

# FOR 1<sup>st</sup> CYCLE OF ACCREDITATION

### MOHAMED SATHAK ENGINEERING COLLEGE

EAST COAST ROAD, MAYAKULAM PANCHAYAT, KILAKARAI. 623806 www.msec.org.in

#### Submitted To

# NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL BANGALORE

November 2022

### 1. EXECUTIVE SUMMARY

#### 1.1 INTRODUCTION

#### Introduction:

The Mohamed Sathak Engineering College, started in the year 1984 is situated in a picturesque environment at Kilakarai, Mayakulam Panchayat, Ramanathapuram District, Tamilnadu. The Mohamed Sathak Trust is a charitable and educational organization established in 1973 Registered under Societies Registration Act by the Philanthropic Mohamed Sathak Family of Kilakarai, Ramnad District, Tamilnadu.

The founder Chairman Late Alhaj S.M. Ahamed Jalaludeen, was the binding force behind the establishment of a trust for the charitable and educational needs of the poor and downtrodden people. The other founder members of the trust apart from Late S.M. Ahamed Jalaludeen are as follows:

Alhaj. Dr. S.M. Dastagir – Former Executive Director

Alhaj Dr.S.M.Hamid Abdul Quadir- Former Chairman

Alhaj. S.M. Kabeer – Former Correspondent

Present Trustees are.

Alhaj S.M. Mohamed Yousuf – Chairman

Hajiyani.S.M.H . Sharmila- Secretary

Its aim is promotion of Technical, Scientific, Medical and Management Education and training of personnel to meet the Technical and Managerial needs of the country. It endeavours to spread technical and management education at all levels of society, in

particular among the backward communities. First the trust have started to give scholarship to the poor backward class students from 1973. Afterwards, it has started other Institutions.

#### OTHER NOTABLE AWARDS

Recently our Institute got NBA(New Delhi) accreditation for four UG courses such as Civil, Mechanical, EEE and Chemical Engineering Department (2020-2023).

Our Institute got NBA Accreditation for ECE, CSE, Mechanical and Civil Engineering Departments (2007 -2010).

ISO 9001:2015 certified by TUV SUD.

• Best Donor Award, Best Principal Award from Collector

The Institution has focused its attention on (i) Quality teaching-learning and (ii) Research encompassing consultancy. The Institution has created the right environment for promoting entrepreneurship among students through layer learning by doing projects from first year onwards.

The students are given complete flexibility and freedom to improve their performance. The Institution promotes measures for Institutional functioning towards continuous quality enhancement through the Best Practices.

#### Vision

To be an institution of repute and rare creativity in providing quality education with technical endeavor and research opportunities of very high standards to the students, who in turn shall contribute to the advancement of the society and human kind.

#### **Mission**

- To provide Quality Education to the students across the country.
- To motivate them to acquire skills and disseminate knowledge.
- To achieve academic and Professional excellence.
- To offer the frontline facilities and sophisticated environment.
- To endow with Expertise Faculty by providing opportunity to promote the students' skills and knowledge.

## 1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

#### **Institutional Strength**

- 1. Strong foundation has been established
- 2. Highly experienced and committed faculty & staff members
- 3. Located in the rural
- 4. Good support for Extra and Co-curricular activities
- 5. Constant encouragement and full-fledged support from the Management.
- 6. Dedicated, well-qualified and competent faculty with research intent.
- 7. Sprawling Campus in a serene environment with excellent infrastructure.
- 8. Well-equipped labs.
- 9. Effective mentoring system providing constant guidance to the student and feedback to the parent.
- 10. Providing scope for all-round development of personality of the student through Sports, Associations and Clubs.
- 11. Ranked at the top among the private Engineering Colleges in Ramnathapuram district.
- 12. Cells like EDC and IEDC to install as well as promote the spirit of innovation and entrepreneurship.
- 13. Increased interest and effort among faculty towards research and publication in reputed journals.
- 14. Periodic research orientations like National and International Conferences, Workshops/Seminars.
- 15. Excellent Placement Records.
- 16. Effective involvement of alumni in placement of out-going students

#### **Institutional Weakness**

- Limited academic freedom
- Reduced core placement due to mass recruitment by IT companies
- As a self-financing college, faculty members face difficulty while seeking funds
  Government funding agencies

  from various
- Inadequate time for organizing extra-curricular activities (NSS/YRC)
- Impact of social media
- Few number of major research projects
- Limited placements in core industries
- Few Interdisciplinary Projects
- Less consultancy work
- Industry-Institute interaction needs improvement

#### **Institutional Opportunity**

- Freedom to introduce new methodology using CoE Laboratories
- Value added Courses to improve Core knowledge, C-Programming courses for non-Computer students
- Scope for commercialization of research outcomes
- Training the students in the New technology areas for enhancing employability
- Rising costs of overheads and resources
- Opportunities for more placements
- Research and consultancy initiatives
- Revenue generation through resource sharing
- Faculty and student exchange programs with foreign Organizations
- To come up as autonomous Institute
- Providing students to study aboard through intenational admission cell

#### **Institutional Challenge**

- Curriculum and Regulation restrictions of the Parent University
- Training the faculty members in the latest technologies as per industry requirement
- Obtaining funds from the Industries for research projects
- Stiff competition among the students in placement, higher studies and research
- Increase placements in core industries
- Execution of collaboration with foreign Institutions
- High cost of delivering Education
- To cope up with emerging technologies
- To attract high meritorious students
- In this fast-growing technological era, it is becoming difficult to adjust and adapt quickly since the academic curriculum is prescribed by the affiliating Anna University.
- Improving the employability of the students in the current scenario of rapidly changing technology

#### 1.3 CRITERIA WISE SUMMARY

#### **Curricular Aspects**

The Institute follows the curriculum prescribed by the Anna University. The curriculum is well translated to the students after through preparation as well as critical thought by the teachers concerned.

Choice Based Credit System introduced in 13 UG programs and 9 PG programs from the academic year 2017-2018.

The institution encourages the faculty to keep themselves update their knowledge by offering refresher courses, faculty development programmes and workshops.

In addition, the institution has provided 33 value added courses and 8 certificate courses to students for developing skills to bridge the gaps in the syllabus. About 78% of students participated in certificate and addon courses.

Institution is sensitive to gender, environment issues, human values and professional ethics. Anna University has introduced courses on professional ethics, Human values and Environmental science. Departmental activities are scheduled which include Industrial visits, Implant training, Guest Lectures, Symposium, Seminars, Conference, Placement and Training and Association activities. About 74% of students have undertaken the field projects and internship every year.

The IQAC academic coordinator monitors and assists the faculty members for effective curriculum delivery. Our institution

always conducts a structured feedback activity and feedback is obtained from both internal and external stakeholders including students, parents, faculties, alumni and employer. Emerging trends in technical and professional education call for value addition i.e. students must acquire something more than what is provided in the curriculum. Hence our institution is keen on helping the students take up certificate courses to complement their knowledge and skills related to their field of study. Department invites suggestion and feedback from students, teachers, employers, Alumni and parents regarding the curriculum and institution ensure its availability in the website.

#### **Teaching-learning and Evaluation**

The main objective of Mohamed Sathak Engineering College is to impart quality education to the students of all sections in the Society. The Outcome Based Education (OBE) model was initiated during the academic year 2018-2019. Advanced learners are provided an opportunity to choose for self-learning courses, summer internships, academic projects and online courses. The programme made available to them for their all-round development range from human rights and gender equity to life skills and leadership skills, self-defense, yoga, sports, communication skills and soft skills. Student exchange programme with Sisters institution provide exposure and experience in increase one's horizon and building self-confidence. A student-centric learning process is followed as stated by the University. Renowned persons from premier institutes and industry from various fields are invited to deliver guest lectures to supplement the curriculum. The College has a effective mentoring system in place. Professional counseling is given to those students who need help in all extends. With a state-of-the-art technology that ascertains technology-enhanced teaching and learning, the college also promotes research and industrial relations. The college has ICT-enabled classrooms and Centre of Excellence in various disciplines that enable effective teaching and learning process. The pass percentage has considerably increased to 88.17% during current assessment period 2017-2022. The average station experience of the teaching faculty is 10 years. The Teachers'quality is improved by organizing and participating various Faculty Development Programme, Workshops, Seminars, and Conferences. Teachers with Ph.D / NET / SET

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qualification have been increased from 6.61% during previous assessment to 15.63% during the current assessment period and at present 23.43% for the current academic year 2022-23. The teaching learning process is monitored by the concerned organizational hierarchies such as the Principal, IQAC coordinator, Head of the Department, Class Committee, and Faculty Advisor.

#### Research, Innovations and Extension

The Institution foster the minds of the faculty members and students towards research and development by adopting various strategies and incentives. The faculty members and students are encouraged to participates in seminars, workshops, conferences, publication and patents. Institution has a dedicated team of researchers. Our College Citation index is 1500, h-index is 23 and i-10 index is 51

- Faculty members and Undergraduate/ postgraduate students are provided with adequate resources to pursue research in their respective field of interest. Students are encouraged to take up research projectunder the supervision of the faculty members
- 12 workshops/ seminars are conducted on IPR.
- 28 research workshops/ seminars are conducted
- During project expo, students are displaying their gadgets to encourage young minds who visit the expo.
- The Institution has 41 Ph.Ds holders, 21 pursuing Ph.D. and remaining faculty members are working collaboratively.
- 41 faculty members have completed PhD in the last five years.
- 4 funded activities have been organized
- 25 research grant has been received from various funding agencies viz., MODROBS, SERB, TNSCST, FIST etc tuned to Rs. 57.78 Lakhs.
- 20 consultancy work has been taken received from 03 industries / government
- The faculty members pursuing research are encouraged by providing them the required equipments, books, leaves for research work, financial assistance for conferences/journals, e-resources, computerfacilities, Wi-Fi etc.
- The college provides incentives to the faculty for their research contribution. Research meeting isconveyed to discuss proposals to funding agencies.
- The department of chemistry is recognized as "Research Centers" bythe Anna University.
- 02 faculty members are recognized supervisors of Anna University and other Ph.D holders are motivated to obtain supervisor recognition.
- The faculty members who do not possess Ph.D degree are advised to register for research work.
- The institution has a well-defined code of ethics to check malpractices and plagiarism in research.
- 27 patents have been applied/ published/ awarded by faculty members and students
- 157 Research papers have been published in the UGC recognized journals.
- 82 papers have been presented in national/international conferences.
- 17 books/ book chapters have been published
- 10 center of excellences has been established
- 04 incubation centers have been established
- Institution has an Industry Institute Partnership Cell (IIPC) which has signed 48 MoUs.
- 04 industrial seminars/ workshops are conducted
- 22 industrial linkage program such as internship, field trip, on-job training and research have beenorganized.

- Our students have participated in Ideathon/ Hackathon/ Design contests conducted at state and national levels.
- 13 recognition and awards are received for various extension activities from University, State level agencies and NGOs.
- 08 blood donation camps have been organized to create an awareness on blood donation theme
- 51 extension and outreach programs were conducted for the benefit of society through NSS, YRC, Rotract, clubs and societies.
- Institution has adopted 05 villages (Mayakulam, Chinnamayakulam, Mulluvadi, bharathi nagar and kangirankudi) under Institutional Social Responsibility scheme

#### **Infrastructure and Learning Resources**

Infrastructure and Learning Resources

Good Ambience Class Rooms, well equipped Laboratories, Tutorial Rooms for effective Teaching and learning with ICT facilities. Administrative Office, Department HoD Rooms and faculty Cabins with all required facilities. Air-conditioned ICT Enabled seminar halls, Board Rooms, GD & Interview Rooms and Auditorium. Around 428 Computers System with 100 Mbps Internet bandwidth

Laundering facilities in College and hostels.Network Maintenance Cell and Test & Repair Centre for maintenance of all hardware and software.Modern Gym facilities separately for girls and boys Availability of indoor and outdoor sports facilitiesEstablishment of Health Centers with qualified Physicians City Union Bank ATM, Postal Service inside the Campus

Maintenance of campus facilities through qualified engineers and managers. Smart Class room available for Special coaching and Guest Lectures. The college has adequate classrooms, laboratories and seminar halls for the conduct of the courses for

all the UG and PG programmes. In addition, faculty rooms, rest rooms exclusively for girls and auditorium for organizing students' events centrally, such as blood donation camp, entrepreneur programmes etc., separate halls for the conduct of examinations are available.

The Internet facility is available for all faculty and students in campus. For ease of access, the entire campus has been made Wi-Fi enabled with about 24 Wi-Fi points spread over the entire campus. The classrooms are equipped with a laptop, a roof mounted LCD projector, white screen facilitating the teacher to project teaching material. Thus, the ICT resources are extensively used in the campus. Due to the large number of computers and networking, a Systems Administrator and a Network administrator with their staff look after the maintenance of computers and the networking. The power is supplied by the Electricity Board with a peak load of 95 kVA, and it is augmented by six diesel generators capable of giving a backup power of 430 kVA. The generators are maintained as and when the repair occurs, on a call basis; the day-to-day maintenance is done by the technical staff attached to the substation.

