

**SWARNANDHRA**  
**COLLEGE OF ENGINEERING & TECHNOLOGY**  
AUTONOMOUS  
Seetharampuram, Narsapuram-534280

**STRATEGIC PLAN**

**2023-24 TO 2027-28**



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## **INSTITUTE VISION & MISSION**

### **VISION**

To produce global competent, ethical and dynamic professionals by creating centre of excellence in technical education for societal empowerment.

### **MISSION**

**M1:** To provide quality education with knowledge and skills for rural and urban students.

**M2:** To collaborate the industries with academic for empowering the students to meet global standards.

**M3:** To induce highly ethical entrepreneurship in young minds with good leadership quality for the society.

**M4:** To enhance the institution in Research and Development by human intellectual capability.

### **QUALITY POLICY**

Swarnandhra college of Engineering and Technology strides towards excellence by imparting training and instructions of International standards in an environment conducive for effective Teaching and Learning processes with a goal to develop the organisation as a trend setter in the academic field and as a centre of excellence with emphasis on knowledge vision and conduct.

To synthesize and analyse the potential needs of the society and global market and to mould urban and rural youth to practice engineering profession with confidence courage competence and integrity for achieving universal acceptance.

## **INTRODUCTION**

Swarnandhra College of Engineering and Technology is an autonomous educational institution which serves mainly rural students. It is located in the river bed of Godavari known for traditional culture. Hence it becomes essential to impart quality education to the students to bring them in to the culture of multi-national companies.

The institution has formally stated quality policy and it is developed, driven, deployed and reviewed. All the courses are approved by All India Council of Technical Education (AICTE), New Delhi. The institution is permanently affiliated to Jawaharlal Nehru Technological University, Kakinada. The institution has attained the status of UGC autonomy in 2014 and accredited by NAAC (Second Cycle) with 'A' grade at 3.02 CGPA in 2022 and there is a special emphasis on Outcome Based Education (OBE) and experimental learning from 2014 onwards. The Vision, mission and quality policy of the institution are having exclusive consideration in the functioning of Internal Quality Assurance Cell (IQAC).

Effective strategic planning requires identifying and implementing strategies that will uplift Swarnandhra College of Engineering and Technology to a next level as an educational institution in West Godavari region in the State of Andhra Pradesh. Strategic planning is a continuous process involving planning, implementing, assessing outcomes and using results and lessons learned for further planning, revising and modifying of the strategies. Measurements and assessments are the vital parameters for strategic planning.

The very purpose of making the strategic plan for the next five years is to improvise the administrative system of the institution as well as the overall development of the institution. Therefore, identifying key indicators for sub-goals and identifying responsible divisions/units will ensure effective monitoring evaluation of outcomes. The institution should focus on a few but bold sub goals and strategies.

Therefore, prioritizing of strategies and focusing on those that have the potential of being game changers are critical. Since the execution of strategies is at the college or department level, the strategic planning process has to be participatory to ensure shared vision, as well as shared ownership qualities and commitment to the plan by stakeholders throughout the institution.

The institute has created the strategy document through a detailed consultation process with stakeholders. The document was discussed in department faculty meetings and alumni inputs were taken.

The document was significantly modified to take into account of the inputs received. The revised document was presented to the Governing council and their suggestions were incorporated in the final document.

## **SWOC ANALYSIS**

### **STRENGTHS:**

- Well supported infrastructure.
- Management supports for the institutional development activities.
- Women empowerment has been achieved remarkably.
- Academic background of the students is sound.
- Rural empowerment.

### **WEAKNESSES:**

- Lack of Communication skills of the students.
- Difficulty in Industrial exposure.
- Urban contact is very hard.
- Less number of PhD scholars are available in this region.
- R & D and consultancy activities are limited.

### **CHALLENGES:**

- Difficulty of getting quality faculty from urban areas.
- Non availability of Industrial experts inside the faculty team.
- Communication issues with industries.
- Quality of student intake in certain departments due to change in preferences.
- Tough competition in research funding agencies.

