



# SENGUNTHAR ENGINEERING COLLEGE (AUTONOMOUS)

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)  
Recognized Under Section 2(f) & 12(B) of the UGC Act, 1956  
NAAC Accredited with 'A' Grade

TIRUCHENGODE - 637 205 NAMAKKAL (Dt) TAMILNADU



## Strategic Plan and Deployment Document

**(2020-2025)**



Estd. 2001



  
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## Vision

To be a prominent centre for academia transforming the life of aspiring minds by imparting professional, technical, ethical, entrepreneurial skills and research attitude to address global challenges.

## Mission

- To train the students to develop into competitive professionals and entrepreneurs with high ethical standards.
- To offer a contemporary and flexible curriculum, industry collaborative teaching, and learning process to achieve academic excellence in Engineering and Technology.
- To establish research centers of excellence in niche areas to foster research for addressing local and global challenges.
- To engage the students in extension activities and outreach programmes for social development.



## Executive Summary

Sengunthar Engineering College is the premier institution which is providing better education in Namakkal district of Tamilnadu since two decades. The institution is offering professional Programs in Engineering, MBA and Ph.D.

The institution was established by the Sengunthar Charitable Trust., with a vision and mission to create a platform for holistic growth and success to students at all levels.

Sengunthar Engineering College is one of the institutions promoted by Sengunthar Charitable Trust. It is established in the year 2001.



## Quality Policy of the Institution

### Quality Policy:

#### **SEC is committed to**

- Provide Quality Technical Education in Undergraduate and Post Graduate fields as per the University Syllabus and in strict compliance with AICTE requirements.
- The Quality Education encompasses the needs and expectations of all interested parties with a strong focus on student centric approach.
- The main focus would be to build students of character and make them employable and successful in their life by inculcating life skills.
- We will strive to consistently achieve these through building competencies among faculties and continual improvement of the QMS.

#### **Milestones achieved by the Institute:**

- Accredited by NAAC with 'A' Grade in the year 2015
- Permanently affiliated to Anna University since 2010
- Recognized under section 2(f)&12(B) of UGC in 2015
- AICTE approved MSME Host Institute in the year 2018
- Sengunthar business incubation center is sponsored by DST in the year 2014
- Conferred Autonomous status by UGC in the year 2019
- PMKVY Skill Development Center by AICTE
- Scientific and Industrial Research Organization (SIRO) Recognized by DSIR, Government of India



## SWOC Analysis of the Institution

### **Institutional Strength:**

- The Institute has Qualified and Experienced faculty
- Good Teaching and Learning process
- Effective execution in rural setup
- The Institute periodically conducts Conferences, Workshops, and Faculty development programs
- Well designed employability skills assessment and Training programs by in house training division “Technical Hub”
- Social extension activities like blood donation camps, educating rural society and conducting health camps
- University affiliation with 10 years of educational legacy along with NAAC “A” grade accreditation.
- Supportive management, committed faculty & staff with creative and innovative ideas, motivated students.
- Sengunthar Charitable Trust Scholarship for 90 % of the students.
- Implementation of Outcome based Educational process.
- Strong focus on Excellence in Education, Research and Promotion of Innovation & Entrepreneurship.
- Periodic Project Review meetings to encourage the students to work on real-life solutions/applications.
- Excellent Industry-Institution Interaction which in turn very much useful for upgrading the curriculum and syllabus based on current industry needs.
- Value added courses; Life Skills and Employability Enhancement courses are included as a part of the curriculum for improving the Employability, Entrepreneurship, and Skill development activities.
- Conversion of Bio-Degradable waste into Bio-Fertilizers by Vermi composting.
- Effective function of Rain Water Harvesting.
- Celebration of National and International Commemorative Days.

### **Institutional weakness:**

- Collaborative laboratories with industry to enhance industry institute interaction.
- Implementing the Innovative Teaching Strategies and Outcome based education as per bloom’s Taxonomy.
- Strengthening Alumni Association and their Contribution to the institution through Entrepreneurship and Skill development activities.
- ICT tools for implementation of innovative teaching learning methodology.
- Students’ awareness on GATE and other competitive examinations.
- Implementation of renewable energy generation and waste water treatment facility.