#### **Student Support and Progression**

Our institution provides necessary financial assistance to the students, meaningful experiences for learning at the campus and to facilitate their holistic development. We also concentrate on progression of students to employment and higher education. Besides academic, our institution motivates the students to participate in various sports and cultural activities. Also, we impart our alumni to provide necessary guidance and assistance for the betterment of our students and the institution.

Scholarship section of our institution provides valuable guidance to get financial assistance from various government schemes like SC/ST Scholarship, BC/MBC Scholarship, First Generation Scholarship, Minority Scholarship, etc. Besides government schemes, we are providing necessary assistance to get financial support from non-government scholarship schemes like Mohamed Sathak Trust Scholarship, Tamilnadu Muslim Association of Greater Chicago Scholarships schemes, etc., During the last five academic years, our students received scholarships under various schemes at an average of 91.18%. We offer various capacity building initiatives for our students to improve their soft skills, communication skills, ICT skills and their life skills. Mechanisms like Anti-ragging cell, Women Empowerment Cell, Student grievance redressal cell provide various welfare measures to support our students. Our Institution has a well structured, organized guidance and counseling system in place.

Our Training & Placement Cell is working towards to equip our students with employability skills and to get succeed in placement drives. Sustainable good practices and effective support, improves confidence level our students to attend various on-campus & off-campus placement drives and they get placed in reputed companies. Also, we motivate and guide the interested students to pursue higher studies. Our placement and higher education average during the last five years is 73.81%. We provide necessary guidance for the interested students to prepare for the competitive exams. We facilitate vertical movement of students from one level of education to the next higher level or towards gainful employment.

Besides academic activities, we motivate our students to take part in extra-curricular activities and our students participated in various sports and cultural events at at average of 25.5 events per year. We are having ample infrastructure to train our students in sports and cultural domain. Our students attain some high levels and received 28 awards and medals in sports and cultural events during the last five academic years.

Our Institution has the best practice of encouraging the collaborative work with Alumni who are having a life long association with the institute and who think and act better in the welfare of the institution. Our Alumni Association has been registered as a Society under Tamilnadu Government Society Registration Act with the Registration Number: 36/2014. Alumni Members are invited for various knowledge transformation programs for the mutual benefit. They are also invited to attend alumni meet where they are felicitated and invited to put forth their suggestions.

#### Governance, Leadership and Management

Our Management gives more importance with keen focus through Vision and Mission of the Institution. The Governing Council meets periodically to monitor progress and suggest strategies. Coordination of academic and administrative planning, and implementation have been established through ISO and AICTE guidelines.

The Principal and the HoDs periodically meet to take decisions on academic matters.

The HoD decides on the activities of the department and delegates responsibilities to the faculty. Transparency maintained in the academic and administrative practices.

Self-appraisal for faculty and students feedback systems. Empowering faculty members through Faculty Development Programs, participation in various activities of the institution.

Financial Assistance by the management through Department budget and Institution Budget.

Regular Internal and external audits for income and expenditure.

Community service by NSS through Blood donation camps, Medical checkups, etc..

Effectiveness of various committees in the implementation of minutes evidenced.

Welfare measures for teaching and non-teaching staff like cash awards, incentives, Maternity leave for women etc..Best practice and support for Examination of students through IQAC initiatives.Planning and

implementation of all academic and administrative activities of IQAC made known to all through Academic Coordinator and members of IQAC.

#### **Institutional Values and Best Practices**

The institution has adopted various measures to maintain a green campus which helps in developing an ecobalanced environment inside the campus with trees and beautiful lawns. Usage of solar panels, rainwater harvesting, sewage water treatment plant, drip water sprinklers, energy saving measures etc., are demonstrated well and the greenery concept is followed in the campus. The institution also ensures environmental consciousness in the minds of the students by conducting environmental awareness programmes from various

clubs like YRC club, NSS etc., The two best innovative practices that the institution follows the skill development for enhancing employablity and to promote Entrepreneur Eco System through Orientation Programme, Creative Thinking Workshop etc. and Voluntary Blood Donation camp conducted regularly under National Service Scheme (NSS) in association with the Tamil Nadu State Blood Transfusion Council & Tamil Nadu State Aids Control Society and Meenakshi Mission Hospital & Research Centre, Madurai.Our Institutional values includes school outreach programme in association with District School Education department is being conducted every year for the HSC students of most backward and rural areas of our district. This programme aims at providing guidelines through subject experts have been invited to give valuable counselling regarding time management and important areas of subject to be concentrated to get better marks in HSC examinations and to face the examinations without fear and stress. Awareness about higher education is imperative to the school students. Various options in higher studies, latest trends of professional courses such as M.B.B.S , Paramedical courses , B.E., B.Tech., B.Arch, Arts & Science, and scholarship schemes available for different categories of students have been very well exposed. Also the school students should equip their qualities in the entire manner while they transform from school to college/university.

# 2. PROFILE

# 2.1 BASIC INFORMATION

Name and Address of the College			
Name	MOHAMED SATHAK ENGINEERING COLLEGE		
Address	East Coast Road, Mayakulam Panchayat, Kilakarai.		
City	KILAKARAI		
State	Tamil Nadu		
Pin	623806		
Website	www.msec.org.in		

Contacts for Communication						
Designation	Name	Telephone with STD Code	Mobile	Fax	Email	
Principal	Senthilkumar R	4567-246333	8610337011	4567-245344	principal@msec.or g.in	
IQAC / CIQA coordinator	Mohamed Rafi M	4567-242327	9442380825	4567-241327	mcahod@msec.org	

Status of the Institution	
Institution Status	Private and Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

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Recognized Minority institution					
If it is a recognized minroity institution  Yes  MSEC Minority opt.pdf					
If Yes, Specify minority status					
Religious	MUSLIM				
Linguistic					
Any Other					

### **Establishment Details**

State	University name	Document
Tamil Nadu	Anna University	View Document

Details of UGC recognition				
<b>Under Section</b>	Date	View Document		
2f of UGC	17-09-2021	<u>View Document</u>		
12B of UGC	17-09-2021	<u>View Document</u>		

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)					
Statutory Regulatory Authority Recognition/App roval details Inst itution/Departme nt programme  Recognition/App year(dd-mm- yyyy) Remarks months					
AICTE	View Document	03-07-2022	12		
COA	View Document	04-07-2022	12		

Recognitions				
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No			
Is the College recognized for its performance by any other governmental agency?	No			

Location and Area of Campus					
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.	
Main campus area	East Coast Road, Mayakulam Panchayat, Kilakarai.	Rural	107	46708	

### 2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Pr ogramme/C ourse	Duration in Months	Entry Qualificatio n	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BE,Aeronaut ical Engineering	48	HSC OR EQ UIVALENT	English	60	8
UG	BE,Civil Engineering	48	HSC OR EQ UIVALENT	English	60	9
UG	BTech,Comp uter Science And Engineering	48	HSC OR EQ UIVALENT	English	60	27
UG	BE,Compute r Science And Engineering	48	HSC OR EQ UIVALENT	English	90	72
UG	BTech,Comp uter Science And Engineering	48	HSC OR EQ UIVALENT	English	60	28
UG	BE,Electrical And Electronics Engineering	48	HSC OR EQ UIVALENT	English	60	20
UG	BE,Electroni cs And Com munication Engineering	48	HSC OR EQ UIVALENT	English	60	14
UG	BE,Marine Engineering	48	HSC OR EQ UIVALENT	English	30	14
UG	BE,Mechani cal Engineering	48	HSC OR EQ UIVALENT	English	60	17
UG	BTech,Chem ical Engineering	48	HSC OR EQ UIVALENT	English	45	6
UG	BTech,Infor mation Technology	48	HSC OR EQ UIVALENT	English	90	65

UG	BArch,B Arch	60	HSC OR EQ UIVALENT	English	40	14
UG	BTech,Agric ultural Engineering	48	HSC OR EQ UIVALENT	English	30	15
PG	ME,Civil Engineering	24	B.E OR B.TECH	English	18	2
PG	ME,Comput er Science And Engineering	24	B.E OR B.TECH	English	18	1
PG	ME,Electrica l And Electronics Engineering	24	B.E OR B.TECH	English	18	3
PG	ME,Electron ics And Com munication Engineering	24	B.E OR B.TECH	English	18	1
PG	ME,Electron ics And Com munication Engineering	24	B.E OR B.TECH	English	18	0
PG	ME,Mechani cal Engineering	24	B.E OR B.TECH	English	18	2
PG	Mtech,Chem ical Engineering	24	B.E OR B.TECH	English	18	3
PG	MBA,Mba	24	ANY DEGREE	English	60	43
PG	MCA,Mca	24	ANY DEGREE	English	60	37

Position Details of Faculty & Staff in the College

	Teaching Faculty											
	Profe	Professor			Assoc	Associate Professor			Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				24				23				145
Recruited	18	6	0	24	14	9	0	23	96	49	0	145
Yet to Recruit				0				0				0
Sanctioned by the Management/Soci ety or Other Authorized Bodies				24				23				145
Recruited	18	6	0	24	14	9	0	23	96	49	0	145
Yet to Recruit				0			•	0		,		0

	Non-Teaching Staff					
	Male	Female	Others	Total		
Sanctioned by the UGC /University State Government				28		
Recruited	10	18	0	28		
Yet to Recruit				0		
Sanctioned by the Management/Society or Other Authorized Bodies				28		
Recruited	10	18	0	28		
Yet to Recruit				0		

Technical Staff						
	Male	Female	Others	Total		
Sanctioned by the UGC /University State Government				26		
Recruited	20	6	0	26		
Yet to Recruit				0		
Sanctioned by the Management/Society or Other Authorized Bodies				26		
Recruited	20	6	0	26		
Yet to Recruit				0		

# Qualification Details of the Teaching Staff

	Permanent Teachers									
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0
Ph.D.	10	4	0	6	5	0	8	8	0	41
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	8	2	0	8	4	0	88	41	0	151
UG	0	0	0	0	0	0	0	0	0	0

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	Temporary Teachers									
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0
UG	0	0	0	0	0	0	0	0	0	0

	Part Time Teachers									
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0
UG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties				
Number of Visiting/Guest Faculty	Male	Female	Others	Total
engaged with the college?	0	0	0	0

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	162	15	0	0	177
	Female	69	0	0	0	69
	Others	0	0	0	0	0
PG	Male	54	0	0	0	54
	Female	24	0	0	0	24
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years					
Category		Year 1	Year 2	Year 3	Year 4
SC	Male	14	20	8	31
	Female	3	12	4	7
	Others	0	0	0	0
ST	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
OBC	Male	270	180	173	266
	Female	59	59	64	105
	Others	0	0	0	0
General	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
Others	Male	3	10	5	13
	Female	1	5	2	0
	Others	0	0	0	0
Total	1	350	286	256	422

### Institutional preparedness for NEP

#### 1. Multidisciplinary/interdisciplinary:

Mohamed Sathak Engineering College (MSEC) is an age-old institution affiliated to Anna University. The curriculum is designed based on CBCS (Choice Based Credit System) pattern as directed by the affiliating university. The courses are categorized as follows: i) Humanities, Social Sciences and Management Courses (HSMC) which includes Professional English, Communication skills etc. ii) Basic Sciences Courses (BSC) which includes Mathematics, Physics, Chemistry, Biology, Environmental Science etc. iii) Engineering Sciences Courses (ESC) which includes Engineering Practices, Engineering Graphics, Basics of Civil / Mechanical / Electrical / Electronics / Instrumentation, Computer Engineering, etc. iv) Professional Core Courses (PCC) comprising the core courses relevant to the chosen specialization/branch. v) Professional Elective Courses (PEC) comprising the elective courses relevant to the chosen specialization/branch. vi) Open Elective Courses (OEC) which includes the courses offered by a branch to other branches, from the list specified in the respective curriculum of the B.E. / B. Tech. / B. Arch. Programmes. Vii) Employability Enhancement Courses (EEC) which includes Project Work, Internship, Seminar, Professional Practices, Case Study and Industrial/Practical Training etc. viii) Audit courses (AC) which composes of the courses such as Constitution of India, Sangam literature etc. Apart from the above acknowledged and prescribed category of courses, the students are encouraged to learn any multidisciplinary/interdisciplinary courses through our technology centres which provides "Learning through experience" arena. These courses are often conducted as afternoon sessions to avoid creating a hindrance to the regular academic schedule. This multidisciplinary / interdisciplinary approach is followed by all programmes through the medium of project work, field visits, study tours, and internships.

