

AISSMS

COLLEGE OF ENGINEERING







STRATEGIC PLAN

2024-2029



Internal Quality Assuarance Cell



PRINCIPAL
ALI NOVA SHPISHYALI MEMORIAL SOCIETYS
COLLEGE OF ENGINEERING
KENNEDY POAD PLINE-LINEAR

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PREFACE

All India Shri Shivaji Memorial Society's College of Engineering, Pune standing with pride for almost 32 years, providing some of the best engineers to the world. Presently, college offers 9 B.E. programs, 6 M.E. programs and 5 Ph.D. research programs. Over the period, college has emerged as a leading institution with total intake of 690 for B.E. program and 99 for M.E. program.

With some of the unique and up to date infrastructure, best academic results in the Savitraibai Phule Pune University (SPPU) and focus on skill based activities including techno-social, sports and cultural activities, college has been preferred choice for many students who dreams to peruse their engineering dreams. As college is situated in heart of city and near to the railway and metro station, it proved to be bonus for most of the students.



College is accredited by NAAC with A+ grade. Also, total six programs are accredited by National board of accreditation (NBA). Our outstanding excellence has been the cornerstone of our reputation, and our graduates are recognized and valued for their integrity, commitment, ethical behaviour and exceptional leadership.

AISSMSCOE has progressed so fast because of the visionary patronage, committed leadership, hard work and community partnerships. These achievements are a testament to the fortitude of every faculty and staff member who enabled change at a pace never experienced before. The campus setting, vibrant learning environment contributes to an exceptional academic atmosphere that gives AISSMSCOE much to celebrate and build upon.

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LOOKING FORWARD

facilitate continued excellence To leadership in our mission, this Strategic Plan has been developed as a guide envisioning priorities. Aligned with the our future Institute's Mission, this Strategic Plan defines the objectives and strategies, that will build towards the goals outlined. Strategic plan document also takes review of implementation of various initiatives and actions taken during last five years which helps in defining strategic objectives for the next five years.

The planning started with process brainstorming session by a team of faculty members. The participants were grouped and completed an extensive SWOC analysis of AISSMSCOE. The team developed ideas on strategies. goals, objectives and the Suggestions and feedbacks were invited from all the stakeholders.







ABOUT AISSM SOCIETY

The All India Shri Shivaji Memorial Society (AISSMS) was established in 1917 by Rajarshi Chhatrapati Shahu Maharaj of Kolhapur to promote the noble cause of education to all strata of society especially the underprivileged and economically backward class. The Society started a day school and Jr. College in 1972. To keep up with the changing times, in the year 1992, AISSMS made a foray into higher and technical education. Today, besides running residential and day school and Jr. Colleges, AISSMS runs a world-class College of Engineering, Institute of Information Technology, College of Hotel Management & Catering Technology, College of Pharmacy. Institute of Management, Polytechnic and Private Industrial Institute with a wide spectrum of disciplines. We can truly boast of imparting world-class education from KG to PG with state-of-the-art equipped facilities for studies, research work and co-curricular and extracurricular activities.











About AISSMS COE

As an educational Institute, it becomes our prime responsibility to provide industry-ready and globally employable engineers to strive to positively impact society and create a notable change. Thus, AISSMS College of Engineering Pune has strived above and beyond to serve society through providing quality education. The All India Shri Shivaji Memorial Society's College of Engineering, Pune (AISSMSCOE) was established in 1992 and is approved by AICTE, New Delhi. The College is recognized under sections 2(f) and 12(B) by UGC. It is recognized by the Government of Maharashtra and affiliated with the Savitribai Phule Pune University (SPPU), Pune. It is the first institute to be accredited with an A+ grade by NAAC (3.27 CGPA) in the first cycle. The College within a short span has established itself as one of the best Engineering College in Maharashtra and also in India. AISSMS College of Engineering received the "Best Professional College Award in Urban Category by Savitribai Phule Pune University (SPPU), Pune.

