SRI SHAKTHI

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution)

Approved by AICTE, New

Delhi | Affiliated to Anna University,

Chennai

COIMBATORE- 641 062

Strategic Plan
2021-25

VISION

To make the institution one of our nation's great engineering schools, recognized nationally and internationally for excellence in teaching, research and public service. We seek to be the preferred destination for students, practitioners seeking an engineering education, employers hiring engineering graduates and organizations seeking engineering knowledge.

MISSION

To Provide an encouraging environment to develop the intellectual capacity, critical thinking, creativity and problem solving ability of the students.

Philosophy

We strongly believe...

Achieving 100% pass is only the GATEWAY to success.

Breeding 100% employable / entrepreneurial engineers is the first MILESTONE.

Creating 100% confident, contributing and self-realising citizens who will uphold the pride and cultural ethos of our great nation is our DESTINATION.

Core Values of the Institution

Quality Education and Integrity: Providing quality, global education that allows the student to achieve their career goals and aspirations with ethical values; preparing responsible citizens through systematic education.

Excellence in every area: Imparting career-focused educational programs with the highest level of academic to prepare the students with real-world experience,

Bringing the best: Encouraging critical thinking, quantitative, ethical decision making, effective communication and social responsibility in students.

Focusing on research activities: Creating excellent infrastructural amenities to undertake research activities, publish quality research articles and patenting the products/ technologies essential for the society.

'Powering the Youth; Empowering the nation'

Sri Shakthi Institute of Engineering and Technology is a new age engineering institution with a difference. With a mission to empower the youth of this nation, Sri Shakthi has scaled unparallel heights in its eleven years of establishment and is still expanding the horizons at every available opportunity. The quality assured in every sphere of activity and the standards set to achieve the objectives are crafting us as one of the top-notch and the most sought after engineering institutions in this part of the country.

Sri Shakthi Institute of Engineering and Technology (SIET) was founded in 2006 and is accredited by the All India Council for Technical Education (AICTE) in New Delhi as well as Anna University in Chennai. SIET. The lustrous and eco-friendly campus is renowned for its contributions in the fields of agriculture and space technology. Sri Shakthi is India's first private engineering college that has launched its own satellite on 28.2.2021 from SriHariKota. It is accredited by NAAC with an "A" grade and by NBA for EEE, IT, CSE, MECH, AGRI, and ECE. The primary vision of the institute is to impart technical knowledge and skills to the students in accordance with the needs of the industry by producing technologically superior and ethically strong engineers to transform life as a whole.

It is the moment of pride to record that our institution is the first youngest institution in India to be accredited by NBA within 10 years of its inception. Our college has been granted with research centers in the departments of CSE, ECE, EEE, IT, Civil, Physics, and Chemistry.

The India's top eco friendly campus is spread over 32.46 acres of land and accredited by WWF, as one of India's top eco friendly campuses. Sri Shakthi is ideally situated in the calm and serene part of Coimbatore city on the arterial of NH-544- L&T bypass road in close proximity to reputed institutions, airport, TIDEL park and multispecialty hospitals. The campus is just 2 km off from Avinashi road and 2 km off from Trichy road.

With the balanced academic structure, we have proudly entered into the 17th academic year providing 12 UG courses and 5 PG courses. The Institution offers several programs apart from regular academic programs to enhance the competencies of students, prepare

them for their career building, to refine their technical knowledge and to bridge the gap between academic and industry needs

SWOC Analysis

SWOC analysis is done for a strategic planning so as to understand the present and vision for the better future.

Strengths

- Academic autonomy to refine curriculum and syllabi.

- Visionary leadership that encourages and supports progressive institutional development.

- Considers the holistic development of the individual by balanced support in education, arts, sports and humanities.

- Commitment to provide the state-of-the art infrastructure with sustainable, tech-savvy and eco-friendly practices.

- Rich diversity in the Engineering programmes :12 UG programmes & 8 PG programmes

- Provides many Value Added Courses in all programmes that lead to industry employability with consecutive 100% placement for all registered students over the last 8 years.

- Provides opportunities students with merit scholarships each year.

- Focus on industry linked final year projects, which lead to better graduation and employability outcomes.

- Encourages mini projects through Engineering exploration Laboratory

- Networks to bridge the gap between the industry and academia through a number of industry interaction events.

- Strong network with around 5000 alumnus from 12 batches.

- Encourages faculty members to pursue opportunities in Research & Extension.

- Committed faculty members with long tenures of service to the institution.

- Awarded as the best engineering college by various surveys

- Organises outreach programmes for the villages around the college.

Weaknesses

- International relations for furthering the educational experience of students and the research experience of the faculty.

- Diversity of faculty and students in-terms of the geographical origins.

