

SETHU INSTITUTE OF TECHNOLOGY

AN AUTONOMOUS INSTITUTION | ACCREDITED WITH 'A' GRADE BY NAAC

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Estd : 1995

STRATEGIC PLAN

(2016 - 2022)

Revision - I

MARCH 2018



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STRATEGIC PLAN

2016-2022

VISION & MISSION

Vision

- To promote excellence in technical education and scientific research for the benefit of the society

Mission

- To provide quality technical education to fulfill the aspiration of the student and to meet the needs of the Industry
- To provide a holistic learning ambience
- To impart skills leading to employability and entrepreneurship
- To establish effective linkage with industries
- To promote Research and Development activities
- To offer services for the development of society through education and technology

Core Values

- Quality
- Commitment
- Innovation
- Team work
- Courtesy

GOALS & OBJECTIVES

GOALS OF STRATEGIC PLAN

- *Excellence in technical education*
- *Excellence in research*
- *Excellence in industry collaboration*
- *Excellence in Institutional effectiveness*

OBJECTIVES OF STRATEGIC PLAN

Goal 1: Excellence in Technical Education - Objectives:

- 1.1 Faculty Excellence
- 1.2 Educational Excellence
- 1.3 Infrastructure Excellence
- 1.4 Promoting Student Excellence
- 1.5 Enriching Student Experience

Goal 2: Excellence in Scientific Research- Objectives:

- 2.1 Promoting Research Ambience and Culture
- 2.2 Enhancing academic research
- 2.3 Enhancing sponsored research
- 2.4 Establishing Research Centres of Excellence

Goal 3: Excellence in Industry collaboration- Objectives:

- 3.1 Producing industry-ready graduates
- 3.2 Establishing mutually beneficial relationship with industries
- 3.3 Setting up industry-supported facilities in the campus

Goal 4: Excellence in Institutional Effectiveness- Objectives:

- 4.1 Promoting continuous improvement
- 4.2 Serving the society
- 4.3 Making a global impact in education

STRATEGIES TO ACHIEVE THE OBJECTIVES OF THE PLAN

The goals and objectives are the main framework of the Strategic Plan. In order to achieve the goals and objectives, proper strategies are needed. The following strategies are evolved after proper planning, to achieve the goals and objectives of the Strategic Plan.

Goal 1: Excellence in Technical Education

Objective 1.1: Faculty Excellence

Strategies:

- ❖ Recruiting competent faculty
- ❖ Enriching Faculty competency – technical and pedagogical
- ❖ Rewarding faculty contributions and achievements
- ❖ Encouraging Faculty Exchange programs
- ❖ Offering performance-based benefit packages
- ❖ Providing healthy and supportive working environment

Objective 1.2: Educational Excellence

Strategies:

- ❖ Designing Industry-oriented curriculum
- ❖ Ensuring focused Learning
- ❖ Promoting ICT-enabled learning
- ❖ Fostering collaborations among programs
- ❖ Ensuring credibility through accreditation
- ❖ Enhancing student creativity
- ❖ Strengthening alumni contribution for institutional development
- ❖ Cultivating lifelong learning skills

Objective 1.3: Infrastructure Excellence

Strategies:

- ❖ Equipping classrooms with ICT Tools
- ❖ Expanding and modernizing laboratories
- ❖ Establishing an eco-friendly campus
- ❖ Expanding Internet, storage and server capacities
- ❖ Constructing additional infrastructure

Objective 1.4: Promoting Student Excellence:

Strategies:

- ❖ Promoting Self Learning ability
- ❖ Developing technical and Professional skills
- ❖ Promoting experiential learning
- ❖ Facilitating horizontal and vertical mobility to the students
- ❖ Providing support based on the academic ability

Objective 1.5: Enriching Student Experience:

Strategies:

- ❖ Improving Co-curricular and extra-curricular activities
- ❖ Nurturing entrepreneurial spirit
- ❖ Equipping all students for placement/higher studies
- ❖ Providing Career guidance
- ❖ Instilling Ethical values
- ❖ Developing Life skills
- ❖ Making students responsible towards society and nation

Goal 2: Excellence in Research

Objective 2.1: Promoting Research Ambience and Culture

Strategies:

