



# **SELF STUDY REPORT**

**FOR**

**2<sup>nd</sup> CYCLE OF ACCREDITATION**

## **MODERN EDUCATION SOCIETY'S COLLEGE OF ENGINEERING**

**WADIA COLLEGE CAMPUS, 19, LATE PRIN. V. K. JOAG PATH,  
411001**

**[www.mescoepune.org](http://www.mescoepune.org)**

**SSR SUBMITTED DATE: 11-11-2021**

Submitted To

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**

**BANGALORE**

**November 2021**

# 1. EXECUTIVE SUMMARY

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## 1.1 INTRODUCTION

Modern Education Society is one of the renowned groups in the education sector. It was established in 1932, with the prime objective "**FOR THE SPREAD OF LIGHT**".

Our Institute, The Modern Education Society's College of Engineering(MESCOE), Pune 1 was established in the year1999. MESCoE, is one of the leading institutions imparting quality technical education through offering four year degree courses in various streams like Mechanical Engineering, E & TC Engineering, Computer Engineering and two years PG Courses in Computer Engineering, Signal Processing and Mechanical Design Engineering.

The engineering degree courses run by the institute are approved by the All India Council for Technical Education (AICTE), New Delhi, sanctioned by Government of Maharashtra and affiliated to Savitribai Phule Pune University.

Our vision is to produce world class engineers for converting global challenges into opportunities through value embedded quality Technical education. The Institute has a conducive environment and enormous learning opportunities to foster character building and good future life ultimately, to emerge as tomorrow's nation builders. All the teaching faculty in the institute, strive hard to impart training for the students to make them competent, motivated engineers and scientists ultimately developing the institute as a centre of academic excellence. All of the faculty members of the Institute trying their best through serving the purpose of inculcating a solid foundation of knowledge and enhancing confidence, creativity and innovation in the students. Some state of the art laboratories worth a mention are **BAKER-MESCOE Metrology Lab, SDR Lab- Center of Excellence and High Performance Lab in association with CDAC**. These laboratories have the latest facility, where the students are exposed to modern and sophisticated instruments.

During the short span of five years, the Institute has admitted around 1800 students pursuing several undergraduate and postgraduate programs. The Institute also offers add-on/short term courses in Programming skill development, Technical skill development and French, German and Japanese language. The Institute was accredited with an "A" Grade by NAAC in 2015 and by NBA in 2018(E&Tc Department, Mechanical Department) and 2019(Computer Department). The college has also been awarded with "Best College Award" by SPPU, Pune in 2017.

### Vision

Our vision is To **Groom - Motivated, Environment friendly, Self-esteemed, Creative and Oriented Engineers.**

### Mission

**To Develop Industry Oriented Manpower to accept the challenges of Globalization by,**

- **Promoting Value Education through motivated trained faculty**
- **Maintaining conducive environment for education at affordable cost**
- **Promoting Industry Institute interaction**
- **involving alumni.**

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

### **Institutional Strength**

- The Institute results are consistently good for all the disciplines. We have produced quite a few University toppers.
- Our Institute has experienced and highly qualified faculty. A substantial number of faculty hold PhD degrees and majority of the faculty are pursuing their PhD.
- The Institute faculty are supervisors for PhD students.
- Faculty have published research papers in high impact factor journals and books.
- IIC MESCOE is helping foster the ecosystem of entrepreneurship and startups with support from the Ministry of Education's Innovation Cell.
- The Institute possesses a distinguished background which carries the name of the illustrious Wadia family.
- Our institution has partnered with reputed campus programs such as Coursera, I.I.T. Bombay spoken tutorial, Indian Institute of Remote Sensing to name a few. The partnership has given an opportunity to our students to hone their skills, during the pandemic and fruitfully use their time during the lockdown.
- The Institute has a State-of-the-art central library equipped with the Radio Frequency Identification (RFID) technology.

### **Institutional Weakness**

- The Institute needs a University affiliated Research Center.
- The Institute needs to strengthen further, the Consultancy activities and foreign exchange programs with universities of repute.
- The Alumni Association, despite its enduring hard-work, finds it challenging to form an extensive alumni base and draw support from them in matters related to student progression, financial support, and career prospects.

### **Institutional Opportunity**

- The Institute can venture into joint research and Ph.D. Programs with international universities which will provide a platform for international exposure to both students and faculties.
- Teaching-learning process has been enhanced and supplemented by quality e-resources. This has opened up opportunities for developing e-content by the faculty.
- The Institute may obtain Academic Autonomy which would enable introducing interdisciplinary courses.

- The COVID-19 pandemic has given an opportunity to re-invent modes and methods of teaching. Students and teachers alike have innovated and adapted to new modes of engagement by training in several online platforms like Microsoft Teams, Zoom, WebEx, Google Meet, and Google Classroom.

### **Institutional Challenge**

- Student's skills need to be enhanced through additional measures as per the continuous changing requirements of the industry.
- Due to the growing number of engineering colleges we need to attract academically good students.
- Owing to the dependence on approval from external authority, introduction of new programs of study remains a challenge.
- As many students come from humble backgrounds, great efforts are required on the part of the teachers to make these students par excellence and nurture them to aspire for higher ambitions.
- It is challenging to establish collaborative programs with institutions at national and international level.

## **1.3 CRITERIA WISE SUMMARY**

### **Curricular Aspects**

Modern Education Society's College of Engineering is affiliated to the Savitribai Phule Pune University (SPPU). The Institute is a self-financing institution. The institute runs 3 UG and 3 PG programs. All UG programs of the Institute are NBA accredited till 30.06.2022.

Institute Academic calendar is based on SPPU calendar for conduction of curricular, co & extra-curricular activities. Institute has highly qualified and experienced faculty members as subject experts, chairman, etc. These faculty members actively participate, coordinating in the curricular design process as per needs and requirements every 4 years.

For effective implementation of policies, vision and mission, the institute has constituted various statutory and administrative committees. Each department has a Departmental Advisory Board (DAB). All the faculty members prepare lesson plans, course files and lab manuals of their respective subjects before the commencement of every semester / academic year.

Bridging the gap between the curriculum and the industry is achieved by conducting seminars, workshops, certificate courses, industry visits, industry sponsored projects, internships, different add on courses through MOU's with different industries & alumni's start-ups. Majority of the students are carrying out field projects, internships, and other interactive programs in association with industry.

The institute also plays a vital role in overall development of the students. Committees like Student Development cell; different clubs are formed by students' viz. Google developer club, Nakshatra club, Designer club, Directing Visions club, Astitva, etc. to help the students to groom themselves by participating in different activities. Institute also conducts NSS Camps, Blood Donation Camps and Orphanage Visits.

Regular feedback from students, alumni also ensure appropriate action towards addressing gaps in curriculum and overall institute development.

## **Teaching-learning and Evaluation**

Modern Education Society's College of Engineering admits more than 1800 students annually, including admissions as per the reservation policy of the Government of India. Faculties assess the academic proficiency of students based on their performance in classroom discussions and tests/assignments. Advanced learners are identified and counselled for higher education, add-on courses etc. participation. The slow learners' need is satisfied through remedial classes, tutorials, giving them question bank etc. The college also has an effective mentor-mentee system for counselling. Students are also mandated to participate in co-curricular activities like Conferences, Robocon, industrial visits etc. These activities improve experiential learning, collaborative as well as participative learning. National conferences organized in the college also provide opportunities for students' developments in academics. To inculcate research interests among students, they are encouraged to be part of research projects supervised by faculty.

Institute has well-qualified full-time teachers are appointed against sanctioned posts in accordance with UGC guidelines to maintain a healthy student-teacher ratio,. Blended teaching-learning methods that employ both ICT and traditional classroom practices make learning more effective. The COVID-19 pandemic threw up new challenges of online teaching-learning, but it was well handled, thus ensuring continuity as well as change in learning experiences. The college maintains a robust internal assessment mechanism to monitor the process and progress of assessment. After thorough assessment, the internal assessment marks are shown to students for redressing their grievances if any. The grievances are taken care by respective courseteachers. The result analysis is done by exam committee and discussed in departmental meeting for further course of action. Programmes and courses – whose outcomes are outlined by the SPPU in subject-specific curricula – are designed to equip students with knowledge, life skills, moral values, and self-reliance. Many students get placed in reputed companies during campus interviews.