This institute is located in the heart of Pune city having a sprawling campus of 11 acres with a large sports ground that is used for various sports competitions, parades and events. Today, engineering is at its zenith with innovative advancements in technology continuously encouraged by the zeal of mankind to achieve beyond what the mind can think. Engineering is just another word for innovative ideas being brought to life. The primary driving force for most of the new inventions are the need of human beings. From the beginning of time, man has been on a constant journey of radical change right from the invention of the wheel to the latest technology of flexible screen being designed to be incorporated in Mobile phones. Every sphere of engineering and technology are putting hard efforts to better themselves daily, bringing mankind to new and higher horizons. These spheres of Engineering include specializations like Computer Engineering. Electronics and Telecommunication, Mechanical, Civil, Production Engineering etc. These branches, and many more, have their special importance in the development of the various technologies and have also created many opportunities for research, placements in private, public and government sectors, Entrepreneurship development, internships etc.

Every branch of engineering has a special part to play in the advancement of humanity and in turn engineers have a special call to play their role efficiently to give back to society in the form of technological and infrastructural development. It is very important to become aware of the influence that each specialization has on the lives of young engineering aspirants not only in terms of providing them with enormous job opportunities but also giving them the power to impact the development of society for the bright future of the generations to come.





AISSMS COE: Academic

Milestones



2019 - 2023

2019
PhD Center Mechanical
2021
PhD Center Computer
2022
BE Robotics & Automation
(30)
ME E & TC : IOT & Sensors
(18)
ME AIDS (18)
2023
PhD Center Civil
PhD Center Electrical

2010 - 2014

2010
ME Automotive (18)
2011
ME Chemical (18)
ME Civil (18)
2012
EE Civil (60)
BE Mechanical (60)
2013
BE Computer (60)
2014
PhD Centre Chemical



1996 - 2002

1996
BE Chemical (60)
BE Mechanical SW (30)
BE Production SW (30)
1998
BE Computer (60)
2002
BE Civil (60)

1992 - 1994

1992 BE Electrical (60) BE Electronics (60) BE Mechanical (60) 1994 BE Mechanical SW (30)

BE Production SW (30)

240



PRINCIPAL
ALL HOLDS OF STRAILMENOON, SIXETY'S
COLLEGE OF ENGAGERING
KENNEDY ROAD, PUNE-411001

759



Institute Achievements

- Accredited with NAAC A+ Grade (2018)
- Accreted by NBA: 6 UG programs
- Recognized under section 2(f) and 12(B) of the UGC act, 1956
- 5 UG programs permanently affiliated to Savitribai Phule Pune University (SPPU), Pune
- Best Professional College Award 2019 by SPPU with cash prize of Rs. 3 Lakhs
- Best Engineering College Students' Chapter by The Institution of Engineers (India) (Consecutively in last eight years)
- Recognized as Best Engineering College by Sakal as Idols of Maharashtra Educational Excellence
- 1st Rank (Rated "A" Grade) in Pune region and 69th in India: NPTEL Local chapter



- UGC approved Mentor Institute (UGC Paramarsh Scheme) received grant of Rs. 30 Lakhs
- Best Engineering College award in India by Business Connect (2020)
- 26th Rank (A++ Category) in Chronicle Magazine, All India Engineering College Survey – 2019
- Recognition of Valuable contribution in building SAEINDIA for 25 years by Society of Automotive Engineers (SAE) India
- Establish Western Regional Chapter (2021-22) of Solar Energy Society of India (SESI)
- Received Climate Clock from Energy Swaraj Foundation for completing 1900+ certifications in Energy Literacy Training program (ELT)
- 237 Registration on AICTE Student Learning Assessment -PARAKH
- Excellence in Academy Library Award 2021 from Central Government Library Association and K-Nimbus
- · Virtual Lab nodal centre
- 12568 Students Enrolled for Swayam MOOC (NPTEL) from 2019 to 2023
- Outstanding Leader award in Higher Education, by Elets Technomedia Pvt Ltd & DL, Education Innovation Summit
- Established Institution Innovation Council (IIC) in AY 2019-2020 as per the MHRD's Innovation Cell, Government of India
- IETE Organizational Membership and Professional Activity Centre
- Institutional Member of TRIZ chapter, TRIZ Association of Asia
- Institutional Member of the Ferrocement Society Pune, India







