshan Prasarak Mandal's

DEOGIRI INSTITUTE OF ENGINEERING AND MANAGEMENT STUDIES

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

Electronica Newsletter 2024

July 2024 – December 2024

ABOUT INSTITUTE

In pursuance with the policies of the Government of India to start Engineering colleges in emerging technologies, Deogiri Institute of Engineering and Management Studies is established at Chh. Sambhajinagar during the academic year 2009-10. The Institute is affiliated to the Dr. Babasaheb Ambedkar Technological University, Lonere and is developed as per the norms of the All India Council for Technical Education (A.I.C.T.E.), Government of India. The institute is ISO-9001 certified & accredited with 'A' graded by NAAC. Recently Department of Electronics & Telecommunication Engineering & Civil Engineering is accredited by NBA.

INSTITUTE VISION AND MISSION

VISION

- Nation Building By Creating Opportunities For Rural And Urban Through Excellent Education & Research In The Field Of Engineering & Management

MISSION

- To develop the students for best academic and industrial practices by implementing the innovative teaching learning methodologies, promoting all round development by giving exposure to series of activities.
- To prepare the students to face global challenges by equipping them with requisite technical expertise and developing entrepreneurship skills among them.
- To promote research attitude among faculty and students

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ABOUT DEPARTMENT

The Department of Electronics and Telecommunication Engineering is accredited by NBA, which has well qualified faculty members and Modern Laboratories. The Department has been providing quality education to the students. The department is recognized and renowned for the academic excellence in the Dr. BATU University, Lonere. The department is associated with professional bodies such as ISTE, IETE, and various activities are conducted to gain knowledge.

DEPARTMENT VISION AND MISSION

VISION

- To provide valuable resources for Industry and Society through research and excellence in Electronics and Telecommunication Engineering

MISSION

- Educating students with requisite technical expertise to meet the growing challenges of the Industry.
- Promoting research through constant interaction with research bodies and various Industries.
- Equipping students with fundamental subject knowledge to enable them for continuing Education.

HOD'S DESK

On behalf of all our faculty, staff, and students, I would like to welcome you to the Department of Electronics and Telecommunication Engineering at Deogiri Institute of Engineering and Management Studies. As a Head of the department, I am extremely proud of our role in providing high quality education and hands-on experience to our students. Right from its inception in 2009, the E&TC Department has earned tremendous reputation for qualitative teaching learning process, meaningful teacher-student interactions, state-of-the-art laboratories, and well qualified faculty; contributing to the community through teaching, research and consultancy activities.

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PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- Graduates would be able to provide the Engineering solution with strong research capabilities in the areas of Electronics and Telecommunication Engineering.
- Graduates would be able to achieve good carrier using improved skill sets.
- Graduates would be able to provide a solid foundation and advanced programming skill in the field of Electronics.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- Apply knowledge to use modern tools and techniques for the Electronics and Telecommunication Engineering
- Identify Design, and Test Analog, Digital Communication Systems and Signal Processing using software and hardware tools.
- Design and Develop computing systems while using best practices for software and hardware implementations.
- Create social and professional skills awareness for lifelong learning.

PROGRAM OUTCOMES (POs)

1. Engineering Knowledge	**2. Problem Analysis**	**3. Design/ Development of Solutions**	**4. Conduct Investigations of Complex Problems**
5. Modern Tool Usage	**6. The Engineer and Society**	**7. Environment and Sustainability**	**8. Ethics**
9. Individual and Team Work	**10. Communication**	**11. Project Management and Finance**	**12. Life-long Learning**

STUDENT ACHIEVEMENTS

Tanvi Varade and Shravani Shete from Final Year E&TC, DIEMS proudly represented Team Dynamic Boosters 7.0 at the Formula Kart Design Challenge (FKDC) in Coimbatore, Tamil Nadu. Competing against 63 teams, they helped secure 2nd place overall, Congratulations to the team!