## **Research, Innovations and Extension**

The institute is motivated to nurture the atmosphere for the research and development and also for the related extension and collaborative activities. The infrastructure of college has well equipped laboratory facilities, library with good number of books and journal subscription. The faculty and students are motivated to attend and present research papers in the national/international conferences, workshops, seminars etc. by providing them financial assistance. They are also encouraged to publish their research article in peer reviewed reputed journals. Institute has started various students' development clubs for the overall development and growth of students (Innovation Ecosystem).

Faculty are encouraged to submit the project proposals to government Agencies and other funding agencies. Faculty are trained on Patenting and IPR issues by organizing webinars and workshops. College has Collaboration with Industries, Academic Institutes and Professional Bodies for sharing research facilities and undertaking collaborative research. Various MoU have been signed with different organizations viz. TechNex Tech., STACKZEAL, CYBER SECURITY TECH., TRIDENTS TECHLABS, CDAC, GRACEFUL GROWTH, AMITEC, c4i4, NATIONAL INSTRUMENTS, Kwatt SOLUTIONS, BAKER GUAGES etc. for the overall development of students and technology transfer. The NSS unit actively participates in National Programs such as Swaccha Bharat Abhiyan, Blood Donation Camps, Tree plantation and many more which are being in line with the vision and mission statement.

## **Infrastructure and Learning Resources**

The institute follows the norms provided by AICTE for creating and enhancing the infrastructure that facilitate effective teaching-learning in proportion to the student strength in different streams. The institute focuses on developing good and modern infrastructure in the campus. The institute is always eager to create or enhance the infrastructure in view of a healthy, comfortable and technology based environment required for effective teaching- learning. The institute constantly and continuously expands and upgrades the infrastructure facilities.

The institute encourages students to participate in various sports and cultural activities to ensure holistic development of students.

The college Library is well-equipped with the latest infrastructure and well-stocked with a good collection of books and is fully automated. It has a diverse collection of books with Barcode tags, e-resources for various disciplines.

Institute ensures extensive use of ICT facilities by providing adequate access of available resources to students and faculty members. The institute has good number of computers with the latest specification to fulfil all the academic requirements and equipped with high end servers. To cope up with continuously changing technologies all the labs are upgraded with the latest softwares on timely basis.

The maintenance of the infrastructure and academic support facilities is carried out on regular basis to ensure uninterrupted and quality service to the stakeholders

### **Student Support and Progression**

Modern Education Society's College of Engineering has always been a student-centric institution. Student mentoring and support has been a primary focus of the institution. The students are mentored from the time of admission up to the completion of their programme at various levels. Every student has a teacher assigned viz. Parent Teacher, to counsel and mentor them. Hostellers have access to their hostel officials at any time of the day and night. The students are provided information and guidance about on-campus facilities such as dispensary, gymnasium, sports facilities, various co-curricular and extracurricular activities, clubs etc at the time of induction program.

The academic calendar gives information about the academic schedule and various other activities that have been planned to be conducted in the year. All departments have associations under the auspices of which students can hone their event and team management skills along with technical skills. The students are encouraged to participate in different technical and other co-curricular events held on campus or anywhere else in the country.

Students can make use of both the Central and departmental libraries for reference work, and computer and internet services for browsing. Students are supported through scholarships and freeships provided by the government. The scholarship section provides information on various financial support schemes.

The Placement Cell arranges for campus recruitment. Other support services include redressal of Students Grievances through IC, Anti ragging committee, in-house language laboratory, Placement Cell, Alumni Association and canteen. Girl students can address their grievances to the IC (which also addresses sexual harassment cases).

College provides many opportunities to students to ensure their representation and participation in various

student bodies and committees. Apart from this, to enable holistic growth of students, the college provides several opportunities to display their talents and skills in the field of sports and cultural activities.

The college has an active Alumni association that facilitate alumni network and support in the form of motivation and opportunities for the current students.

### **Governance, Leadership and Management**

The institute is affiliated to Savitribai Phule Pune University (SPPU). Hence admissions and all the academic activities are conducted as per the rules and regulations by SPPU. The institute have clearly defined policies with precise goals that focus the excellence in education.

The Monitoring and Development Committee (MDC), Registrar-Trust and CFO-Trust are the governing bodies. The Principal is the Head of the institute. He is assisted by Vice Principapl, the Deans, Head of departments, Registrar, Examination Officer and librarian in all academic and administrative matters. The institute encourages participative management. To facilitate the participative management, various committees are formed.

The budget allocation to the institute is made by the governing bodies. The sanctioned budget is disbursed by the principal to different departments/committees for purchasing equipment, books and other necessary expenditure. The registrar and the accountant are responsible for the financial management of the institute.

The institute interacts with all the stakeholders. Regular meetings are conducted for this purpose such as teacher-parents meeting. There is well-defined feedback mechanism for students. The students are encouraged to participate in various activities and also they are in various administrative committees. The teaching and non-teaching staff is encouraged for their all-round development. The institute assists them by various means such as financial assistance, special leaves.

The college has IQAC cell that plays crucial role in all developmental strategies and academic development of the institute. The IQAC initiates various processes for overall development of students and faculty. It plays a catalytic role to improve the academic and administrative performance of the institute.

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

The institution constituted the following committees as per the norms laid down by the University/UGC: Institution Grievance Redressal Committee, Anti-Ragging, Internal Committee and Mentoring Programme cares for the well-being of students and staff in the institution. The Institute is continuously engaged in making the campus eco-friendly. The Institute has installed LED bulbs/ tubes for the conservation of energy. The Institute has also installed Solar and Biogas Energy systems as a green campus initiative.. Rain water harvesting system has been installed at various points in our College and hostels. The Institute under takes tree plantation efforts in order to neutralize the carbon dioxide in and around the college campus. The Institute organizes activities that strengthen our constitutional values and deepen our allegiance and responsibility towards our Nation. The National Service Scheme (NSS) and Board of Student Development are two integral bodies under SPPU that commit to programs and activities to inculcate constitutional obligations and patriotism among students and staff. The college fosters community responsibility by organizing blood donation camps routinely. In every camp, around 100 volunteers donate blood. NSS also organize books, food and clothes

donation programs regularly. The college celebrates national and international commemorative days to inculcate constitutional responsibilities, in order to engrain patriotic spirit and to encourage unity among fellow citizens.

#### Best Practices

Title of Practice: No.1: “Industry Institute Interaction”

The goal of the scheme is to establish and maintain relationships with the corporate world through MoUs, Centre of Excellence, sponsored projects, industrial visits and in-plant training for students and faculty members. The Institution has taken initiative to interact with various industries through the Industry Institute Interaction committee that maintains professional relations with industries through membership of Professional Technical Bodies (ASHRAE, SAE, ASME, CSI, IETE, ISTE), MoUs with industries (Baker Gauges India, CSI, ICT Academy) and lab development under Center of Excellence (3D Printing Lab (MODROB), NI Lab, Tribo Lab, Baker Gauges Lab, TechNex, JALTAP, Sapours, StackZeal, ICT, SDR lab).

Title of Practice: No.2: Student Skill Development Activity

The goal of the scheme is for the development of students' technical skills and job skills, necessary for industries through Co-curricular and Extracurricular activities. Co-curricular activities are significant for enriching students on an emotional, cognitive, physical, and social level. At the same time, extracurricular activities incorporating NSS, art and music can play a vital role in nation-building, psychomotor development and dexterity. The SAE Student chapter was formed under which students were financed and motivated to participate in events like M-Baja which is a Multi Terrain vehicle making competition and E-Baja which electric vehicle making competition to enhance students technical skills, build teamwork, leadership and presentation skills, the Institute continuously supports students to participate in such competitions.