**Institutional opportunity:**

- Considering the socio - economic background of the students there is a scope to focus on pedagogy for seamless transfer of knowledge from the faculty to the students.
- Entrepreneurship Cell to incubate and encourage students with innovative ideas to develop the entrepreneurship skills among the students.
- Motivating students to upgrade their knowledge through MOOC courses like NPTEL or SWAYAM which facilitates lifelong learning.
- Upgrade the laboratories with sophisticated equipment and software tools to train students, support research and consultancy.
- Learning flexibility through extracurricular activities like sports, NCC and NSS.
- Enhancing Energy Conservation by new policies and mythologies
- More facility for Disabled person
- Better policy and innovative methods for Waste Management
- Advancement in emerging technologies like Artificial Intelligence, IOT, Robotics and 3D printing provides scope for more employment
- Provincial industrialization and government initiatives like Make in India, Startup India provides scope for entrepreneurship

**Institutional challenge:**

- Limited resource funding from national and International funding agencies to pursue cutting edge research and consultancy.
- Enhancing the communication and employability skills of the students has become a major challenge in the present-day industry demand.
- Measures to review the course content in order to make them relevant to the present-day industry requirements.
- Innovations in curriculum and teaching pedagogy to place students at par with global competitions.
- Lack of interest among the students to pursue research as career.



## Strategic Plan of the Institute

Strategic Plan 2020–2025 identifies the following broad targets:

- To emerge as a Premier institution, among peers, to offer various programs on cutting edge technologies
- Strengthen Research and Development activities and emerge as a creator of new and innovative projects that cater to the needs of society
- Produce successful startups to generate employability
- Launch trending courses to meet out the societal needs
- Intensify Alumni involvement in all aspects of institute development
- Provide an amicable work culture in the institute for retention of staff members
- Applying for grants from government and private sources
- Create sources for internal revenue generation
- Get NBA accreditation for eligible courses
- To receive recognition through accreditations (NAAC "A++" Grade) and sustain in the top 100 NIRF Ranking
- To achieve “Deemed to be University” status within 10 Year duration.
- Extension of available area to accommodate more classrooms, laboratories, and Renovate infrastructure of the institution.
- Achievement of recognition from national and international organizations in the form of grants and awards.
- Partnering with Research Institutes.
- Mobilization of funds and projects through the alumni and other stake holders
- Imparting in-depth knowledge by providing proper training in advanced technologies.
- Develop online courses
- To Increase the number of Faculty members with Ph.D qualification.
- Renovation of physical and IT Infrastructure and upgrade Contemporary Labs, Research Lab, Examination Management Information System E-MIS), ICT tools.
- Secure Consultancy projects of 5 Lakhs in the next 5 years.
- Two research publications per faculty per year, and at least 50% of the said publications be indexed in SCOPUS, WOS.
- Exposing the students to enhance their skills for industrial environments.
- Commitment for personality development of students though training on ethical values.



### Strategic Planning (2020-2025)

<b>Teaching learning process</b>	<ul style="list-style-type: none"> <li>• Academic planning and preparation of Academic Calendar</li> <li>• Development of teaching plan as per OBE</li> <li>• Preparation of Lesson Plan based on CO &amp; PO mapping</li> <li>• Use of more teaching aids and adopt more ICT</li> <li>• Development of e- learning resources</li> <li>• Promote research culture &amp; facilities</li> <li>• Provide mentoring and personal support</li> <li>• Follow a transparent and fair feedback system</li> <li>• Conduct training based on need analysis</li> <li>• Evaluation parameters and benchmarking</li> <li>• Continuous assessment to measure outcomes</li> <li>• Performance development through credit system</li> <li>• Implementation of best practices</li> </ul>
<b>Leadership and participative management</b>	<ul style="list-style-type: none"> <li>• To follow reporting structure</li> <li>• Decentralize the academic, administration and student related authorities &amp; responsibilities</li> <li>• Prescribe duties, responsibilities and accountability</li> <li>• Portfolio assignments</li> <li>• Establishment of functional committees</li> </ul>
<b>Internal Quality Assurance System</b>	<ul style="list-style-type: none"> <li>• Establishment of IQAC done</li> <li>• Framing of Quality Policy &amp; publishing regularly</li> <li>• Formation of Quality Monitoring Committee &amp; functioning</li> <li>• Educating &amp; Training of all employees</li> <li>• Periodic check &amp; guidance for quality improvement</li> <li>• Establishment of audit team and process</li> <li>• Audit for remedial measures</li> <li>• Promoting best practices</li> <li>• Annual report preparation &amp; submission</li> </ul>
<b>Good governance</b>	<ul style="list-style-type: none"> <li>• Vision, Mission development &amp; their articulation in every key position</li> <li>• Inclusion of industrialists &amp; academicians in the GB</li> <li>• Evaluation of Institute's performance and benchmarking</li> <li>• Institutional strategic goals setting</li> <li>• Institutional Strategic development plan</li> <li>• Monitoring and Implementing the Quality Management Systems</li> <li>• Following organization structure</li> <li>• Smooth Working of statutory committees</li> <li>• Establishing E governance</li> <li>• Leadership development through decentralization</li> <li>• Establishing internal audit committee</li> <li>• Code of conduct and policy formulation, approval and</li> </ul>

