

# Techno College of Engineering Agartala

Maheshkhola, Agartala, West Tripura

## Strategic Plan

**2017-2022**



**JANUARY - 2017**

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## **1. SWOC Analysis**

## **2. Strategic Goals :Key Parameter Indicators derived from Vision & Mission**

- Facilitating high-quality knowledge
- Development of competencies and skills
- Enabling to handle the technological challenges
- Fostering human values and all-round development
- The quality of courses and its sustainability
- Promote R&D and Consultancy through strong Industry Institute Interaction to address the societal problems
- Innovation & Entrepreneurship
- Create good infrastructural facilities for optimization of knowledge acquisition
- Nurture the students holistically and make them competent to excel in the global scenario

## **3. Proposed Strategic Plan**

## **4. Actionable tasks to implement the Strategic Plan.**

## SWOC ANALYSIS

### **Strengths:**

1. Working towards the Vision & Mission of the Institute
2. Qualified and Experienced faculty and staff
3. Well Equipped Laboratories and infrastructure
4. Around 30% of faculty registered for Ph.D
5. The senior faculty pursuing solutions to critical research, have applied for patents
6. Guidance in elite research projects granted from DST,UGC,DRDO
7. Around 30+ MoU's in all departments with industries
8. Good academic culture, ambience and working environment leading to high students and faculty satisfaction.
9. Management supports faculty qualifications up gradation
10. Students are given awards and rewards for merit achievement
11. Mentoring System with regular monitoring of attendance of students and their performance in examinations.
12. Holistic development of Students
13. Institute location is accessible to all the Stakeholders

### **Weaknesses:**

1. Getting good senior professors with research aptitude
2. MoU's with core companies
3. Sanctioning of grants from DST/UGC for private Institutions
4. Less number of faculty with Ph.D.
5. R & D and consultancy activities are limited and research culture needs to be strengthened.

### **Opportunities**

1. Continuous efforts from departments for applying research projects from various agencies.
2. The institution plans to collaborate and interact with research laboratories, institutes and industry for research activities to enter formal MoUs.
3. Establishment of research centers in emerging areas in all departments.
4. To provide seed-money to faculty for research in all departments of the institute to undertake inter-disciplinary research, the e-library facility available serves the cause.

5. Measures to be taken by institution to facilitate smooth progress & implementation of research schemes and projects by providing support in terms of technology and information.
6. The efforts for Consultancy Projects will be placed vigorously for improving Technical Skills and Re-sharpening Knowledge.
7. As many faculty members registered for Ph.D the scope for research activity increases further.
8. With the addition of new infrastructure sanctioned by AICTE the research can be well organized and show cased through research center.
9. Autonomy would enable the Institute to address the shortcomings under affiliation system.
10. Leveraging locational advantage to network with institutes of higher learning, industry and research organisations for consultancy, collaborative R & D Projects, sponsored research, academic interaction, student internships etc.
11. Use its alumni base for institutional growth.

### **Challenges**

1. Establishing high end labs for the courses with the help of industry support.
2. To recruit competent faculty members and Recruitment of all doctorates in the departments.
3. Develop Industry ready courses in curriculum.
4. Bringing good Research Ecosystem in the Institute.
5. Quality of student intake in certain departments due to change in preferences.

## Proposed Strategic Plan

### **Vision and Mission of the Institute**

#### **Vision:**

The Techno College of Engineering Agartala strives to develop institutional excellence in technical education and research to graduate talented, skilled and trained engineers, with admirable traditional cultural values to meet the technological and socioeconomic needs of our state, nation and the world at large.

#### **Mission:**

- To produce creative and technically strong engineers by providing high-quality technical education with emphasis on technical academic excellence, innovative research and development programmes with core human values.
- To continuously upgrade the faculty in curriculum design, teaching pedagogy, usage of ICT (Information and Communication Technology) and various processes pertaining to academics, research and University administration.
- Techno College of Engineering Agartala is committed to providing an education that combines rigorous academics with joy of discovery.
- The Institute encourages its community to develop a unique culture that instills responsibility and accountability in partnership with various stakeholders such as parents, society, business and education community.

#### **Quality Policy**

To ensure high standards to educate, enrich and excel in imparting professional education, by top-quality-faculty who endeavors to mould the students into socially responsible professionals through creative team-work, innovation and research.