## 2. PROFILE

### 2.1 BASIC INFORMATION

Name and Address of the College	
Name	MODERN EDUCATION SOCIETY'S COLLEGE OF ENGINEERING
Address	Wadia College Campus, 19, Late Prin. V. K. Joag Path,
City	Pune
State	Maharashtra
Pin	411001
Website	<a href="http://www.mescoepune.org">www.mescoepune.org</a>

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal(in-charge)	S. S. Sarawade	020-26163831	9422460448	020-26163831	mescoenaac@gmail.com
IQAC / CIQA coordinator	Mane Pranoti P	020-26262626	8806661816	020-26262625	pranoti.mane@mescoepune.org

Status of the Institution	
Institution Status	Private

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details	
Date of establishment of the college	05-07-1999

**University to which the college is affiliated/ or which governs the college (if it is a constituent college)**

State	University name	Document
Maharashtra	Savitribai Phule Pune University	<a href="#">View Document</a>

**Details of UGC recognition**

Under Section	Date	View Document
2f of UGC		
12B of UGC		

**Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)**

Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day,Month and year(dd-mm-yyyy)	Validity in months	Remarks
AICTE	<a href="#">View Document</a>	05-07-1999	12	Approval is extended every year by submitting the required document as per AICTE

**Details of autonomy**

Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?	No
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**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

<b>Location and Area of Campus</b>				
<b>Campus Type</b>	<b>Address</b>	<b>Location*</b>	<b>Campus Area in Acres</b>	<b>Built up Area in sq.mts.</b>
Main campus area	Wadia College Campus, 19, Late Prin. V. K. Joag Path,	Urban	4.11	14715

## 2.2 ACADEMIC INFORMATION

<b>Details of Programmes Offered by the College (Give Data for Current Academic year)</b>						
<b>Programme Level</b>	<b>Name of Programme/Course</b>	<b>Duration in Months</b>	<b>Entry Qualification</b>	<b>Medium of Instruction</b>	<b>Sanctioned Strength</b>	<b>No.of Students Admitted</b>
UG	BE,Computer	48	HSC	English	180	0
UG	BE,Electronics And Telecommunication	48	HSC	English	120	0
UG	BE,Mechanical	48	HSC	English	120	0
PG	ME,Computer	24	BE	English	24	0
PG	ME,Electronics And Telecommunication	24	BE	English	12	0
PG	ME,Mechanical	24	BE	English	24	0

### Position Details of Faculty & Staff in the College

<b>Teaching Faculty</b>												
	<b>Professor</b>				<b>Associate Professor</b>				<b>Assistant Professor</b>			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	11				14				66			
Recruited	7	4	0	11	6	8	0	14	32	34	0	66
Yet to Recruit	0				0				0			
Sanctioned by the Management/Society or Other Authorized Bodies	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			

<b>Non-Teaching Staff</b>				
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Total</b>
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				39
Recruited	31	8	0	39
Yet to Recruit				0

<b>Technical Staff</b>				
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Total</b>
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				29
Recruited	27	2	0	29
Yet to Recruit				0

**Qualification Details of the Teaching Staff**

<b>Permanent Teachers</b>										
<b>Highest Qualification</b>	<b>Professor</b>			<b>Associate Professor</b>			<b>Assistant Professor</b>			<b>Total</b>
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	7	4	0	6	7	0	2	4	0	30
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	1	0	29	31	0	61

<b>Temporary Teachers</b>										
<b>Highest Qualification</b>	<b>Professor</b>			<b>Associate Professor</b>			<b>Assistant Professor</b>			<b>Total</b>
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	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

<b>Part Time Teachers</b>										
<b>Highest Qualification</b>	<b>Professor</b>			<b>Associate Professor</b>			<b>Assistant Professor</b>			<b>Total</b>
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	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

<b>Details of Visting/Guest Faculties</b>				
<b>Number of Visiting/Guest Faculty engaged with the college?</b>	<b>Male</b>		<b>Female</b>	<b>Total</b>
		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
PG	Male	2	0	0	0	2
	Female	1	0	0	0	1
	Others	0	0	0	0	0
UG	Male	981	26	0	0	1007
	Female	444	9	0	0	453
	Others	0	0	0	0	0

**Provide the Following Details of Students admitted to the College During the last four Academic Years**

Programme		Year 1	Year 2	Year 3	Year 4
SC	Male	165	128	148	111
	Female	108	96	92	86
	Others	0	0	0	0
ST	Male	14	11	15	16
	Female	2	2	0	1
	Others	0	0	0	0
OBC	Male	343	333	286	265
	Female	157	153	174	171
	Others	0	0	0	0
General	Male	589	539	601	611
	Female	283	297	366	362
	Others	0	0	0	0
Others	Male	213	194	136	120
	Female	88	87	81	97
	Others	0	0	0	0
Total		1962	1840	1899	1840

## Extended Profile

### 1 Program

#### 1.1

Number of courses offered by the Institution across all programs during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
248	238	238	247	242
File Description		Document		
Institutional data prescribed format		<a href="#">View Document</a>		

#### 1.2

Number of programs offered year-wise for last five years

2020-21	2019-20	2018-19	2017-18	2016-17
6	6	6	6	6

### 2 Students

#### 2.1

Number of students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
1962	1840	1899	1840	1869
File Description		Document		
Institutional data in prescribed format		<a href="#">View Document</a>		

#### 2.2

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

2020-21	2019-20	2018-19	2017-18	2016-17
235	268	235	226	226

File Description	Document
Institutional data in prescribed format	<a href="#">View Document</a>

### 2.3

#### Number of outgoing / final year students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
486	479	455	422	435

File Description	Document
Institutional data in prescribed format	<a href="#">View Document</a>

## 3 Teachers

### 3.1

#### Number of full time teachers year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
91	93	124	133	132

File Description	Document
Institutional data in prescribed format	<a href="#">View Document</a>

### 3.2

#### Number of sanctioned posts year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
92	92	126	126	123

File Description	Document
Institutional data in prescribed format	<a href="#">View Document</a>

## 4 Institution

### 4.1

#### Total number of classrooms and seminar halls

**Response: 24**

**4.2**

**Total Expenditure excluding salary year-wise during last five years ( INR in Lakhs)**

2020-21	2019-20	2018-19	2017-18	2016-17
213.3	338.18113	344.34563	496.53541	359.62975

**4.3**

**Number of Computers**

**Response: 739**

NAAC

## 4. Quality Indicator Framework(QIF)

### Criterion 1 - Curricular Aspects

#### 1.1 Curricular Planning and Implementation

##### 1.1.1 The Institution ensures effective curriculum delivery through a well planned and documented process

##### Response:

Modern Education Society's College of Engineering, Pune (MESCOE) is affiliated to Savitribai Phule (SPPU), Maharashtra - INDIA. The curriculum of all programs are as per the scheme and syllabus of affiliated university. The institution meticulously develops action plans for the effective implementation of the curriculum.

To cater with contemporary needs, students are trained with additional knowledge in thrust areas viz. 3D Printing, IoT, Data Science, AI/ML, etc. through add-on courses and encouragement in participation in internationally recognized competitions viz. SAE-BAJA, Hackathons, RoboCon, etc.

The Principal of the college conducts meetings with the departmental heads to develop strategies for effective implementation of the curriculum. Every Department has a departmental advisory board (DAB).

- Departmental meetings by Heads of the Department: These are held periodically by the respective Heads of the Department wherein a review of the syllabus completion is taken regularly.
- Principal, Deans, HoD's and academic monitoring committee conducts meetings to review semester's progress and provide suggestions.

1. Academic Calendar: Institute's Academic Calendar is in line with SPPU calendar. All programs plans 16-week academic calendar of each semester. Academic calendar is disseminated to stakeholders through college websites, department blogs, notice boards, etc. clearly defining schedules of all curricular, co & extracurricular activities well in advance.

2. Improving instruction methods: Academic monitoring committee continuously monitors student's attendance, syllabus completion, student's progression, etc. All faculty members prepare content analysis for each course as a part of the course file.

3. Use of ICT Tools in teaching: To facilitate advance learning, faculty members utilizes ICT tools viz. NPTEL videos, web-resources, self-developed experiments/blogs for information beyond curriculum, virtual laboratories, online courses, etc. During the pandemic situation, faculty members utilized *licensed* MicroSoft Teams, Google Teams, AICTE free softwares like AutoDesk Fusion360, Oracle Live, online MATLAB available for both teachers and students.

4. **Conduction of Experiments:** Faculty delivers basic knowledge of the experiment in small groups of 4-5 students to perform the experiment. Faculties monitor student's performance individually through continuous assessment. Institute has signed MoU's with Virtual lab (IIT Bombay), Spoken tutorial, Coursera, ICT Academy, etc., for effective online practical and skill development.

5. **Student Mentoring & counselling:** As per institute policy, parent teachers are assigned for admitted students. It's the parent teacher's responsibility to mentor/monitor each student throughout his academics. Parent teacher classifies each one as a bright or weak student based on his/her past academics, feedback from peers, etc. Special attention is given to academically weak students through individual's counselling and referring such cases to subject expert faculties through remedial classes to clarify their doubts and revision of basic knowledge.

