



DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING

UNDERGRADUATE PROGRAMS OFFERED

B.Tech Electronics & Instrumentation Engineering

B.Tech Automation & Robotics (Industry supported program)

POSTGRADUATE PROGRAMS OFFERED

M.Tech Electronics & Control Engineering

M.Tech Automation & Robotics (Industry supported program)

DOCTORAL RESEARCH

PhD (Full time/Part time) in all major thrust areas



SRM Institute of Science and Technology

SRM Nagar, Potheri, Kattankulathur-603203, Tamil Nadu, India



DEPARTMENT OVERVIEW

The department was established in the year 1993-94, with an undergraduate program. The department of Electronics and Instrumentation branched out from the department of Instrumentation and Control, in the year 2007-08. Over the past 27 years, the department has nurtured young talents to cater the growing demands of industries. The undergraduate program has been accredited by the **IET accreditation council**, UK. The department has been accredited by the **National Board of Accreditation (NBA)**, New Delhi and offers skill oriented program for students which has been certified by the **IASC sector skill council**, Government of India. The students who take up the course have access to world class facilities, knowledge repository, and renowned industrial connectivity. Upon successful completion of our **engineering council accredited degree**, students will have unique recognition in industries and government sectors. As it is a **multidisciplinary branch** in itself, the student will have a range of opportunities to carve their career/higher studies in all major domains including sensor design and measurement, process control and automation, robotics, biomedical and microelectronics.

VISION

The department is committed to enable the students to experience an uncompromised educational journey that facilitates them to build successful careers and excel in the field of Electronics and Instrumentation Engineering with social and ethical standards.

MISSION

- To have a **scholarly and professional environment** to make long lasting contributions for the advancement of knowledge.
- To have a **world class teaching resources** and laboratory facilities.
- To have an **innovative, dynamic, flexible** devising academic program and structure.
- To foster **research and development**, for the benefit of global community.

INFRASTRUCTURE

The department is well equipped with dedicated, state of the art laboratories, which help the students to understand and implement theoretical concepts with ease under the guidance of faculty mentors.



Process Control lab facilities

Automation lab facility

BEST TEACHING PRACTICES

- **World-class infrastructure** with equipments worth in crores
- **Well experienced** and motivated faculty members with strong knowledge base to nurture students' skill set
- **Active MoUs** with Government agencies, Industries and International research collaboration with foreign Universities
- Centre of Excellence (CoE) in factory automation has been established with Mitsubishi Electric India which offers UG & PG programs for enhanced learning experience
- 10+ Industry run labs and Industry certification courses to enrich the students' portfolio and career building
- External and Internal Funding worth 1Cr which helped to channelize student research ideas into products, patents and publications
- 100+ student teams have successfully patented their projects ideas moving towards entrepreneurship
- Two startups have been initiated
- Successfully offering one credit MOOCs certification course on "**Modelling, Simulation and Analysis of Control Systems**"

HIGH END ACADEMIC FACILITIES

○ Center Of Excellence (CoE) - Mitsubishi Electric, India

Center of Excellence in Factory Automation has been established, in collaboration with **Mitsubishi Electric, India**. The center aims to train the students in automation field, to improve their core competency and employability skill. Industry mentored UG and PG programs have been designed and inculcated with inputs from these Industrial experts.

○ IoT Innovation lab

IoT Innovation lab, in association with **EdGate Technologies Pvt. Ltd**, Bangalore has been established, under the aegis of Texas Instruments University Program (TIUP)

○ JCI Enrich Program

The department organized a career oriented **JCI Enrich Program** – Industry module, in collaboration with Johnson Controls India. **100+ students** were trained and **4 students got placed** in automation sector.

○ Industry run lab by KCP SUGARS & INDUSTRIES CORPORATION LIMITED, AP

Process control lab is an integral part of Instrumentation Engineering. Hence the department has partnered with **KCP SUGARS & INDUSTRIES CORPORATION LIMITED, AP**, for motivating the students to reach higher level of learning using practical concepts and internship training at their industry.

ACTIVE INDUSTRIAL COLLABORATIONS & MoU's

The department has active research collaborations and partnership with Government agencies like the IGCAR, CSIR, and International collaborations with RMIT University, Australia, to foster the holistic development of students. The research ambience has motivated **100+ student teams** to inculcate, invent, and transform their research ideas in to prototype models and marketable products.