Bachelor of Engineering (BE) <u>Total Intake - 690</u>

| Sr. No. | Branch | Course Starting Year | Intake |
|------------|---|----------------------------|--------|
| 1 | Chemical Engineering | 1996 | 60 |
| 2 | Civil Engineering | 2002 | 120 |
| 3 | Computer Engineering | 1999 | 120 |
| 4 | Electrical Engineering | 1992 | 60 |
| 5 | Electronics & Tele. Engineering | 1992 | 60 |
| 6 | Mechanical Engineering | 1992 | 120 |
| 7 | Mechanical Engineering (Sandwich) | 1994 | 60 |
| 8 | Robotics and Automation | 2022 | 30 |
| 9 | Electronics Engineering (VLSI Design And Technology) | 2023 | 60 |





Master of Engineering (ME) Total Intake - 99

| Sr. No. | Branch | Course Starting Year | Intake |
|---------|--|----------------------------|--------|
| 1 | Chemical Engineering | 2011 | 9 |
| 2 | Civil Engineering: (Structure Engineering) | 2011 | 18 |
| 3 | Artificial Intelligence and Data Science | 2013 | 18 |
| 4 | Electrical Engineering: (Power Electronics & Drives) | 2011 | 18 |
| 5 | E & TC Engineering: (IoT and Sensor Systems) | 2010 | 18 |
| 6 | Mechanical Engineering Design | 2013 | 18 |





Ph.D. Research Center

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Mechanical Engineering







Vision & Mission

Vision: Service to society through quality education

AISSMS College of Engineering has vision and mission which are futuristic in nature. They satisfy the needs of society by providing quality education through leading-edge technology.

Mission:

- Generation of national wealth through education and research
- Imparting quality technical education at the cost affordable to all strata of the society
- Enhancing the quality of life through sustainable development
- Carrying out high quality intellectual work
- Achieving the distinction of highest preferred engineering college in the eyes of the stake holders





Core Values

Leadership and cultural heritage

All India Shri Shivaji Memorial Society, established as early as in 1917, for the noble cause of Military, General, Technical & Management Education in India by Shri Chhatrapati Shahu Maharaj of Kolhapur also known as Rajarshi Shahu. In our Institute we follow the noble practices to focus a rich cultural heritage which is totally focused on the noble cause of Quality Education.

Honesty and Integrity

The foreword of our society is "Satyala Maran Nahi" which means "Truth is eternal" Keeping this in mind we are primarily focused on promoting the highest standards of trustworthiness and honesty by conducting all the activities in an ethical manner.

Freedom of thought and Expression

The guarantee of fundamental freedom of thought and expression ensures the overall development of an individual. Everybody is valued and judged in view of their commitments to foster a climate of ethical conduct, respect, responsibility and Trust.

Excellence

At AISSMS COE we endeavour to create and seek after higher benchmarks by exhibiting quality in staffing, facilities, programs, and services by promoting continuous improvement. A culture of excellence must pervade the Institution in both academic and non-academic areas.

Accountability and Transparency

We are engaged towards developing an atmosphere where every member takes responsibility for personal and professional growth and development. We believe in having complete transparency at all levels of hierarchy to promote a healthier working atmosphere to all.

Encouragement

Encouragement is provided for critical and quantitative thinking, effective communication, ethical decision making and social obligation in our students. Institute work in the direction of a motivated environment for staff and students.



SWOC Analysis

Institutional Strength

- Strong foundation established by social reformers
- · Active, participative and supportive management
- · Well qualified and experienced staff with good retention ratio
- Well maintained infrastructure for curricular, co-curricular and extra-curricular activities
- Located in the heart of the city and good connectivity with all modes of transport.
- Mentor institute under PARAMARSH scheme of UGC.
- Good connect with various professional bodies
- Well-resourced digitized Library
- · Vibrant NSS unit
- · Eco-friendly clean and green campus
- UGC recognition with 2(f) & 12(B) certificate.
- Accredited by NBA: 6 UG Programs

Institutional Weakness

- Less number of funded research and consultancy projects.
- Limited placements in core industries
- · Less student enrollment from other states
- Less number of doctorate faculty.
- Limited flexibility in curriculum design as affiliated to SPPU.
- Insufficient accommodation facility





