

Innovation in Teaching & Learning: EEE Department Focus

The Electrical and Electronics Engineering (EEE) Department is committed to fostering an innovative and dynamic learning environment, ensuring our students are well-equipped for the rapidly evolving technological landscape. Our faculty actively integrates cutting-edge methodologies and ICT-enabled tools to enhance pedagogical effectiveness and achieve superior learning outcomes.

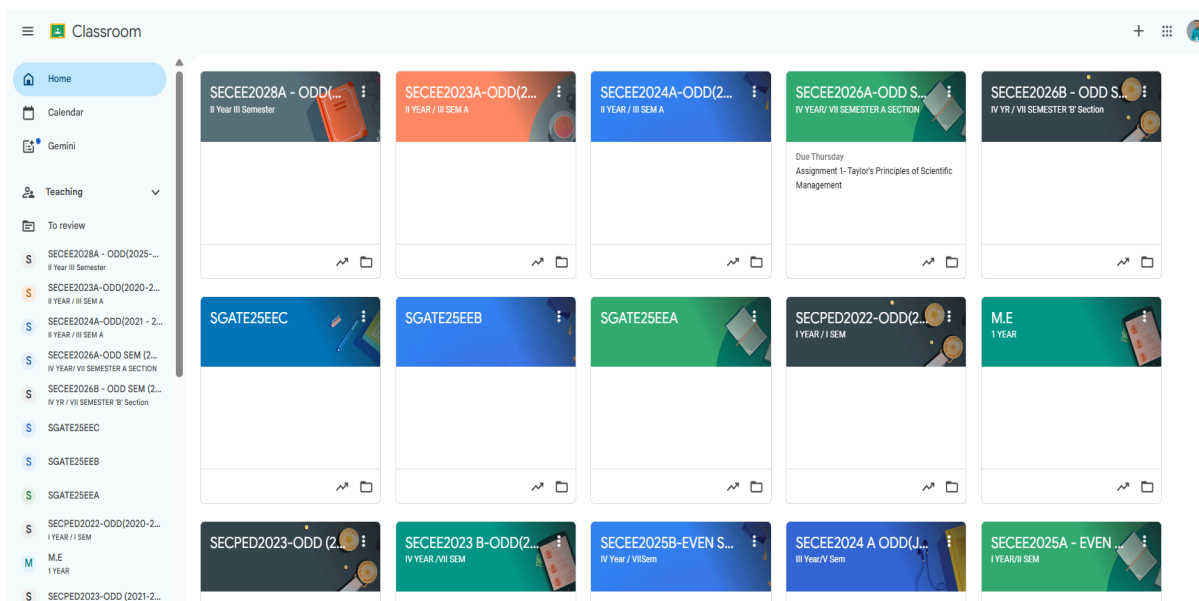
Core Principles of Innovation in EEE:

- **Bridging Theory and Practice:** Emphasizing hands-on experience and real-world application of EEE concepts.
- **Fostering Critical Thinking:** Cultivating problem-solving skills and proactive mindsets essential for complex engineering challenges.
- **Leveraging Digital Tools:** Harnessing technology to deliver content efficiently, assess understanding and provide flexible learning opportunities.
- **Continuous Skill Enhancement:** Encouraging both faculty and students to stay aware of the latest advancements in electrical and electronics domains.

Key Innovative Teaching Methodologies Adopted in EEE:

1. Google Classroom for Streamlined Course Management:

- **Objective:** To simplify the distribution and grading of assignments and facilitate seamless sharing of course materials between faculty and students.
- **EEE Application:** Used extensively for uploading course materials (PDFs, PPTs) aligned with Anna University and autonomous syllabi for all years. This includes providing comprehensive question banks (Part A, B, C with solutions) for subjects like Circuit Theory, Control Systems, Power Electronics and Digital Signal Processing aiding in exam preparation. Lecture videos on complex EEE concepts (e.g., power converter operation, signal processing algorithms) are also shared for enhanced visualization.



2. SAIL (Sairam Artificial Intelligence Learning) for Live Assessment & Aptitude:

- o **Objective:** To offer an alternative, anytime, anywhere method for continuous student assessment and to enhance problem-solving skills.
- o **EEE Application:** Provides access to syllabus materials and enables daily quizzes focused on logical and reasoning aptitude, crucial for competitive exams and technical interviews in the EEE field. Student performance and understanding levels in EEE-specific tests (e.g., Discrete Time Signal Processing tests) are tracked and visualized, offering insights into their grasp of core concepts.