## **Key Target Areas (KTA's) derived from Vision & Mission**

1. Facilitating Industry oriented knowledge.
2. Development of competencies with reference to corporate culture.
3. Enabling to handle the technological challenges.
4. Fostering human values and ethical guidance to the students
5. Training to excel for practitioners and entrepreneurs

## **Perspective Plan for the development of the institution.**

1. To strengthen industry-institute interaction.
2. Improvement of consultancy services.
3. Increasing value-added certification courses.
4. To be ranked in top 150 at prestigious NIRF ranking.
5. Extension of Academic Autonomy and continuation of accreditations.
6. Getting the status of Deemed to be University
7. Establishment of new innovation and incubation centres.
8. Centre of Excellence.
9. Creating an intense research ambiance in terms of establishing recognised R&D centres in all the departments.

The following major deployments have been taken place after the first cycle of accreditation

1. Standardizing the Revised Bloom's taxonomy based teaching-learning processes.
2. Establishment of Advanced Labs like 3D Printing, IoT, ARC lab, etc.
3. Functional MoUs.
4. Establishment of new courses like AIML, AIDS, CSE-DS, CSE-CS, CSE-BS and Robotics.
5. The Alumni association has been strengthened.
6. Recognised as NPTEL Local Chapter.
7. Adoption of Choice Based Credit System (CBCS) in curriculum with out come based education.
8. Recognised research centre for Mechanical Engineering and Computer Science and Engineering departments by JNTUK, Kakinada.

## **OBJECTIVES**

- FDPs will have to be conducted minimum two (2) per department in an academic year.
- All the departments will be made as Research centres with the standard organisations.
- E-journals and E-Books will be improved at least ten (10) in addition to the available per branch of study.
- Students will be encouraged to do NPTEL course per year.
- Faculty members will also complete NPTEL courses related to the subjects they are handling.
- The campus will become natural with green technology.
- Community service projects will be strictly monitored so that the society is directly benefitted.
- Office Automation will be implemented in focus with OBE concepts.
- The students will have to take academic seminars, to attend subject quiz and group discussion for the subjects need more attention.
- The old students of the concerned departments will be invited to the engineering association meetings regularly and motivated students.
- The International Conference/Seminar will be conducted each per year in the campus.
- Socially backward rural students will be given intensive communication skill training apart from academic activities.
- Campus Recruitment Training will be given to the students in the view point corporate culture and needs.
- IIC will be given top priority in such a way that students will feel comfortable while travelling in their career.
- Intramural sports events will be conducted for athletics and sports.
- Auditorium with the capacity of 2000 seats.
- Staff recreation club (teaching and non-teaching) will have to be started.

| <b>Stream-wise Summary of KTAs</b> |                                 |
|------------------------------------|---------------------------------|
| <b>S.No</b>                        | <b>STREAM</b>                   |
| 1                                  | Infrastructure                  |
| 2                                  | Teaching-Learning ( Curriculum) |
| 3                                  | Students Related                |
| 4                                  | Faculty Related                 |
| 5                                  | Co-curricular (Students)        |
| 6                                  | Extra-curricular                |
| 7                                  | R&D Strategy                    |