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	<p>implementation</p> <ul style="list-style-type: none"> <li>• Establishing fair and transparent performance appraisal system</li> </ul>
<b>Student's development and participation</b>	<ul style="list-style-type: none"> <li>• Budget allocation for student development programmes and activities</li> <li>• Students Trainings &amp; Placement Activities</li> <li>• Formation of student council</li> <li>• Student's representation in various committee and cell</li> <li>• Participation in competitions</li> <li>• Organizing competitions</li> <li>• Credit transfer &amp; compensation</li> <li>• Rewards &amp; recognitions of achievers</li> <li>• Participation in extracurricular activities</li> <li>• Participating in social and welfare activities</li> </ul>
<b>Staff development &amp; welfare</b>	<ul style="list-style-type: none"> <li>• Recruitment Policy formation &amp; implementation</li> <li>• Staff performance evaluation system</li> <li>• Staff Training for quality improvement</li> <li>• Best possible work facilities &amp; infrastructure facilities</li> <li>• Code of conduct, service rules &amp; leave rules</li> <li>• Staff welfare policy implementation</li> <li>• Career advancement schemes</li> <li>• Rewards, recognitions and incentives</li> <li>• Deputation for seminars, conferences and workshops etc.</li> <li>• Sponsorship/ Motivation for qualification improvement</li> <li>• Support for research, consultancy, innovations</li> </ul>
<b>Financial management</b>	<ul style="list-style-type: none"> <li>• Framing &amp; implementation of Purchase and Financial policies</li> <li>• Department wise Budget planning and allocation</li> <li>• Forecasting income &amp; expenditure</li> <li>• Effective functioning of purchase committee</li> <li>• Plans for Emergency Fund</li> <li>• Budget formulation &amp; approval through Finance Committee</li> <li>• Periodic Audit.</li> </ul>
<b>Institute – Industry Interaction</b>	<ul style="list-style-type: none"> <li>• Formation of industry institute interaction cell</li> <li>• MoUs with industries</li> <li>• Support for internships, visits, trainings, guest lectures</li> <li>• Identifications of industry needs and advice on Curriculum for extra courses apart from curriculum.</li> <li>• Providing opportunities for Industry based/sponsored projects</li> <li>• Providing career guidance</li> <li>• Strengthen training &amp; placement</li> <li>• Establishing innovation centres.</li> </ul>



<b>Entrepreneurship</b>	<ul style="list-style-type: none"> <li>• Establishment of Entrepreneurship Development Cell</li> <li>• Effective functioning of entrepreneurship development Cell</li> <li>• MoUs with organizations for entrepreneurship development Providing training &amp; guidance for entrepreneurship development</li> <li>• Bringing more experts of the field for seminar, lecture, workshop for entrepreneurship development</li> <li>• Establishing incubation centers</li> <li>• Promoting ,sponsoring and facilitating entrepreneurship development</li> </ul>
<b>Research and innovation</b>	<ul style="list-style-type: none"> <li>• Dedicated R &amp; D facilitation centre</li> <li>• Establish and develop Laboratories with more research facility</li> <li>• Fund generation through Project proposals</li> <li>• Apply for Government/Non Government industry, sponsored funds</li> <li>• Collaborations with Government &amp; Private Institutes, Universities and Research Organizations</li> <li>• Applying for patent</li> </ul>
<b>Internal revenue generation</b>	<ul style="list-style-type: none"> <li>• Establishing infrastructure for revenue generation</li> <li>• Identification and Strengthening of IRG activities</li> <li>• Policy for Incentives for Revenue generation plans</li> <li>• Successful implementation of Internal revenue generation plans</li> <li>• Advertising &amp; marketing</li> </ul>
<b>Alumni Interaction</b>	<ul style="list-style-type: none"> <li>• Formation of Alumni association, participation and registration</li> <li>• Data base creation, Regular interactions with alumni and networking</li> <li>• Recognition of successful alumni</li> <li>• Leverage for guest lecturers/internships/placements/training/ entrepreneurship</li> <li>• Exploring Contributions</li> <li>• Brand ambassadors</li> <li>• Sponsorships/scholarships/fund generation</li> </ul>
<b>Community Services and Outreach Activities</b>	<ul style="list-style-type: none"> <li>• Budget from institution resources/Faculty/students/other donors</li> <li>• Identify community and social development work</li> <li>• Identify challenges of society for development work</li> <li>• Provide vocational training /job oriented training as per local needs at the institute</li> <li>• Educational support to village people</li> <li>• Conducting awareness camps</li> </ul>