#### 2. Academic bank of credits (ABC):

MSEC is consistently maintaining the data of the academic credits earned by students. It is stored as databases in the systems implanted in respective departments. If a student discontinues from our institution and joins in some other institution in any inevitable situations, he/she can obtain marksheet from our affiliating university and produce it in the

new institution so that the credits already earned by the student will also be taken into account. Implementation of Academic Bank of Credits system with a central database is totally based on the directions given by our affiliating university and Higher Education Department of Tamil Nadu. Considering its importance in mind, this institution makes sure the immediate implementation of Academic Bank Record. This system is inculcated after receiving the guidelines from the regulating authorities. 3. Skill development: A cardinal requisite of an engineering student is to get equipped with various skills in interdisciplinary areas. MSEC has taken various initiatives to develop the skills of students by training them through various technology centres established inside the college premises apart from the laboratory facilities mandated by the regular curriculum. Students are trained by in-house faculty in these centres and certified by various agencies like Automation Anywhere, CISCO, Altair, Jet Aerospace Research Centre, etc. We conduct the value-added courses prescribed by our affiliating university in different disciplines and this would enable them to earn academic credits apart from the skills they acquire. Apart from these skill training courses, we are also offering awareness lectures and hands-on training courses to the school and polytechnic students at free of cost. 4. Appropriate integration of Indian Knowledge In order to promote /integrate the local language, art system (teaching in Indian Language, culture, using and culture, various activities are being conducted in online course): the college every regional language. To enhance the interaction and promote mutual understanding people of different states with different languages and different cultures, our institution has made collaboration with various Engineering colleges and schools. To promote the culture of Tamil people, The famous Tamil festival called "Pongal" our institute coalesces with faculty and staff members to celebrate the festival inside the campus. During this festival various events and competitions are being conducted to promote our ancient culture. Like Pongal various other festivals like Onam, Christmas and Ramzan are also celebrated in the campus to inculcate various regional culture and tradition to the students. 5. Focus on Outcome based education (OBE): All the programmes offered by our institute are well

formulated, achievable and measurable with determined Programme Educational Objectives (PEOs), which the graduates would be able to achieve in their career. The curriculum is designed with twelve Programme Outcomes (POs) as prescribed by National Board of Accreditation. Each programme consists of Programme Specific Outcomes (PSOs) which our graduates would be able to present by themselves after completion of the programme. Apart from the above designed outcomes, each course has five to six course outcomes which are formulated in coordination with POs and PSOs. These course outcomes are formulated in such a way that they can be achieved and measured at the end of each course by a distinctive process. The content delivery of each course is meticulously planned at the beginning of the semester and recorded precisely in the lesson plan. The notes of lesson are also prepared by taking the course outcomes as reference and uploaded in the website for the future reference of the students. Variety of teaching-learning approaches are implanted in order to achieve the outcomes designed at the beginning. The POs that are not covered in regular content delivery of courses, are thought through experiential learning methods. CO attainment is calculated in a 3-point scale at the end of each course and PO and PSO attainments are consecutively calculated in a 3-point scale at the end of programme. Based on the final attainment levels, the course outcomes will be revised ana analyzed whether it requires any modification. All the above outcomes are defined meticulously as the institution strives hard to restore the spirit of NEP.

#### 6. Distance education/online education:

Our institution solemnly has taken advantage of the lockdown due to COVID-19 by engaging classes in online mode, organizing webinars, faculty development programmes and conducting conferences and meetings in every possible virtual platform. Our students and faculty members have completed many courses in online mode not only during the lockdown but are still in the process of upgrading their skills through various online learning platforms like NPTEL, Udemy etc. To achieve greater heights in learning, some of the laboratory classes were even conducted in virtual mode. Our institute encourages and supports activities to be

conducted in virtual mode because it breaks the
geographical barriers and reaches different audience
when compared to physical mode.

## **Extended Profile**

#### 1 Students

#### 1.1

#### Number of students year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
1123	1250	1473	1841	2034

File Description	Document
Upload supporting document	<u>View Document</u>
Institutional data in the prescribed format	View Document

### 2 Teachers

### 2.1

#### Number of teaching staff / full time teachers during the last five years (Without repeat count):

Response: 339

9	File Description	Document
	Upload supporting document	<u>View Document</u>
	Institutional data in the prescribed format	View Document

#### 2.2

#### Number of teaching staff / full time teachers year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
184	213	207	223	254

### 3 Institution

#### 3.1

### Expenditure excluding salary component year wise during the last five years (INR in lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
525.35	662.06	619.9	636.67	732.15

## 4. Quality Indicator Framework(QIF)

### **Criterion 1 - Curricular Aspects**

#### 1.1 Curricular Planning and Implementation

1.1.1 The Institution ensures effective curriculum planning and delivery through a well-planned and documented process including Academic calendar and conduct of continuous internal Assessment

#### **Response:**

Mohamed Sathak Engineering College (MSEC) is approved by AICTE and affiliated to the Anna University, Chennai. MSEC is offering 13 UG Programs, 9 PG Programs in Engineering & Technology and a Research program in Science and Humanities.

The Institute follows the curriculum approved by the BoS of Anna University and implements the syllabus with course objectives and evaluation schemes for every course. Our faculty members also participate at various bodies of the University such as Academic Council, Board of Studies (BOS), and subject chairman who contribute in framing of syllabus regularly.

Institute has an **Academic Administration Committee** (AAC) comprising of Principal, Heads of the Department (HoD's) and Internal Quality Assurance Cell (IQAC) that are responsible for planning, monitoring and implementation of overall academic activities like preparation of timetable, identification of learning gaps, industry expectations, emerging skills, knowledge enhancement, faculty training and designing of new courses in this backdrop, planning and conduct of programs for curriculum enhancement. The Program coordinator monitors the conduct of the academics.

- Academic calendar is prepared to fulfill the objectives of the curriculum delivery. MSEC is affiliated to Anna University, T.N., and follows the curriculum prescribed by it. The Institution Academic Calendar is finalized in alignment with the University calendar. Based on Academic Advisory Committee inputs, Co-curricular and extra-curricular activities are planned in academic calendar.
- Annual Calendar of events is prepared which consists of plan for Internships, Field tours and projects. Lectures are scheduled for connecting the requirements of industry and academics.
- Before the start of every academic session, Principal conducts meeting with Vice- Principal, Academic Dean, Heads of all the Departments, and finalize **Academic Policy** which covers following points:
- **Teaching Load Distribution** (theory and practical) is appropriately allotted among the faculty members. **Competency mapping** is undertaken at department level to ensure that most suitable teachers handle the courses based on their specialization and experience.
- **Time table** is prepared as per the teaching scheme of Anna University and as per department requirements by the Time-Table Committee. Time table is prepared at the Department level teacher wise class wise as a matrix structure. Students are made aware of commencement of semester through notice and SMS.
- **Preparation for Course Delivery: Teaching Plans** (Theory & Practical) and **Tutorial Plans** are prepared by the subject teachers before the start of every semester. **Lesson plan** is prepared by the subject teacher prior to the delivery of lecture, who also prepares the **lecture notes** for all topics in

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- the curriculum and devise the **assignment topics** and **tutorial problems** and get the approval of the CC Head, HoD and Principal. Individual faculty uploads Unit-Wise Teaching Plan in college website and LMS before commencement of semester.
- Course files are prepared by all faculty members which include Syllabus, Academic calendar, Teaching Plan, Tutorial Plan, Program Outcomes, Program specific outcomes and Course Outcomes, CO-PO(s), CO-PSO(s) Mapping & Attainment, Tutorial Sheets, Class Assessment Tests (CAT) question Bank, Assignment Questions, University Question Papers & model solution, Support for Academically slow students etc.

For Complete Writeup click the link: https://msec.org.in/uploads/naac/1.1.1/1.1.1writeup.pdf

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

#### 1.2 Academic Flexibility

#### 1.2.1 Number of Add on /Certificate/Value added programs offered during the last five years

#### Response: 41

File Description	Document
Upload supporting document	<u>View Document</u>
Institutional data in the prescribed format	View Document
Institutional data in the prescribed format	View Document

# 1.2.2 Percentage of students enrolled in Certificate/ Add-on/Value added programs as against the total number of students during the last five years

Response: 78.2

# 1.2.2.1 Number of students enrolled in subject related Certificate/ Add-on/Value added programs year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
1123	929	829	1303	1854

File Description	Document
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Institutional data in the prescribed format	View Document

#### 1.3 Curriculum Enrichment

# 1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

#### **Response:**

The Anna University curriculum includes value added courses such as Gender equality, Environmental consciousness and sustainability, Human Values and Professional Ethics into the regular Curriculum. Institute organizes various activities like awareness programme on Human Values and Environmental Sustainability. Final year students are encouraged to take projects which address interdisciplinary issues viz. Green energy, clean and green manufacturing, eco-friendly and sustainable manufacturing, low cost green houses, etc. MSEC offers this wide range of courses to its students to mould them into all round competent professional based on their interests and inclinations

#### **Professional Ethics and Human Values:**

Professional Ethics and Human Values course are offered as per regular curriculum of Anna University to all branches of Engineering. This course focuses on human values and discusses engineering ethics, explains safety and risk factors, responsibilities and rights of engineers and addresses global issues, computer, and environmental ethics.

#### **Gender Equality:**

MSEC gives equal opportunities to both the genders in terms of admissions, training, placement, cocurricular and extra-curricular activities, NSS, NCC, Sports and Cultural Clubs, so that gender issues do not arise. The institute has constituted various committees including Women Empowerment Cell, Women Grievance & Redressal Committee. These committees help in promoting issues/programs on gender equity, promoting leadership qualities in women and also handle issues related to safety and security of girl students and lady staff..

#### **Environment and Sustainability:**

Environmental Science and Engineering is offered as a compulsory course by Anna University to all branches of Engineering from 2017 Regulations. This course focuses on Environment, Ecosystems, Biodiversity, addresses environmental pollution and conservation of natural resources. The details of the course related to Environment and Sustainability are given also in the additional information.

In Civil Engineering program, students learn **Environmental Engineering 1 and 2** as core subjects. Students opt as electives from **Environment and sustainability**, **Air pollution and solid waste management**, **Water and waste water treatment**.

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Many Projects are undertaken by final year students relating to environmental issues like climate change, water pollution, sewage treatment, air pollution, rain water harvesting, modelling, flood prediction, disaster management and green concrete etc. Topics related to these issues are also taken up for quiz and debates during the National Science Day, Earth Day celebrations and the Independence Day function.

MSEC students go to rural areas and educate rural people about the environmental based activities and educate them. The curriculum also includes mentor hour which provides moral ideas to the students.

The following environmental initiatives are implemented by the Institute:

- A bio gas plant of 1 ton capacity is installed which generates 1kw BTU of Energy monthly.
- There are multiple Rain Water Harvesting percolating structures in the campus which keep the ground water charged during rainy season
- Ours is a Plastic-free green campus implementing Swatch Bharat Abhiyaan.
- Tree plantation and various environment-related awareness seminars are conducted on regular basis to inculcate the importance of the environment to the student community.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

# 1.3.2 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)

**Response:** 74.89

#### 1.3.2.1 Number of students undertaking project work/field work / internships

Response: 841

 File Description
 Document

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 View Document

 Institutional data in the prescribed format
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#### 1.4 Feedback System

1.4.1 Institution obtains feedback on the academic performance and ambience of the institution from various stakeholders, such as Students, Teachers, Employers, Alumni etc. and action taken report on the feedback is made available on institutional website (Yes or No)

Response: Yes

File Description	Document
Upload supporting document	<u>View Document</u>

### **Criterion 2 - Teaching-learning and Evaluation**

#### 2.1 Student Enrollment and Profile

#### 2.1.1 Enrolment percentage

Response: 35.3

#### 2.1.1.1 Number of students admitted year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
296	260	225	341	481

#### 2.1.1.2 Number of sanctioned seats year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
841	861	861	979	999

File Description	Document
Upload supporting document	<u>View Document</u>
Institutional data in the prescribed format	View Document

# 2.1.2 Percentage of seats filled against seats reserved for various categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy) during the last five years (Exclusive of supernumerary seats)

Response: 60.38

# 2.1.2.1 Number of actual students admitted from the reserved categories year - wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
171	134	123	197	291

# 2.1.2.2 Number of seats earmarked for reserved category as per GOI/ State Govt rule year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
278	290	286	328	335

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

#### 2.2 Student Teacher Ratio

2.2.1 Student – Full time Teacher Ratio (Data for the latest completed academic year)

Response: 6.1

### 2.3 Teaching-Learning Process

2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences using ICT tools

#### **Response:**

#### **Response:**

MSEC provides inclusive and need based education for all students including students coming from vernacular languages, slow learners, advanced learners, and socially, economically backward sectors. The institution follows a well designed academic plan to assess the students, implement desired learning objectives and guide them to improve their academic performance.

**Identifying Learners abilities:** After admission, the Institution assesses the learning level of the students and organizes various programmes for advanced learners and slow learners. The slow and advanced learners are identified for each subject separately through Class observation, Active participation, Involvement, Academic performance, Marks scored in the Internal Assessment tests and University Examination.