- Output in-terms of research projects to improve the practical knowledge of the students as well as the faculty members

Opportunities

- Enhance the scope and scale of the Research & Consultancy activities on campus.

- Create multiple Centres of Excellence with industry partnership

- Focus on nurturing and creating more student entrepreneurs

- Create opportunities in abroad for students to do short term courses in the universities with which MoUs are signed and others too.

Challenges

- Navigating the short term volatility in the core subject Jobs market.

- To inspire faculty members to obtain more funded projects and claiming patents

- To create the attitude and focussed mindset among all stakeholders to achieve our quality objectives.

1. Strategic Plan: Overview

The Strategic Plan 2021-2025is determinedbased on academic, research, product development, and placement.

Based on the priorities, following areas are given more importance.

- Transforming the teaching/learning experience to the next level, especially in the areas of Curriculum and Syllabus, Teaching and Training.
- Setting up Centres of Excellence
- In-house training courses
- Infrastructure development
- Strengthening the academic and research domains
- Focussing on alternate career coaching

2. Objectives

The strategic plan should be in accordance with the objectives of the institute to advance the overall development of the college.

The focuson the following core areas:

- Creation of Improved learning Environment: It is essential to have modern class room, laboratories that provide positive learning environment for all students and digitalising the content of all the learning materials in both written and video formats. This would enable the students to learn, and practice till their goals are achieved.
- Developing Enhanced Teaching and Learning Opportunities: Allstudents should have an access to high-quality instruction. To achieve this in a effective way, the faculty members who do not have doctorates, should be encouraged to complete at the earliest. Newly recruited faculty members also should be shortlisted based on this focus.
- Promote research: The project aims augmenting the facilities to enhance andpromote research. The research activities should include students also. The area of developing products should be strengthenedvigorously.

- Develop products coordinating both Faculty members and Students and applying for patents for unique products.

- Create aneco-friendly campus: In order to facilitate world class learningexperience, biodiversity enriched ambience is essential. The waste disposal methods which are already available should be systematised as per latest technology.

- Augment the existing sports infrastructure facilities to international standards. So that, students could excel at international levels.

- Organise more extra-curricular activities to empower the students to become more holistic in their learning.
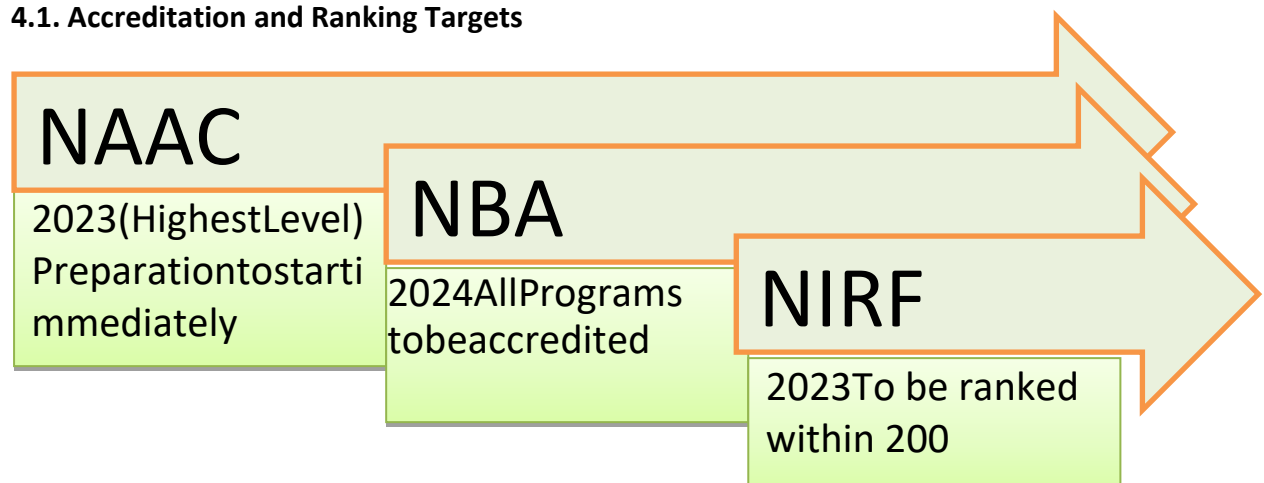
3. Methodology

Based on the strategic plan, the methodology adopted to accomplish the goals is

- Personal interviews and discussions were conducted with the stake holders including college officials, students, alumni, people's representatives, academicians and industry experts.

- Visit industries, government officials, and collect data before the plan.