6. **Feedback:** Periodical online feedback is taken from all stakeholders on various aspects of the teaching-learning process.

7. **Selection of PBL/Seminars/Projects:** Students are encouraged to form groups and select projects/topics in thrust areas, industrial problems, etc. Coordinators assign guides based on their subject expertise. Preference to projects with market potential are considered and supported for development of new start-ups.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

### 1.1.2 The institution adheres to the academic calendar including for the conduct of CIE

#### Response:

- As per the SPPU academic calendar, Continuous Internal Evaluation (CIE) through In-semester and end-semester examinations controlled by SPPU through college appointed College Examination Officer (CEO).
- Internal Assessment tests (IA), assignments, quizzes, and seminars are part of the Continuous Internal Evaluation (CIE) of students. There is a well-defined process for the conduction of CIE as per the calendar of events. The course instructors prepare IA question papers based on the revised Bloom's Taxonomy along with the scheme of evaluation, reviewed by the module coordinator and approved by the Department Advisory Board (DAB).
- The Internal Assessment (IA) timetable prepared by the examination committee headed by CEO is published, and tests are conducted as per the schedule. Post IA tests, evaluation of answer scripts, and calculation of Course Outcomes (CO) - Program Outcomes (PO) and Program Specific Outcomes (PSO) attainment is carried out by the respective Course teacher.
- As per institute calendar, internal evaluations are done through continuous assessment of practical, unit-wise tests, quizzes, etc. Term work (TW) assessment is based on continuous

evaluations, submission of assignments, oral based questions, etc.

- CIE includes Internal Periodical Assessments, Final Term Work submission of all the laboratory journals, mini- projects, seminars and final year projects.
- Weak students are identified based on continuous evaluations. Course teacher takes care of such weak students through revised practical, additional explanations, assignments, etc.
- Theory and Practical content analysis are prepared for every course and execution of course delivery is monitored for continuous improvement.
- Continuous evaluation and assessments are also done for laboratory courses, project work, seminars, etc.
- Institute Academic Calendar strictly follows SPPU schedules for all curricular as well as Co & Extra-curricular activities. Also, the institute has active tie-ups with Institute Innovation Cell (IIC) under MHRD, GoI, Start-up & Innovation Cell in association with CIE-SPPU, ISRO-IIRS e-learning, etc. All activities under MoU's, tie-ups, etc. are conducted and monitored continuously as per their schedules.
- Following points are considered for success of every listed activity in the Institute Academic Calendar: (1) Various committees are prepared and different tasks are assigned to them department wise. (2) Departmental and central committees monitor successful implementation of each and every task that is enlisted in the academic calendar. (3) After completion of each activity, detailed closure reports including attendance, photographs, etc. are generated ensuring completion of task.
- For advanced knowledge and skill developments, the institute offers various interdisciplinary major/minor honors courses as per SPPU curriculum w.e.f. 2020-21 batch for its students without any additional charges.

File Description	Document
Upload Additional information	<a href="#">View Document</a>

**1.1.3 Teachers of the Institution participate in following activities related to curriculum development and assessment of the affiliating University and/are represented on the following academic bodies during the last five years**

1. Academic council/BoS of Affiliating university
2. Setting of question papers for UG/PG programs
3. Design and Development of Curriculum for Add on/ certificate/ Diploma Courses

**4. Assessment /evaluation process of the affiliating University****Response:** B. Any 3 of the above

<b>File Description</b>	<b>Document</b>
Institutional data in prescribed format	<a href="#">View Document</a>
Details of participation of teachers in various bodies/activities provided as a response to the metric	<a href="#">View Document</a>

**1.2 Academic Flexibility****1.2.1 Percentage of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented****Response:** 100**1.2.1.1 Number of Programmes in which CBCS / Elective course system implemented.****Response:** 6

<b>File Description</b>	<b>Document</b>
Institutional data in prescribed format	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**1.2.2 Number of Add on /Certificate programs offered during the last five years****Response:** 40**1.2.2.1 How many Add on /Certificate programs are offered within the last 5 years.**

2020-21	2019-20	2018-19	2017-18	2016-17
19	7	9	3	2

<b>File Description</b>	<b>Document</b>
List of Add on /Certificate programs	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**1.2.3 Average percentage of students enrolled in Certificate/ Add-on programs as against the total number of students during the last five years**

**Response:** 40.33

### 1.2.3.1 Number of students enrolled in subject related Certificate or Add-on programs year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
1722	1547	262	205	91

File Description	Document
Details of the students enrolled in Subjects related to certificate/Add-on programs	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 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:**

SPPU has offered courses from FE to BE incorporating cross cutting issues like Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum.

Institute has taken consistent efforts for preparing an individual to progress in life and work .

Mandatory courses which amalgamate above mentioned issues are

- **Audit course1&2 deals with study of ecology; causes, effects and preventive measures related to environmental issues.**
- **Democracy Election Governance: It gives introduction to the students about the Constitution of India, different Models of Democracy Evolution and Dimensions of Democracy such as Social, Economic and Political.**
- **Audit course 3, 4, 5 & 6 consists of a combination of various courses which students are free to choose in their second and third year engineering programme.**
- **Students can choose any two non- credit courses through the list provided by the university. Then register for a course for which they are awarded grade AP which is included in the result.**
- **Orientation programme is specially held for first year students to familiarize them with**

**campus life and enlighten them about cross cutting issues mentioned above.**

- **Various activities are organized by the institute mainly National Service Scheme (NSS), Student Development/Welfare Organization (SDO/SWO), Internal Complaints Committee (ICC), Staff/Student Grievance committee & Anti-ragging committee.**

**College organized a one-day programme on personality development and self-defence for girls to boost self-confidence and bring awareness about health, law and student activities. Board of student development, SPPU, Pune and our institute in joint venture arranged a workshop on the importance of Health of Girl Students.**

**Campus is equipped with various energy saving facilities namely**

- **100 LPD Evacuated Tube Collector Solar Water Heater System,**
- **Solar Electricity Plants: 3kW and 5kW**
- **Biogas plant**
- **Sensor based Light systems in Washrooms**
- **Use of LED bulbs/tubelights in Institute**
- **College also has the following ongoing project which reveals the environment friendly attitude of the institute.**
  - **The vermicompost culture project which is implemented in campus to prepare fertilizer, which is used for the plants in the campus.**
  - **Liquid waste management-Water Harvesting: A network of rainwater harvesting systems ensures continuous recharging of groundwater tables.**

**Various NSS activities are conducted throughout the year which help students to inherit human values and ethics like kindness, honesty, peace, truth, accountability and respect to others.**

- **Blood donation camp is held every year to donate blood as societal responsibility.**
- **Thanksgiving activity is organized wherein books, food and clothing items are collected by the college desk and are distributed among needy people.**
- **NSS organized a road safety programme to foster the importance of safeguarding human life.**

File Description	Document
Upload the list and description of courses which address the Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum.	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 1.3.2 Average percentage of courses that include experiential learning through project work/field work/internship during last five years

Response: 41.56

#### 1.3.2.1 Number of courses that include experiential learning through project work/field work/internship year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
102	100	102	100	100

File Description	Document
MoU's with relevant organizations for these courses, if any Average percentage of courses that include experiential learning through project work/field work/internship	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

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

Response: 100

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

Response: 1962

File Description	Document
List of programmes and number of students undertaking project work/field work/ /internships	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 1.4 Feedback System

**1.4.1 Institution obtains feedback on the syllabus and its transaction at the institution from the following stakeholders 1) Students 2) Teachers 3) Employers 4) Alumni**

**Response:** B. Any 3 of the above

File Description	Document
Any additional information (Upload)	<a href="#">View Document</a>

**1.4.2 Feedback process of the Institution may be classified as follows: Options:**

1. Feedback collected, analysed and action taken and feedback available on website
2. Feedback collected, analysed and action has been taken
3. Feedback collected and analysed
4. Feedback collected
5. Feedback not collected

**Response:** C. Feedback collected and analysed

File Description	Document
Upload any additional information	<a href="#">View Document</a>

## Criterion 2 - Teaching-learning and Evaluation

### 2.1 Student Enrollment and Profile

#### 2.1.1 Average Enrolment percentage (Average of last five years)

**Response:** 81.42

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

2020-21	2019-20	2018-19	2017-18	2016-17
372	414	422	387	408

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

2020-21	2019-20	2018-19	2017-18	2016-17
492	492	492	492	492

#### File Description

#### Document

Institutional data in prescribed format

[View Document](#)

Any additional information

[View Document](#)

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

**Response:** 78.3

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

2020-21	2019-20	2018-19	2017-18	2016-17
144	224	199	179	187

#### File Description

#### Document

Average percentage of seats filled against seats reserved

[View Document](#)

Any additional information

[View Document](#)

## 2.2 Catering to Student Diversity

### 2.2.1 The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners

#### Response:

The assessment of the learning levels of the students is done by the teachers in the classrooms during lectures. The rubrics used for identifying slow and advanced learners are academic performance, participation in discussions in classrooms and laboratories, performance in class tests, assignments, tutorials, quizzes, etc. Moreover, the Continuous internal assessment and mock-end examinations also provide the means to assess the learning levels of the students in all courses thereby enabling faculty to identify slow/fast learners.