E&TC Department celebrates the success of its students at Avishkar 2025. Mrunal Deshmukh secured 1st Rank in (PG), while Yashraj Netke and Rohan Nagargoje excelled in taking 1st (UG) and 3rd (PG) ranks, respectively. Manthan Gourshete earned 3rd Rank in (UG), Congratulations to All the Students!

59 Final Year E&TC students as part of their 7th-Semester Foreign Language Studies successfully completed the NPTEL SWAYAM German 1 course and Exam. The course provided a foundation in the German language. Congratulations to All the Final Year E&TC Students.

Third Year E&TC student Shubham Pitekar was part of Team Spoon Share, which secured 3rd place in the Google Solution Challenge 2024. Their innovative solution impressed judges and showcased their technical skills. Congratulations to Shubham and the team for this remarkable achievement!

FACULTY ACTIVITES

Faculty Development Programme (FDP) and Short Term Trainning Programme (SDP) (AY : 2023-24)

Title of Program	Name of Faculty	Name of FDP	Duration
FDP on Leveraging Cutting Edge Technologies for Sustainable Agriculture Practices	Prof. P. M. Soni	AICTE Training and Learning (ATAL) Academy	2/12/2024 to 7/12/2024
FDP on Innovative Teaching Pedagogy and Skill Component of NEP	Prof. P. M. Soni	Ratan Tata Maharashtra State Skill University	9/12/2024
FDP on Innovative Teaching Pedagogy and Skill Component of NEP	Prof. R. L. Gayke	Ratan Tata Maharashtra State Skill University	9/12/2024
FDP on AI Innovation and MATLAB Solution	Prof. K. J. Kakade	PCETS, Pimpri Chinchwad College Engineering and Research, RAVAT	23/09/2024 to28/09/2024
FDP on Arduino and Robotics Farm-Tech Fusion Unlocking Arduino and Robotics in Agriculture - 2024	Prof. K. J. Kakade	AgMatrix Consulltancy Pvt. Ltd.	17/11/2024 to 23/12/2024
FDP on Leveraging Cutting Edge Technologies for Sustainable Agriculture Practices	Dr. A. R. Wadhekar	AICTE Training and Learning (ATAL) Academy	2/12/2024 to 7/12/2024
FDP on AI Innovation and MATLAB Solution	Prof. K. T. Madrewar	PCETS, Pimpri Chinchwad College Engineering and Research, RAVAT	23/09/2024 to 28/09/2024

FACULTY PUBLICATIONS

- **Vaijanath Laxmanrao Chinchane**, “Various new traveling wave solutions for conformable time-fractional Sasa-Satsuma equation”, Volume 55, Issue 4, 307-329, November 2024 DOI:10.5556/j.tkjm.55.2024.5158
- **Vaijanath L. Chinchane**, “On solutions of fractional differential equations for the mechanical oscillations by using the Laplace transform”, Volume 9, Issue 11, 32629-32645, AIMS Mathematics 2024, DOI: 10.3934/math.20241562
- **Krishna T. Madrewar, Rucha Bhosale, Rohit Kewat, Pankaj Khoche**,“Arduino-Driven Smart Home Security System with Real-Time Monitoring”, Volume 12, Issue 10, October 2024, JOT-5908, ISSN: 10123407
- **Krishna T. Madrewar, Shaikh Ahmad, Kedar Yesage, Altaf Shaikh, Yash Ramdas**, “Arduino-Driven Password Door Lock System for Modern Access Control”, Volume 12, Issue 10, October 2024, JOT-5912, ISSN: 10123407

INDUSTRY VISIT

INDUSTRY VISIT TO ISKCON ANNAMRIT FOUNDATION

Final Year E&TC students at DIEMS visited the ISKCON Annamrit Foundation, MIDC Chikalthana, Chh. Sambhajinagar to explore its food distribution and sustainability efforts. The visit offered practical insights into industry operations and social impact. Under the guidance of Faculty Co-ordinator Prof. Krishna T. Madrewar, the students interacted with the professionals and gained a deeper understanding of the foundation’s mission. This visit enriched their academic learning and provided real-world context to their studies.