- ❖ Improving infrastructure requirements to facilitate research
- ❖ Attracting research scholars who can contribute towards scientific and technological research
- ❖ Conducting workshops and training programs to promote research culture
- ❖ Encouraging faculty members to receive state, national and international recognition for research contributions
- ❖ Promoting innovation among faculty and students

Objective 2.2: Enhancing Academic Research

Strategies:

- ❖ Improving student research projects
- ❖ Encouraging faculty members to do research
- ❖ Increasing publication in refereed journals
- ❖ Motivating interdepartmental research projects
- ❖ Encouraging more filing of patents
- ❖ Promoting internal revenue generation

Objective 2.3: Enhancing sponsored research

Strategies:

- ❖ Increasing funded projects
- ❖ Promoting sponsored, socially-oriented and industry-driven research
- ❖ Collaborating with research organizations

Objective 2.4: Establishing Research Centres of Excellence

Strategies:

- ❖ Advancing focused research in specific areas
- ❖ Establishing incubation Centre
- ❖ Setting up sponsored/recognized research Centre

Goal 3: Excellence in Industry collaboration

Objective 3.1: Producing industry-ready graduates

Strategies:

- ❖ Facilitating industrial training for students
- ❖ Conducting industry-oriented training programs

Objective 3.2: Establishing mutually beneficial relationship with industries

Strategies:

- ❖ Signing Memorandum of Understanding (MoU) with Industries
- ❖ Conducting short-term courses and workshops for industry persons
- ❖ Offering solutions to industrial problems
- ❖ Encouraging 'idea- to-product' transformation
- ❖ Exposing the faculty and students to current industry practices, challenges and needs

Objective 3.3: Setting up industry supported facilities in the campus

Strategies:

- ❖ Establishing industry attached laboratories
- ❖ Setting-up industry supported research centres

Goal 4: Excellence in Institutional Effectiveness

Objective 4.1: Promoting continuous improvement

Strategies:

- ❖ Focusing on service to stakeholders
- ❖ Promoting cooperation within and across departments
- ❖ Practicing paperless governance
- ❖ Continuously improving all processes and functions

Objective 4.2: Serving the Society

Strategies:

- ❖ Offering training programs to rural youth
- ❖ Providing technical solutions to societal problems
- ❖ Adopting village to develop model village

Objective 4.3: Making a global impact in education

Strategies:

- ❖ Fostering global competencies among students
- ❖ Establishing MoU with foreign organizations
- ❖ Providing international experience for students

DETAILED STRATEGIES TO ATTAIN THE PROJECTED GOALS

Goal 1: Excellence in Technical Education

Strategies for excellence in technical education aim to stimulate a lifelong thirst for knowledge and learning in the students and to encourage a pioneering, innovative, independent attitude and aspiration to achieve success within and beyond the institution.

Objective 1.1: Faculty Excellence:

Strategies:

- **Recruiting competent faculty**-To promote the reputation of the college and attract the best by accessing talent nationally and provide the ambience to enable them to become effective.
- **Enriching Faculty competency** – Technical and pedagogical-To motivate the faculty members to be part of the technologically changing scenario by inspiring and equipping them to deploy a range of skills to shape, influence, lead and support professional and career development of students. Enhance resources for pedagogical innovation, faculty research, and creative activity through Faculty Development Programs.
- **Rewarding faculty contributions and achievements** –To reward excellence and success through incentives to develop the knowledge, capabilities and skills of faculty members.
- **Encouraging Faculty Exchange programs:** To foster a culture of high aspiration and performance through Faculty Exchange programs that will ultimately result in knowledge sharing opening avenues to sharpen acumen.
- **Offering performance-based benefit packages:** To enhance salaries for faculty and staff based on their performance and also recognize and reward annual performance where ever applicable.
- **Providing healthy and supportive working environment:** To be inclusive, supportive and collegial in our approach, that is underpinned by principles of dignity and respect, equality and diversity, health, safety and wellbeing. To promote superior quality of life in the workplace that serves as an exemplar for an

encouraging, nurturing, energizing, and supportive work and cultural environment for all faculty, staff, and students to excel in their pursuits.