#### **Supporting slow Learners:**

- Special classes every day
- Personal, academic and social counseling
- Prepare Course material and Revision Class material in their level

#### **Supporting advanced Learners:**

• Coach them for facing competitive examination.

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- Take part in various skills development programme
- Present papers in seminars and conferences
- Publish the paper in Journals
- Encouragement to complete NPTEL and similar courses

Some of the strategies used in the class at MSEC are:

#### **Experiential learning:**

- ICT mode of teaching for active classroom learning
- Learning through Internship, Field projects, Industry Oriented Mini and Major Projects
- Mandatory library hours to improve reference skills and knowledge level
- Blending theory and practice through field-based Survey, Study, Project works and case studies
- Industrial visits for gaining knowledge on state of the art.
- Audio visual learning in Language Lab.
- Online learning through Spoken Tutorials
- Poster presentation and Video clips
- E-training Programs and Virtual labs
- Models exhibits and Project Expo to promote creativity and experiential learning
- Enrolment in Value Added Courses.

#### Participative learning:

- Collaborative Learning using a group of intellectuals to enhance learning through working together to share knowledge and learn new concepts
- Case Studies where students are allowed to discuss on an imaginary or real situation
- Charts and models are used by the faculty to explain the fundamental topics.
- Guided & focussed group discussion to promote communication ability, generate ideas and interpersonal skills.
- Learning through participation in programming classes, debates, paper presentation, seminars, guest lectures and quiz competitions
- Mock interviews during placement and Panel discussions to present Innovative Ideas
- Participating in curricular and co-curricular competitions, Puzzles, Drama, Debates and Games and in NSS activities to understand the Social needs and problems.

#### **Problem solving skills:**

- Class Assignments and learning in peer groups to do assignments and solve problems
- Course-Based Mini and Major Projects
- Case studies and analysing them to develop problem solving skills
- NPTEL, SWAYAM On line courses gives the opportunity to students to learn innovative ideas
- Hackathons, Programming Contests to develop solutions to the given problem statement.
- **Real life Projects** where Students are encouraged and guided to involve themselves in various real life projects such as bio-gas preparation, rainwater harvesting, Waste management
- Discussions on GATE and Competitive Examination questions, research paper and journals for subject updates

#### For Further Details: https://www.msec.org.in/uploads/naac/2.3.1/2.3.1writeup.pdf

File Description	Document
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Provide Link for Additional information	<u>View Document</u>

#### 2.4 Teacher Profile and Quality

#### 2.4.1 Percentage of full-time teachers against sanctioned posts during the last five years

Response: 100

# 2.4.1.1 Number of Sanctioned posts / required positions for teaching staff/ full time teachers year wise during the last five years:

2021-22	2020-21	2019-20	2018-19	2017-18
184	213	207	223	254

File Description	Document
Upload supporting document	View Document

# 2.4.2 Percentage of full time teachers with NET/SET/SLET/ Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)

Response: 15.63

# 2.4.2.1 Number of full time teachers with NET/SET/SLET/Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
38	39	31	34	27

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

#### 2.5 Evaluation Process and Reforms

# 2.5.1 Mechanism of internal/ external assessment is transparent and the grievance redressal system is time- bound and efficient

#### **Response:**

The internal assessment examinations are conducted according to the Academic calendar of the institute as well as University. Exam cell prepares the examination schedule well in advance before the commencement of exams in consultation with Academic Head which is displayed in the Notice board and mailed to the students and staff members for their reference. The respective subject teacher sets the question paper measure the CO's through the quality of questions and pattern of paper setting following Blooms taxonomy to realise OBE.

During examination, attendance is taken by the invigilator for record. If someone found absent in the examination then a message is sent to the parent by the Examination cell.

The overall assessment is based on the marks obtained in internal evaluation through, Model Exams, Assignments, Unit tests, Class tests, Internals, External Examination and attendance. Internal marks and attendance are periodically communicated to the parents through SMS and during Parent Teacher Meetings.

During the recent pandemic period, teaching was undertaken remotely and on digital platforms. Classes were conducted in online mode using Google Classroom.

#### **Grievance redressal system:**

Some of the policy guidelines are:

- Student's written statement in the presence of the supervisor and invigilator is taken.
- The Examination Committee calls for a meeting of its members, the student and the invigilator. Depending up on the nature of the unfair means, the committee after due deliberations takes necessary action leading to supplementary examination or referring the matter to the Grievance Redressal Committee
- Students or parents may also use the college website (Online mode) for any grievances and queries regarding the Internal Assessment and the same is forwarded to the Head of the Institution/University to take suitable action.

For grievances redressal related to marks:

#### **Internal Examinations:**

- Student can apply for obtaining photocopy of answer book of the examinations conducted by Institute within 7 working days from the date of the declaration of result.
- The answer sheets are shown to the students after evaluation for their information which provides transparency and accountability in the evaluation process.
- Students' grievance are taken care of and addressed in a timely manner.
- Finalized marks are verified by the faculty and signed off by the students.

• Online internal marks are submitted to the university through faculty's login account on the university internal examination portal.

#### External Examinations:

- If any student desires, he can apply for the copy of the Answer book.
- After going through the photocopy if there are grievances like 'totalling mistake' and or 'question not assessed', the student can bring the same to the notice of examination department.
- In case of revaluation, the answer book is first masked and sent for re assessment to another faculty.
- For University Examination related grievances, students can make use of individual student login with their credentials through which they can upload the grievances directly to the university.
- Students and parents can approach the Head of the Institution for any University Exam related grievances (Name correction, non-receipt of certificates, feedback on university Examination question paper, etc.).

For Further Details: https://www.msec.org.in/uploads/naac/2.5.1/2.5.1writeup.pdf

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

#### 2.6 Student Performance and Learning Outcomes

2.6.1 Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website and attainment of POs and COs are evaluated

#### **Response:**

Mohammed Sathak Engineering College (MSEC) is affiliated to the Anna University (AU) and follows the syllabus/curriculum prescribed by the university. AU curriculum contains the core and elective courses. The curriculum is formulated and reviewed by the Board of Studies (BOS) of the University.

Teaching with this consciousness and following the associated effort constitutes outcome-based education. Program Outcomes (POs) are statements that describe what students are able to do after graduating from the respective program. These relate to the skills, knowledge, analytical ability, attitude, and behaviour that students acquire throughout the program.

Course Outcomes (COs) of a course are the statements describing what the student would be able to do after studying a course. MSEC is affiliated to AU and the syllabus is framed and disseminated by the university. Program Specific Outcomes (PSOs) are a statement that describes what students are expected to know and be able to do in a specialized area of Engineering/MBA after graduation from a program. Awareness of Program Outcomes (POs), Course Outcomes (COs) and Program Specific Outcomes (PSOs), among faculties and students in the Institute are done by:

- PO, PSO and PEOs boards are displayed in the corridor of each department and are made available to the students on the college website: https://www.msec.org.in/
- POs COs and PSOs for each program are disseminated to the students by respective Department HoDs during Induction Program arranged by the institute for newly joined students.
- The course instructor describes the relevance of POs, PSOs and COs to students during the beginning of each course. COs along with lesson plan are printed and issued to the students during the first class
- Students are made aware of the COs of each Course by mentioning COs in the Internal Assessment question papers.

#### **Evaluation and Attainment of COs, PSOs**

The assessment methods and processes used for the attainment measure of each of the Program Outcomes and Program Specific Outcomes are as follows

#### **Assessment of COs / POs**

- For each course, the course instructor will identify 5-6 course outcomes (CO) & these COs are mapped with relevant Program Outcome (PO) as high, medium & low.
- The consolidated matrix of CO-PO mapping is done for each program & the same for the CO-PSO mapping.
- The CO attainment levels can be measured based on the marks scored by the student in internal assessment and external examination conducted by the university. This is a form of direct measurement of attainment. As per the university norms three Internal assessment tests, Seminars, assignments, tests are conducted for each course in a semester.
- In each test, the percentage of students who achieve a set target for the COs is computed. After the three tests, the average of these percentages is computed to decide the attainment level.
- Indirect assessment strategies are implemented by embedding them in the Survey.
- PO Attainment (%) = (weightage: 80%) x (Average attainment (direct method)) + (weightage: 20%) x (Average attainment (indirect method))

#### For Further Details: https://www.msec.org.in/uploads/naac/2.6.1/2.6.1writeup.pdf

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#### 2.6.2 Pass percentage of Students during last five years

**Response:** 88.17

# 2.6.2.1 Number of final year students who passed the university examination year wise during the last five years

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2021-22	2020-21	2019-20	2018-19	2017-18
335	462	477	477	425

## 2.6.2.2 Number of final year students who appeared for the university examination year-wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
354	466	489	614	545

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

2.7 Student Satisfaction Survey

#### 2.7.1 Online student satisfaction survey regarding teaching learning process

**Response:** 3.79

File Description	Document
Upload database of all students on roll	<u>View Document</u>

#### Criterion 3 - Research, Innovations and Extension

#### 3.1 Resource Mobilization for Research

3.1.1 Grants received from Government and non-governmental agencies for research projects / endowments in the institution during the last five years (INR in Lakhs)

Response: 57.78

## 3.1.1.1 Total Grants from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
14.3266	0.03	15.98	26.21	1.23

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

#### 3.2 Innovation Ecosystem

## 3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

#### **Response:**

**Mohamed Sathak** Engineering College has a vibrant Research Council, an apex body to guide MSEC research community and innovation for creation and transfer of knowledge.

The apex body is constituted with a team of experts drawn from academic Institutions, Scientists, Entrepreneurs and Industrial researchers from various reputed organizations under Research Career Planning and Guidance Department. The team generates links with the industry through periodic visit to their office and participating in monthly and annual meets.

MSEC established a Research Centre, Entrepreneurship Development Cell and Incubation Centre. The early initiative to create an ecosystem for innovations is the formation of various student clubs for creation and transfer of knowledge. The hidden talents of the students are identified and nurtured through student clubs, co-curricular and extra-curricular activities.

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MSEC Research and Development Centre comprises of senior faculty members from each department. Dean (R&D) who is a senior professor having handsome experience and expertise in versatile research field heads R&D Centre with the principal presiding over. The committee oversees the smooth and efficient coordination of research and development activities in the institute, thus fostering overall growth.

The aim of MSEC R&D cell is to foresee future problems through pursuit of technology to respond to current social demands, and to contribute to the creation and development of scientific technologies with the aim of realizing an affluent society and natural environment for humanity. At the same time, the MSEC aims to create excellent educational resources and an excellent educational environment through frontline researches.

#### To achieve the above-mentioned purposes, the following objectives are set:

- Lead the academic world and conduct internationally high-level researches in each engineering field
- Conduct cutting-edge researches to lead the academic and industrial worlds at home and abroad and create and develop new academic and technological fields
- Aim to globalize research and education
- Provide suggestions for the future of humanity and the earth, based on high-level academic foundations and vision
- Conduct researches that contribute to the development of human resources who can play a leading and core role in society and researchers who can conduct cutting-edge researches

#### MISSION AND VISION OF R&D CELL

- Image building of the Institution.
- Creation of research facilities in-house and in collaboration with other national institutes and laboratories.
- Conducting workshops/national and international seminars
- Identification of research projects for faculty and encouraging students for such.
- Imbibing the culture to carry out innovative projects with the students beyond curriculum.
- Conducting various competitions for students on projects and seminars.
- Training younger generation teachers with innovative research projects
- Encouraging faculty and students to attend seminars and workshops inside and outside the state.
- Encouraging faculty and students for publication of research papers in national and international journals of repute.
- Encouraging teachers and students to apply for patents.
- Bringing Research to class rooms by inviting scientists for interaction with students.

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## 3.2.2 Number of workshops/seminars/conferences including on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship conducted during the last five years

Response: 72

# 3.2.2.1 Total number of workshops/seminars/conferences including programs conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
30	20	17	1	4

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

#### 3.3 Research Publications and Awards

## 3.3.1 Number of research papers published per teacher in the Journals notified on UGC care list during the last five years

Response: 0.46

## 3.3.1.1 Number of research papers in the Journals notified on UGC CARE list year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
20	48	25	29	35

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

## 3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/international conference proceedings per teacher during last five years

**Response:** 0.29

## 3.3.2.1 Total number of books and chapters in edited volumes/books published and papers in national/international conference proceedings year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
7	8	61	13	10

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

#### 3.4 Extension Activities

3.4.1 Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the last five years.

#### **Response:**

#### **Extension Activities:**

Mohamed Sathak Engineering College (MSEC) promotes regular engagement of faculty, students and staff with neighbourhood community for their holistic development and sustained community development through various activities. The college motivates the student's social participation and also drives to achieve its goal of providing higher technical education to create equitable society with ethical values. The Institute is conscious of its role in campus community connection, well-being of its neighbourhood and has initiated a number of community development activities.

To track the involvement of students in various social activities, the Institute has established a mentoring system wherein each faculty members act as mentor for 15 students. They keep records of their participation in such activities. Faculty advisor has to file the student participation in such extension activities in the respective file.