| <b>1. INFRASTRUCTURE</b> |  |  |                 |                |                               |                |
|--------------------------|--|--|-----------------|----------------|-------------------------------|----------------|
| <b>Academic Years</b>    |  | <b>2023-24</b>   | <b>2024-25</b>  | <b>2025-26</b> | <b>2026-27</b>                | <b>2027-28</b> |
| <b>S.No</b>              | <b>Key Performance Area (KPA)</b>              | <b>Progressive Enhancement Targets (PET)- Year -wise</b> |                 |                |                               |                |
| 1                        | Smart class (AV Hall)                          | 2 New  | All Dept        | All Dept       | All Dept                      | All Dept       |
| 2                        | Class room with LCD Projector (Window curtain) | 50%  | 75%             | 100%           | 100%                          | 100%           |
| 3                        | Modernization of Lab                           | 25%  | 25%             | 25%            | 25%                           | New Lab        |
| 4                        | III Cell and EDC                               | 3 Prog/yr  | 4 Prog/yr       | 5 Prog/yr      | 5 Prog/yr                     | 5 Prog/yr      |
| 5                        | Centre of Excellence (CoE)                     | IoT  | AI & Networking | Robotics       | Design Thinking               | VLSI/Embedded  |
| 6                        | CMS & LMS                                      | 100%   | 100%            | 100%           | 100%                          | 100%           |
| 7                        | Library- e-books & e-journals                  | 50/dept  | 50/dept         | 50/dept        | 50/dept                       | 50/dept        |
| 8                        | One Seminar hall for Each/ Dept                | 75%  | All Dept.       | All Dept       | Auditorium with 2000 Capacity | All Dept.      |
| 9                        | e-governance                                   | 100%   | 100%            | 100%           | 100%                          | 100%           |

| <b>2. TEACHING-LEARNING(CURRICULUM)</b> |                                    |  |                          |                      |                      |                      |
|---|------------------------------------|--|--------------------------|----------------------|----------------------|----------------------|
| <b>Academic Years</b>                   |                                    | <b>2023-24</b>   | <b>2024-25</b>           | <b>2025-26</b>       | <b>2026-27</b>       | <b>2027-28</b>       |
| <b>S.No</b>                             | <b>Key Performance Area (KPA)</b>  | <b>Progressive Enhancement Targets (PET)- Year -wise</b> |                          |                      |                      |                      |
| 1                                       | Common E-learning                  | All Common courses                                       | All Common courses       | All Common courses   | All Common courses   | All Common courses   |
| 2                                       | NIRF Ranking                       | Top 500  | Top 300                  | Top 200              | Top 100              | Top 50               |
| 3                                       | NBA                                | 5 UG Department (tier-1)                                 | 2 UG Department (Tier-1) | PG CSE               | Eligible UG          | Eligible UG & PG     |
| 4                                       | NAAC                               | AQAR/Semester  | AQAR/Semester            | AQAR/Semester        | Next Cycle           | AQAR/Semester        |
| 5                                       | Professional Society tie-up        | 1/dept   | 1/dept                   | 1/dept               | 1/dept               | 1/dept               |
| 6                                       | Innovative Teaching & Learning     | 1 Online Course/Dept                                     | 1 Online Course/Dept     | 1 Online Course/Dept | 1 Online Course/Dept | 1 Online Course/Dept |
| 7                                       | Outcome Based Education (OBE)      | Maintained   | Maintained               | Maintained           | Maintained           | Maintained           |
| 8                                       | Industrial Collaborated Courses    | 1 per Dept   | 1 per Dept               | 1 per Dept           | 1 per Dept           | 1 per Dept           |
| 9                                       | Leadership course in the Curricula | Implementation   | Enhance & Improve        | Enhance & Improve    | Enhance & Improve    | Enhance & Improve    |
| 10                                      | Open electives                     | 4  | 4                        | 5                    | 5                    | 5                    |
| 11                                      | Bridge Course                      | 14 days  | 14 days                  | 21 days              | 21 days              | 21 days              |
| 12                                      | Projects into products and patents | 2/Dept.  | 3/Dept.                  | 4/Dept.              | 5/Dept.              | 5/Dept.              |
| 13                                      | Skilled Oriented Practical         | 1/ Dept.   | 2/ Dept.                 | 3/ Dept.             | 3/ Dept.             | 3/ Dept.             |