HIGH END RESEARCH FACILITIES

DEDICATED RESEARCH CENTERS

Student research interests are channelized through in-house research centers which facilitate them to build a high profile career by connecting with International and national scientists, experts and researchers. Outcomes of the research have motivated **100+ student teams** to reinvent themselves as Inventors of marketable products developed at:

- **Center for Advanced Complex Control and Embedded Systems (ACCES)**
- **Center for Instrument Design and Measurement (CIDM)**
- **Center for Micro Electro Mechanical Systems (MEMS)**
- **Center for Human Movement Research & Analysis (CHMRA)**

NOTABLE RESEARCH OUTCOMES

○ FUNDED PROJECTS

We strongly believe that hands on working knowledge, in a real time environment exults the students to reach higher potential. Students work alongside faculties who have projects under various schemes funded by agencies like DST, SERB, SPARC, SRM IEDC etc. A total funding of **Rs. 13, 836, 502** has been generated till 2021.

○ PUBLICATIONS

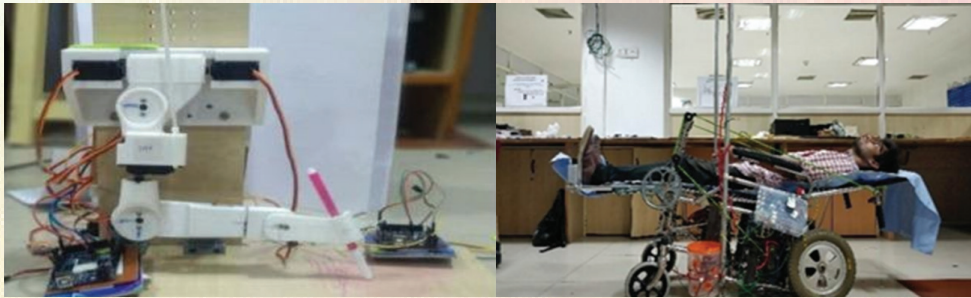
Promising results from the experimental analysis have led to publications in indexed journals and conferences. The total number of journal publications by the EIE team, since 2010 is **418**. Highest impact factor of the journal in which our department team has published their results is **6.373** and the **H-index of the department is 16**.



INTELLECTUAL PROPERTY RIGHTS

Total number of patents filed/ published/ granted by the faculty and students of the department is **91**. Students play an active role in making this a reality as few products are ready for commercialization.

INTERNATIONAL PATENTS GRANTED/FILED - 11/12
NATIONAL PATENTS GRANTED/PUBLISHED - 03/79



Indian Patent No - 202041044985

US Patent No - US 101575179482

CONSULTANCY SERVICES – *earn while you learn*

Energetic student teams, along with faculty mentors, have formulated solutions to real world problems faced by service providers like hospitals & industries and have fetched revenue of Rs.1, 50, 000 to the department and the university.

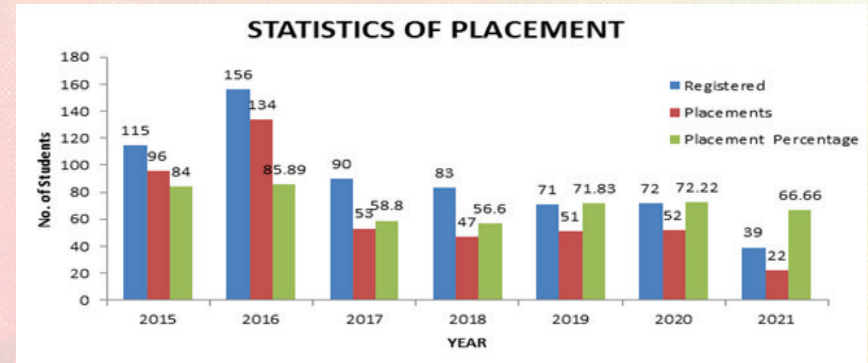


Design and Development of Digital Exophthalmometer

LEARNER CENTRIC ACTIVITIES

PLACEMENT STATISTICS – *perfect launch to dream careers*

Placement assistance and rigorous training is given to all students to get selected in core companies like HUL, Siemens Tech, ABB, KPIT, Schneider Electric and Top Notch IT companies like Google, Infosys, TCS, and CTS. One of our student, who got selected by Optum, was offered the highest CTC of **14 LPA**. The placement % of 2022 batch is 100.



CORE & IT PROSPECTIVE RECRUITERS

250+ meritorious students have got selected at core companies and 350+ students at IT majors, some of which are listed here (up to 2021).