The screenshot shows the SAIL dashboard interface. At the top, the browser address bar displays 'dbsaileducator.edwisely.com/dashboard'. The dashboard header includes the SAIL logo (Powered by Edwiser), a user profile for Mr. R. Sivaprasad (Assistant Professor | EEE), and the date 'Sunday July 27'. A left sidebar contains navigation links: Home, Teach, Engage, Assess, Track, and Analyse. The main content area is titled 'AI Insights and Alerts' and features a 'Welcome to your AI-Powered Faculty Dashboard' message with a call to action to enable AI-powered insights. Below this, there are sections for 'Your courses' (showing 'EEE | Sem 7') and 'Today's schedule' (showing 'No schedules for today'). On the right, a 'Knowledge bytes' section highlights an article titled 'Electrical And Electronics Market 2025, Growth And Research' with a 'Read More' link. The bottom right corner shows an 'Activity wall' section.

3. Video Classes for Enhanced Conceptual Understanding:

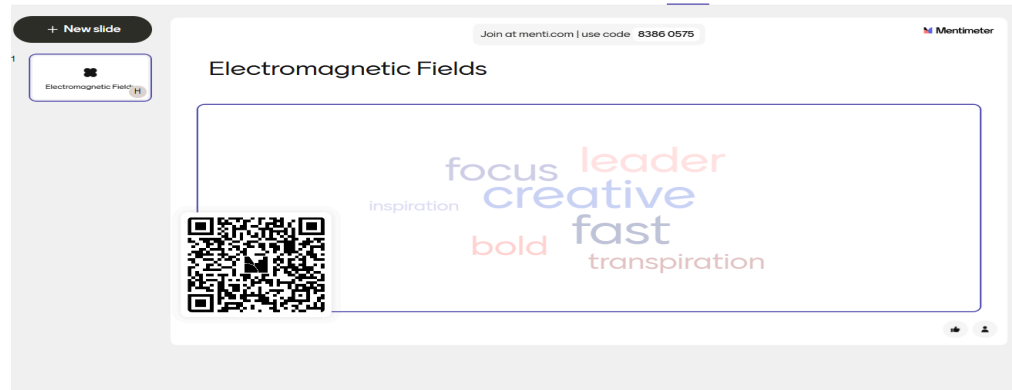
- o **Objective:** To enrich student knowledge and present EEE course content dynamically through live demonstrations and supplementary video clips.
- o **EEE Application:** Dedicated video sessions explore topics beyond the curriculum, such as "Silicon Run" (semiconductor manufacturing processes), "Inside an iPhone Battery Factory" (power systems and electronics in consumer devices), "5G Explained," "IoT: Powering the Digital Economy," "Electric Cars," and "Electromagnetism." These sessions provide practical insights and visualize complex EEE principles.



4. Mentimeter for Interactive Learning:

- o **Objective:** To engage students actively through live polls, word clouds, quizzes and multiple-choice questions during lectures.
- o **EEE Application:** Used to gauge real-time understanding of EEE topics, conduct quick checks on circuit analysis concepts, or gather immediate

feedback on complex power system diagrams.



5. Skillrack for Programming and Problem-Solving:

- o **Objective:** To enhance students' problem-solving and programming skills.
- o **EEE Application:** Crucial for EEE students who require strong programming skills for embedded systems, control algorithms and data analysis in electrical applications.

SECEE082025

0 GOLD 0 SILVER 4743 BRONZE

Registration/Roll Number [Add to Team](#)

16 candidates found.

[XLSX](#) (1 of 1) << < 1 > >>

Id ↓↑	First and Last Name	LoginId	Remove	Branch ↓↑	University Regn Number	Placed
354182	HARIHARAN S	sec21ee008@sairamce	Remove	EEE	sec21ee008	0/20 0 555
354191	HARI D P K	sec21ee017@sairamce	Remove	EEE	sec21ee017	0/20 0 232

6. Quizzes for Topic-End Assessment:

- o **Objective:** To test student understanding at the end of each course topic.
- o **EEE Application:** Regular quizzes are conducted to ensure students have grasped fundamental EEE principles before moving to advanced topics.