Objective 1.2: Educational Excellence

Strategies:

- **Designing Industry-oriented curriculum:** To design curriculum based on the needs of the industries so that the student can meet the latent challenges and foster links with industry to meet the contemporary needs of the industries.
- **Ensuring focused Learning:** To experience the value of outcome based education and embed graduate attributes and employability in all our curricula, and equip our students to compete in the global marketplace
- **Promoting ICT-enabled learning:** To leverage the potential of ICT, in teaching and learning process for the benefit of all the learners. To train and empower faculty members to effectively use the computing devices for the purpose of teaching and learning. To teach heterogeneous students by creating interactive multimedia based instructional materials where learner is given control to review the topic at their own pace and in accordance to their individual interests, needs and cognitive processes.
- **Fostering collaborations among programs:** To enable the students at the college to enjoy an innovative curriculum that emphasizes collaborative inter-, intra- and cross-disciplinary learning and to foster a system allowing flexibility for faculty to teach, conduct research and provide service in furtherance of interdisciplinary pursuits.
- **Ensuring credibility through accreditation:** To ensure reliability through accreditation of the institution/all programs and sustain the quality of engineering education on par with global standards.
- **Enhancing student creativity:** To enhance creative thinking in students by providing an atmosphere that is conducive of idea generation and for selecting the most appropriate technique to solve the technical, social and environmental problems of the world in innovative ways.

- **Strengthening alumni contribution for institutional development:** To create strong links with alumni with an aim to foster ground-breaking initiatives in technology, innovation, research, entrepreneurship and social good through meaningful dialogue and interaction between the alumni and institution.
- **Cultivating lifelong learning skills:** To help students discover the need for lifelong learning by giving them opportunities to learn on their own and also stimulate a thirst for life-long learning for their personal and professional benefits

Objective 1.3: Infrastructure Excellence

Strategies:

- **Equipping class rooms with ICT tools:** To equip classrooms with flexible seating arrangements and state-of-the-art audio-visual technology to enhance the learning experience of students.
- **Expanding and modernizing laboratories:** To expand the laboratories in proportion with the increase in the number of students. To provide modern engineering tools necessary for modern engineering practice.
- **Establishing an eco-friendly campus:** To establish innovative campus design that signifies its commitment to environmental consciousness and sustainability, aesthetics, functionality, and safety to provide clean and green environment. To conduct environment sustainability activities in the campus to inspire students to carry the message of environmental responsibility. To integrate environmental aspects in the curriculum to produce sustainable citizens.
- **Expanding Internet, storage and server capacities:** To increase the internet, storage and server capacity in order to simplify, standardize and automate the data storage infrastructure so as to focus on managing the data.
- **Constructing additional infrastructure:** To construct additional academic infrastructure and amenities proportionate to the increase in students' strength and to fulfill the needs based on technological developments.

Objective 1.4: Promoting Student Excellence

Strategies:

- **Promoting Self Learning ability** - To encourage students to do online courses to have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.
- **Developing technical and Professional skills** - To develop the ability to apply the knowledge of mathematics, science and engineering for designing solutions for complex engineering problems and to develop the to function effectively as a team
- **Promoting experiential learning** - To develop the knowledge, skills, and values of students from direct experiences outside a traditional academic setting through activities such as Industrial visits, internships, lab experiments and projects.
- **Facilitating horizontal and vertical mobility to the students** - To encourage students to learn courses across disciplines and levels.
- **Providing support based on the academic ability** - To provide a supportive learning environment by encouraging bright students for advanced learning and the required assistance to the low performers

Objective 1.5: Enriching Student Experience

Strategies:

- **Improving Co-curricular and extra-curricular activities:** To ensure holistic development of students by encouraging out of class activities which affect all domains of life such as cognitive, emotional, social, moral, cultural and aesthetic. To motivate students to participate in co-curricular activities that are more focused upon the intellectual development. The extra-curricular activities serve as a platform to demonstrate the passion, commitment and leadership skills of students.
- **Nurturing entrepreneurial spirit** : To instill entrepreneurship and also to nurture the students in having developed good support skills including communications, interpersonal abilities, economic understanding, digital skills, marketing, management, and finance skills.