Institutional Opportunity

- · Research and consultancy initiatives
- Revenue generation through resources sharing
- To achieve commendable NIRF ranking
- Development of industry supported laboratories
- Large pool of alumni can be harnessed to improve the quality of placement and research activities.
- · Strengthen the Innovation and Incubation Centre
- To come up as autonomous institute / Private university

Institutional Challenge

- Placement of students in core industries
- · Adoption of emerging technologies
- Enhancing networking with institutions of eminence within the nation and abroad.
- Branding of institute to attract meritorious students







STRATEGIC PLAN 2024-2029

In the next five years, we will focus our work in six areas, to ensure imparting quality education.

Areas of Focus:

- Excellence in teaching learning and academic processes
- Research and innovation
- Interaction with outside world
- Campus to community
- Professional development of students
- Overall quality initiatives

Goals:

- To inculcate learning habits
- To create an environment to make the students creative and innovative
- To promote project based learning
- To strengthen industry institute interaction
- To ensure continuous improvement in quality
- To develop entrepreneurship skills
- To nurture the spirit of team work
- To catalyze all round development of students
- To develop technologies for sustainable development





Area of Focus:

Excellence in Teaching - Learning and Academic Processes

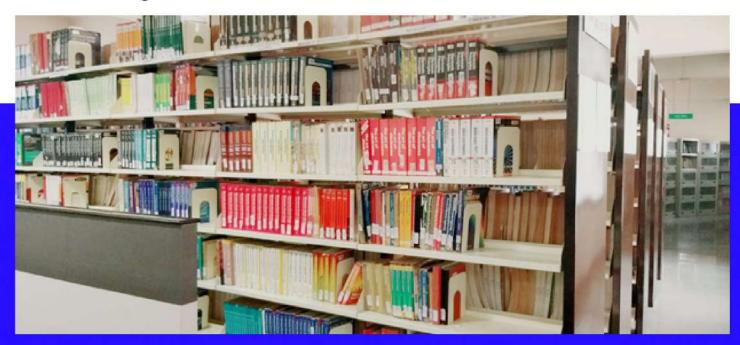
Initiatives / Action taken during 2018-2023

- Establishment of Academic Monitoring and Development committee
- Establishment of Program Assessment and Quality Improvement Committee (PAQIC) in each department for Planning and evaluation of academics.
- Implementation of ERP (e governance) for academic monitoring.
- Weekly academic monitoring through Google sheet shared with all faculty members
- Provision of online teaching-learning platform through MS Team, Zoom, Moodle during Covid19 pandemic
- Motivation to students and faculty for online certification courses by Swayam, NPTEL, COURSERA, EDX and foreign universities.
- Study material, recorded videos shared through DELNET and Virtual Labs identified for different domains and subjects.
- Conducted 5 Days FDP on "Excellence in Teaching Learning: understanding CO, PO, PSO, Its mapping and Outcome."
- Participation in UGC/AICTE/MHRD initiatives: PARAKH (250 + students completed assignments)
- Started NPTEL Nodal center and V-Lab Nodal Center
- Formation of guidelines, policy document, SOPs for students' projects.

- · Provision for Self learning, Mentoring slot in timetable
- Implementation of Course Activity Practice for providing real life exposure to student.
- Installation of lecture capture facility
- Establishment of Centre of Excellence in Teaching Learning (IUCEE)

Strategic Objectives for 2024 - 2029

- To develop improved plans for academic development and monitoring.
- To identify areas of improvement in academics and effective implementation of OBE.
- To implement NEP 2020 guidelines in a well-defined time frame.
- To encourage faculty and students for innovative and ICT enabled teaching-learning methods.
- To encourage students and faculty for experiential learning through various initiatives.