The college is continuously organizing a number of extensions and outreach activities which are directly connected with students academic, social, cultural, community services etc., and the college management with the help of many voluntary organizations and NGOs organizes the outreach programs.

And our College provides the major extension and outreach programmes organized under the banner of National Service Scheme of the College with the details of faculty and student participation. The NSS

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student volunteers used to visit villages and extend their services regularly.

The NSS volunteers used to organize blood donation camp, free eye screening camp, free medical checkup camp, general awareness camp, rally for social awareness, cleaning the nearby villages, etc.

Exposure to extension and outreach activities sensitize the students towards social issues and also to legal and social remedies for matters like domestic violence, dowry, child abuse, beggars, female child, victims of violence, old and infirm, refugees and displaced persons etc.

The activities conducted lead imbibing the values of social responsibility such as:

- To help people in need and distress
- To understand and share the need of under privileged children
- To promote cleanliness in all span of life and common places, Juggi areas.
- To acquire social values and a deep interest in environmental related issues.
- Learning outcomes of the activity:
- Enlarge the knowledge of societal issues and problems and to search solution by getting involved with their lives.
- Build up relation and tie up with organizations/NGO to carry forward humanitarian work in future.
- Develop a passion and brotherhood towards community, affected people/animals and destitute.
- Develop skill and aptitude for problem solving.

The Following Extension Activities are done by MSEC,

- Blood donation camps
- Tree planting
- Cleanliness campaigns in Campus
- Awareness programs
  - Swacch Bharat
  - Food Safety
  - Wild life Safety
  - Disease Prevention (Dengue, Cancer, and Seasonal Diseases)
  - Drug Usage
- Environmental Safety and pollution
- Medicine and Health care Programs Like Eye camp, General Medical Camps
- Disaster Management Programs
- Government Services Like Election Trainings, Career Guidance Programs Science Expo
- Quiz and Sports Competition for School Students
- Independence and Republic day celebrations
- Off campus placement for other college students

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

## 3.4.2 Awards and recognitions received for extension activities from government / government recognised bodies

#### **Response:**

And our College provides the major extension and outreach programmes organized under the banner of National Service Scheme of the College with the details of faculty and student participation.

The NSS student volunteers used to visit villages and extend their services regularly. The NSS volunteers used to organize blood donation camp, free eye screening camp, free medical checkup camp, general awareness camp, rally for social awareness, cleaning the nearby villages, etc.

Exposure to extension and outreach activities sensitize the students towards social issues and also to legal and social remedies for matters like domestic violence, dowry, child abuse, beggars, female child, victims of violence, old and infirm, refugees and displaced persons etc.

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- 4. To acquire social values and a deep interest in environmental related issues.
- 5. Learning outcomes of the activity:
- 6. Enlarge the knowledge of societal issues and problems and to search solution by getting involved with their lives.
- 7. Build up relation and tie up with organizations/NGO to carry forward humanitarian work in future.
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- 9. Develop skill and aptitude for problem solving.

The Following Extension Activities are done by MSEC,

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- Environmental Safety and pollution
- Medicine and Health care Programs Like Eye camp, General Medical Camps

- Disaster Management Programs
- o Government Services Like Election Trainings, Career Guidance Programs Science Expo
- Quiz and Sports Competition for School Students
- Independence and Republic Day celebrations
- o Off campus placement for other college students

File Description	Document
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Provide Link for Additional information	View Document

3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC/Red cross/YRC etc., (including the programmes such as Swachh Bharat, AIDS awareness, Gender issues etc. and/or those organised in collaboration with industry, community and NGOs) during the last five years

Response: 51

3.4.3.1 Number of extension and outreach Programs conducted in collaboration with industry, community, and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
11	8	12	10	10

File Description	Document
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Institutional data in the prescribed format	View Document

#### 3.5 Collaboration

3.5.1 Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years.

Response: 22

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

#### **Criterion 4 - Infrastructure and Learning Resources**

#### 4.1 Physical Facilities

4.1.1 Availability of adequate infrastructure and physical facilities viz., classrooms, laboratories, ICT facilities, cultural activities, gymnasium, yoga centre etc. in the institution

#### **Response:**

Mohamed Sathak Engineering College (MSEC) was started in the year 1984 as the very first Self finance Engineering College in the State of Tamil Nadu (G.O. Ms.No.1088, Education dated 21.08.1984).

It was started with 3 Programmes and now we are running successfully 13 Under Graduate and 09 Post Graduate Programmes. All programmes are approved by AICTE and affiliated to Anna University, Chennai. The Marine Engineering programme is approved by Director General of Shipping (DGS) and Architecture programme is approved by Council of Architecture (COA), New Delhi.

#### Classrooms and seminar halls Facilities:

The Institution is provided with excellent classroom facilities. Each class is provided with white or blackboard and stage with a sufficient number of lights and fans. Good ventilation is provided and windows are covered with curtains.

#### **Laboratory Facilities**

Institute has modern, well - equipped laboratories with the latest equipment and required software for the entire programme. A separate storage facility is provided to store raw material and consumables. In addition, it consists of first aid kit and fire safety measures. Labs are suitably designed to accommodate and run heavy machinery. Multiple power supplies like UPS, Generator and EB power are suitably provided for all the lab spaces.

#### **Computing and ICT Facilities**

Mohamed Sathak Engineering College provides well - equipped computer facilities with the best state of the art computer lab and research centre. A high speed optical fibre network enables students to access a wide range of services across the campus including all computer labs.

#### **Auditorium and Cultural Activities**

The Institution offers a good opportunity for the students to come out with their talents in Dance, Music, Art and Mime. Institute organises various cultural activities to make the students relax, enjoy and balance leisure. The Institution has an Auditorium with a capacity of 2500 to conduct cultural and other mega events. Frequent programs are conducted to encourage the student's participation.

#### **GYM and Fitness Centre**

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Modern Gym offers a fun and safe learning environment that gives weight training, strengthening and weight loss programmes. We strive to develop student's confidence and determination through their mastery of skills and improved fitness. High – Quality instructions from energetic, enthusiastic and proficient coaches make this possible.

#### **Yoga and Sports Facilities**

A full time Physical director works for the yoga practice, physical fitness of students and sports activities. College teams are taking part in Anna University Zonal level competitions and other intercollegiate competitions. Sports event competitions are conducted in interdepartmental level in an academic year and the winners and participants are awarded in Annual Sports Day celebration to encourage them.

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## 4.1.2 Percentage of expenditure, excluding salary for infrastructure augmentation during last five years (INR in Lakhs)

Response: 21.11

## 4.1.2.1 Expenditure for infrastructure augmentation, excluding salary during the last five years (INR in lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
117.36	140.04	127.06	129.75	156.34

File Description	Document
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Institutional data in the prescribed format	View Document

#### 4.2 Library as a Learning Resource

4.2.1 Library is automated using Integrated Library Management System (ILMS), subscription to eresources, amount spent on purchase of books, journals and per day usage of library

#### **Response:**

MSEC Library is an important source of knowledge for young minds. The library is spread over a carpet area of 7917 sq.ft, the reading space is 2639 sq.ft. The number of seats in reading space is 160. Library has a collection of around 120605 books and 30 periodical journals, 233 encyclopaedias, 56 Gate Books, book banks, proceedings, news clippings, Back volumes, 146 Dictionary for Engineering & General, 1638 Microforms and 3250 Project Reports. It also has archive of college magazine, news letter, annual reports, academic syllabus & regulations, course materials, Old semester question papers, publications, videos for self learning, audios and photographs of college events etc.

The library is fully automated with KOHA library management software, version 19.05. The OPAC page is the home page of the college library. The OPAC page, being the gateway to library collection, shows the kind of knowledge-store that exists in the institution. The entire collection of our library can be accessed through the IP address http:103.127.189.12:8000 the intranet. is available in Library. The key functions of the library automation, are acquisition, cataloguing, circulation, serials control, acquisition, Course management, reports and reference service.

All the Staff and Students are the member of our central library. Our Central Library is functioning from 9.00 A.M to 7.00 P.M on all working days. During Sunday, will function from 10.00 A.M to 4.00 P.M. so all the students can utilize the library effectively.

#### **Full-featured ILS**

KOHA ILS has comprehensive functionality including basic and advanced modules for acquisitions, circulation, cataloguing, serials management, authorities, flexible reporting, label printing, multi-format notices, offline circulation for when Internet access is not available, and much more.

**Full text searching:** Powerful searching, and an enhanced catalogue display that can use content from Amazon, Google, Library Thing, Open Library, and Syndetics, among others.

**Library Standards Compliant:** KOHA is built using library standards and protocols such as MARC 21, UNIMARC, z39.50, SRU/SW, SIP2, SIP/NCIP, ensuring interoperability between KOHA and other systems and technologies, while supporting existing workflows and tools.

#### **Digital Library:**

The institute has a digital library with 20 terminals. It is fully automated with the help of Dspace Digital Library package. It has a collection of 1533 e-journals from Delnet (IESTC), JGATE publications. The digital library is available on LAN through IP address: http://infotrac.galegroup.com/itweb/msec An E-learning centre with in the digital library is established with NPTEL video lectures from IITs, MIT, *etc* related to all Engineering subjects. These E-learning data can be reached at http:103.127.189.12:8000 in the LAN.

Every department is connected to the library via intranet where in the faculty can network with the above facilities. Faculty has remote access to e-publications. Library information is available on institute web site.

The annual expenditure for purchase of books/ e-books and subscription to

journals/e-journals during the last five years (INR in Lakhs) is detailed below:

YEAR	2017-18	2018-19	2019-20	2020-21	2021-22	Average Expenditur
Annual	9.29	0.94	2.34	2.79	3.072	3.69
expenditure for purchas books/	se of					
e-books and						
subscription to journa journals	ıls/e-					

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#### 4.3 IT Infrastructure

## 4.3.1 Institution frequently updates its IT facilities and provides sufficient bandwidth for internet connection

#### **Response:**

#### **Computing Facility:**

As the world is becoming completely digital, MSEC is keen in giving computer education to all the students in the college and has accordingly updated its IT infrastructure to cater to the needs of the students ensuring effective and outcome based teaching-learning. Value added IT courses are conducted in all the departments. MSEC has a total of 428 computers which are of latest hardware configuration. There are around 11Computer labs in the campus. The Student - Computer ratio is 2.6:1.

#### Servers, Open source software and Propriety Software:

MSEC maintains a total number of 02 servers with Xeon E-5 version-2, 8 GB RAM, 1.0 TB hard drive, which are served as Domain Controller, student biometric server, faculty biometric server and applications servers.Back up device-2TB for critical server back up

The need for Internet has become mandatory in information sharing and knowledge dissemination. The old network has been upgraded and replaced with 50 extreme switches, 25 wireless access points, a high resolution sonic firewall, WLAN controller, unified threat management system and 2 high end servers for Antivirus, FTP and DHCP.

Our campus is completely Wi-Fi enabled in the year 2016. For ease of access, all blocks have been enabled with Wi-Fi (with 25 hotspots). All the seminar and conference halls have been installed with LCD projectors. Biometric scanner based attendance capturing system is upgraded for faculty members. From all the departments, classrooms, and seminar halls data could be easily accessed. The institution has 25 hotspots with extenders provided to cover the wireless range throughout the college. The speed of the Wi-Fi access is 100 Mbps. Biometric attendance machines are also connected with Wi-Fi. The laptops those are brought in by the students are connected by noting down their system's MAC address

The noteworthy feature of our wi-fi facility is, students, faculty and research scholars have 24/7 access to the internet. Dedicated leased line Internet facility with a bandwidth of 100 Mbps is available to cater to the academic & research needs in the Campus. The entire campus is Wi-Fi enabled. The activity in the institute is under video surveillance with 96 CC cameras.

Video-conferencing facility is also available within the institute. Our active web team, deals with creating, updating the college website. Periodic updates are done regularly to make the website very vibrant and dynamic. Learning Management System (LMS) and The Student Management Software are hosted on cloud computing.

The college upgraded this to the College Web Portal through which all students and faculty members can access. There is an IT Admin, who takes care of the issues related to all the computers in the Computer labs, Internet centre, Language lab, Departments and Research Centres. Any technical issues are settled down immediately and used for knowledge enrichment & dissemination.