**Physical infrastructure**

- Infrastructure building development & modification
- Smart Class rooms, Tutorials, Seminar halls
- Modernization of Laboratory & equipment
- More ICT enabled classrooms
- Library infrastructure up gradation
- System up gradation
- Functional facilities for e-learning
- Safety & Security management
- Water facility
- Medical facility
- Developing sports (indoor/outdoor) facilities
- Plantations
- Rain water harvesting
- Renewable Energy usage
- Hygiene, zero plastic & green campus
- Recycling of water



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**Strategic Plan 2020–2025 identifies the following implementation:**

Strategic Plan	Implementation
To emerge as a Premier institution, among peers, to offer various programs on cutting edge technologies	<ul style="list-style-type: none"> <li>Offering Trending courses such as AI&amp;DS, Cyber Security.</li> </ul>
Strengthen Research and Development activities and emerge as a creator of new and innovative projects that cater to the needs of society	<ul style="list-style-type: none"> <li>New Course Ph.D. has been established under Faculty Electrical and Electronics Engineering</li> </ul>
Produce successful startups to generate employability	<ul style="list-style-type: none"> <li>New Start ups are established</li> <li>Establishment of Skill Development Centre is under process</li> </ul>
Launch trending courses to meet out the societal needs	<ul style="list-style-type: none"> <li>Artificial Intelligence and Data Science Course has been established in the year 2021-2022</li> <li>Cyber Security Course started in the year 2022-2023</li> </ul>
Intensify Alumni involvement in all aspects of institute development	<ul style="list-style-type: none"> <li>Contributed Fund for Open Air Auditorium.</li> <li>Sponsored Water Doctor at Office and Hostel</li> <li>Sponsored fund for purchasing public addressing system</li> </ul>
Provide an amicable work culture in the institute for retention of staff members	<ul style="list-style-type: none"> <li>More than 50% faculty retention is maintained due to friendly work environment.</li> </ul>
Applying for grants from government and private sources	<ul style="list-style-type: none"> <li>MSME Host Institution</li> <li>Received Grant from AICTE under MODROB scheme.</li> <li>Sanctioned grant from AICTE under RPS scheme.</li> </ul>
Extension of available area to accommodate more classrooms, laboratories, and Renovate infrastructure of the institution	<ul style="list-style-type: none"> <li>The institution has adequate infrastructure and physical facilities for teaching-learning.viz., classrooms,</li> </ul>





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	laboratories and computing equipments
Partnering with Research Institutes.	<ul style="list-style-type: none"><li>• Made MoU with Make Labs Research and Development on 11.01.2023 for five years</li></ul>
Mobilization of funds and projects through the alumni and other stake holders	<ul style="list-style-type: none"><li>• Fund mobilization policy is used for fund Generation and optimal utilization</li></ul>
Imparting in-depth knowledge by providing proper training in advanced technologies.	<ul style="list-style-type: none"><li>• MOU has been made with Alpha Tech Academy Solutions, Bangalore, FACE Prep Coimbatore,</li><li>• Indian Biomedical Skill Council, Visakhapatnam, Edu Skills Foundation</li></ul>
To Increase the number of Faculty members with Ph.D qualification.	<ul style="list-style-type: none"><li>• 10 Faculty members Pursing Ph.D.</li></ul>
Renovation of physical and IT Infrastructure and upgrade Contemporary Labs, Research Lab, Examination Management Information System, ICT tools,	<ul style="list-style-type: none"><li>• MATLAB- Proprietary software purchased in the year 2021-2022 with Campus wide License.</li><li>• Computer Centre at Placement Block renovated with 110 new systems.</li></ul>
Two research publications per faculty per year, and at least 50% of the said publications be indexed in SCOPUS, WOS.	<ul style="list-style-type: none"><li>• Details of research papers per faculty members in journals</li></ul>
Exposing the students to enhance their skills for industrial environments.	<ul style="list-style-type: none"><li>• Faculty members completed skills based training by attending FDP and workshops</li></ul>
Commitment for personality development of students though training on ethical values.	<ul style="list-style-type: none"><li>• MoU has made with Alpha Tech Solutions Pvt Ltd Bangalore</li><li>• Provide Soft skill and Communication Skill training given to the students.</li></ul>



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