- **Equipping all students for placement/higher studies:** To equip our students with the right talent and personality to be found employable. To guide our students to pursue higher studies according to their interest.
- **Providing Career guidance:** To enable the graduates to discover their strengths and weaknesses to choose a profession that is lucrative and fulfilling.
- **Instilling Ethical values:** To impart ethical knowledge to the all the segments of the institution on how ethical engineering decisions will impact society thereby reflecting on the growth of the person as well as organization, continuously promoting excellence.
- **Developing Life skills** To develop life skills to face challenges in employability, prepare students for competitive exams like GRE, GATE, and language assessment exams like BEC, TOEFL etc, and to incubate successful start-ups creating innovative products and business models using the knowledge and technologies developed by the Institute.
- **Making students responsible towards society and nation:** To make out students good citizens by encouraging them to help the needy and by making them play vital roles during emergencies and after disasters.

Goal 2: Excellence in Research

To focus on enhancing our research infrastructure, developing our Global Research Priorities as well as supporting our disciplines to achieve the very best standing they can in peer rankings through innovative ways of funding new initiatives, enabling the best use of our resources through our Research Technology Platforms and finding ways of rewarding and incentivising success.

Objective 2.1: Promoting Research Ambience and Culture

Strategies:

- **Improving infrastructure requirements to facilitate research:** To develop infrastructure that enables discipline-based as well as interdisciplinary research through enhanced library facilities and department laboratories
- **Attracting research scholars who can contribute towards scientific and technological research:** To identify the competencies and skills necessary to achieve campus goals and priorities, and promote individual accountability for excellent performance in research and development activities.
- **Conducting workshops and training programs to promote research culture:** To conduct several workshops and discussions with an aim of improving the capability of the faculty members and students to develop industry needed technology and to provide a platform for establishing linkages with researchers
- **Encouraging faculty members to receive state, national and international recognition for research contributions:** To motivate our faculty members to receive awards for their accomplishments and efforts in research so that they would be inspired to contribute further.
- **Promoting innovation among faculty and students:** To stimulate the culture of innovation among faculty and students through effective learning and by supporting new areas of research

Objective 2.2: Enhancing Academic Research

Strategies:

- **Improving student research projects:** To motivate students to take up research projects that would complement their academic interests and career aspirations. Their personal involvement in research would increase their learning intensity and it will be a chance for them to show their potential employers their ability to initiate and carry out a complex scientific task.
- **Encouraging faculty members to do research:** To expand support for research programs of faculty members that would enable them to earn a doctorate degree and also enrich their teaching
- **Increasing publication in refereed journals:** To collaborate with experts in the field who will provide intellectual input, additional techniques or better models and encourage publication in reputed national and international journals with high impact factor.
- **Motivating interdepartmental research projects:** To support interdepartmental research projects focusing on the major scientific challenges of current scenario related to technology and research on environmental issues.
- **Encouraging more filing of patents:** To pursue the goal of active patenting and commercialization of innovative products.
- **Promoting internal revenue generation:** To explore ways of generating revenues internally for resilience and sustainability. Also to pay closer attention to reduced costs and wastages by improving on efficiency as a strategy for reducing educational recurrent expenditure. Optimal utilization of institute's physical facilities and adequate maintenance culture would reduce cost and greatly minimize wastages.

Objective 2.3: Enhancing sponsored research

Strategies:

- **Increasing funded projects:** To increase the number and value of funded projects and foster new approaches to cross-disciplinary research, including encouraging outstanding global research contributions
- **Promoting socially-oriented and industry-driven research:** To remove the vast disconnect between academic research and that used by industries by promoting industry-driven and socially-oriented research
- **Collaborating with research organizations:** To collaborate with reputed research organizations that draws together diverse disciplines and crosses organizational boundaries and link the Institution's research to the successful resolution of some of society's challenging issues.

Objective 2.4: Establishing Research Centres of excellence

Strategies:

- **Advancing focused research in specific areas:** To focus research in areas of study that are of key interest and are related to needs of pressing interest to demonstrate sound knowledge of the topic.
- **Establishing incubation Centre:** To encourage students, research scholars and alumni to share their ideas to solve chosen problems which are local centric and to validate, refine and nurture the ideas and also provide an ecosystem to convert the ideas into proof of concept and upgrade them to a level of commercial value. The establishment of incubation Centres shall create value added jobs and services and promote technology based new enterprise.
- **Setting up sponsored/recognized research Centre:** To set up a facility that focuses on research in a specific area with extensive infrastructure that is sponsored by a funding agency for advanced research and development covering the entire spectrum of the chosen area.