Area of Focus: Research and Innovation

Initiatives / Action taken during 2018-2023

- Received funding of Rs. 4.5 lakhs from Autofina UK for collaborative robot.
- Received funding of Rs. 28 lakhs from AICTE under MODROB Scheme
- Received funding Cummins for Research Activities of SAE
- Funding from MHRD, India under Unnat Bharat Abhiyan for Onion Harvesting Machine
- Development of research project "Performance Assessment of VCC based Air Water Generator using flat plate type Evaporator".
- Provision for financial rewards and special leaves for quality research publications.
- Celebration of "Dr. A P J Kalam Innovation and start up week" annually on the occasion of Dr A P J kalam birth anniversary.
- Organisation of Impact lecture series, webinars and seminars, specifically on IPR and Start Up.
- Organisation of Atmnirbhar Bharat: Online Startup Competition, Internal Ideathon and Smart India Hackathon.
- Total 11 faculties and one student are certified as innovation ambassadors by MHRD.
- Participation in YUKTI Innovative Idea Competition 2023 with total nine teams.

- AISSMS COE team won first prize in Smart India hackathon in Hardware section (2019-20) solving industrial problem of NALCO.
- Two projects recognised widely in Smart India Hackathon 21-22.
 1. Wheel chair operated based on tongue movement 2. Solution to MP State Police for map updation.
- IICDC-Semi Finalist Project from Civil department on "Quality water Equal Distribution."
- Number of patents by faculty and students. (Patents 50 +)
- 1st Prize in Avishkar, SPPU, Mumbai University and 1st Prize in Anveshan, AIU Delhi for project on Automated railway Crossing gate

Strategic Objectives for 2024 - 2029

- Boost the activities of Research, development and collaborations committee.
- Boost the activities of Innovation, IPR and Start Up committee
- Encourage students and faculty to participate in research and consultancy projects.
- Organize faculty development programs related to for research, development and innovation activities.
- Encourage faculty to pursue Ph.D. degree.





Area of Focus: Interaction with Outside world

Initiatives / Action taken during 2018-2023

- Centre for information, Training and Placement (CITP) involving different committees. Placement, Alumni engagement, Entrepreneurship and skill development, Industry-Institute Interaction, Mentoring and counselling, Competitive examinations.
- Training involving Soft skill, Analytical / Logical reasoning and Company specific are arranged for students.
- One faculty One Industry Practice improved interaction with industry.
- Foreign language course (German) for students in the campus.
- Skill based activities through students' chapters like SAE/Drone/Robotics/Aero-design
- Involvement of student in institute administration through GSA (General Students' Association, committees for Students' chapters, Class Study Circle
- Organization of career orientation sessions, corporate training for students.
- Development of mentoring booklet for mentoring of students.
- Provision for professional counselor for counselling of identified students.
- Organization of "Coffee with Alumni" sessions for interaction of alumni with students.
- Development of internship portal to bring all the internship activities.

- Using Placement Management platforms like Drives, Superset & POD.
- Infosys SPRINGBOARD platform for advance courses.
- Conducted Entrepreneurship Awareness Programs is association with DST.

Strategic Objectives for 2024 - 2029

- Identification of potential industry partners for various collaborative initiatives
- Strengthen association with industry and professional organizations.
- Boost the activities of entrepreneurship and skill development cell.
- Promote innovation and start Up activities through incubation center.
- Promote interaction with alumni at a wider scale.







Area of Focus: Campus to Community

Initiatives / Action taken during 2018-2023

- Vibrant NSS unit organizes various extension social activities throughout year.
- Environmental programs such as tree plantation, environment preservation, energy conservation, promotion of renewable energy, hygienic cleanliness are organized on annual basis.
- Water management awareness program was organized and RO plant was installed in a village for reducing water borne diseases.
- Blood donation camps and Plasma donation camps organized twice in a year in association with government organizations and Army Hospital Pune.
- Health checkup, eye checkup camps were organized by NSS unit.
- · Visit to orphanage and physically disabled schools
- Awareness sessions and activities on women empowerment, road safety and traffic, heritage conservation, cybercrime were organized.
- Electoral literacy club organizes voter awareness sessions, voter registration drives.
- Adoption of five villages Unnat Bharat Abhiyan
- During pandemic, social contribution: Mask and sanitizer distribution, awareness activities for vaccination etc.