The first year students are made to appear for a **mental ability test**. This test aids teachers in identifying not only the Intelligent quotient of students but also their area of interest in which they can grow.

Faculty at MESCOE follows an integrated approach. Traditional teaching methods are complemented by new age technological methods to make learning more effective, engaging and relatable. Due to the pandemic, various online platforms like MS teams, Google Meet, etc. are effectively used by teachers and its impact is visible on results.

#### Slow Learners:

The slow learner are motivated with initiatives such as:

- Conduction of Remedial classes and Extra lectures
- Personal Attention in teaching
- Extra practical sessions
- Counseling sessions by Mentors– special hints and techniques
- Assignments and solving University question papers
- Question banks and Model answers
- Guidance for Seminar/Project presentation Mock oral/practical examination Tutorials
- Institute has made special provision of exhaustive soft skills training and exclusive counseling to mould the slow and advanced learners to plan their career and placements.
- Additional reading material and books, videos from NPTEL, official YouTube channel etc. are made available to increase their understanding of the subject.
- Lecture notes uploaded on respective faculty blogs as well as under Teams App.E-links are also

suggested to the students to help them gain an in-depth knowledge of the subject.

- Personal, academic and career-related counselling is given from time to time.

### Advanced Learners:

The advanced learner are motivated with initiatives such as:

- Encouraging them to participate in co-curricular and extracurricular activities.
- Recommending students to participate in sports and NSS activities.
- Students are advised to perform research work in their area of interest and publish it in reputed journals.
- Students are guided for acquiring grants from various bodies.
- Academic toppers from each class are awarded during Annual Social Gathering.
- Encouragement to complete NPTEL/Advanced courses.
- Participation in Seminars/Conferences/IIT events
- Induction in Clubs like Robotics, Electro Infinity etc.
- Workshop/Seminar on current trends
- Patent filing process
- In house mini-projects Project competition
- Model making/building Motivation and guidance for higher studies (competitive exams)
- Industrial visits and Industry sponsored/research project
- Students who are advanced learners are encouraged to upgrade their knowledge and skills through add-on courses provided by the college along with special lectures organized by expert resource persons.
- Students are encouraged to participate in IRIS program, Hackathon etc.

File Description	Document
Upload any additional information	<a href="#">View Document</a>

**2.2.2 Student- Full time teacher ratio (Data for the latest completed academic year)****Response:** 22:1

File Description	Document
Any additional information	<a href="#">View Document</a>

**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****Response:**

Faculties have incorporated a paradigm shift in the focus over the last few years, from conventional teaching-learning process to a student centric learning process. Faculty at MESCOE ensures the active participation and involvement of students during lectures through seminars, quizzes, polls etc. for seamless transfer of knowledge and learning. The faculty also nurtures the culture amongst students of being independent, learning through self study and from their peers, and also guides them to develop effective and lifelong skills. The following latest teaching and learning methodologies are used to motivate students to learn for higher retention of knowledge through better understanding, and developing positive attitude towards subjects taught :

**1. Experiential learning:** - Experiential learning has proven to be a very effective form of learning as students are learning by doing on their own and by reflecting on their experience. Faculties at MESCOE encourages and foster experiential learning amongst students through following activities like:

- Students are encouraged to undertake internship programs, hands-on training, industrial training, and sponsored projects in order to make them industry ready graduates.
- Institute organizes industrial visits, field trips for the students to make them aware of the current market working trends and technologies.
- Various technical events like robot making, circuit-designing, etc. are arranged by students association like ETSA, ACE, MESA, Project Competition , Robocon etc.

**2. Participative learning :**

- Students are continuously motivated to participate in curricular, co- curricular and extracurricular activities so that their hard skills as well as soft skills enhance and they become industry ready.
- Different departments organize National level conferences, mini- projects, project, and poster-

making competitions for the students to promote participative learning.

- Several student associations of respective departments organise technical and non-technical intercollegiate events annually. This is a platform created to promote awareness of advancements in respective fields and showcase technical expertise and talent of the students. These activities also enable students to learn in a collaborative manner.
- Student development cell at MESCoE organises several activities like workshops, seminars, guest lectures wherein students work together to maximise their own and each other's learning.
- Students implement a mini project at the end of most of the courses, which enables them to implement the concepts taught during the theory sessions and bridge the gap between theoretical concepts and practical implementations. Seminar and project activities in the curriculum of SPPU impart lifelong learning in the students in the field of engineering. Students develop a learning ability enabling them to understand the different stages of product development or systematic ways to formulate a solution of the engineering problem.

### 3. Problem- solving methodologies:

- In Project- Based learning, different methods are adopted by students for solving problems. Students identify an idea, and try converting it into a prototype. The problem's level of difficulty increases as students move into subsequent years.
- Students participate in several national level intercollegiate events and collaboratively work toward their solutions by using inter-disciplinary knowledge.
- Students participate in activities like E-BAJA, M-BAJA, Robocon, E-PGPEX(Regional level National PG conference) and demonstrate their technical skills .

File Description	Document
Upload any additional information	<a href="#">View Document</a>

### 2.3.2 Teachers use ICT enabled tools for effective teaching-learning process.

#### Response:

Faculties at MESCOE are well versed in making the best use of the technology in their teaching process. Faculties have attended FDPs so as to gain the knowledge and skills to use new digital tools in order to help students excel in academics. ICT has enhanced the modes of communication, promoted better teaching and learning methods, minimized cost and saved time, simplified the job of student management and given automatic solutions to manual paper-based processes and procedures.

1. The College has a Wi-Fi Enabled Campus which helps the teachers and students to be at par with

recent developments.. The college has ICT Enabled Classrooms and Staff Rooms having Desktops, Projectors which facilitates e-learning process. Faculties use and share E-resources like notes, tutorial, books of reputed publications and this means of knowledge dissemination has proven to be very effective especially in pandemic.

- 2.The college has a Central Library which has a massive collection of books, reputed national and international journals as well as e-resources like NPTEL videos etc. The library provides accessibility to e-resources like access of standard reputed papers from IEEE, Elsevier portals to teachers and students.
- 3.The college has well equipped Computer Labs. The teachers take practical classes for courses like the Centre of Excellence lab of SDR, NI lab,VLSI Design and Technology,Signal Processing Circuit simulation lab,etc. The curriculum of these courses has practical components which require the use of computer labs. The labs are updated with new softwares like Matlab,Vivado Design Suite, Multisim, Proteus etc.
4. Faculties make and present PowerPoint presentations in the classrooms which help them have an interactive conversation with the students. Presentations are the best way to make notes as they can be updated with the latest changes in the knowledge, presenting diagrams, charts, etc.
- 5.Teachers have started taking lectures online on Google Meet, Zoom, Microsoft Teams, etc. FDPs are conducted to enable/familiarize the teachers with these online platforms. Faculty disseminated knowledge to students via their Youtube channels as well wherein pre-recorded videos of several topics are uploaded. Faculty have also prepared videos of their practicals and demonstrated the same during practical sessions along with live demos.
- 6.Faculty share reading materials, notes, e-books, question banks, Assignments, tutorials, etc. over different media like Google Classroom, E-Mail, College Portal,Blogs, WhatsApp,etc. Faculties at MESCOE most often use ICTs for daily routine tasks (lesson plan development, Instruction Delivery,Meetings,documentation etc.). Faculty is effectively using ICT tools to provide quality education to the students.
- 7.Project Based Learning is also used by teachers to make teaching - learning more effective.Thhave e crude and rough ideas of students are given a proper shape, finishing under the able guidance of faculties. The students are made to present their work in several project competitions, e- BAJA, m-BAJA, Innovations etc.
- 8.Proactive Teaching methods like Case Studies, Seminars, Group Discussion etc is also widely used by faculties in place of conventional chalk and talk methods so as to meet the demands of current agile and tech-savvy generation.

