MAR ATHANASIUS COLLEGE OF ENGINEERING

SWOC ANALYSIS AND STRATEGIC PLAN

VISION

Excellence in education through resource integration

MISSION

The institution is committed to transform itself into a centre of excellence in Technical Education upholding the motto "Knowledge is Power." This is to be achieved by imparting quality education to mould technically competent professionals with moral integrity, ethical values and social commitment, and by promoting innovative activities in the thrust areas emerging from time to time.

SWOC ANALYSIS

Strengths:

- Brand image and opulent legacy of the institute
- The campus is spread over 62 acres of land
- Visionary leaders with high values
- NBA accredited from 2002 onwards
- Top ranked and ambitious students
- Timely scheduled examinations and result publication
- Choice based credit and semester system
- Excellent placement records
- Encouragement and support from management and PTA
- Research and consultancy culture
- Heterogeneous student community
- Career guidance and placement cell
- Well-functioning library and well-equipped laboratories
- Scholarship and free-ships by government/college
- Effective faculty advisor and mentoring system
- Sports facilities of international standards
- Vibrant NSS unit with state and national awards
- Very well connected by air, road and rail
- Conducive peaceful environment for learners
- Dedicated Faculty with qualification and experience
- Good transition rate of students
- Service minded technical staff
- Full WI-FI enabled campus
- Separate Hostel facilities for Boys and Girls
- Eco-friendly campus
- 100 percent faculty retention rate

Weakness:

- Less number of UG courses due to government restrictions
- Lack of exclusive research wing
- Limited industrial exposure and revenue generation
- Patents and major startups are limited
- Lack of foreign exchange programme
- Inadequate accommodation and conveyance facilities.
- Government restrictions for Infrastructure expansion
- Inability to implement full-fledged CBCS due to government/university restrictions
- Lack of entrepreneurship development.

Opportunity:

- Affordable tuition fees fixed by Government
- Technological University
- National Education Policy
- High reputation and social acceptance
- Government's start-up policy
- Potential to become an autonomous engineering college/ Deemed-to-be university
- Proximity to Cochin industrial zone
- Industrial requirements and tie-ups
- Fast changing technology.
- Encouragement and support from Alumni
- Community extension programmes
- Collaborative Research with National and International Organization
- Exchange programs
- Funded/sponsored projects at National and International levels
- Revenue generation through consultancy

Challenges:

- Declining number of good research scholars.
- Twinning Programmes
- Advanced courses offered by other institutes.
- Brain drains of professional talents.
- Luring by other institutions.
- Lack of interest for engineering profession.
- Attitudinal and behavioural problems.
- Core company's preference for premier institutes.
- Shortage of good scholars opting teaching profession.
- Filing patents and high-quality research publication
- Industry – Institute interaction for curriculum development and placement
- Developing a sustainable research culture

STRATEGIC PLAN

1. Autonomous College & Skill Development

	Strategy	Action Plan	Target Year
1.1	Autonomous College	• NAAC Accreditation • MACE attains Autonomy in terms of curriculum • Increase in the number of courses and skill-based, technical programmes	Attained Autonomy status and first batch of autonomy in 2024
1.2	Increase the Number of Courses	• Introduce more courses like Robotics, AI, Biotechnology, Data Mining etc. • Introduce more practical and technical skill-oriented courses • Courses may include: ▪ Core courses ▪ Elective courses ▪ Core-Supportive courses ▪ Allied courses ▪ Extra-departmental courses ▪ Extra-credit courses ▪ Vocational & add-on courses	New AI & ML course introduced in 2022

1.3	Lay emphasis on Skill-based Development	• Twinning Programmes, Skill-oriented and Industry-related courses and Executive Education • Practical-based, project-based courses in curriculum • Training based on hands-on experience and research opportunities in the selected field	2025

		• Internships, hand-on workshops & associated training opportunities for such fields • Integrated courses to let students learn topics of their interest, like Machine Learning, AI, Competitive Programming, Embedded Systems and IoT	
1.4	Syllabus more inclusive of Practical Knowledge	• Practical application of learnt topics to promote more patented & funded projects from college • Personal Finance Management, Ethics, Tax Management, Work Etiquettes, Character and Personality Development classes and activities to boost the morale of students regarding self • Value Added Courses for Competency Examinations (GATE, IAS, IPS, IFS etc.) to provide effective mentoring. • Introducing life skills & topics likeOrganic Farming to foster sustainability	2025
1.5	Placement Opportunities	• Bring forth the best placement opportunities in Kerala • Bring in more collaborations and tie-ups with MNCs and large firms for Placement Drives and signing MoUs • Provide better, transformative training and awareness among students with the help of Training & Placement Cell	2025
1.6	Encouragement of Patented Projects	• Encourage more projects from college by providing support in terms of technical support and financial aid • Raise awareness on patents, IPR and funds for projects	2025