4. Targets

4.1. Accreditation and Ranking Targets

NAAC
2023(HighestLevel)
Preparationtostartimmediately

NBA
2024AllPrograms
tobeaccredited

NIRF
2023To be ranked within 200

4.2. Research Deliverables 2021 – 2025

TARGETS	ACTION PLAN	OUTCOMES 2024
Undertaking Inter-disciplinaryprojects – Establishing Centers inside the campus	Projects formulated and sent fornationalfundinginthefocal areas –200peryear	**200projectssubmittedand aminimumof100sanction ed.**
Projectstobesentout to both national / internationalfundingagenci es	Projectsformulatedandapplied inthe thrust areas –20peryear	**20projectssubmittedand minimum 10 sanctioned**
Projects of students to bedeveloped into the domains of focalareas	Paperspublishedbasedon eachprojectin ScopusIndexpublications – 400 peryear. Papers published by the faculty members in Scopus Index publications – 400 per year.	**Minimumof800projectsa ndminimumof400papers publishedinScopusIndexe djournals/proceedings**
Patentsinfocalareas	**Filingand publishing100patents/yea rbasedontheworks ɓtudentsand facultymembers.**	**100patentsfiledandpublish ed** **25commercialized**

4.2.1.Ongoing Research Status

S.No	Name of the Coordinator	Dept	Scheme of Proposal	Sponsoring Agency	Title of the Project	Month/Year (Received)	Funds Received	Status
1	Dr. V. Bhuvaneshwari/BT	BT	TARE	DST-SERB	Biogenesis of nanomaterials from effective Trichoderma spp. for the management of red rot disease in sugarcane	October 2019	Rs.18,00,000	Ongoing

2	Dr.G.Sundar	EEE	AICTE-STTP	Ref .No. 34-66/207/FDCISTTP/Po l i c y -1/2019-20	Unleashing the latest innovations in hybrid electric vehicle and solar powered charging station techniques	Aug 2020	Rs.3,21,667	Completed
3	Dr.P.M.Balasubramaniam	EEE	AICTE -MODROBS	1-2188895977	ADVANCED POWER ELECTRONICS FOR RENEWABLE ENERGY LABORATORY SETUP	Dec-20	Rs.11,02,745	ongoing
4	Dr.M.Nirmala	ECE	DST	DST	National level Seminar on " Artificial Intelligence in Diabetes and heart diseases technology driven progress in health Care"	Dec-21	Rs.18000	Completed
5	Mr.A.Senthil kumar	ECE	TNSCST(Student Project Scheme)	TNSCST(Student Project Scheme)	Peltier based air using IoT	Mar-22	Rs.7500	Completed
6	Dr.D.Somasundaram	ECE	AICTE-RPS	F.N0-8-233/RIFD/RPS(Policy-I)/2018-19	A Cost effective minatured Lab on Chip device for screening ofsemen and embryo qualityfor artificial insemination in Clinical IVP	22.11.2019	Rs.6,40,250.00	Completed
7	Dr.B.Vinodh kumar	ECE	AICTE -MODROBS	F-No.9-66/RFID/MOD/Policy-I/2018-19	Modernisation and removal of obscelence in Digital signal Processing Lab	14.01.2019	Rs.12,00.000.00	Completed
8	Dr. D. Karuannidhi	Civil	DST-NRDMS	NRDMS/2016/01/09/016	Geospatial Technology in Promoting Recharge in Lower Bhavani in between Bhavanisagar to Bhavani Town, Erode District, Tamil Nadu	02.01.2017	Rs.14,80,000/-	Completed

9	Dr. D. Karuannidhi	Civil	SERB-ECR	ECR/2017/0001322	Identification of hydrogeochemical controls on occurrence of high Fluorides in bed rock aquifers of Shanmuganadhi Sub – basin, Amaravathi River, Tamil Nadu – a special stress on remediation by Managed Aquifer Recharge	28.10.2018	Rs.26,27,200/-	Completed
10	Dr. D. Karuannidhi	Civil	SERB&BRNS	SSY/2017/000357	Recent Advanced Techniques for Aqua Chemical Characteristics and Sustainable Development of Bed Rock Aquifers	19.07.2017	Rs.3,00,000/-	Completed
11	Dr. D. Karuannidhi	Civil	IUSSTF	MAR/WS/111/2019	Integrated hydrochemicalmodeling for sustainable development and management of water supply aquifers	16.06.2019	Rs.8,00,000/-	Completed
12	Dr. D. Karuannidhi	Civil	SERB&BRNS	SSY/2022/0002922	Climate change impacts on groundwater quality and human health risks: present status and future challenges	16.06.2022	Rs.3,00,000/-	Ongoing
13	The Principal	Nil	DST	S/FST/College-2019-739(C)	Fund for Improvement of S&T Infrastructure	07.6.2019	Rs.1,00,00,000/-	Ongoing
14	Dr. K. Navaneetha Pandiyaraj	Phy	SERB	SR/FTP/PS-106/2011	Surface Modification And Characterization Of Polymeric Films Uisng Glow Discharge Plasma To Improve Their Blood And Cell Compatibility Fot Vascular Implants	27/06/2012	Rs. 18,18,000/-	Completed
15	Dr. A. David Stephen	Phy	SERB		Ab Initio Prediction Of Crystal Structure Of Molecular Solids	01-11-2013	Rs. 14,64,000/-	Completed