File Description	Document
Upload any additional information	<a href="#">View Document</a>

**2.3.3 Ratio of students to mentor for academic and other related issues (Data for the latest completed academic year )****Response:** 22:1**2.3.3.1 Number of mentors****Response:** 91

<b>File Description</b>	<b>Document</b>
Upload year wise, number of students enrolled and full time teachers on roll.	<a href="#">View Document</a>
mentor/mentee ratio	<a href="#">View Document</a>
Circulars pertaining to assigning mentors to mentees	<a href="#">View Document</a>

**2.4 Teacher Profile and Quality****2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years****Response:** 102.26

<b>File Description</b>	<b>Document</b>
Year wise full time teachers and sanctioned posts for 5years(Data Template)	<a href="#">View Document</a>
List of the faculty members authenticated by the Head of HEI	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**2.4.2 Average percentage of full time teachers with 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:** 20.8**2.4.2.1 Number of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. year wise during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
29	26	22	18	17

File Description	Document
List of number of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. and number of full time teachers for 5 years (Data Template)	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 2.4.3 Average teaching experience of full time teachers in the same institution (Data for the latest completed academic year in number of years)

**Response:** 10.66

#### 2.4.3.1 Total experience of full-time teachers

Response: 970.4

File Description	Document
List of Teachers including their PAN, designation, dept and experience details(Data Template)	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 2.5 Evaluation Process and Reforms

### 2.5.1 Mechanism of internal assessment is transparent and robust in terms of frequency and mode

**Response:**

The institute is affiliated with Savitribai Phule Pune University (SPPU) and thus follows all its evaluation reforms.

The major reforms introduced by SPPU are:

**Appointment of CEO :** The college is allowed to appoint a senior faculty to work as College Exam Officer as per the directives issued by SPPU. The examination committee consists of principal, CEO, departmental coordinators, office staff with the principal being head of the committee. All exams internal as well as external are conducted under the directions of the university and coordinated by CEO and his team members. The exam is based on choice and credit based systems .

**In-Sem Examinations:** SPPU has introduced an In-Sem exam(subjective) of 30 marks for First year Second year, ,Third year and final year students of UG while for both years of PG.The paper settings of these exams are coordinated by SPPU and conduction is at college level. Online insem exams are conducted for last three semester by college as per circulars received from SPPU considering pandemic situation.MS Teams platform was used for online conduction. All internal subject teachers designed Question papers in Multiple choice format using Ms Teams forms for 30 marks and Junior supervisors conducted Proctored

exams batchwise.

End-Sem Exam: SPPU also conducts end-sem exams for UG( 70 marks) and PG students( 50 Marks).

In order to ensure academic excellence of students the institute also practices different assessment processes for the evaluation of the course outcome . These processes are

1. Conduction of CO based test, Assignments and tutorials.
2. Continuous Internal Evaluation for practicals and subjects having termwork on the basis of parameters like timely completion, punctuality, performance in orals, Attendance in theory, performance in tests, etc.
3. Conduction of Mid Sem and Mock Endsem
4. Conduction of Mock Practical/Oral exams
5. Conduction of BE Project Reviews

All these exams are conducted under the guidance of the CEO and his team. The marking scheme is quite fair and transparent as students are well made aware of the examination pattern, marking scheme and continuous internal evaluation right at the beginning of the semester by respective course teachers of each programme.

The students are informed about marks scored by them in each course and a model solution is discussed with them.

Poor performing students are counselled by their parent teachers. Project review reports are discussed with students of all years as the university has introduced Project based learning.

File Description	Document
Any additional information	<a href="#">View Document</a>

### **2.5.2 Mechanism to deal with internal/external examination related grievances is transparent, time-bound and efficient**

#### **Response:**

The mechanism for dealing with internal/external examination related grievances is transparent, time bound and handled efficiently by the institute. The process for redressing the internal grievances of the students with respect to internal evaluation is as follows:

Department Level Grievance Redressal:

1. Every department has nominated a faculty as an department exam coordinator and he/she is also part of the CEO team. Department exam coordinator looks into the issue raised by students and the query is resolved amicably at department level by consulting with respective faculty and head of the department.
2. The concerned faculty discusses the problem with students, tell them the model answers expected and the marking scheme.
3. However , if the student is not satisfied then the matter is escalated to the Principal for further initiation of action. Principal looks into the matter and gives appropriate guidelines to the department for resolving the grievance.

Institute Level Grievance Redressal:

1. The institute level grievances of university based exams are addressed by the College Examination Officer and examination section. The students' issues addressed by SPPU are revaluation, photocopy of answer sheets etc. The examination section of the institute takes follow up of all these grievances and conveys the results to the students.
2. The staff also approaches the CEO for any exam related grievances and mails them queries in the format given by SPPU. The CEO forwards the queries to SPPU for its resolution and then the same is communicated to concerned faculty.
3. Internal marks are filled through SPPU internal marks entry portal. The appointments for marks entry are done by HOD. For respective subject one internal and external examiner is allotted for faithful marks entry .
- 4.

Once online marks are filled department coordinator collect all downloaded authenticated marksheets and submit at CEO office. Where those are maintained and can be verified to solve exam marks related issues.

File Description	Document
Any additional information	<a href="#">View Document</a>

## 2.6 Student Performance and Learning Outcomes

**2.6.1 Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students.**

### Response:

Teachers and students are aware of the stated Programme and course outcomes of the Programmes offered by the institution.

The college has defined its Program Outcomes(POs) and Course Outcomes(COs) so as to satisfy the mission and goals of each program. The POs and COs are meticulously drafted for all the UG and PG Programs following the COs framed by Savitribai Phule Pune University(SPPU). The COs are framed meticulously so as to map all the POs fostering the overall growth of students pertaining to core subject knowledge, skill development, creativeness, competency, inculcating ethics, values, and soft skills development.

### Dissemination of the POs, PSOs and COs:

The college has multiple ways of disseminating Course Outcomes(COs) and Program Outcomes(POs).

### Website:

- The respective department's COs, POs, and PSOs are presented on the college website.

<http://mescoepune.org/dept-etc-pos.php>

### Ways of communicating the POs, PSOs and COs to the teachers and students

#### Communication to the teachers:

Each program framed POs and PSOs and COs for courses inline with COs framed by SPPU. SPPU organises syllabus orientation workshops for faculties wherein apart from teaching methodology, COs are also discussed. COs are framed by involving all the subject group incharges and faculties of the department and are approved after thorough discussion. All POs and COs are maintained by faculty in their course files.

#### Communication to the Students:

- First year Induction Programme: Dedicated lectures are organized as a part of the Induction

Programme in which COs are presented and explained to the students.

- Display Boards and Banners: All POs, PSOs of respective programs are displayed on boards and banners in the department corridors, library, staff rooms, etc.
- Introduction of Course Outcomes: Respective COs are presented at the beginning of each course in lecture session.
- Question papers of Continuous Assessment: The questions of continuous assessment exams are set reflecting the COs of the particular course along with Bloom's Taxonomy level of learning.

File Description	Document
Upload COs for all Programmes (exemplars from Glossary)	<a href="#">View Document</a>
Upload any additional information	<a href="#">View Document</a>

### 2.6.2 Attainment of programme outcomes and course outcomes are evaluated by the institution.

#### Response:

#### Attainment of Outcomes

- The Program Outcomes (POs) and Program Specific Outcomes (PSOs) are satisfied through curriculum
- Course Outcomes (COs) are defined for each course and mapping is done to POs and PSOs.
- A set of performance evaluation criteria is used for quantitative assessment of COs
- Thus the attainment of COs provides evidence of attainment of POs and PSOs.

#### CO attainment

Following are the different methods for Assessment, Evaluation and Measurement of COs Assessment

#### Direct Assessment methods :

Continuous Assessment: COs are assessed through Test, tutorials & Assignment Examinations, Home Assignments and Lab records. The COs are mapped against each question and CO analysis is carried out by faculty for each course and documented in Faculty Course Assessment Report (FCAR). The contribution of COs are assessed in high, moderate and low levels, towards the attainment of POs/PSOs.

