



DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION

NEWSLETTER

The objectives of this News Letter is to keep our Students, Parents, Faculty and Industry informed about the activities happening in the Department.

Vision

To be recognized by the society as one of the global leaders in the field of Electronics and Telecommunication Engineering. To contribute in the holistic growth of students and make them competent to contribute to the need of public and society through research, innovation and technological advancement.

Mission

To deliver theoretical based, advanced technological concepts, teamwork spirit, ethics, human values, practical base, research and development to the students, extension activities to other organizations through creation of advanced facilities and providing platforms for synergy.

To create opportunities for Research and Development to meet the ever changing and ever demanding needs of the Electronics industry in particular, along with other interdisciplinary fields in general.

To promote research culture by infusing scientific temper in the students and guiding them towards R&D activities.

Message from HOD of Department



Mrs. Swapna Patil
Assistant Professor
(HOD EXTC)

The global electronics industry is vast. Electronics is so ubiquitous in modern life that there are many opportunities for electronic engineering graduates to apply their expertise in other industry sectors. Business, medicine, aviation, communications, transport, space exploration, industrial automation, science, entertainment, music, gaming and environmental monitoring have all been revolutionized by electronics. The role of the electronics

engineer is pivotal in realms ranging from the toy industry to consumer electronics, from household articles to space/satellite communication. Electronic engineering covers subfields such as analog & digital electronics, embedded systems and power-electronics. Electronics engineering deals with design and implementation of various applications, be it from telecommunication, or automobile, or production, or bio-medical, the list is endless.

SLRTCE has spacious and well-ventilated classrooms with fully equipped laboratories and a huge Central Library. The institute has a fully-fledged Placement Cell with 100% Placement Assistance. The Incubation Centre, 'Vyavasay Abhyas Niketan', provides opportunities for students to work on various funded projects. The Entrepreneurship Cell (E-Cell), engages students in Group Discussions, Workshops, Presentations and participation at various events, which helps build their confidence and enhance their personality as budding entrepreneurs.

Value added training sessions help students as well as teachers to hone pertinent skills in all domains. Teachers of every Department are encouraged to participate in Workshops at various Institutes and also to organize STTPs, Seminars and Activities throughout the year at SLRTCE.

Besides the regular lecture method, teachers adopt learner centric techniques to involve students actively through Course Networking and NPTEL Courses. The mentoring system, Peer Learning, Group Discussion, Case Studies, Project Reports and Quizzes also form an integral part of the teaching methodology.

Courses Offered

Undergraduate Courses	Annual Intake (UG)
Electronics and Telecommunication Engineering (EXTC)	60
Computer Engineering (CMPN)	240
Mechanical Engineering (MECH)	30
Electronics and Computer Science Engineering	120
Civil Engineering (CIVIL)	30
Information Technology (IT)	240
Post- Graduate Courses	Annual Intake (PG)
Electronics and Telecommunication Engineering (EXTC)	12
Computer Engineering(CMPN)	12

Program Educational Objectives

- To produce Electronics & Telecommunication engineers, having strong theoretical foundation, good design experience and exposure to research and development.
- To produce researcher who have clear thinking, articulation and interest to carry out theoretical and/or applied research resulting in significant advancement in the field of specialization.
- To develop an ability to identify, formulate and solve electronics and telecommunication engineering problems in the latest technology.

- To develop the ability among students to synthesize data and technical concepts from applications to product design.

Events

An UNSDG Field visit at “Shape India NGO” was arranged on 20th January 2026 for SE students along with faculty Mrs. Menka Singh. The visit primarily focused on HIV/AIDS prevention, awareness, testing, counseling, and treatment support and promotes mental and physical well-being, stigma reduction, and community health education. The visit successfully bridged the gap between theoretical learning and real-life social applications, reinforcing the importance of engineering students contributing beyond technical domains.



A 5 days FDP on **Transforming Traditional Teaching into Innovation-Driven Learning through IDEA Lab Pedagogy** was organized for the faculties of SLRTCE by Principal Prof. Dr. Umesh S. Bhadade and FDP coordinators from 28th January 2026 to 31st January 2026. The event included all the HOD's and faculties from various department. Principal Prof. Dr. Umesh S. Bhadade inaugurated the FDP with his session on **“IDEA Lab Philosophy & Vision”**. It emphasized a pedagogical shift from teaching-centered to learning-centered education, aligned with NEP 2020, Outcome-Based Education (OBE), and global sustainability goals. Few Sessions for the FDP

were conducted by faculties of EXTC department starting from Mrs. Hemangi Satam on **“Field Exposure, Stake holder engagement & Problem Validation”** which focused on transforming conventional teaching into innovation-driven, experimental learning using Idea Lab pedagogy. The session on **“Theme-Based Curriculum Design & Problem Statement Development”** was conducted by Dr. Sheetal Mahadik, the session addressed the long-standing gap between academic learning and real-world readiness, highlighting that employability concerns stem from learning architecture rather than syllabus. **“Documentation, Reporting & Accreditation Mapping for IDEA Lab”** session was conducted by Mrs. Aparna Majare which emphasized that documentation in IDEA Lab is pedagogical evidence, not merely record-keeping-it demonstrates what students did, learned, and improved through experiential Structured records such as monthly reviews, logbooks, and project reports capture creativity, problem-solving, collaboration, and real-world application of subject knowledge, directly supporting Outcome-Based Education (OBE).