EXPERT TALKS

Sr. No.	Topic of Expert Talk	Date	Name of the Expert	Name of Co-ordinator
1	Fundamentals of Internet of Things	21/09/2024	Dr. Javed Sayyed, Assistant Professor, Robotics & Automation Dept., Symboisis Institute of Technology, Pune	Prof. K. B. Dandge
2	Transition of Renewable Energy Sources and Its E-Waste Management	16/10/2024	Mr. Nishant Sachdeva, Business Head, Sadbhav Futuretech Pvt. Ltd., Gurgaon, India	Dr. R. M. Autee
3	Awareness of Competitive Exams	21/09/2024	Mr. Kuldip Kotambe, Founder and UPSC trainer, Exellence IAS academy, Pune	Prof. S. A. Karmude
4	Career Development in Government Sector	11/11/2024	Dr. Shaikh Amreen Fatima, Managing Director, Shubham Sir's Academy, Nirala Bazar	Prof. S. K. Kapde
5	Stress Management	23/10/2024	Mr. Balkrishna Dake, Life Coach and Mentor, Author of PSYCHOLOGY, Ignite Academy	Prof. K. T. Madrewar
6	Financial Tax Literacy	22/10/2024	Ms. Sapna Lunawat, Chartered Account, Lunawat Associates, Chh. Sambhajinagar	Prof. K. T. Madrewar
7	Introduction and Applications of Electrical Machines & Instruments, Whole process of Making Large Quantity of Food	10/11/2024	Mr. Sudarshan Potbhare, Branch Manager, ISKCON Annamrita Foundation, MIDC Cikalthana, Chh.Sambhajinagar	Prof. K. T. Madrewar

IETE STUDENT FORUM (ISF) ACTIVITES

4-DAYS PCB DESIGN WORKSHOP

The Department of Electronics and Telecommunication Engineering, in association with IETE DIEMS ISF, organized a **4-day workshop on "PCB Design"** from October 16 to 19, 2024. Total 60+ second-year students (SY-A & SY-B, E&TC) participated in the workshop. Students learned the complete process of PCB design, simulation, and fabrication using Eagle software.

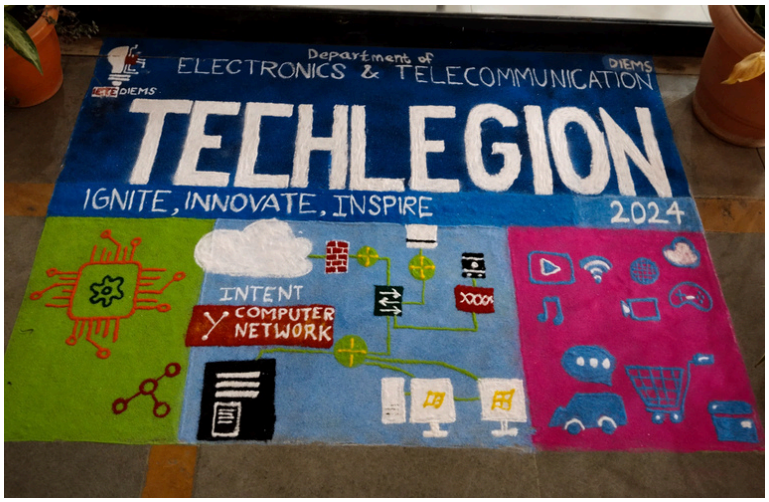
The event was inaugurated by Dr. Subhash V. Lahane, Dean of Academics, Dr. Arti Wadhekar, HOD of E&TC, and Dr. Rajesh Autee, Professor, also addressed the students, appreciating their active participation and the organizers' efforts. Expert trainers Ms. Rutika Dushing and Ms. Shweta Jagtap led the workshop.