				Development Of Bio-Functional Coatings On The Surface Of Polymeric Films Through Cold Atmospheric Pressure Plasma (Capp) For Biomedical Applications			
16	Dr. K. Navaneetha Pandiyaraj	Phy	DAE-BRNS	34/14/05/2014-Brns/0145	Development Of Bio-Functional Coatings On The Surface Of Polymeric Films Through Cold Atmospheric Pressure Plasma (Capp) For Biomedical Applications	25/04/2014	Rs. 24,95,000/-	Completed
17	Dr. K. Navaneetha Pandiyaraj	Phy	SERB	Emr/2016/006812	Deprivation Of Dye And Pharmaceutical Compound From Textile And Pharmaceutical Industry Waste Water Through Pin-To-Plate Dielectric Barrier Discharge Plasma Assisted With Activated Catalysts For Agricultural Applications.	02-11-2017	Rs. 34,25,848	Completed
18	Dr. Raneesh K Y	Agri	TNSCST(Student Project Scheme)	TNSCST(Student Project Scheme) - AS-031	Automated micro irrigation using soil moisture sensors	18.02.2019	Rs.7500	Completed
19	Mr. V. Venkatramanan	BT	TNSCST(Student Project Scheme)	TNSCST(Student Project Scheme)-BS-036	Biopreservative using Syzygiumcumini seeds	11-03-2022	Rs.7500	completed
20	Dr.V. Baskar	BT	TNSCST(Student Project Scheme)	TNSCST(Student Project Scheme)-MS-329	High throughput screening of potential antivenom compounds from natural sources throughinsilico and in vitro analysis	11-03-2022	Rs.7500	completed
21	Dr. V. Baskar	BT	TNSCST(Student Project Scheme)	TNSCST(Student Project Scheme)-AS-176	Comparative expression and phytochemical-profiling and therapeutic applications of wild and quality tea (Camellia sinensis (L.) O. Kuntze) cultivars of India.	11-03-2022	Rs.7500	completed

| 22 | Mr.Vignesh. V | Mech | TNSCST(Student Project Scheme) | TNSCST(Student Project Scheme) | Design and Fabrication of plastic recycling machine for producing 3D printing filament (Project Code – EME0670) | 11.03.20 22 | Rs.7500 | Complet ed |

4.3. Academic Targets

Targets	Action Plan	OUTCOMES
Revising UG/PG curricula and syllabi to fit intothenationalandinternationalqualityandstandardskeepinginview theIdeaofthe transforming into aUniversity	Modificationsandchangescompletedand updatingincorporated AccreditationandRankingTargetsAchievedby2025	Syllabistipulatedbystatutorybodiesintroduced Studentandfacultysatisfactionensuredevery year Morelabs,centresofexcellenceandpracticals,industrialvisits, sandwich programs
One Elective every year for all studentsin focal areasofdirectsocialrelevance,and'Technology forsocietalneeds'tobe eintroducedinFirstYear New programs and courses in IoT, Data Science, MachineLearning, Cyber Security, Data Analytics to beintroducedwherevernot alreadyavailable	**Syllabitobereadybyreadyontime ApprovedbyACandBoSandintroducedeveryacademicyearwith theapprovalofstatutorybodies**	AI & DS and AI & ML already introduced in 2021. Cyber Security in 2022 Planning for other programs

Link up with more Industries	Link up with 100 new industries every year	100 industries within India and abroad to be linked up every year and carrying out collaborating works.
Industrial exposure for sandwich programs	Industrial visits and internships by every student / every year	
Project/research works in industries	Research and project works in industries by 50% of the students	All students visit and work in industries two times a year covering all the major topics in their subjects.
	Faculty industrial exposure – 50% every year	All faculty members exposed to Practical training and learning. Achieved better placement opportunities.
Collaboration with R&D and Higher Education Institutions	Link up with 10 reputed universities and 10 R&D institutions every year	Total of 25 reputed institutions in India and abroad linked up
Quality improvement of faculty	Exposure of 50 faculty and 100 students to suchinstitutions	100 faculty trained technically
More faculty from reputed foreign universities	Visit of 100 experts/academicians every year	100 students get admission for higher studies

All faculty with Ph D and 15% with post doc. Exp |
| Seminars and Transfer of Technology | Conferences, Seminars, Workshops and other Events on Focal Areas – at least 10 events by all the departments every year. | 6 proceedings brought out
450 papers published based on these events |

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