A workshop was conducted by ISF under the **IETE banner on “Figma (UI/UX Designer)”** for Third Year EXTC students on 2nd February and 4th February 2026. The session aimed to introduce students to modern UI/UX design concepts and hands-on experience with the Figma design tool. The resource person, Mr. Roshan Chaturvedi, explained core UI/UX

principles, wireframing, prototyping, and collaborative design workflows. The workshop helped students understand the importance of user-centered design and enhanced their practical skills in interface designing. The workshop was facilitated by Mr. Aditya Jalgaonkar and Mr. Azad Ali Sayyed, with Mr. Azad Ali Sayyed playing the primary role in delivering the hands-on training and concept explanations throughout the sessions.



A seminar on “**Digital Marketing**” for Second Year EXTC students was conducted on 6th February 2026. The speaker for the event was Mr. Roshan Chaturvedi (Founder, Just Academy) the event provided students with a foundational understanding of digital marketing concepts and their growing importance in today’s technology-driven environment. It introduced major digital marketing tools and platforms such as SEO, social media, and online advertising, enabling students to recognize their practical applications. Through case studies and discussions, participants analyzed simple online marketing strategies and understood how data and digital technologies support decision-making. The session also highlighted diverse career opportunities in digital marketing, motivating students to explore interdisciplinary roles and develop relevant professional skills.

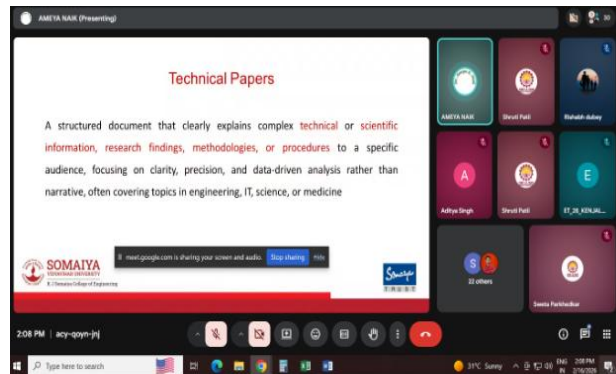


An industrial visit to “**TESTRIQ QA Lab**” was organized for TE EXTC students on 10th February 2026. The visit was organized to provide students with practical exposure to the IT industry. The main purpose of the visit was to understand real-world applications of software testing and data analysis. This visit helped bridge the gap between theoretical knowledge and practical experience.



The session on “**Technical Paper Writing**” was conducted by Dr. Ameya K. Naik for BE EXTC students on 16th February 2026. The session focused on how effective technical paper writing skills can be acquired. Sir explained key concepts such as structure of the paper, clarity of presentation, publishing clearly giving better understanding of how to present the work effectively. He shared important tips and notes on avoiding common mistakes, and things to be avoided which will help to improve research writing skills. He suggested seeking feedback from peers to improve the quality of paper. The

speaker gave valuable suggestions for submission and publication process of paper, selecting right journal, handling rejections and open access, rights, visibility, and after acceptance proof, promotion, post publication steps.



An activity on **“Idea Pitching Event for Startups”** was conducted for all the SE students on 4th March 2026. The event Formulate structured business models by applying BMC tools to define value propositions and operational plans. It also Identified appropriate funding sources by evaluating various startup investment models and MSME financial strategies. The event Integrated IPR and digital marketing to protect entrepreneurial innovations and reach target online ecosystems. It Executed professional business pitches that demonstrated the technical and economic viability of a Minimum Viable Product.

A Seminar on **Mental Toughness** was organized by 13th March 2026 for SE EXTC students. The Speaker for the event was Mr. Yusuf Sehorewala – Physics & Mindset Coach. The session Developed Emotional Control: Students learned techniques to remain composed when facing pressure or setbacks. It Improved Self-Awareness: Understanding personal behavior patterns helps in managing stress effectively. Taking action immediately after setbacks improves resilience and Turn Challenges into Growth Opportunities: Difficult

situations can be reframed as opportunities for learning and improvement.