**Semester-end Theory Examinations:** The semester-end examinations is considered and average marks taken pertaining to CO attainment.

**Laboratory Records:** For lab courses both continuous and semester-end examinations are conducted to test the COs attainment.

#### **Indirect Assessment Methods:**

**Course Exit survey:** This survey taken from the course students at the completion of semester, stands as the comprehensive feedback for the Course assessment

**Guest Lectures :** Guest lecture is organized as and when required for the course attainment as well as for bridging the gap.

PO/PSOs attainment

#### **Following are the different methods for Assessment, Evaluation and Measurement of POs/PSOs**

- Direct Assessment methods
- Indirect Assessment methods

#### **Assessment**

##### **Direct Assessment methods :**

The direct PO/PSO attainment of each course is aggregated to achieve PO/PSO attainment by direct assessment method.

##### **Indirect Assessment Methods:**

**Graduate Exit survey:** This survey taken from the final year students at the completion of their B.E. programme, stands as the comprehensive feedback for the PO/PSO assessment.

**Alumni Survey :** This survey is conducted annually through Google link or mail with the Alumni to obtain the inputs and suggestions on PO attainment in the real time societal environment.

**All CO, PO, PSO attainment is evaluated by the department.**

<b>File Description</b>	<b>Document</b>
Upload any additional information	<a href="#">View Document</a>

#### **2.6.3 Average pass percentage of Students during last five years**

**Response:** 95.04**2.6.3.1 Number of final year students who passed the university examination year-wise during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
486	479	455	422	435

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

2020-21	2019-20	2018-19	2017-18	2016-17
490	485	495	450	475

<b>File Description</b>	<b>Document</b>
Upload list of Programmes and number of students passed and appeared in the final year examination (Data Template)	<a href="#">View Document</a>
Upload any additional information	<a href="#">View Document</a>

**2.7 Student Satisfaction Survey****2.7.1 Online student satisfaction survey regarding teaching learning process****Response:**

<b>File Description</b>	<b>Document</b>
Upload database of all currently enrolled students (Data Template)	<a href="#">View Document</a>

## 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, Chairs in the institution during the last five years (INR in Lakhs)**

**Response:** 53.02

**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)**

2020-21	2019-20	2018-19	2017-18	2016-17
44.32455	0	0	0	8.70000

File Description	Document
List of endowments / projects with details of grants	<a href="#">View Document</a>
e-copies of the grant award letters for sponsored research projects / endowments	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**3.1.2 Percentage of teachers recognized as research guides (latest completed academic year)**

**Response:** 10.99

**3.1.2.1 Number of teachers recognized as research guides**

**Response:** 10

File Description	Document
Institutional data in prescribed format	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**3.1.3 Percentage of departments having Research projects funded by government and non government agencies during the last five years**

**Response:** 46.67

**3.1.3.1 Number of departments having Research projects funded by government and non-government agencies during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
3	0	0	0	4

### 3.1.3.2 Number of departments offering academic programmes

2020-21	2019-20	2018-19	2017-18	2016-17
3	3	3	3	3

File Description	Document
Supporting document from Funding Agency	<a href="#">View Document</a>
List of research projects and funding details	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
Paste link to funding agency website	<a href="#">View Document</a>

## 3.2 Innovation Ecosystem

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

#### Response:

#### 1. Research & Development Policy of the Institute:

Research & Development **Policy** has been developed by institute to promote innovation and incubation for the faculty and students in tune with the corporate world.

#### 2. Resources:

Research lab has been created exclusively for the promotion of innovation and incubation with required facilities in all departments. The college has been making the seed money available for the faculty to undertake Innovative projects with relevant material resources. The Institute is nurturing the innovation with a financial support up to 50% to students in addition to the encouragement by prominent Alumni. Institute encourages the faculty and students to protect their Intellectual property (IP) by providing facilitates and financial support.

#### 3. Institute Innovation Council:

Ministry of Education (MoE), Govt. of India has established 'MoE's Innovation Cell (MIC)' to foster the

culture of Innovation among all Higher Education Institutions (HEIs). The Institution's Innovation Council of Modern Education Society's College of Engineering (IIC MESCOE) has been established under this initiative on 22nd October 2020. At present there are more than 50 staff and 60 students who are active members of IIC. These members are actively coordinating and organizing multiple activities for the benefit of all the students of MESCOE. IIC-MESCOE activities are divided into four major areas – Startup, Innovation, IPR and Internship.

**4. Collaboration (MoU):** Institute has various MoU with other institutions and industries for benefits of faculty and students. MoU are listed department wise as below;

#### **Computer Department**

1. TechNex Tech. Pvt. Ltd
2. Sapours Technologies Pvt. Ltd
3. Cyber Securist Tech. Pvt Ltd
4. Softy inc. Swargate, Pune
5. STACKZEAL Pvt. Ltd.
6. Samarth Udyog Tech. Forum (SUTF)
7. ELINTEX TECH. LLP (Nirmiee.io)
8. SOLable India
9. miTu Technology
10. Fizzible Tech Pvt Ltd
11. Seed Technology

#### **Mechanical Department**

1. SUTF-Center for Industry 4.0 (c4i4)
2. National Instruments
3. ARK Infosolution Pvt. Ltd. IFS Academy, Pune
4. Baker Gauges India Pvt. Ltd.
5. Simulation Lab
6. ZEST Engineering Services and Technology
7. cBalance Solutions Pvt. Ltd.
8. kWatt Solution Pvt. Ltd. Mumbai
9. Spoken Tutorial IIT Bombay
10. Mechatol Engineering Solutions

#### **Electronics & Telecommunication Department**

1. Mitsubishi Electric India Pvt. Ltd.
2. Centre for Development of Advance Computing (CDAC)
3. VUE Test Center AMITEC Electronics Ltd.
4. ICT Academy
5. Edgate Tech & Texas Instruments
6. Pearson VUET est Center
7. RS Network

8. Proactive IT Services Pvt. Ltd.
9. Graceful Growth
10. Sphier Unified Solutions Pvt. Ltd

### 5. Activities:

Every year Innovative and entrepreneurship activities such as Hackathons, SAE BAJA, Idea competitions, Awareness workshops on IPR, Cognitive and Critical thinking, Leadership Talks, etc. are conducted as per guidelines of Innovation cell. The institute encourages the students to participate in Regional and National Level Idea competitions conducted by the recognized bodies and institutions of reputation such as SPPU, IIC and, AICTE etc. All department regularly conduct and organize guest lectures, webinars and project competitions to cultivate research and innovation environment among the students and faculty in coordination with alumni.

File Description	Document
Upload any additional information	<a href="#">View Document</a>

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

**Response:** 25

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

2020-21	2019-20	2018-19	2017-18	2016-17
15	0	3	4	3

File Description	Document
Report of the event	<a href="#">View Document</a>
List of workshops/seminars during last 5 years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 3.3 Research Publications and Awards

#### 3.3.1 Number of Ph.Ds registered per eligible teacher during the last five years

**Response:** 3.5

**3.3.1.1 How many Ph.Ds registered per eligible teacher within last five years**

Response: 35

**3.3.1.2 Number of teachers recognized as guides during the last five years**

Response: 10

File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**3.3.2 Number of research papers per teachers in the Journals notified on UGC website during the last five years**

Response: 3.05

**3.3.2.1 Number of research papers in the Journals notified on UGC website during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
51	44	79	93	82

File Description	Document
List of research papers by title, author, department, name and year of publication	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**3.3.3 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: 3.07

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

2020-21	2019-20	2018-19	2017-18	2016-17
52	45	80	96	79

File Description	Document
List books and chapters edited volumes/ books published	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 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:**

**Response:** College has undertaken activities in the following domains which have benefitted the neighboring community while sensitizing the students to techno-social issues. The said domains of activity include Technology advancement, Social and Community service, Public health & safety and Environmental protection.

**1. Advancement in Technology:**

**Engineers' & Teachers Day:** The Celebrations organized every year have been giving an opportunity for students and public to visit the innovative technical models/programs developed by our students over the years.

**2. Social and Community service:** Blood donation and Free Medical camps organized by NSS unit of the college in association with various blood banks and NGO, etc for the benefit of the needy and underprivileged.