Goal 3: Excellence in Industry collaboration

To ensure a strong, distinguishing focus on industrial collaboration which will be a key element of our continued success through discovery and innovations and achieve their full and widest impact through mutually beneficial relations with industry.

Objective 3.1: Producing industry-ready graduates

Strategies:

- **Facilitating industrial training for students:** To expose students to industrial experience through in-plant training, summer internship, winter internship on emerging needs of the industry and ensure that our graduates are trained through industry and are career-ready. To form selective strategic alliances with industrial organizations, provide practical experience and assess the relevant knowledge and skills of the graduating engineers
- **Conducting industry-oriented training programs:** To develop partnership with local, regional and national industries and conduct training program for students with the help of industrial experts.

Objective 3.2: Establishing mutually beneficial relationship with industries

Strategies:

- **Signing Memorandum of Understanding (MoU) with Industries:** To provide industrial exposure to students and faculty members and to jointly work on projects required for industries and research needs MoU will be signed with Core and Software Industries.
- **Conducting short-term courses and workshops for industry persons:** To create an ambience where the industry and the institution can be mutually benefited through exchange of innovative ideas. To enrich the skills of industry persons through skill based programs, inducting various open source tools after conducting a survey on the lacuna in different industry centric skills.

- **Offering solutions to industrial problems:** To produce graduates who have an ability to analyze an industrial problem, and identify and formulate the industrial engineering principles and develop appropriate solution.
- **Encouraging ‘idea-to-product’ transformation:** To collaborate with industry that provides the market to transform a research idea to a commercial product and bring it to the market
- **Exposing the faculty and students to current industry practices, challenges and needs:** To interact closely with the industries and benefit faculty and students through an effective Industry –Institution Interaction Cell. Students should be exposed to the challenges and needs of Industries. Industry exposure of faculty is very much helpful to guide students about latest industrial practices.

Objective 3.3: Setting up industry supported facilities in the campus

Strategies:

- **Establishing industry attached laboratories:** To create an infrastructure in which suitable labs funded by the industry give the faculty and students a competitive edge, enabling them to fit in as the key link between industry and institute and thus offer solutions to industrial problems.
- **Setting-up industry supported research centres:** To establish a Research center in collaboration with an industry Unit in the Institute to provide specialized administrative and managerial support for the operation of Sponsored Research Projects, Consultancy Jobs and other related R&D activities and as a result to set up many modern laboratories and supporting infrastructure through the projects.

Goal 4: Excellence in Institutional Effectiveness

To establish the institution in the top tier of global universities through the leadership, governance and financial strength needed to sustain our mission, through a continued capability to invest and make the most of the people, programmes and infrastructure that will be the basis of our future success. To excel, sustain excellence and demonstrate our progress towards the goal of environmental, economic and social sustainability to a range of external stakeholders, prospective staff and students.

Objective 4.1: Promoting continuous improvement

Strategies:

- **Focusing on service to stakeholders:** To continuously feed the customer requirements into the system by collecting feedback from the internal stakeholders such as students and faculty and the external stakeholders such as employers, parents and society at large.
- **Promoting cooperation within and across departments:** To foster collaboration by promoting cooperative goals and building trust among all the employees. To train and educate people for relevant tasks and publicly acknowledge their accomplishments.
- **Practicing paperless governance:** To minimize the use of papers and create paperless governance where electronic faxes and email replace the need to print documents which reduces expenses lowering the investment in reams of paper and to promote an environmentally friendly approach.
- **Continuously improving all processes and functions:** To continuously measure the work flow in the institution and analyze specific problems. To conduct brainstorming sessions and interviews to gather relevant information and find remedies to problems. To execute the action to be taken, to evaluate and to monitor the outcome and determine if the process has produced the desired result.