A Session on Alumni Talk on **"ENTREPRENEUR JOURNEY"** was conducted for the TE students on 13th March 2026 by Alumni **Mr. Yusuf Sehorewala – Physics & Mindset Coach** provided valuable practical insights into the process of building and managing a business. Students learned about the importance of identifying opportunities, taking calculated risks, and staying persistent despite challenges. The speaker shared real-life experiences, which helped students understand the gap between theoretical knowledge and practical implementation.



A one-day Workshop was conducted by ISF under the IETE on **“Hands-On Training for FPGA Boards”** for Third Year EXTC students

on 17th March 2026. The Speakers for the session was **Mr. Yash Shevde**. The session introduced the fundamentals of FPGA, its architecture, and its applications in digital system design. During the workshop, students were guided through the basics of hardware description and were given exposure to programming and configuring FPGA boards. The session included practical demonstrations which helped students understand real-time implementation of digital circuits. The workshop enhanced student's understanding of hardware-based design and improved their practical skills.



“TANTRAVERSE 2026 – A National Level Technical Event” organized by the **Department of Electronics and Telecommunication (EXTC)** in collaboration with **IIC SLRTCE** and **IETE Student Forum** aiming to bring together creativity and technical excellence on a single platform proved to be a grand success, bringing together technology and creativity under one platform. The event not only showcased student talent but also inspired innovation and collaboration, making it a memorable experience for all participants and organizers.



Mrs. Swapna Patil of guided a Research Project titled Smart Health Credle System using STM 32 which was presented by her student Ms. Yadav Ujala in Engineering and Technology Category and UG Level at the 20th Aavishkar: Inter Collegiate / Institute / Department Research Convention (Final Round) organized by the University of Mumbai at Vivekanand Education Society's Institute of Technology, Chembur, Mumbai (Autonomous) on December 17, 2025.



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IOT BASED SMART BABY CRADLE

Ms. Shreya Chauhan¹, Ms. Priya Mishra², Ms. Aadrika Sharma³, Ms. Ujala Yadav⁴,
Mrs. Swapna Patil⁵

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Of Engineering, India.

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Engineering, India.

ABSTRACT

This paper presents the design and development of an IoT-enabled Smart Baby Cradle that ensures continuous monitoring of the baby's state, comfort, and safety. The system uses an STM32 microcontroller as the main control unit, programmed via Arduino IDE, and integrates various sensors such as DHT11 for temperature and humidity detection, and KY-037 for cry recognition. The ESP8266 Wi-Fi module enables real-time data transmission to a mobile or cloud dashboard. When the baby cries, the cradle automatically swings using a servo motor and alerts parents through IoT notifications. The system not only provides live health and environment data, but also allows parents to rock cradle from the app making it an effective smart solution for modern parenting.

Keywords: Smart Cradle, IoT, STM32, ESP8266, KY-037, DHT11, Servo Motor, Arduino IDE, Baby Monitoring.

Dr. Sweta Padman, Associate Professor from EXTC department granted and published patent on 10th April 2026 for the topic Title: Advanced driver-emotion monitoring system and related methods.

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B60W 40/09

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(32) Priority Date: --

(71) Name of Applicant(s):
1. Aditya Mote,
2. Dr. Dhiraj Magare,
3. Dr. Vishwesh Vyawahare,
4. Dr. Sweta Padman,
5. Ramrao Adik Institute Of Technology, Nerul,
Navi Mumbai.

Mrs. Aparna Majare and Mrs. Hemangi Satam Assistant Professor from EXTC department successfully completed NPTEL online certification in Effective Engineering Teaching in Practice



Elite
NPTEL ONLINE CERTIFICATION
(Funded by the MoE, Govt. of India)

This certificate is awarded to
APARNA MAJARE
for successfully completing the course
Effective Engineering Teaching in Practice

with a consolidated score of **85** %

Online Assignments	22.75/25	Proctored Exam	62.63/75
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Total number of candidates certified in this course: 1237


Prof. Andrew Thangaraj
Chair
Centre for Outreach and Digital Education, IITM

Jan-Feb 2026
(4 week course)


Prof. Vignesh Muthuvijayan
NPTEL Coordinator
IIT Madras



Indian Institute of Technology Madras



Roll No: NPTEL26GE3SS463001942

To verify the certificate 

No. of credits recommended: 2



Elite
NPTEL ONLINE CERTIFICATION
(Funded by the MoE, Govt. of India)

This certificate is awarded to
HEMANGI SATAM
for successfully completing the course
Effective Engineering Teaching in Practice

with a consolidated score of **67** %

Online Assignments	22.75/25	Proctored Exam	44.01/75
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Total number of candidates certified in this course: 1237


Prof. Andrew Thangaraj
Chair
Centre for Outreach and Digital Education, IITM

Jan-Feb 2026
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Prof. Vignesh Muthuvijayan
NPTEL Coordinator
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