7. Working Models for Hardware Comprehension:


- o **Objective:** To enhance knowledge towards the hardware aspects of EEE projects.
- o **EEE Application:** Students are encouraged to develop and demonstrate working models of electrical circuits, power electronic converters, embedded systems and control projects, providing invaluable hands-on experience.

	A	B	C
1	Name	Value	
2	Game Started On	Thu 20 Feb 2025,10:26 AM	
3	Game Type	Live Quiz	
4	Participants	46	
5	Total Attempts	48	
6	Class Accuracy	66%	
7	Game Ends On	Thu 20 Feb 2025,10:32 AM	
8			
9			
10			
11			
12			

QUIZIZZ

8. Virtual Labs for Practical Exposure:

- o **Objective:** To enable students to learn engineering concepts and methodologies practically through remote access to simulation-based labs.
- o **EEE Application:** Provides a platform for simulating electrical circuits, power system operations, control system responses and electronic device characteristics without needing physical lab equipment, offering flexibility and accessibility.


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Participants List
Dashboard

Institution Name Sri Sairam Engineering College, Tamil Nadu
Foss R
Date May 29, 2023
Participants Count 90
Organiser MAL
Dept. Electrical and Electronics Engineering (EEE)
Batch Year 2022

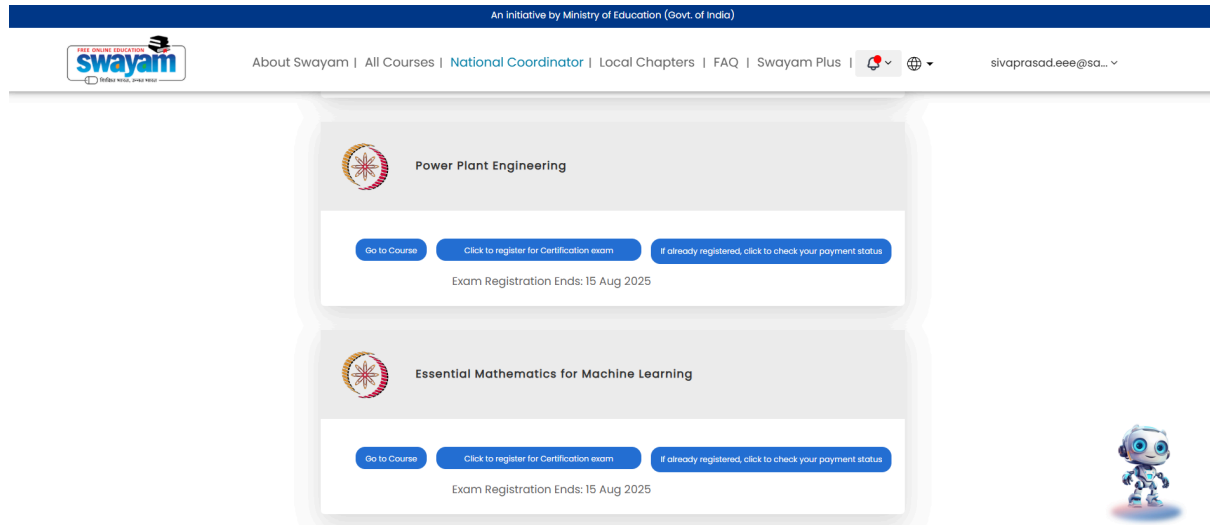
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#	First Name	Last Name	Email Id	Score
1	ABINAYA	R	sec21ee005@sairamtap.edu.in	55.0% - Certificate
2	DHAARANI	K	sec21ee062@sairamtap.edu.in	47.5% - Certificate
3	DHARSHINI	R	sec21ee050@sairamtap.edu.in	37.5 (Fail)
4	DHIVYASRI	D	sec21ee044@sairamtap.edu.in	45.0% - Certificate

9. E-Learning Platforms for Curriculum Beyond:

- o **Objective:** To upgrade the quality of engineering education by utilizing resources beyond the prescribed curriculum.
- o **EEE Application:** Faculty and students are encouraged to complete online certification courses from platforms like NPTEL, Coursera, Udemy, NITTT and NASSCOM Future Skills in areas relevant to EEE, such as advanced

power electronics, renewable energy systems, industrial automation and embedded systems design. This ensures continuous professional development and exposure to emerging technologies.



By integrating these innovative methods, the EEE department aims to produce highly competent and adaptable engineers ready to contribute to the advancements in the electrical and electronics industry.