### 3. STUDENTS RELATED

| Academic Years |   | 2023-24   | 2024-25      | 2025-26      | 2026-27      | 2027-28      |
|----------------|---|---|--------------|--------------|--------------|--------------|
| S.No           | Key Performance Area (KPA)                      | Progressive Enhancement Targets (PET)- Year -wise |              |              |              |              |
| 1              | Admissions (UG)                                 | 100%  | 100%         | 100%         | 100%         | 100%         |
| 2              | Placement (UG)                                  | 80%   | 90%          | 100%         | 100%         | 100%         |
| 3              | Admission (PG)                                  | 75%   | 80%          | 85%          | 90%          | 90%          |
| 4              | Lateral entry Admission                         | 10%   | 10%          | 10%          | 10%          | 10%          |
| 5              | Starting EAPCET Rank                            | 15,000  | 10,000       | <6000        | <5000        | <2000        |
| 6              | GATE – To be appeared                           | 100 Students                                      | 100 Students | 125 Students | 150 Students | 200 Students |
| 7              | GATE – To be qualified                          | 20%   | 30%          | 40%          | 40%          | 40%          |
| 8              | IELTS / TOEFL / GRE                             | 20 Students                                       | 30 Students  | 50 Students  | 50 Students  | 50 Students  |
| 9              | Entrepreneur Development                        | 10  | 15           | 20           | 25           | 30           |
| 10             | Fee Concession                                  | 10%   | 9%           | 8%           | 7%           | 5%           |
| 11             | Additional Academic support for weaker students | 7 Days  | 10 Days      | 14 Days      | 14 Days      | 14 Days      |

| <b>4. FACULTY RELATED</b> |  |  |                |                |                |                |
|---------------------------|--|--|----------------|----------------|----------------|----------------|
| <b>Academic Years</b>     |  | <b>2023-24</b>   | <b>2024-25</b> | <b>2025-26</b> | <b>2026-27</b> | <b>2027-28</b> |
| <b>S.No</b>               | <b>Key Performance Area (KPA)</b>                | <b>Progressive Enhancement Targets (PET)- Year -wise</b> |                |                |                |                |
| 1                         | Pass % (UG)                                      | 80   | 85             | 90             | 90             | >=95           |
| 2                         | Pass % (PG)                                      | 90   | >=95           | >=95           | 100            | 100            |
| 3                         | Avg. Experience                                  | 5  | 6              | 7              | 7.5            | 8              |
| 4                         | Student - Faculty Ratio                          | 18   | 17             | 16             | 15             | 15             |
| 5                         | Retention  | 12%  | 10%            | <10%           | <10%           | <10%           |
| 6                         | Publication per Dept. (with high IF)             | 40%  | 50%            | 60%            | 65%            | 70%            |
| 7                         | Ph.D. Qualified                                  | 25%  | 30%            | 30%            | 30%            | 30%            |
| 8                         | Publication                                      | 1 per/year   | 1 per/year     | 1 per/year     | 2 per/year     | 2 per/year     |
| 9                         | Conferences                                      | 1 peryear  | 1 per year     | 1 per year     | 1 per year     | 1 per year     |
| 10                        | Workshop / FDP Organized                         | 2 per/year   | 2 per/year     | 2 per/year     | 2 per/year     | 2 per/year     |
| 11                        | Workshop / FDP Attended<br>(External / Internal) | 2 / Faculty  | 2 / Faculty    | 2 / Faculty    | 2 / Faculty    | 2 / Faculty    |
| 12                        | Industrial Training                              | 2 / Dept.  | 2 / Dept.      | 2 / Dept.      | 2 / Dept.      | 2 / Dept.      |
| 13                        | Industry experts – as resource<br>person         | 5 / Dept.  | 6 / Dept.      | 7 / Dept.      | 8 / Dept.      | 9 / Dept.      |
| 13                        | Faculty Induction and guidance                   | 2 days   | 2 days         | 2 days         | 2 days         | 2 days         |