Improvement in the Internet bandwidth in the last 5 years:

Parameter	Year 2014-15	Year 2021-22	
Internet and Wi-Fi Bandwidth	16 Mbps	100 Mbps	

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#### 4.3.2 Student – Computer ratio (Data for the latest completed academic year)

Response: 2.62

4.3.2.1 Number of computers available for students usage during the latest completed academic year:

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Response: 428	
File Description	Document
Upload supporting document	View Document

#### **4.4 Maintenance of Campus Infrastructure**

4.4.1 Percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years (INR in Lakhs)

**Response:** 38.25

4.4.1.1 Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component year wise during the last five years (INR in lakhs)

2021-22	2020-21	2019-20	2018-19	2017-18
140.76	121.52	282.47	295.08	375

File Description	Document
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#### **Criterion 5 - Student Support and Progression**

#### 5.1 Student Support

## 5.1.1 Percentage of students benefited by scholarships and freeships provided by the Government and Non-Government agencies during last five years

Response: 89.15

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government and Non-Government agencies year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
1099	1187	1298	1610	1689

File Description	Document
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Institutional data in the prescribed format	View Document

#### 5.1.2 Capacity building and skills enhancement initiatives taken by the institution include the following

- 1. Soft skills
- 2. Language and communication skills
- 3. Life skills (Yoga, physical fitness, health and hygiene)
- 4.ICT/computing skills

**Response:** A. All of the above

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

## 5.1.3 Percentage of students benefitted by guidance for competitive examinations and career counseling offered by the Institution during the last five years

Response: 83.46

5.1.3.1 Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years

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2021-22	2020-21	2019-20	2018-19	2017-18
948	1054	1226	1558	1658

File Description	Document
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Institutional data in the prescribed format	View Document

## 5.1.4 The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

- 1. Implementation of guidelines of statutory/regulatory bodies
- 2. Organisation wide awareness and undertakings on policies with zero tolerance
- 3. Mechanisms for submission of online/offline students' grievances
- 4. Timely redressal of the grievances through appropriate committees

**Response:** A. All of the above

File Description	Document
Upload supporting document	<u>View Document</u>

#### **5.2 Student Progression**

## 5.2.1 Percentage of placement of outgoing students and students progressing to higher education during the last five years

Response: 73.81

## 5.2.1.1 Number of outgoing students placed and / or progressed to higher education year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
257	355	360	413	436

#### 5.2.1.2 Number of outgoing students year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
354	465	489	614	545

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File Description	Document
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# 5.2.2 Percentage of students qualifying in state/national/international level examinations during the last five years (eg: JAM/CLAT/GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 100

5.2.2.1 Number of students qualifying in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ Judicial Services/Public Prosecution services/All India Bar Exams/State government examinations) year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
4	7	7	2	3

# 5.2.2.2 Number of students appearing in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT,GRE/ TOFEL/ Civil Services/ State government examinations) year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
4	7	7	2	3

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

#### 5.3 Student Participation and Activities

5.3.1 Number of awards/medals for outstanding performance in sports/ cultural activities at University / state/ national / international level (award for a team event should be counted as one) during the last five years

Response: 29

5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at

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## national/international level (award for a team event should be counted as one) year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
9	2	7	7	4

File Description	Document
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Institutional data in the prescribed format	View Document

## 5.3.2 Average number of sports and cultural programs in which students of the Institution participated during last five years (organised by the institution/other institutions)

Response: 25.6

## 5.3.2.1 Number of sports and cultural programs in which students of the Institution participated year wise during last five years

2021-22	2020-21	2019-20	2018-19	2017-18
49	19	19	23	18

File Description	Document
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Institutional data in the prescribed format	View Document

#### 5.4 Alumni Engagement

## 5.4.1 There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services

#### **Response:**

Mohammed Sathak Engineering College (MSEC) has played a pivotal role in shaping the careers of students into technocrats, leaders, entrepreneurs, researchers and global managers. Developing an active and engaged alumni network empowers both the Institute and its graduates. MSEC has a registered Alumni Association named as "Mohammed Sathak Engineering College Alumni Association" that creates and maintains a life-long connection between MSEC and its alumni. MSEC Alumni Association is registered as a society under Government of Tamilnadu Societies Act during the year 2014 with the Registration

Number 36/2014 with defined by-laws. There is a separate bank account for the Alumni Association, which is periodically audited by the external auditor.

**Alumni Committee** is functional with the objective to nurture a platform for its alumni base of 3000+ registered life members to connect, engage and benefit the alumni, students and staff. Alumni Association is formed in 2014 having one representative from every Department to accommodate the ever increasing number of alumni.

The mission of the Association is to foster strong bonds between alumni, students and the Institute, to keep alumni informed, and create a network enabling them to remain engaged with their alma mater and help shape its future through the Association's programmes and services. MSEC Alumni Association continues to seek innovative ways to serve alumni by providing social, educational, and professional opportunities that appeal to our broad constituency.

Alumni association undertakes activities such as, to receive feedback on the design, review of syllabus, to enhance employment opportunities, get-togethers, alumni directory, continued learning opportunities and administration of social services. Association organizes alumni reunion once in a year to provide an opportunity to meet junior students and faculty to share their professional experience and also guide them for their future aspects like employment, knowledge acquisition and training updates.

**Star Alumni:** MSEC takes pride in many star alumni who are currently holding eminent and illustrious positions in various multinational companies including IBM, CISCO, Microsoft, Oracle, Ford, Hyundai, Saint-Gobain, Accenture, RedHat etc., Some of the star alumni are also successful entrepreneurs.

**Alumni Contribution:** MSEC alumni contribute significantly to the development of the Institute through the following means like:

**Sponsoring Economically weak Students:** Alumni support our students either partially or fully for their academic fee.

**Expert speaker:** Alumni are invited as keynote speakers for training programmes, seminars and as distinguished speakers for graduation ceremony.

**Curriculum enrichment:** Alumni contribute for curriculum enrichment through their structured feedback on curriculum in-order to keep pace with the recent advancements in industry.

**Faculty:** Alumni were appointed as faculty and presently 15% of the faculty are our alumni and are serving as regular teaching faculty.

**IQAC:** Alumni are active members of IQAC and their inputs are helping us for quality enhancements.

**Project work & Placements:** Alumni are involved in training final year students with Industry Specific Skills and facilitate Institute for campus recruitment

Educational-tour: MSEC alumni facilitate our students for industrial visits.

**Construction of Mosque in the College Premises:** This was achieved through a substantial amount of Rs.20 laks donated by Alumni.

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#### Criterion 6 - Governance, Leadership and Management

#### 6.1 Institutional Vision and Leadership

6.1.1 The governance and leadership is in accordance with vision and mission of the institution and it is visible in various institutional practices such as decentralization and participation in the institutional governance

#### **Response:**

The Institute's focus and core ideology are reflected in its Vision, Mission, and Quality Policy which are mentioned below:

**Vision:** "To be an institution of repute and rare creativity in providing quality education with technical endeavour and research opportunities of high standards to the students, who in turn shall contribute to the advancement of the society and human kind".

#### Mission:

- To provide Quality Education to the students across rural the country.
- To motivate students to acquire skills and apply knowledge.
- To achieve Academic and Professional excellence.
- To offer state of the art facilities under sophisticated and safe environment.
- To endow with expertise faculty by providing opportunity to promote the students skills and knowledge.

#### **Quality Policy**

"To become a Premier Institute of National Repute by Providing Quality Education, Successful Graduation, Potential Employability and Advanced Research & Development through Academic Excellence".

"To Develop and Make Students Competent Professional in the Dynamic Environment in the field of Engineering, Technology and Management by emphasizing Research, Social Concern and Ethical Values through Quality Education System".

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#### **6.2** Strategy Development and Deployment

6.2.1 The functioning of the institutional bodies is effective and efficient as visible from policies,

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## administrative setup, appointment and service rules, procedures, deployment of institutional Strategic/ perspective/development plan etc

#### **Response:**

The Governing Council of MSEC is the statutory decision making body of the college carrying out functions and responsibilities in pursuit of institutional vision, mission and core values. It is constituted as per the norms of AICTE, New Delhi, Affiliating University (Anna University) & Govt. of T.N, wherein the members of the board of management have adequate representation.

The GC meets twice a year to deliberate on the activities and approves the minutes of the committees which report to the GC. In this way, strategic plan, minutes of the academic committee, suggesting the fee structure, budget proposals of the finance committee and new initiatives for the future regarding the intake changes of any program are presented to GC for approval. It has a robust framework for governance with the support of 7 Statutory and 29 Non-statutory functional committees. GC also decides the promotions or penalties as recommended by the academic committee, nominate and constitute central committees for smooth discharge of responsibilities.

Principal functions as the Head of the Institution and is the Ex-officio member of the GC. Based on the directions received from the GC, the Principal executes decisions taken by GC through various committees with the support and coordination of Dean and HoD's and manages the day-to-day affairs of the college. The vice-principal assists Principal in daily admin and heads the internal quality assurance cell. Heads of Department are the administrative head of the concerned department and ensure the smooth running of the department by setting goals and milestones of the department. They are responsible for timetables of each semester, upkeep and maintain records of the department, maintain laboratories, assets, assign duties and monitor faculty performance, verify faculty appraisal, benchmark the growth parameters, monitoring, mentoring of students by the mentors, identify and execute actions on departmental needs, prepare the team towards audits and compliance, monitor R&D and project activities of the department, ensure up keeping of departmental library, lead the team towards publications and IPR, forge MoUs from suitable industries.

Various committees are constituted as per the guidelines from AICTE, AU and UGC to ensure all stakeholders' needs are effectively catered. Some of the important committees functional in the institute are:

- Planning and Monitoring Committee
- Training and Placement Cell
- Alumni Association
- Finance Committee
- Discipline and Welfare Committee
- Grievances and Redressal Cell
- Academic Advisory Committee
- Time Table Committee
- Discipline Committee
- Research Committee
- Purchase Committee
- Sports Committee
- NSS Committee

- Budget Committee
- Co-curricular and Extra-Curricular Activities Committee
- Entrepreneur Development Cell
- Anti-Ragging Committee
- Grievance Redressal Committee
- Student Welfare Committee

The academic monitoring committee is the highest academic body which decides and advices on all academic matters. Academic proposals from each department are scrutinized and approved with or without modifications by the academic committee. It also recommends/advise the GC on proposals for new programme of study and other academic matters.

#### Additional Information: www.msec.org.in/uploads/naac/6.2.1/6.2.1.Writeup.pdf

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#### 6.2.2 Implementation of e-governance in areas of operation

- 1. Administration
- 2. Finance and Accounts
- 3. Student Admission and Support
- 4. Examination

**Response:** A. All of the above

File Description	Document
Upload supporting document	<u>View Document</u>

#### **6.3 Faculty Empowerment Strategies**

## 6.3.1 The institution has effective welfare measures and Performance Appraisal System for teaching and non-teaching staff

#### **Response:**

The Institution provides effective welfare measures to both teaching and non-teaching staff. Various welfare measures towards personal and professional growth are being followed to the satisfaction of the employees.

• As per the norms of AICTE, Pay commission recommendations are implemented and benefits under CAS are being extended.

- Employees are covered under EPF, ESI and Gratuity to all eligible members .
- Study, Maternity and Medical leaves are sanctioned for the needy staff. Sanction of CL, OD for Conferences, Workshops, FDPs, STTPs with financial support.
- Advances/ loans are provided for vehicle and laptops to all staff.
- Reward for publication of papers/research articles and best research work.
- Reward for academic excellence/100% pass
- Faculty can avail 5 books from the library per semester.
- Financial support provided to faculty to take up Membership in any Professional Body.
- Support for education of the children of the teachers in the group institutions.
- Free transportation for all staff.
- Subsidised canteen fare.
- Incentive for vehicle utilization or transport allowance for non-teaching staff.
- Incentive for dress materials for housekeeping and supporting staff.
- Health coverage-group insurance scheme for the whole staff.
- On campus free Full time medical facility with qualified Doctor available.
- Vacation for every semester
- Reward for attending orientation programmes, workshops and conferences for non-teaching staff.
- Gifts during Teachers' Day celebrations.
- Family Get togethers.

#### Performance Appraisal System for teaching and non-teaching staff

The Institution has a formal annual performance appraisal for both teaching and non-teaching staff conducted every year. Self-Appraisal is collected once in an academic year. At the beginning of the academic year the faculty appraisal format is shared by the HOD to all the teaching and non-teaching staff of the department so that faculty members are well aware of the appraisal measurement criteria. The faculty is required to submit the filled in pro forma of self-appraisal which is based on "Performance Based Appraisal System" as per UGC regulations.

Evaluation of each staff member's appraisal report is based on the criteria like: work load, qualifications, experience, student feedback, Anna University exam results and pass percentage of the classes the teacher has taught, research papers published (national/ international), patents filed/obtained, projects work/dissertation and Ph.D. guided, UG projects guided, research projects applied/funded, FDPs conducted/attended, international/ national conferences/ seminars/ workshops conducted/ attended, pedagogy methods adopted/followed details, administrative responsibilities, responsibilities for students co-curricular activities and university duties.

Student feedback is collected and assessed once in a semester. Every faculty self-appraisal is evaluated by HoD based on the above criteria and the same is forwarded to the Principal. The principal in consultation with HoD makes recommendations to the GC. This system helps the staff in setting up new goals and self-assesses their strengths and weaknesses. Based on the Annual appraisal of the teaching and non-teaching staff are given increments. In case of adverse remarks in the annual performance report, the employees are counselled and provided training to improve efficiency.