		• More industry-related training and internships	
1.7	Promotion of Entrepreneurship & Start-Up Culture	• Enlightening students about the start-up culture and entrepreneurship through orientation, idea-pitches & ideation platforms • Encourage start-up initiatives and investments in the form of infrastructure or funds • Conducting talks, workshops with business professionals to share their experiences • Raise awareness regarding the same with the help of college IEDC cell	2025
1.8	Green and Sustainable campus	• Rainwater harvesting carried out as water tanks and built-in structures in campus buildings • Slurry and manure management to utilise biodegradable waste as fertilisers and biogas, becoming a good fuel • Recycled paper used for paperwork; all fee transactions through online methods	2025
1.9	Self-sufficiency and Sustainability in energy	• 100% energy requirements met by solar panels and solar energy cells placed at rooftops	2025
1.10	Self-sufficiency in food procurement	• Promoting organic farming with dedicated farmlands and greenhouses • Raising awareness about various farming techniques, seed qualities and the need to practice agriculture with the help of college NSS units	2025

2. International Student Exchange Program

	Strategy	Action Plan	Target Year
2.1	Foreign Exchange	• Deemed University Twinning Programmes • Foreign exchange programmes with leading foreign universities • Conducting collaborations with National & International campuses to provide quality education to students • Introduction of both online & offline courses in the curriculum spanning from 6 months to 1 year in duration • Provide foreign language training to students including French and German	2030
2.2	Student Exchange Program	• Opportunity for our students to study at Prime International institutions for a duration of 6 months to 1 year online/offline • Invitation to Core Companies for Placement Drives, Training-based internships and Industrial Visits.	2030
2.3	Cultural Exchange	• Promote student interaction across institutes barring cultural and regional differences through pan-India and pan-World events. • This can be done so by arranging: ▪ Business conferences ▪ Technical conclaves ▪ International hackathons ▪ MUNs ▪ Music concerts ▪ Dance competitions ▪ Arts & Literary Fests ▪ Open Mic sessions ▪ Film festivals	2030

		▪ Ted Talks & exhibitions • Conduct Inter-campus and International Sports meets & Athletic events	
2.4	Improvement of Infrastructure	• Fully Residential Campus at par with International standards • Infrastructure in terms of classrooms, labs, housing and campus facilities equipped with latest technology • Provide solar energy cells for energy usage and install rainwater harvesting systems in buildings • Building sports stadiums, language centres and improving recreational facilities • Improve transport facilities in the campus	2030

3. Establishment as a Global Hub

	Strategy	**Action Plan**	**Target Year**
3.1	Placements & Job opportunities	• NIRF Ranking in Top 50 • Core companies, MNCs, and International firms invited for Placement Drives, Trainings, MoUs and Campus Selections • MACE to enter in the Top 100 engineering colleges in India • MACE to be established as a global hub for education through autonomy and student exchange programs • Possible attainment of a University status by clubbing sister institutions under the college management.	2035

		• Provision for students to migrate to foreign countries for jobs & internships	
3.2	Centre of Excellence for Research	• Promoting research-oriented education to inculcate strong scientific and research aptitude among students. • Enhance the possibility of making MACE a centre of excellence for research • More research-based projects and patents from the campus • Encourage projects and research on topics of social and technical relevance	2035
3.3	Academic & Student Achievements	• Number of departments incremented as per the changing scenario • More options for students, especially in the form of technical, industry-based, project-based and skill-based courses. • Exposure of the student to international level events, hackathons and programs • More patented and funded projects approached from the campus • More start-up initiatives and business ventures introduced from the campus • Provision for students to pursue higher education in foreign campuses	2035

4. MACE as Global Hub

	Strategy	Action Plan	Target Year
4.1	MACE as a Global Icon	• Expand MACE Campus all over the world • Fully Residential Campus at par with International Standards	2040

		• World-class technology adopted in teaching and learning experience • Curriculum rich in technical, skill-oriented, industry-based and practical courses • Foreign exchange programmes and student exchange programmes enhancing educational and cultural exposure for our students as well as students from diverse campuses • Expanding infrastructure that foster interdisciplinary research, thereby creating a global hub of innovation in MACE. • Moulding a generation of technically proficient and Industry-ready engineers from the campus • Carving a technically skilled, talented pool of engineers through skill-oriented, industry-related courses and training	