Objective 4.2: Serving the Society

Strategies:

- **Offering training programs to rural youth:** To provide need based skill development training programs to sharpen the rural youths' acumen and mould them to be employable or to become entrepreneurs.
- **Providing technical solutions to societal problems:** To motivate students to take up innovative projects based on the needs of the society
- **Adopting village to develop model village:** To adopt nearby village and to enthuse the students to solve problems in the areas like electricity, water, entrepreneurship, organic agriculture, sanitation and renewable energy, using the knowledge and skills earned by them during their course to establish a model village.

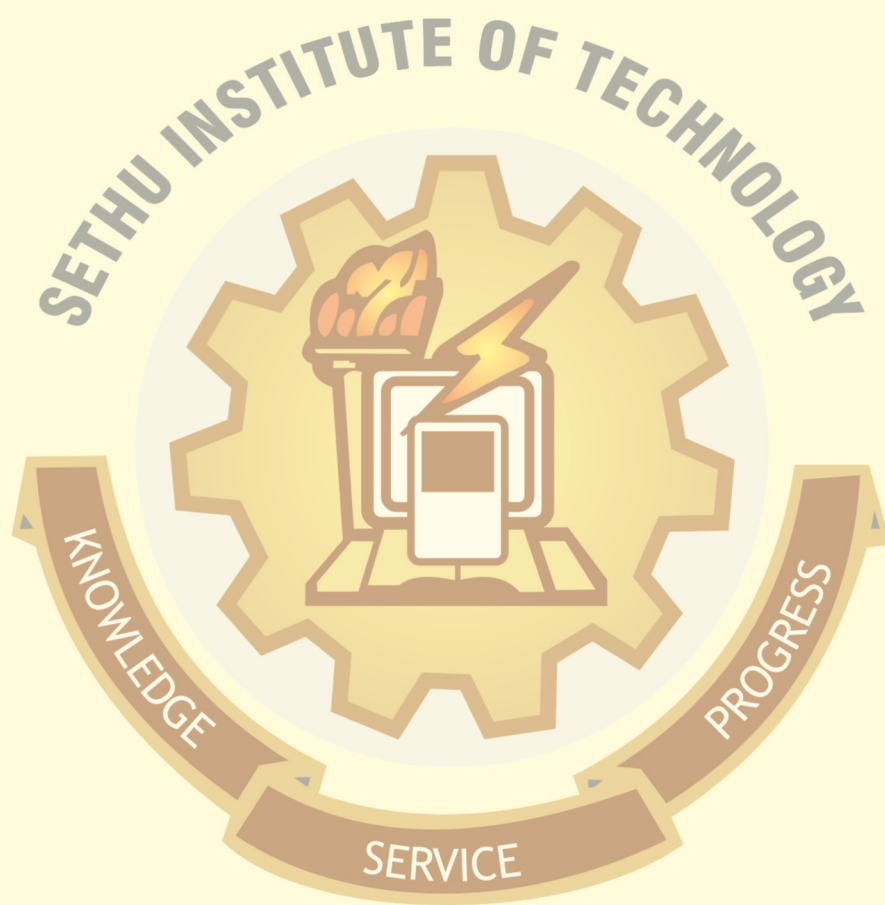
Objective 4.3: Making a global impact in education

Strategies:

- **Fostering global competencies among students:** To integrate global engineering attributes and themes in the curriculum as required by Washington Accord. To incorporate global education into classroom through activities and partnerships.
- **Establishing MoU with foreign organizations:** To sign MOU with foreign Universities for conducting research activities, development, education, training, transfer of technology and dissemination of knowledge on long term basis; promoting international collaboration and increased contribution of social development
- **Providing international experience for students :** To implement exchange programs with Foreign Universities and take all efforts to be provide opportunities for students to be recognized as a global leader in education and research and to emphasize joint innovative student projects and collaborative research. To incorporate internationalization in all areas of institutional activity, including by developing a globally relevant curriculum, promoting global citizenship and collaborating on teaching, research and knowledge exchange with international partners.

Annexure
Revision Index

S.No.	Revision No.	Revision Date	Revision Detail
1.	01	24.03.2018	In Goal 1: Excellence in Technical Education, Objective 4: Promoting Student Excellence is added as a new objective (P.No. 2) Strategies for this Objective are added (P.No. 4) Detailed Strategies for this Objective are added (P.No. 10)



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