The workshop was organized by Mrs. Komal B. Dandge (IETE ISF Co-ordinator), Mr. Krishna S. Ingle, Mrs. Sunanda K. Kapde, Mr. Sachin G. Jagdale (Event Co-ordinators) and Mr. Suryakant Kulkarni (Chairperson, IETE DIEMS ISF) and IETE ISF Core Committee Members, who played key roles in ensuring the event's success.

TECHLEGION 2024

The Department of Electronics & Telecommunication Engineering, in association with IETE DIEMS ISF, successfully conducted the **"TECHLEGION 2024" Project Competition & Exhibition** on November 11, 2024, at Deogiri Institute of Engineering and Management Studies, Chhatrapati Sambhajinagar. The event received an overwhelming response, with over 90 students from various departments participating in 35 project groups.

The inaugural function was graced by the Guest of Honour, Mr. Sudhir Sambrey, Director of Lunas Electronics, along with Dr. Abhilasha Mishra, Dean R&D and Innovation, MIT, Dr. Subhash V. Lahane, Dean Academics, Dr. Arti Wadhekar, HOD of E&TC, and Mrs. Komal B. Dandge, IETE ISF Co-ordinator. Mr. Rajendra L. Gaike, Event Co-ordinator, Mr. Suryakant Kulkarni, Chairperson, IETE DIEMS ISF and IETE ISF Core Committee Members.



The valedictory function saw the announcement of winners, followed by the distribution of prizes and participation certificates to all students. The guests, along with Dr. Subhash V. Lahane, delivered inspiring speeches, encouraging students to continue their pursuit of innovation and learning. The Chairperson of IETE ISF provided an overview of the forum, and a vote of thanks was offered by Dr. Arti R. Wadhekar, HOD E&TC, expressing gratitude to all who contributed to the success of the event.

Neuralink: A Brain-Computer Interface (BCI) Technology

In a groundbreaking advancement that brings us closer to a future once imagined in science fiction, NeuraLink, the brain-implant company, has unveiled its most advanced Brain-Computer Interface (BCI) chip yet—the NeuraLink 4.0. This new chip represents a major leap forward in the development of mind-controlled technology, allowing users to interact with digital devices like computers, smartphones, and other electronic devices using only their brainwaves. As we stand on the precipice of a new era of human-computer interaction, the implications for human health, communication, entertainment, and beyond are profound.

The Revolutionary NeuraLink 4.0

The NeuraLink 4.0 chip is smaller than a coin, but its potential to revolutionize the way we interact with technology is immense. Implanted into the brain using the latest neuro-surgical techniques, the chip can seamlessly communicate with a range of devices, offering a hands-free, mind-powered interface for users. What makes this technology particularly remarkable is the minimal risk involved in the implantation process, which is made possible by cutting-edge techniques that drastically reduce complications associated with brain surgeries. The most striking feature of the NeuraLink 4.0 chip is its ability to translate brain activity into digital signals, enabling users to control digital devices directly through thought alone. This capability opens up numerous possibilities, especially for individuals with physical or neurological challenges.

Health Benefits: A New Hope for the Disabled

One of the most promising applications of BCI technology is in the healthcare sector, particularly for people suffering from neurological conditions such as ALS, paralysis, or other forms of disability.

Enhanced Communication

Communication, as we know it, could also be transformed by the advent of BCIs. Imagine typing or sending a message, without the need for a keyboard or touchscreen. With the NeuraLink 4.0, users could directly transmit their thoughts into digital messages, making communication faster, more efficient, and even more accessible.

A Glimpse Into the Future

While the NeuraLink 4.0 is still in its early stages of development and consumer availability, the possibilities it offers are vast. As the technology advances, we can expect to see BCIs integrated into numerous aspects of daily life, from healthcare and communication to entertainment and beyond. In many ways, the NeuraLink 4.0 chip represents a pivotal moment in the evolution of human-computer interaction, and we are just beginning to scratch the surface of its potential.

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DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

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WE WELCOME YOUR COMMENTS AND IDEAS FOR FUTURE ISSUES

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING

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