ALUMNI CONNECT

ALUMNI ASSOCIATION - *our Alumni, our pride*

A strong and active EIE/ICE Alumni Association has been built with 2000+ alumni across the globe. Our alumni support various activities of the department such as curriculum design, guest lectures, motivational talks, and mock interviews to fine tune the interview skills. Alumni reunion is conducted annually for reviving the rapport between the current academic and alumni students. One of our Alumni has sponsored a thermal imaging FLIR camera at CIDM lab and another alumna has contributed to the activities of Alumni association recently. Alumnus Mr. Sauvik Das Gupta, received the Distinguished Alumni award in February 2020. Alumni Students are motivated to initiate startup. 16 alumni have successfully begun their entrepreneurial journey, of which 2 entrepreneurs opened up recruitment of 2022 batch

SEMESTER ABROAD PROGRAM (SAP) - *explore the world*

Students can chose to study a few courses in reputed foreign universities for a semester. 300+ students have successfully completed the SAP and Master's program at prestigious institutions like UC Davis, UC Berkeley, San Diego, Illinois, La Trobe, NUS, Taipei University to name a few. One of our alumni got selected for a meritorious PhD program at University of Southern California in August'21 (seen in pic)



DEPARTMENT ASSOCIATIONS & ACTIVITIES

CONFERENCES & SYMPOSIUM

An International Conference on Instrumentation, MEMS & Bio sensing Technology **ICIMBT** and a National level Technical symposium on **Industrial IoT and Automation (IIoTA)** are organized annually under the aegis of EIE Association. Participants from various Indian and foreign universities, take part in events like hackathons, Paper Presentation, Poster Presentation, Debugging and Technical Quiz.

SOCIETAL CONNECT/INITIATIVE- *give back to the society*

Frequent visits to government schools in and around the campus towards educating school children with scientific experiments and mini projects are carried out. One such student expo, the **Techno Blizz**, organized in Collaboration with IGCAR, Kalpakkam every year. **1000 students** learnt about **25+** model demonstrations from **IGCAR** and 40+ in house patent models developed by team EIE. This helps our students to learn life skills and gain social responsibility.



TechnoBizz'19 - Student Expo

STUDENT CLUBS – *knowledge & team building*

LabVIEW CLUB- Intense training on LabVIEW software is given by the faculty and senior students to help interested students to clear Certified LabVIEW Associate Developer (CLAD) exams

ARDUINO CLUB- Regular training schedules are framed by faculty, to impart programming knowledge & key aspects of Arduino microcontrollers with its potential applications/projects.

TEAM ROBOCON – Technically challenging tasks, untiring efforts and mind blowing outcomes are a part of the ROBOCON team, mentored and coordinated by one of our department faculty.

INTERNSHIP OFFERS – *Be career ready*

Enthusiastic students are offered internships in core industries for a period of 2-3 weeks, with challenging tasks explored at department level in order to enhance their core competency and technical expertise. Our students have successfully completed their internships at Texas Instruments, National Instruments, Johnson controls, Siemens Tech, Ford India, High radius, Climber Inc., and have also received job offers based on their performance and merits.

INTERNSHIP LEADING TO PLACEMENT				
				
Puranjay Mohan RA1811035010019 Texas Instruments Role: Project Intern	Ayush Kundu RA1811035010045 Highradius Pvt Ltd Role: Trainee-UI Automation	G Viswa Teja RA1811035010039 Highradius Pvt Ltd Role: Trainee-ABM	TR Vikram RA1811035010009 Highradius Pvt Ltd Role: Trainee-Analytics	Sandesh Nirban RA1811035010046 Highradius Pvt Ltd Role: Trainee-CBM

AWARDS & RECOGNITIONS *to feel proud of*

- AICTE Certificate of excellence (2nd Prize), awarded to one of the 3rd year B.Tech student for a project in support of **AtmaNirbar Bharat**, in a ceremony at NCR, August 2021 (in pic)
- **CanSAT -Team EIE** and Aerospace Team secured **5th place** in the world and **1st place** in Asia
- One of our alumni student was a part of technical design team in SRM UAV-AUVSI SUAS held at Maryland USA
- Two of our students have received young Innovator awards by the management of SRMIST in 2016
- One of our student has received the Volunteer leader of the year by the ISA association in 2016
- **ROBOCON**, an Asia-Oceania Robotics Competition organized by Asia Broadcasting Union- Team EIE won a National award for “The Best Economical Robot” in 2014 and finished at Top 25 in National Robocon 2013
- One of our student Mr. Arumugam created a Guinness world record for solving maximum number of Rubik’s cube in 24h with one hand (seen in pic)



Mr.Tanuj and his tem receiving the AICTE award

Mr.Arumugam while setting the world record

INTERESTING LINKS for a virtual experience

Department virtual tour : <https://www.srmist.edu.in/virtual/tour/Engg/37.html>

Research Centres- <https://www.srmist.edu.in/electronics-instrumentation/research-centers>