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

## 6.3.2 Percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years

Response: 85.85

## 6.3.2.1 Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
180	207	203	197	141

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

# 6.3.3 Percentage of teaching and non-teaching staff participating in Faculty development Programmes (FDP), professional development /administrative training programs during the last five years

Response: 79.01

# 6.3.3.1 Total number of teaching and non-teaching staff participating in Faculty development Programmes (FDP), professional development /administrative training programs during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
206	235	230	233	120

#### 6.3.3.2 Number of non-teaching staff year wise during the last five years

2021-22	2020-21	2019-20	2018-19	2017-18
43	38	39	46	49

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

#### 6.4 Financial Management and Resource Mobilization

6.4.1 Institution has strategies for mobilization and optimal utilization of resources and funds from various sources (government/ nongovernment organizations) and it conducts financial audits regularly (internal and external)

#### **Response:**

#### **Recurring Sources**

#### **Fees Receipts**

Students are admitted as per Tamil Nadu Government Higher Education norms. 50% of students through Anna University counseling and remaining 50% of students are admitted through Consortium of Self Financing Professional, Arts and Science Colleges in Tamil Nadu. The fees amount collected from the Management Quota students' is higher than the fees collected from Government Quota students. As per the norms laid by the Fees Fixation Committee of State Government, fees amount is collected from each student.

#### **Interest Earnings**

Every year student's fees are collected from June to October. This amount is deposited in banks as short term deposits towards recurring expenses i.e. salaries, electricity maintenance and vehicle fuel etc. At the time of maturing the banks credit the interest of the concerned deposit, which is an additional income utilized for the development of the college.

#### 1.Non-Recurring Sources

#### Loans

The institute is getting Term Loans and Hire Purchase Loans from Public sector Bank with Minimum rate of interest through Mohamed Sathak Trust. This amount is utilized for the development of infrastructural facilities.

#### **Government Grants and Sponsorship Receipts**

Institute is getting Grants from various Government Bodies i.e. AICTE, IEDC, DST etc. to purchase modernized laboratory equipments, latest version software and others. Apart from this, the college applies for getting grants to conduct various Symposiums, Seminars, National and International conferences and other similar activities.

#### **Non - Government Bodies and Sponsorship Receipts**

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Donations are received from Institutions' well-wishers (i.e. alumni and others) and Philanthropists for students' research and project activities. The college also gets various sponsorships from industries, private firms and individuals.

#### **Optimal Utilization**

#### **Recurring Expenses**

Salary to staff, academic activities and payment of bank interest are done with fees collection.

#### Infrastructural development facilities and Building construction works

Management allocates budget to create and upgrade the infrastructural facilities in tune with the modern trends and for construction works.

#### Seminars, Conferences and FDP & other co-curricular

The institute conducts the above said regularly and religiously matching with the latest technology, innovations, research, changes and needs for the society.

#### **Extra-curricular activities**

Indoor sports complex has been created to provide ample opportunities for conduct of sports and enabling student participation

#### **Green Campus**

Enough care is taken to maintain cleanliness in the campus.

#### Conducts financial audits regularly (internal & external)

This Institution has a pre-defined mechanism for Internal and External Audits. Internal Audit is performed by officials deputed from the Trust office. An external audit is conducted by the chartered accountant.

During the course of the Internal Audit, required steps are taken to regularize the accounts and to obtain confirmations for the credit balances. The copy of the internal audit report covering all matters related to the maintenance of accounts is preserved.

After the completion of the external statutory audit, the final audit report along with audit findings are submitted to the Management. Thereafter the consolidated report and the annual returns are submitted to the Income-tax Authorities, Registrar of Societies, Tamil Nadu and to other relevant authorities concerned.

Additional Information: www.msec.org.in/uploads/naac/6.4.1/6.4.1.Writeup.pdf

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File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

#### **6.5 Internal Quality Assurance System**

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes. It reviews teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals and records the incremental improvement in various activities

#### **Response:**

The IQAC of MSEC was established on 04.10.2012 with Prof. M. Mohamed Rafi as the coordinator of the Cell. The main focus of IQAC is to establish quality metrics consistently in all the initiatives of academic and administrative activities for overall growth of the college. Being a participative cell of the Institution, it works on evolving strategies to get rid of shortage and enhance quality. Thus the IQAC is channelizing the efforts of the University towards achieving holistic academic excellence. The cell is working effectively for the overall quality improvement. All the academic committees of the institution work together with IQAC. The decisions and suggestions are followed and implemented effectively and they communicate with faculties and students through the head of the respective departments. The IQAC is monitoring the entire process of the academic quality and reports to the Principal and the Steering committee. The decisions are forwarded to the management for approval and they also take initiatives to facilitate the development and quality improvement of the environment in the institution.

MSEC has integrated framework for Quality Assurance of the academic and administrative activities. All the departments, with the teaching and non teaching faculty carry out the activities as per the processes and forms:

- Discipline should be maintained inside the college Campus.
- Regular conduct of class work and laboratory work.
- Regular monitoring of individual student's attendance is submitted to the principal every day.
- Performance of the students is continuously evaluated by the student counselors and mentors
- Semester wise performance and results were compared and analyzed with other affiliated colleges.
- The institution regularly collects feedback from the students and evaluates the teaching process of faculty.
- The Head of the department separately evaluates the performance of the faculty.
- Detailed course handout is prepared in unit wise order, as per the prescribed syllabus.
- Lab manuals are prepared by the faculty and made available to the student in printed format.
- Special training programs were organized for the students to improve their communication skills, soft skills, leadership qualities etc.
- The heads of the department conduct various faculty meetings to discuss the academic progress of the students.
- The performance of the students in the periodical tests and remedial measures for the slow learners was discussed.
- Industrial internships were planned for the students to facilitate the practical learning.

Participation of National and International technical events was encouraged to get exposure. All the
academic procedures were planned in the beginning of the academic year under various processes
are laid down by the institute.

#### Few processes are mentioned:

- Completion of syllabus on particular time.
- Internal and model Examination schedule.
- Submission of question to the exam cell by the respective department.
- Marks of the internals and model exam submission.
- Review meeting with the principal
- Completion of record note book.
- Revision classes.
- Submission of log book to the respective HOD.
- Commencement of university theory exam and lab

#### Additional Information: www.msec.org.in/uploads/naac/6.5.1/6.5.1.Writeup.pdf

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

#### **6.5.2** Quality assurance initiatives of the institution include:

- 1. Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements
- 2. Collaborative quality initiatives with other institution(s)/ membership of international networks
- 3. Participation in NIRF
- 4.any other quality audit/accreditation recognized by state, national or international agencies such as NAAC, NBA, ISO Certification etc

#### **Response:** A. All of the above

File Description	Document
Upload supporting document	View Document
Institutional data in the prescribed format	View Document

#### **Criterion 7 - Institutional Values and Best Practices**

#### 7.1 Institutional Values and Social Responsibilities

7.1.1 Measures initiated by the Institution for the promotion of gender equity and Institutional initiatives to celebrate / organize national and international commemorative days, events and festivals during the last five years

#### **Response:**

#### 7.1 Measures initiated by the Institution for the promotion of gender equity

#### **Response:**

MSEC nurtures students to be technically competent and ensures aware of social and civil responsibilities perceptive to gender issues. Women's safety and security is prime one.

#### Gender equity & sensitization in curricular and co-curricular activities:

MSEC students of both the gender have equal opportunities and **annual gender equity and sensitization action plan** is prepared in advance that includes the curricular and extra-curricular initiatives which are planned and executed. The institute arranges special programs, especially during **International Women's Day**.

Sessions on 'Cyber crime against Woman', 'Seminar on Sexual Harassment', 'Security Tactics', 'Women Research Promotion Schemes', 'Educate Girls Child', 'Legal Rights on Women', and 'Rangoli competition', have been organized.

#### I. Infrastructure & Facilities for women on campus:

#### **Safety & Security:**

Safety and security of female students, are of prime importance at MSEC. The entire campus is under the surveillance of CCTV camera which ensures safety of girl students.

#### **Common Rooms:**

Institution has ladies common rooms with facilities like cot, bed etc.

#### **Counselling:**

MSEC has faculty mentoring system, through which students are mentored periodically by faculty mentors.

#### Redressal of grievance related to sexual harassment:

The institute has anti-sexual harassment committee which resolves any issues related to sexual harassment. Suggestion boxes are also placed.

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#### II. Women Cell activities:

- Makara Sankranti Celebration for women on 14th January of each year.
- Organizing Women Health programs regularly.
- Celebration of International Women's Day.

#### III. Administrative structure for Women safety at MSEC:

Institute has formalized committees as per the guidelines of UGC/AICTE/State Government in campus.

Discipline committee

Women Grievance and empowerment cell

Internal Complaint Committee & Grievance cell

Redressal Committee.

Faculty advisor system

Antiragging Committee.

Institutional initiatives to celebrate / organize national and international commemorative days, events and festivals

#### National youth day on occasion of Swami Vivekananda Jayanthi (12th Jan):

Student recollects the role of the youth in the development by Swami Vivekananda.

#### Republic Day (26th Jan):

Principal, HODs, teaching & non-teaching staff & students of the institute participated in 75th Republic Day Celebrations.

#### **International Women's Day (8th March):**

Reputed Women personalities are invited for the motivational talks. The women achievers are awarded on this occasion.

#### **International Yoga Day (21st June):**

The faculty members and students of MSEC participated in 'International Yoga Day' celebrations.

#### **Independence Day (15th August):**

Management, Principal, Staff, NSS Volunteers and Students of the institution participate in flag hoisting.

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#### Teachers Day (5th Sept):

Principal address all the staff members and speak about the achievements and qualities of Sri. Sarvepalli Radhakrishnan.

#### **Engineers Day (15th Sept):**

The birth anniversary of Sir. M. Visweswaraiah and technical talks are delivered.

Gandhi Jayanthi & Lal Bahadur Shastri Birth Anniversary (2nd Oct): Recollect the contributions made by Mahatma Gandhi and Lal Bahadur Shastri importance of peace, non-violence and hygiene.

#### T.N. Formation Day (18th July):

Students, Staff and the Management recollect the importance of statehood and regional language.

#### World Aids Day (1st Dec):

NSS Volunteers spreading the awareness on prevention of AIDS at the nearby villages.

For Further Details: https://www.msec.org.in/uploads/naac/7.1.1/7.1.1writeup.pdf

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

#### 7.1.2 The Institution has facilities and initiatives for

- 1. Alternate sources of energy and energy conservation measures
- 2. Management of the various types of degradable and nondegradable waste
- 3. Water conservation
- 4. Green campus initiatives
- 5. Disabled-friendly, barrier free environment

**Response:** A. 4 or All of the above

File Description	Document
Upload supporting document	<u>View Document</u>

## 7.1.3 Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through the following

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- 1. Green audit / Environment audit
- 2. Energy audit
- 3. Clean and green campus initiatives
- 4. Beyond the campus environmental promotion activities

**Response:** A. All of the above

File Description	Document
Upload supporting document	<u>View Document</u>

7.1.4 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic diversity and Sensitization of students and employees to the constitutional obligations: values, rights, duties and responsibilities of citizens (Within 500 words)

#### **Response:**

7.1.4. Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and Sensitization of students and employees to the constitutional obligations: values, rights, duties and responsibilities of citizens.

#### **Response:**

MSEC believes in cultural diversity and tolerance as a key to social harmony and has a diverse range of student body as well as employees from diverse regions.

The analysis has shown that students at the institute come from diverse cultural background such as North India, South India and from different religion such as Hindus, Muslims, and Christians.

The annual cultural fest of the institute 'DON Festa' is celebrated with pomp and show. Music, dance, literary, theatre and fine arts events are part of these competitions.

Ethnic Day is also one of the much awaited events by the students in the institute. The spirit of 'Unity in Diversity' is clearly evident during this ethnic day.

Students and staff of respective departments perform Saraswathi & Ayudha Pooja in their laboratories. Institute celebrates various cultural events such as Diwali, Christmas, Makarsankanti, Woman's Day, Yoga Day and Eid.

International Yoga Day (June 21), Founder's Day, International Youth Day (12th August). Sadbhavana Day (20th August), Teachers Day (5th September) International Literacy Day (8th September), Engineers Day (15th September), NSS Day (24th September), Gandhi Jayanti (2nd October) as Swachhta Diwas, National Unity Day (31stOctober) and National Integration Day are enthusiastically celebrated with pledges and various activities.

The institute to promote harmony amongst students along with individual holistic development is Students

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Clubs. These contributions are not only highlighting their individual talent but also promote their ideas.

MSEC creates awareness in Kilakarai towards Swatch Bharat Abhiyan which develop empathy towards economically weaker sections of the society

## Sensitization of students and employees to the constitutional obligations: values, rights, duties and responsibilities of citizens:

The courses 'State, Nation Building and Politics in India', 'Political and Economic Thought for a Humane Society' and 'History of Science and Technology in India' offered in B.E / B.Tech curriculum to have constitutional knowledge and responsibilities.