#### **Key Parameter Indicators derived from Vision & Mission**

1. Facilitating high-quality knowledge
2. Development of competencies and skills
3. Enabling to handle the technological challenges

4. Fostering human values and all-round development
5. Curriculum beneficial to the students in terms of Internships/Projects (Fast Track Curriculum)
6. Promote R&D and Consultancy through strong Industry Institute Interaction to address the societal problems.
7. Create good infrastructural facilities for optimization of knowledge acquisition.
8. Nurture the students holistically and make them competent to excel in the global scenario.

## Actionable tasks to implement the Strategic Plan

### **Targets & Strategies**

#### **Strategies to achieve Vision & Mission:**

1. To establish better academic practices and procedures
2. To be a choice for good quality students and competent faculty
3. To nurture the students holistically and make them competent to excel in the global scenario
4. To produce technically competent and ethically strong graduates
5. To encourage Research & Consultancy
6. To develop a smart campus

#### 1. To establish better academic practices and procedures

- Revision of curriculum & academic regulations
- Introduction of courses as per industry trends
- Introduction of more number of professional electives
- Introduction of open electives
- Fast Track Curriculum
- Introduction of industry supported electives
- Encouraging for online certification courses
- Provision for Industry internships

- Introduction of Skill Development Courses.
- Introduction of structured co-curricular and extra-curricular activities
- Introduction of courses on life skills
- Introduction of courses to promote entrepreneurial skills

**Revision of examination regulations & procedures:**

1. More emphasis on continuous learning and assessment.
2. Introduction of Bloom's Taxonomy in learning and assessment.
3. Examination reforms.
4. Early declaration of results on completion of exams.

**Introduction of best practices**

1. Improving course delivery to meet learning and assessment levels of Bloom's Taxonomy
2. Implementation of Outcome Based Education (OBE)
3. Strengthening Industry Institute Interaction

**MoUs with industries and research institutions for:**

1. Consultancy
2. Research
3. Faculty training and encouraging for attending conferences and FDP'S

**Self and Collaborative Learning Initiatives:**

1. Online certification courses.
2. Internships.
3. Peer Group Learning

## 2. To be a choice for good quality students and competent faculty

- Recruitment of good quality faculty members
- Innovations in Teaching for better understandability
- Implementation of IQAC goals and strategies for overall quality improvement of the Institute
- ICT enabled facilities in the class room
- Good Infrastructural facilities
- Good quality placements
- NBA Accreditation
- NAAC Accreditation
- Autonomous Renewal

## 3. To nurture the students holistically and make them competent to excel in the global scenario

- Strengthening of Professional societies and club activities
- Student Clubs for overall development
- Participation in Hackathons and Inter Institute events
- Introduction of Skill Development Courses from 1st year onwards
- Introduction of courses on life skills
- Introduction of structured co-curricular and extra-curricular activities
- Encourage students to participate in Games, Sports and cultural activities
- Introduction of courses to promote entrepreneurial skills
- Introduction of Technical Skills training during 3<sup>rd</sup> year
- Introduction of online courses
- Introduction of industry oriented Add-on courses
- Encourage participation of students in voluntary and extension activities

#### 4. To produce technically competent and ethically strong graduates

- To introduce weekly sessions on human values and professional ethics
- Arranging technical Expert sessions
- Conducting National & International Conferences
- Encouraging students to write and guiding them to publish in good journals
- Encouraging them to do small projects in 2<sup>nd</sup> year B.Tech
- Applying for student patents

#### 5. To encourage Research & Consultancy

- Constitution of Research Advisory Board
- Monitoring the progress of the faculty pursuing Doctoral programme
- Training programmes on writing research papers
- Awareness programmes on funding agencies
- Training programmes on writing proposals
- Encourage faculty to publish papers in indexed journals
- Encourage faculty with Ph.D to submit project proposals for funding
- Financial support for research publications
- Establish Centres of Excellence with industry collaboration.
- Department wise research groups to strengthen research
- Establish Centres of Excellence with industry collaboration

#### 6. To develop a smart campus

- Wifi enabled campus
- Desktop & Laptop facility to all faculty members
- Introduction to Biometric Attendance to faculty and staff

- Establishment of Campus surveillance System
- Plastic free campus
- Facilities for alternative sources of energy and Energy Conservation (Solar Energy/use of LED bulbs, power efficient equipment and Wheeling to the Grid)
- Landscaping with trees and plan