

Sree Chitra Thirunal College of Engineering

Institutional perspective plan and deployment

The vision and mission of Sree Chitra Thirunal College of Engineering (SCTCE) is aligned with broader educational goals and the needs of stakeholders including students, faculty, industry, and the community. Areas for improvement are identified by analysing the strengths, weaknesses, opportunities, and threats of the institute. Based on these specific, measurable, achievable, relevant, and time-bound goals that reflect the institution's strategic priorities are categories as short and long term perspective plans. These goals address areas such as academic excellence, research output, student outcomes, and institutional reputation.

The short term institute perspective plan involves,

- Enhance student support services, including counselling and career guidance.
- Increase student engagement through extracurricular activities.
- Upgrade existing facilities and technology.
- Conduct curriculum reviews and faculty training workshops.
- Plan and execute minor infrastructure upgrades.
- NBA Accreditation for all UG and PG programmes
- NAAC Accreditation for the Institution

Long term institute perspective plans include,

- Obtain academic autonomy
- NIRF ranking within first 200
- Starting more UG and PG Programmes in Engineering, preferably with industry collaboration
- Commencing MBA programme
- Start more number of collaborative research projects with R&D and industrial organizations
- Establish centres of excellence in the strong area of each discipline
- Generate more research fund from central/state funding agencies
- Increase the number of patents and research publications.

These proposed action plans are entrusted with all the stakeholders of institute to develop the strategies for carrying out the action plans, and the department head oversees each stage of implementation. As part of its deployment SCTCE have established Memorandums of Understandings (MoU) with CSIR-NIIST, TATA ELXSI, HLL Life Care Ltd, Green Method engineering, Center for Management Development, Motor Vehicle Department etc., for academic collaborations. SCTCE serves as a research partner in collaboration with NFTDC, IIT Madras, IISc Bangalore, IIT Bhuvanewar through DST funded consortium project (MECSP 2017), for the development of Centre for H2 Solutions-Materials & Energy Systems. Dr G Mohan, Professor in Mechanical Engineering is the Nodal Officer of the research consortium.

The innovation endeavours of the institute have obtained patent certification of registration. Prof. Sigikumar T S, along with his team, has been awarded the Certificate of Registration of Design for Fabric Dryer and Dr Anil Kumar S H, along with his team, has been awarded the Certificate of Registration of Design for Carbon Fibre Impact Absorber, by the Patent Office, Government of India.

Four UG programmes of the institute are granted NBA Accreditation. The faculty strength is a critical asset to the institution, contributing to its academic excellence and research output. The institute is having 95% of faculty with more than 10 years of experience and about 42% of faculty members at SCTCE hold PhD Degree. Faculty members are motivated with 'Best Teacher' award by Alumni Association. Appreciation Certificates are awarded to all faculties who achieve 100% results in their courses, and who excel in student's feedback. SCTCE also provides financial support for presenting papers in conferences. Faculty members are experts in their respective fields, offering specialized knowledge and skills that enrich the academic environment.

SCTCE is endowed with a range of infrastructure facilities that support its mission of providing high-quality technical education and fostering research and innovation. With funding from Kerala Start Up Mission and the FAB foundation, APJ Abdul Kalam Technological University established a Mini Fab lab at SCTCE. Research labs for Nano materials and Innovation Centre for IoT & Wireless Communication lab was established by utilizing the Plan fund from Govt. of Kerala. The vision of research labs is to carry out innovative, collaborative and interdisciplinary research thereby bridging the gap between academia and industry. SCTCE hosted the 9th IEEE International Women in Engineering Conference 2023. The conference was jointly organised by IEEE Bangladesh section and IEEE Kerala section, in hybrid mode. The proposed twinning programme between SCTCE and Birmingham City University (BCU), UK, presents an exciting opportunity for both institutions to enhance their academic offerings, provide international exposure, and foster collaborative research and learning. Dr. Olusegun Ilori, Senior Lecturer, Birmingham City University, UK visited SCTCE for assessing the academic set-up and teaching-Learning process as part of the proposed twinning programme.

SCTCE provides a venue for the holistic development of students, preparing them not only academically but also personally and professionally for their future endeavors. Student clubs and activities play a significant role at SCTCE in enhancing the overall educational experience. National Service Scheme which is under the ministry of Youth Affairs & Sports is functioning in the campus with a volunteer strength of more than 200. Our NSS unit is now one among the most active NSS unit under NSS Technical Cell, Govt. of Kerala. The NSS Unit of this college was registered in 2009 (Reg. No: 225). Henceforth NSS have expanded both quantitatively and qualitatively over the years by undertaking various projects and programs in association with different Government departments and agencies. Now SCT College of Engineering has two NSS units (Unit no: 225 & 527). The social service and community engagement of NSS units helps students develop a sense of social responsibility and empathy towards societal issues. 'Meckartans' is a group of automobile enthusiastic students. They design analyse and fabricate gokarts with a different specification and participate in National Level Events. They also conduct workshops and seminars on automotive engineering in schools and colleges. Cult a Way is the annual technical and cultural festival of SCTCE. It was started in 2011 but took off rapidly and became one of the major college fests in Kerala. It is a four- or five-day event held annually and almost all colleges in the state participate in this event. The events includes technical workshops, cultural events like dance programs, treasure hunt, quizzes, fashion shows etc. Various clubs often organize workshops, seminars, and competitions that supplement the academic curriculum, providing students with additional learning opportunities.

Add-on courses at SCTCE significantly enhance students' employability by providing them with additional skills and knowledge. In this view, students are offered with Bridge Course on C-Programming for S2 students, Course on German Language: Training for A1 and A2 Levels Certification, Placement Training for first year, second year, and third year students. Company specific training in fourth year, Basic Course on Python Programming, Advanced Course

on Python Programming etc. As collaborative part of effort, SCTCE is also offering training programs and workshops. IIT Madras Incubation Cell: Student's Training under LEAP -Learn Engineering by Activity with Products , NIT Calicut: Bootcamp on Drone/UAS Technologies, Learning by Doing, ISRO: Space science and Technology AwaReness Training (START) and Collaboration with ICT Academy of Kerala are some of them. There by STCE provides opportunities to students in enhancing students' employability by providing them with the necessary skills, knowledge, and experience to meet industry demands and succeed in their professional careers.

The decentralization in working has been followed in SCTCE to ensure a more responsive, inclusive, effective and efficient functioning of the academic and administrative sectors. The institute offers its faculty members opportunities for continuous professional development, including seminars, workshops, and higher degree options like the AICTE QIP scheme with full-service benefits, for both teaching and non-teaching personnel. With financial support, faculty members are encouraged to work on research projects, publish papers, and attend conferences. By leveraging and continuously improving focused on perspective plans, SCTCE can ensure a high-quality educational experience, foster innovation, and uplift its position as a leading engineering institution.