Strategic Objectives for 2024 - 2029

- To develop strong campus community relationship.
- To provide platform for social entrepreneurship.
- Identification of local issues for providing solution with the involvement of students and faculty.
- To sensitize students and faculty towards democratic values and Indian ethos.
- To initiate various activities and platforms for the holistic development of students.









Area of Focus: Professional Development of Students

Initiatives / Action taken during 2018-2023

- Formation of Students Committee for Students' Chapter and Students Club
- Established new Students Chapters like Solar Energy Society of India (SESI), IETE Student Forum (ISF), IEEE, etc.
- Organization of Annual Technical Event "Engineering Today".
- Organization of Annual Institute Level Project Competition
- National Awards: Best Engineering College Students' Chapter Award from The Institution of Engineers (India): 2018, 2019, 2021, 2022, 2023
- Organization of International Conference on Green Energy (ICOGE-2023)
- Participation in national level events of SAE: M BAJA, E BAJA, Effi- Cycle, SUPRA, Gocart.
- All India Rank One in design contest BAJA SAE India 2024 with ten prizes in different categories.





Strategic Objectives for 2024 - 2029

- To Introduce professional development opportunities such as skill-building workshops and mentorship programs
- To encourage members to participate in industry conferences and seminars.
- To encourage Student members to propose and lead innovative projects.
- Pursue opportunities for national recognition through awards or partnerships with prominent organizations









Area of Focus: Overall Quality Initiatives

Initiatives / Action taken during 2018-2023

- Annual Report Format for data collection
- Active Participation of Institute Level Committees (ILC)
- Filing for documentation of all the achievements to be maintained by departments
- Initiated and implemented format for "OVERALL BEST PERFORMING DEPARTMENT"
- Annual Academic and Administrative Audit (AAA)
- Standard formats initiated by IQAC:
 - Feedback from Stakeholders and Action taken Report
 - Result Analysis (Pro-forma A and B)
 - Guidelines for PAQIC formation
 - Feedback from industry, Impact analysis and feedback of students
 - Students feedback on Infrastructure and facilities
 - Benchmarking of activities
- Conduction of Induction lecture for all classes at the start of academic year
- Implementation of "Class Study Circle" practice
- Implementation of "Course Activity" practice
- Initiated and implemented organization of "Dr. A P J Kalam Innovation and Start Up week", Interdepartmental project exhibition / competition on annual basis.

- Interdepartmental project exhibition / competition on annual basis.
- Mentor institute under "UGC PARAMARSHA" scheme for NAAC accreditation aspiring five institutes.
- Participation in NIRF, various Best Engineering College ranking and surveys.
- Received "Best Engineering College Award of SPPU".
- Accreditation of six programs by NBA

Strategic Objectives for 2024 - 2029

- Develop a plan for achieving autonomous institute or private university status.
- Develop a plan for effective implementation of NEP 2020.
- Identification of national and international level accreditation and ranking agencies for continuous improvement.
- Develop networking with national and international level institutes / universities for research and academics.
- Adoption of the rapid technological changes by updating the curriculum and infrastructure.





Deployment Strategy

Action Plans:

- Develop detailed action plans for each focus area and strategic objective.
- Assign responsibilities and timelines for effective implementation.

Resource Allocation:

- Allocate funds for infrastructure upgrades, faculty development, and research initiatives.
- Seek external funding through grants and partnerships.

Monitoring and Evaluation:

- Implement regular progress reviews and evaluations.
- Define sub strategies and goals with evolving needs.

Stakeholder Engagement:

- Engage internal and external stakeholders in the implementation of strategic plan.
- Foster a sense of ownership and commitment to the strategic objectives.





Looking ahead

Strategic plan developed for 2024-2029 will serve as a monitoring tool for self-assessment of institute at every step. Strategic objectives are set considering implementation of initiatives and actions in last five years which will help to define sub strategies and goals in coming years. Preparation of action plan and its implementation with the involvement of all the stakeholders and resource allocation for the same are the key aspects required to be monitored. Execution of strategic plan in continuously changing dynamic environment will require a framework for implementation and regular evaluation involving team work with good sprit.

Through strategic planning and effective deployment strategies, the institution aims to position itself as a leader in engineering education and research.