### 5. CO- CURRICULAR (STUDENTS)

| Academic Years |   | 2023-24   | 2024-25        | 2025-26        | 2026-27        | 2027-28        |
|----------------|---|---|----------------|----------------|----------------|----------------|
| S.No           | Key Performance Area (KPA)              | Progressive Enhancement Targets (PET)- Year -wise |                |                |                |                |
| 1              | Publication (PG) – Journal/Conference   | 75%   | 80%            | 85%            | 90%            | 100%           |
| 2              | Industry Projects (UG & PG)             | 4/Dept.   | 4/Dept.        | 5/Dept.        | 5/Dept.        | 5/Dept.        |
| 3              | Workshop /Seminar Attended              | 1/Student/Yr.                                     | 1/Student/Yr.  | 1/Student/Yr.  | 1/Student/Yr.  | 1/Student/Yr.  |
| 4              | Industrial Visit                        | 1/Year  | 1/Year         | 1/Year         | 1/Year         | 1/Year         |
| 5              | In-Plant Training                       | 1/Student   | 1/Student      | 1/Student      | 1/Student      | 1/Student      |
| 6              | Internship                              | 8 Weeks   | 8 Weeks        | 8 Weeks        | 8 Weeks        | 8 Weeks        |
| 7              | Club to Strengthen Communication Skills | 2 Activities                                      | 2 Activities   | 2 Activities   | 2 Activities   | 2 Activities   |
| 8              | Value Added Course(s)                   | 2 per Dept.                                       | 2 per Dept.    | 2 per Dept.    | 2 per Dept.    | 2 per Dept.    |
| 9              | Placement Training                      | 30 Days / Year                                    | 30 Days / Year | 30 Days / Year | 30 Days / Year | 30 Days / Year |
| 10             | Spoken Tutorials / SWAYAM / NPTEL       | 1 /Dept.  | 1 /Dept.       | 1 /Dept.       | 1 /Dept.       | 1 /Dept.       |

### 6. EXTRA CURRICULAR (SUPPLEMENTARY PROCESS)

| Academic Years |                            | 2023-24   | 2024-25      | 2025-26          | 2026-27      | 2027-28          |
|----------------|----------------------------|---|--------------|------------------|--------------|------------------|
| S.No           | Key Performance Area (KPA) | Progressive Enhancement Targets (PET)- Year -wise |              |                  |              |                  |
| 1              | Sports                     | Kabaddi   | Basket Ball  | Cricket          | Volley Ball  | Foot Ball        |
| 2              | Indoor Games Tournament    | Table Tennis                                      | Chess        | Carroms          | Table Tennis | Chess            |
| 3              | Tournaments @ Level        | Zonal Level                                       | Zonal Level  | University Level | Zonal Level  | University Level |
| 4              | NSS / NCC                  | 3 / Semester                                      | 3 / Semester | 3 / Semester     | 3 / Semester | 3 / Semester     |
| 5              | Alumni Meet                | 1 per year  | 1 per year   | 1 per year       | 2 per year   | 2 per year       |
| 6              | Village adaptation / ISR   | 1 (New)   | 1 (New)      | 1 (New)          | 1 (New)      | 1 (New)          |
| 7              | NSDC                       | 1/Dept.   | 1/Dept.      | 1/Dept.          | 1/Dept.      | 1/Dept.          |
| 8              | Foreign Language Training  | 1   | 1            | 1                | 2            | 2                |
| 9              | IAS/IES/UPSC/Banking       | 1   | 2            | 2                | 2            | 2                |