Every year 'Independence Day', 'Republic Day', 'Human Rights Day', 'National Voters Day', 'International Day of Democracy', 'National Unity Day', 'Electoral Day' and 'Samvidhan Diwas' are celebrated. In all these activities students involve as volunteers and display their duties and responsibilities towards society.

#### **Rural connect through Unnat Bharat Abhiyan:**

Institute is registered under the Ministry of Human Resource Development (MHRD) initiated program Unnat Bharat Abhiyan with AISHE CODE: C-26795. Under the UBA program, MSEC has adopted one village: Various grassroot studies are undertaken in these villages under the guidance of Dr.M.Vadivel, Professor / Chemistry Department.

#### **Digitalisation Awareness Program**

A team of MSEC from the CSE stream visited Kilakarai, and Thirupullani on 20.11.2021 & 27.11.2021 and held Digitalisation Awareness Campaigns.

#### Awareness Campaign on Skilling and Health

A team of MSEC from the Mechanical Engineering stream held the following awareness campaign on 08 Jan 2022 at Mayakulam Village.

Skill Development Program.

Prevention and Protective Measures of Endemic and Epidemic Diseases.

#### For Further Details: https://www.msec.org.in/uploads/naac/7.1.4/7.1.4writeup.pdf

File Description	Document
Upload Additional information	<u>View Document</u>
Provide Link for Additional information	View Document

#### 7.2 Best Practices

## 7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual

#### **Response:**

#### 7.2. Best Practice

#### **Best Practice - I**

#### i) Response:

#### Skill Development for Enhancing Employability and to promote Entrepreneur Eco-system

#### ii) Goal:

- Enhance quantitative and aptitude ability of the students.
- Improve their ability to express their views and ideas without fear.
- Help them to enhance their analytical and logic building ability.
- Ensure that they use good vocabulary hence communicating with international clients easily.
- Inculcate self-learning as part of their routine learning.
- Involving students in entrepreneurial activities.

#### iii) Context:

- A decade ago recruiting companies gave a feedback that students were technically good but need to be trained for soft skills.
- On interaction with recruiters we came to understand that students need to be introduced to recent technologies. Hence by collaborating with various industries and formed COE.
- Companies expected to be productive from day one the students are expected to possess good programming ability.
- To produce job providers than job seekers.
- First year students are given an orientation program.
- Students are given detailed introduction to the scope and opportunities available for their field of specialization.
- Motivational programs are conducted to ignite their thinking ability. They are also exposed to a workshop on creative thinking which is essential for any individual to innovate.
- Business English Certification is made as Additional training is provided to ensure that their analytical ability and reasoning ability are enhanced.
- During their third year of study students are trained to enhance their problem-solving ability.
- All students are mandatorily trained on enhancing their programming skills as all engineering graduates are expected to be computer literate.
- During the third-year students are provided with various opportunities to enhance their domain knowledge and also enhance their presentation and communication skills.
- COE are set up to impart training on a specific domain. With the help of industry experts, we form core committees which will decide and frame the syllabus to be delivered as part of training through a COE.

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- Faculty members are trained by industry experts who would subsequently train the students. In certain cases, industry experts, themselves train the students.
- Conduct Learn-wise programme through National Entrepreneurship Network and EDI, Government of Tamilnadu, which lead to students setting up startups.

Semester	Name	<b>Duration(week)</b>
I	Orientation Programme	One
	Motivation Programme	One
	Life Skills Workshop	One
II	Engineering Orientation Programme	One
	Creative Thinking Workshop	One
	Motivation Programme	One
III	Campus Readiness Programme	Two
	Communication Skills BEC Training	One
	Mock Aptitude Test	One Day
IV	Communication Skills - BEC Training	One
	Campus Readiness Programme	Two
	Mock Aptitude Test	One Day
V	Aptitude Training Programme Five days	
VI	Mock Aptitude Test (4,5,6)  Three Days	
VII	Aptitude Training Programme using Smart	Two days
VIII	Two days 8 Mock Interview Technical & HR	Two days

#### iv) Evidence of Success:

#### **Guidance for Competitive Examinations**

The Placement Cell provides competent training to the students on aptitude; verbal communication and group discussion which enable the students appear for various competitive examinations during their course of study and also after attaining the degree.

#### **Soft Skills Development**

Separate sessions for soft skills development is integrated in the placement training schedule through which the students can enhance the oral communication skill, personality development, collaboration and leadership qualities of the students.

#### Language Lab

Our language lab provides a rich environment to learn the language and a new outlook for the students to support themselves at the onset. Communication Skills lab develops the Listening, Speaking, Reading and Writing skills.

- During the last five academic years we had been a placement record of 70 % to 75 %.
- During the next three years, we had seen a little dip in the placement record due to recession (Corona virus).
- For the past three years, after practicing the model of Centre of Excellence training we have seen our placement percentage improving from 75 % to 80%.

#### v) Problems Encountered & Resources Required:

- Making the students realize the importance of the training being imparted and make them participate with full involvement has been a problem in the beginning.
- Trainers for many of the training programs are acquired through reputed training institutes. For technical training faculty members in our college are trained to deliver the content to our students.

#### **Best Practice - II**

#### i) Response:

#### **Voluntary Blood Donation Camp**

#### ii) Goals:

- To promote academic-public people interaction.
- To expose students to know the importance of blood donation.
- To encourage students to donate the Blood Voluntary.
- To encourage students to save the people life.
- To provide mentoring to engineering student's fear about this blood donation.
- To enhance social contribution in Engineering Education.

#### iii) The Context

Right from first year of engineering, students insist to participate the Blood donation Voluntary. A Madurai regional level Blood donation camp organized by the Mohamed Sathak Engineering College and donated blood more than 300 Units.

#### iv) Practice

This event has a successful history of last 10 years

MSEC is conducting "BLOOD DONATION" camps regularly under National Service Scheme (NSS) in association with the Tamil Nadu State Blood Transfusion Council & Tamil Nadu State Aids Control Society and Meenakshi Mission Hospital & Research Centre, Madurai.

During these health check-up programs, the Doctors/Nurses conducts blood pressure and other tests. We have been awarded with "Best Motivator awards" in regional level for the year 2012, 2013, 2016, 2017 and 2018 for organizing such programs.

#### v) Evidence of Success

- Over the period of time there is a significant improvement in the Blood donor.
- Some donors have gone for the Meenakshi Mission Hospital & Research Centre, Madurai and are donated blood for urgent needy.
- Since MSEC have been awarded with "Best Motivator awards" for the year 2012, 2013, 2016,

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2017and 2018 for organizing such programs.

#### vi) Problems Encountered and Resources Required Problems Encountered

- Lack of interest.
- Lack of awareness.

File Description	Document	
Best practices as hosted on the Institutional website	View Document	
Any other relevant information	<u>View Document</u>	

#### 7.3 Institutional Distinctiveness

## 7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words

#### **Response:**

#### 7.3: Institutional Distinctiveness

### 7.3: Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words.

Mohamed Sathak Engineering College was founded with a goal of being a leading institute of higher education and research by implementing innovative teaching learning and sustainable practices to address industry and social needs.

To contribute towards the socio economic development of the society, the college has initiated many activities under Carrier Guidance Programmes. This also help us to inculcate social awareness and values amongst students and also to take care of moral and ethical values so as provide service through activities and discharge the obligations towards the society of poverty students.

#### **Salient features:**

- Science exhibitions are conducted to encourage school and polytechnic college students to improve abilities in critical thinking, problem solving skills.
- Classes are taken for government school students in the subjects like Mathematics, Physics, Chemistry and Computer Science, where adequate teachers are not available
- Hands-on Training is provided to create awareness in Science & Technology development among school and polytechnic college students in forte areas.
- Motivational talk, life skill programs, stress management by experts are arranged to school students at their premises & in online mode during pandemic period to inspire them to learn more deeply and perform better.

- Furniture's, computers and books are given to needy government schools in the vicinity of the college.
- Scholarships are given to meritorious and economically backward students from rural area for admission into the college.
- Best teachers from schools and polytechnic colleges are honoured every year in teacher's day celebrations.

#### **School Outreach Programmes (Vetri Namathe)**

- A school outreach programme in association with District School Education department is being conducted every year for the HSC students of most backward and rural areas of our district.
- This programme aims at providing guidelines to get better marks in Higher Secondary Examinations (HSC) Subject experts have been invited to give valuable counselling regarding time management and important areas of subject to be concentrated to get better marks in HSC examinations and to face the examinations without fear and stress.
- More over this programme also helps the students to choose their future carrier for college/university studies. Awareness about higher education is imperative to the school students. Various options in higher studies, latest trends of professional courses such as B.E., B.Tech., & B.Arch., and scholarship schemes available for different categories of students have been very well exposed. Also the school students should equip their qualities in the entire manner while they transform from school to college/university. To create awareness and to bridge the gap on these aspects, this outreach programmes (VETRI NAMATHE) for school students are being conducting every year.

#### The following are the benefits of the programmes:

- Difficulties and barriers of subjects will be cleared with the help of subject experts.
- Students are prepared to face the examinations with full of confidence and free from stress.
- Various avenues of higher studies are exposed to the rural background students.
- By bringing school students to college they came to know the facilities where they can access the college resources and they will come to know about the systems followed in colleges.
- Students are given valuable exposure by using the new and different resources.
- Students are motivated to pursue college/university studies.
- Students will get awareness about the latest trends in education.

#### **Evidence of success:**

- Our district HSC students are consistently producing around 90% results in the last five years. This programme helps and contributes for this achievement.
- We have been consistently contributing to HSC school students of Backward areas to achieve above 90% of results through this programme

File Description	Document
Any other relevant information	<u>View Document</u>
Appropriate web in the Institutional website	View Document

#### 5. CONCLUSION

#### **Additional Information:**

Mohamed Sathak Engineering College has created impact in the surrounding area by way of imparting quality technical education, MSEC has NBA, New Delhi has accredited Four UGcourses (2020-2023). implemented Quality Management System in line with International standard ISO 9001:2015 and is certified by TUV-SUD a leading ISO Certification Body. Institution is blessed by many educationist and philanthropists to name few are Late Dr.APJ Abdul Kalam visited our campus in the year 2008. 10 Mega Blood Donation Camps organized by NSS for the past Five years. "Best NSS volunteer" awards each year, for the past Five years. Awards for mobilizing more than 2000 units of blood each year, for the past Five years. "Best NSS Programme Officer" award from Anna University. And "Best Motivator Award" Received by the Principal from Meenakshi Mission Hospital & Research Centre (MMHRC), as an internationally renowned centre for educationMohamed Sathak Engineering College has created impact in the surrounding area by way of imparting quality technical education, MSEC has implemented Quality Management System in line with International standard ISO 9001:2015 and is certified by TUV-SUD a leading ISO Certification Body.

#### **Concluding Remarks:**

Right from its inception in 1984 with just three branches of undergraduate Engineering courses, the Institution has grown leaps and bounds both in its size as well as stature till this day and promises to continue in its progressive mode of placing at the hands of our nation, Engineers with knowledge, skill as well as human values. The Institution has been constantly refining its focus as well as modus operandi in achieving the Vision it has set for itself. The descriptive summaries and the accompanying data under each criterion are a proof of the sincere efforts of the Institution in this direction. It is a firm belief as well as the perception of the Management of this Institution that the growth in infrastructure, academics, research, co-curricular and extracurricular activities, activities on social and national issues for creating awareness as well as mitigating the problems, contributions in terms of activities of relevance to local community around the Institution - have all been in keeping with the expectations of NAAC - a wing of the UGC, highly relevant to the present-day educational scenario in the country. As such, it is humbly submitted that this Institution, MOHAMED SATHAK ENGINEERING COLLEGE, KILAKARAI, deserves to be accredited well by NAAC. This accreditation will also be a milestone in its chronological history as well as serve as a great morale booster in accelerating its growth towards its nation-building efforts through Engineering education

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#### **6.ANNEXURE**

#### 1.Metrics Level Deviations

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- 3.2.2 Number of workshops/seminars/conferences including on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship conducted during the last five years
  - 3.2.2.1. Total number of workshops/seminars/conferences including programs conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year wise during last five years

Answer before DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18
34	23	22	2	5

#### Answer After DVV Verification:

2021-22	2020-21	2019-20	2018-19	2017-18
30	20	17	1	4

Remark: other topics are removed.

- 5.1.2 Capacity building and skills enhancement initiatives taken by the institution include the following
  - 1. Soft skills
  - 2. Language and communication skills
  - 3. Life skills (Yoga, physical fitness, health and hygiene)
  - 4. ICT/computing skills

Answer before DVV Verification : A. All of the above Answer After DVV Verification: A. All of the above

#### 2.Extended Profile Deviations

ID	Extended Questions
1.1	Number of teaching staff / full time teachers during the last five years (Without repeat count):
	Answer before DVV Verification: 346
	Answer after DVV Verification: 339

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