PhD research thrust areas- <https://docs.google.com/document/d/18kJL69QBxmOMiVBlv8LBM0ss03bdayfb1KCmaSXInM/edit?usp=sharing>

Department Google scholar link - <https://scholar.google.co.in/citations?user=ehgLOjIAAAAJ&hl=en&authuser=2>

Distinguished guest visit - https://docs.google.com/document/u/1/d/1Y5LO787HH5_KGa3UTZS28ivnuc55l_Ze/edit?usp=drive_web&oid=111247450702126652804&rtpof=true

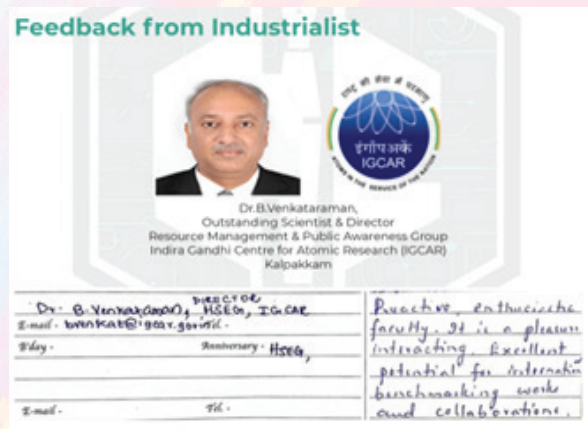
Distinguished Alumni excerpts - <https://www.youtube.com/watch?v=GQ6wUcOw2Qg&t=342s>

"Open day 2019" Image gallery - https://drive.google.com/folderview?id=1rUb07UL_KFfUI4u4DCTxbuEG-SF_MU7P


Department you tube channel- <https://www.youtube.com/channel/UCrssQgy2l2tnoqYfbuik6-Q>

Department social media pages- <https://www.facebook.com/SRMIST-EIE-KTR-105516501867849/>
<https://www.linkedin.com/company/eie-srm-ktr/>

PARENTS AND INDUSTRIALIST FEEDBACK




I am Capt Sanjay Kumar. Father of Pranjal Srivastava. I am working with Nayara Energy Ltd as head of chartering, Pranjal has completed his B.Tech in EIE engineering from SRM Institute of science and Technology. I wish to thank all faculty members of Department, for the hard work they have put in for teaching, explaining everything in a detailed manner. Faculty Member are very knowledgeable and help the students to involve in research activities. A big thank you to all of them.




Name : Gowtu Venkata Ramana
Job: Ex-Army,
Designation: Electrical Mechanical Engineer (EME)
Rank: ACP Havaldar

Feedback : It is so happy to share my views about getting chance to my child to complete his bachelor degree in Electronics and Instrumentation Stream. Having Knowledge with Instruments. I have seen my child developed lot of Interest and participation in projects related to sensors, as department staff give complete reliance and important practical knowledge, which will be useful to my child in future.

ALUMNI TESTIMONIALS- What they feel and say about it

Hi Smruthi here. Electronics and Instrumentation is a very versatile course. It consists of a variety of subjects from Medical, Electrical, Computer Science, Electronics, Biomedical concentrations. The curriculum strives to make students industry - ready. The department has labs that are well-equipped with instruments and software used in industries. We were able to obtain valuable practical experience and learning. The faculties are very approachable and friendly. They always try to help the students with their weak areas and suggest how the students can improve. I enjoyed volunteering in the department events and conferences that gave me essential exposure. It's a department that will facilitate your growth if you're willing to learn and work hard.



Hi I am Dikshant, EIE Department. The placement rate of SRM is pretty good. Students who have above 7.5 CGPA don't face any difficulty for placements. The placement training provided by the college was excellent and on par with what is asked by the companies in the online tests. An amalgamation of companies were seen coming to the campus for recruitment, ranging from EduTech, to Core. From a large number of companies a few of them were, HUL, L&T Technology Services, Siemens, Schneider Electric, Byju, KPIT, Unschool, TCS, Capgemini, cognizant.

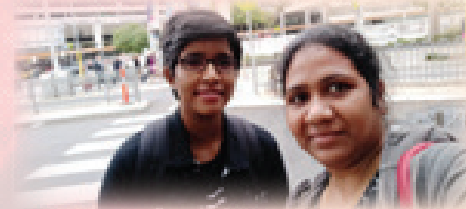


EIE Department faculty

IMAGE GALLERY- *lingering moments & memories*



Industrial Visit to CSIR



Research Abroad at
RMIT University, Australia



Students from Schools nearby participating in Techno Blizz