



Mahavir Education Trust's

**Shah & Anchor Kutchhi Engineering College**

An Autonomous Institute Affiliated to University of Mumbai

## **Strategic Plan of the Institute**

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## **PREFACE**

Shah and Anchor Kutchhi Engineering College was established in 1985 for the purpose of imparting quality technical education. The college is managed by Mahavir Education Trust. The college is approved by AICTE, New Delhi and Government of Maharashtra, and is affiliated to University of Mumbai.

It offers under graduate courses in Computer Engineering, Information Technology, Electronics and Computer Science, Electronics Telecommunication, Artificial Intelligence Data Science, Cyber Security, Electronics Engineering(VLSI Design Technology) and ElectronicsCommunication (Advance Communication Technology). It also offers Post Graduate Courses in Computer Engineering, Information Technology Electronics Engineering. PhD in Information technology is started in 2023 and in computer Engineering is started in 2024 .The college has received approval from AICTE for starting three years bachelors program in Information technology and Computer engineering for working professional from the year 2023. Degree course in bachelor of vocational in Artificial Intelligence and Data science and Cyber security is will be started in 2024. The institute is NAAC accredited with A grade, NBA accredited and has ISO certification. Institute has conferred with autonomous status by the UGC from the academic year 2024-25 for the period of 10 years. This strategic plan of the institute is prepared by taking in to consideration future technological developments .

# Chapter 1

## Institute Information

### 1.1 Vision

To become globally recognized autonomous institution offering quality education and enhancing professional standards.

### 1.2 Mission

To impart high quality multidisciplinary and holistic education to the students by providing an excellent academic environment ,well equipped laboratories and training through motivated skill based teachers.

A comprehensive assessment has been done from all the stake holders such as students,parents,alumni,industry and staff to perform SWOT analysis as given below-

### 1.3 Institutional Strength

#### 1.3.1 Vision of management

Sound financial condition is the backbone of our organization resulting in excellent vision for development of the college. The college is keen in implementing all technological developments in the institute. In order to cater needs of society, new programs are introduced from time to time.

#### 1.3.2 Location

The institute is located at the heart of the city and has good connectivity with all modes of transport.

#### 1.3.3 Excellent infrastructure

College has well maintained campus, well equipped laboratories and classrooms and hi-tech library. Institute has state-of-the-art auditorium, seminar halls, Gymnasium etc. College campus is wi-fi enabled.

### **1.3.4 Experienced and quality staff**

The institute has highly motivated, well qualified and experienced staff members. Staff members up skill themselves on regular basis.

### **1.3.5 Excellent curriculum delivery**

Teachers incorporate latest ICT tools and techniques for teaching. Student centric teaching is implemented in the institute.

### **1.3.6 International and National Collaborations and MoU**

### **1.3.7 Students participation in extracurricular and curricular Activities**

Students actively participate in various technical, nontechnical events, competitions at national and international levels. Our students have consistently won awards and medals.

### **1.3.8 Training, placement and internship cell**

There is a fully functional training and placement cell which helps in providing students placements in reputed organizations. Regular training and counseling programs are conducted to make students industry ready. Paid internships are offered to deserving students.

### **1.3.9 Various cells**

To cater to the needs of industry and society, college has research cell, IPR cell, Robo club, speakers club, IQAC, IIC, IKS etc.

### **1.3.10 E-Cell and incubation centre**

The E-cell is established to create awareness, motivate, guide and support the students for starting their own business venture.

### **1.3.11 Good Student Faculty ratio**

The institute has a good student to full time teacher ratio.

### **1.3.12 Institute Social Responsibility**

Staff and students are regularly engaged in projects aimed at societal benefits facilitated by research cell and other professional bodies.

### **1.3.13 Students Mentoring**

: Students are mentored for their academic as well as personal issues. The institute has appointed qualified counselor to cater to emotional needs of students.

### **1.3.14 Teamwork**

There exists cordial relationship among all employees of college, resulting in excellent work environment.

## **1.4 Institutional Weakness**

1. Less placement in core areas of engineering other than IT field.
2. Space constraint due to high cost of land in Mumbai city.
3. There is a need to find sufficient alternative sources of revenue generation.
4. There is difficulty to attract sizeable research funds from the Government funding agencies being a private engineering college

## **1.5 Institutional Opportunity**

1. Institute offers number of electives listed in the curriculum due to which Interdisciplinary growth for students is possible.

The electives are offered even if there are group of 5 students. **2.** Students can undertake research projects at premier institutes such as IIT Bombay, VJTI, BARC, RCF, Telecom factory, ISRO, etc.