## 7. RESEARCH AND DEVELOPMENT STRATEGY

| Academic Years |                                    | 2023-24   | 2024-25     | 2025-26     | 2026-27     | 2027-28     |
|----------------|------------------------------------|---|-------------|-------------|-------------|-------------|
| S.No           | Key Performance Area (KPA)         | Progressive Enhancement Targets (PET)- Year -wise |             |             |             |             |
| 1              | Research FDP /Workshop             | 2 No's  | 2 No's      | 2 No's      | 2 No's      | 2 No's      |
| 2              | Ph.D. completion                   | 2   | 3           | 3           | 3           | 3           |
| 3              | Ph.D. Registration                 | 5   | 6           | 7           | 8           | 9           |
| 4              | Ph.D. Guide ship                   | 2 New   | 3 New       | 3 New       | 3 New       | 3 New       |
| 5              | Funded Project – Applied (10- 15L) | 10 No's   | 15 No's     | 15 No's     | 15 No's     | 15 No's     |
| 6              | Funded Seminar/ Workshop Conducted | 3   | 4           | 5           | 5           | 5           |
| 7              | International Conference           | 1   | 1           | 1           | 1           | 1           |
| 8              | Major Projects                     | 4 No's  | 4 No's      | 4 No's      | 4 No's      | 4 No's      |
| 9              | Funded Student Project             | 4/ Dept.  | 4/ Dept.    | 4/ Dept.    | 4/ Dept.    | 4/ Dept.    |
| 10             | MoU with industry                  | 3 No's  | 3 No's      | 3 No's      | 3 No's      | 3 No's      |
| 11             | MoU: Institutions/Universities     | 2 No's  | 2 No's      | 2 No's      | 2 No's      | 2 No's      |
| 12             | Consultancy                        | 3/Dept.   | 4/Dept.     | 5/Dept.     | 5/Dept.     | 5/Dept.     |
| 13             | Patent applied (Total)             | 5   | 10          | 15          | 20          | 25          |
| 14             | Patent Granted                     | 2 per Dept.                                       | 2 per Dept. | 2 per Dept. | 2 per Dept. | 2 per Dept. |
| 15             | Product Development                | 2 per Dept.                                       | 2 per Dept. | 3 per Dept. | 3 per Dept. | 3 per Dept. |
| 16             | Research Centre                    | Mechanical,CSE                                    | ECE,EEE     | IT          | AIML        | DS          |

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**COLLEGE OF ENGINEERING & TECHNOLOGY**  
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Seetharampuram, Narsapur-534280

**Institutional Strategic plan Review Committee**

**Review report for 2018-2023**

The Strategic plan for the year 2016-2021 was already prepared and Allowed. The review of the plan regarding conformity of the planning and execution of the same is given below.

**1. Student Affairs**

1. As per the strategic plan, the admission had been accomplished.
2. Fees concession had been given to the deserved candidates.
3. Placements had been achieved as per the targets.
4. Students funded projects had not been got. Concentration may be given to their aspect further.
5. Awards and medals had been given to the students who came with flying colors in end semester examinations.

**2. Faculty Members**

1. Orientation had been given to the newly joined staff.
2. No. of Faculty members with doctoral degree had been achieved more than the target numbers.
3. Journal publications with impact factor should be given attention in future.
4. Attrition rate of the faculty had been maintained in such a way that teaching-learning process is not affected.
5. Faculty members had attended FDPs as per the target.
6. Faculty members had been considerably enhanced for circuit branches

**3. Teaching and Evaluation**

1. All the courses had been prepared with question bank and circulated to the students.
2. Choice based credit system had been implemented.
3. Psychometric analysis test had been conducted for the students during their first year studies.
4. Internship had been introduced in the curriculum.
5. Most of the departments applied for NBA inspection
6. The internal assessment had been fixed as 30% and 70% for external assessment.
7. MoU with reputed universities should be given attention in future.



#### **4. Infrastructure**

1. Examination section has been functioning with an effective software.
2. Entrepreneurship Development Cell had been established.
3. Furniture and other equipments had been considerably increased
4. Obsolete computers and technical instruments were replaced on time.
5. All the departments should be made as research centers in future.
6. All the staff members should be accommodated in quarters in future.

#### **5. Curricular & extra –Curricular Activites**

1. International Conferences may be conducted in future.
2. Value added courses had been introduced in all the departments.
3. Seminars were conducted in all the departments, but external sponsorship could not been got.
4. Foreign Language training may be given to the first year students.
5. Zonal level tournament had been conducted in the college.

SCET,  
05.01.2024

(Dr.A.Gopichand)  
Convener