- 3.** Students and staff can work in real life projects facilitated through number of national and international MoUs with companies and NGOs.

- 4.** Exposure to foreign university and companies through International Industrial visits.

- 5.** Opportunities to enhance literary skills through writer's club Sambodhi.

- 6.** Students can undertake certification courses such as RedHat, STAR at minimal cost.

- 7.** Students get a firsthand experience of working on social cause and contribute towards nation building.

- 8.** Free Access to quality research publications through subscriptions to various journals and conference proceedings.

- 9.** There is opportunity to become leading institute at the national level.

10. Growing demand for modern graduate programs in teaching would enable us to cope up with technology change.

## **1.6 Institutional Challenges**

1. Admitting students to full capacity due to the presence of large number of Engineering colleges in state.
2. Recruiting faculty who have completed PhD from reputed institute like IIT.
3. Declining ethical standards in society. There are change in priorities in society and there are challenges in adopting these changes.
4. Students interest is shifting from physical world to virtual world even for lectures. Hence, there are challenges to adapt to hybrid teaching-learning techniques to focus on student attentiveness.
5. Revised AICTE pay scale resulting in maximum expenses in staff salaries.

## **1.7 Forecast**

Engineering in India has a bright and successful future. The industrial revolution introduced certain new technologies that require engineers to be updated with. Machine Learning, Artificial Intelligence and Robotics and advanced communication technology are some of the new trends that are responsible for shaping the future of India.

Institute has developed a strategic plan in line with above forecast. The curriculum after implementation of autonomy has incorporated about 20% subjects related to artificial intelligence.

# Chapter 2

## Strategic plan of the institute for the period 2024-2029

### 2.1 Infrastructural improvement

State of an art new building is expected to be completed within next two years. Campus layout has been designed so that academic, research, cultural and operational facets harmoniously interact. It will have easy accessibility for persons with disability. Strong ICT infrastructure throughout campus with high speed internet communication and digital information access will be provided. International tie up will be done after completion of new building. Upgradation of existing laboratories and development of new laboratories with hi tech equipments is being planned.

### 2.2 Prioritizing a student friendly approach and Continuous up gradation of curriculum

In order to fill gap between industry and academics ,syllabus revision will be done on regular basis. Skill based courses will be increased. Industry experts will be involved in curriculum design and student assessment. Technology will be used in the form of blended mode of learning ,creation and delivery of digital contents.

This will enhance employability of students at both national and international levels. Adoption of national credit framework and academic bank of credit (ABC) for a fluent student mobility and flexible learning has been planned.

Incubational centre will be made fully operational and will be equipped with modern equipments which will be used for revenue generation as well as for research purpose. Strengthening of Academia - industry and academia community partnerships via diverse initiatives is being planned. Students will be equipped with to become global citizens by internationalizing the education. Boosting of student enrollment ,retention and graduation metrics will be done.

Support for under represented students will be intensified for ensuring their success. Paid internships will be offered to maximum number of students.



## **2.3 Governanace improvement**

Autonomy will be given in all aspects with full accountability to various departments and cells. In place processes and quality assurance mechanisms will be improved. Additional funding resources will be prioritized and identified. Transparency, auditability and accountability will be implemented in all financial transactions to maintain trust and credibility with all stake holders.

## **2.4 Promotion of research activities**

Intensive and balanced use of latest technology, AR/VR, ML, AI will be made. Practice oriented and industry required research will be promoted to make research and teaching unique, such as industry 4.0/5.0.

All stake holders will be involved in research, innovation and scholarly publication.

Culture of innovative thinking will be made. More focus will be given for quality research programs, and intellectual property development. Faculty participation in research projects will be encouraged.

Exploring of funding mechanisms and cultivating of entrepreneurial culture will be made.

## **2.5 Training and faculty development**

In accordance with regulations, investment in faculty development will be made to enhance teaching and research skills. Training will include workshops on pedagogy, research methodologies, and academic technology.

Compliance involves ensuring that faculty engage in ongoing professional development as mandated by regulatory guidelines, and accreditation requirements.

## **2.6 Faculty evaluation**

Regular faculty evaluations based on teaching, research, and service will be done. Competitive compensations to attract and retain top academic talent, ensuring compliance with labour laws and guidelines provided by these regulatory bodies will be done. Investment in continuous education and training programs to enhance the skill set of administrative staff will be made.

## **2.7 Digitization and ICT framework**

Digital content repository will be promoted. Real time monitoring of resources, infrastructure utilization and environmental factors will be done by dashboard. Totally Paperless system will be made.