**Earn & Learn Scheme:** The Earn and Learn Scheme of Board of Students Welfare, Savitribai Phule Pune University is being implemented successfully for the needy students. Students are benefitted from this Scheme by working in the Laboratories, Library and Office etc of our institute. Students are paid Rs.50/-per hour to meet their monthly expenses. This Scheme also inculcates a sense of responsibility and dignity. Expert lectures for the first year students are arranged under the Special Guidance Scheme of Board of Students Welfare, Savitribai Phule Pune University.

**3. Public Health and safety:** The organization of these activities make the students practically to see several social woes and they can develop empathetic orientation. These programs help the students to understand the significance of reciprocating to the society.

**4. Environmental protection:** College regularly organize environmental protection related activities to make students aware with environmental pollution causes, hazards, prevention and importance of environmental pollution control.

File Description	Document
Upload any additional information	<a href="#">View Document</a>

### 3.4.2 Number of awards and recognitions received for extension activities from government/ government recognised bodies during the last five years

**Response: 4**

#### 3.4.2.1 Total number of awards and recognition received for extension activities from Government/ Government recognised bodies year-wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
3	0	0	1	0

File Description	Document
Number of awards for extension activities in last 5 year	<a href="#">View Document</a>
e-copy of the award letters	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC/Red cross/YRC etc., during the last five years ( including Government initiated programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. and those organised in collaboration with industry, community and NGOs)

**Response: 42**

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

2020-21	2019-20	2018-19	2017-18	2016-17
5	15	7	6	9

File Description	Document
Reports of the event organized	<a href="#">View Document</a>
Number of extension and outreach Programmes conducted with industry, community etc for the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 3.4.4 Average percentage of students participating in extension activities at 3.4.3. above during last five years

**Response:** 40.72

#### 3.4.4.1 Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
645	924	502	761	985

File Description	Document
Report of the event	<a href="#">View Document</a>
Average percentage of students participating in extension activities with Govt or NGO etc	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 3.5 Collaboration

### 3.5.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship per year

**Response:** 98

#### 3.5.1.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
86	2	5	5	0

File Description	Document
e-copies of related Document	<a href="#">View Document</a>
Details of Collaborative activities with institutions/industries for research, Faculty exchange, Student exchange/ internship	<a href="#">View Document</a>

### 3.5.2 Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the last five years

**Response:** 73

#### 3.5.2.1 Number of functional MoUs with Institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
23	16	16	12	06

File Description	Document
e-Copies of the MoUs with institution/ industry/corporate houses	<a href="#">View Document</a>
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## Criterion 4 - Infrastructure and Learning Resources

### 4.1 Physical Facilities

**4.1.1 The Institution has adequate infrastructure and physical facilities for teaching- learning. viz., classrooms, laboratories, computing equipment etc.**

**Response:**

The institute follows the norms provided by AICTE and Savitribai Phule Pune University for creating and enhancing the infrastructure that facilitate effective teaching and learning in proportion to the student strength in different streams. The institute focuses on developing good and modern infrastructure like classrooms, laboratories, library with reading rooms, internet facility, parking facility, canteen, and hostel with mess for boys and girls in campus. The institute is always eager to create or enhance the infrastructure in view of a healthy, comfortable and technology based environment required for effective teaching and learning. The institution constantly and continuously expands and upgrades the infrastructure facilities.

The state-of-the-art infrastructure creates and promotes a good teaching-learning environment which involves a adequate number of classrooms, tutorial rooms, laboratories, Mechanical workshop, central library, Seminar halls, canteen facility and playground ensuring complete development of students in all aspects.

**Classroom:** All the classrooms are designed and maintained as per AICTE norms with respect to carpet area, lighting, ventilation, furniture, etc. to have a conducive environment. The classrooms are equipped with ICT tools which enable interactive teaching-learning processes.

**Smart Classroom:** Smart classroom (309) is designed and maintained to create a new state-of-art teaching-learning facility primarily focussing on acoustics to have a conducive environment. The smart classroom is equipped with the latest ICT tools for effective teaching-learning.

**Laboratories:** Laboratories are well equipped with adequate number of experimental set-ups, computers & peripherals to meet syllabus requirements. In addition, advanced equipment to help the faculty members/students to carry out research activities to a greater extent are made available in the following state-of-the-art facilities.

**State of the art facilities:** The institute has taken great initiatives to develop unique and novel research facilities to incubate research environments. Facilities are listed below

- Centre of Excellence in High Performance Computing
- Centre of Excellence PG lab & SDR Lab
- NI LabVIEW Academy
- Industrial Tribology Lab
- Kuka Robotics Lab

· Rapid Prototyping facility [3D Printing]

**Computing Facilities:** The college has more than 700 computers to fulfill all the academic requirements of students as well as faculties. The college is equipped with 3 high end servers utilised by entire students and faculties. To cope up with continuously changing technologies all the labs are upgraded with the latest softwares time to time. Our college has sufficient number of computers for students and faculties, 12 laptops for all departments. All labs are equipped with printers and are utilised by students and teaching and nonteaching staff. The entire campus is equipped with strong Wi-Fi connectivity. The Wi-Fi facility is highly utilized by Final year students for their project work. All classrooms and Seminar halls are well equipped with LCD projectors. Our library is well equipped with fully automated 1 server, 20 Computers for students and 6 Computers for library staff.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

#### 4.1.2 The Institution has adequate facilities for cultural activities, sports, games (indoor, outdoor), gymnasium, yoga centre etc.

**Response:**

The institute encourages and provides facilities for students to participate in various games like cricket, football, athletics etc. to ensure overall development of students and to fulfil that requirement college is equipped with various sports equipment. A team of faculty members look after all cultural, sports and extracurricular activities of the institute. To promote social awareness amongst students, the NSS team of the institute regularly organizes social welfare activities.

**Cultural Activities:** Institute has a committee for cultural activities. This committee organizes an annual cultural function called **JHANKAAR**. The cultural events can be broadly classified into competitions, festivals, workshops. The JHANKAAR committee aims to bring out talent in the student community in all the possible forms whether its music, dance, theatre, literary skills, sketching or other fine art styles. In order to showcase these talents various competitions like mehandi, singing, dancing, Staff Antakshari, Mr & Miss MESCOE, Lead the Youth, Treasure Hunt, Art Gallery, Fashion Show, Days celebrations, Rangoli making are conducted. Students also participate in various university and state level competitions.

**Sports:** Institute has a playground for practicing several sports activities. Separate Gymnasium facility for boys and girls is provided by the institute in the campus. For the development of sports skills amongst the students, faculty encourages them to participate in various sports like football, boxing, cricket, volleyball, basketball, swimming, table tennis and lawn tennis. The institute has a physical director to guide students.

**Public speaking and Communication skills development:** Students are encouraged to participate in various university level events to international events like M-Baja, E- Baja, Robocon for overall

development of students. Personality development programs run by the institute involve various activities like public speaking and communication skills development. Institute has a language laboratory. Under ASTITVA, the Institute organizes debate competitions every year.

File Description	Document
Upload any additional information	<a href="#">View Document</a>

#### 4.1.3 Percentage of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc. (Data for the latest completed academic year)

**Response:** 100

##### 4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 24

File Description	Document
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	<a href="#">View Document</a>
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

#### 4.1.4 Average percentage of expenditure, excluding salary for infrastructure augmentation during last five years(INR in Lakhs)

**Response:** 23.93

##### 4.1.4.1 Expenditure for infrastructure augmentation, excluding salary year-wise during last five years (INR in lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
38.3	74.00	66.83	166.15	96.97

File Description	Document
Upload Details of budget allocation, excluding salary during the last five years (Data Template)	<a href="#">View Document</a>
Upload audited utilization statements	<a href="#">View Document</a>
Upload any additional information	<a href="#">View Document</a>

## 4.2 Library as a Learning Resource

### 4.2.1 Library is automated using Integrated Library Management System (ILMS)

#### Response:

Library is well-equipped with the latest infrastructure and well-stocked with a good collection of books.

The library is fully automated and operates with SLIM 21 ILMS. It includes all the features to automate library staff functionality related to cataloguing, Circulation, Inventory, and Reporting. For library members, SLIM 21 provides a portal to search in-house collections as well as external resources.

- Name of ILMS software : SLIM 21 ILMS
- Nature of automation (fully or partially) : Fully
- Version : SLIM 21 3.7.0
- Year of Automation : FY 2007-08

This software is purchased in the FY 2007-08 from Algorhythms Counsultants Pvt. Ltd. for automation of the Library. SLIM 21 includes all the features to automate library staff functionality related to cataloguing, Circulation, Inventory, and Reporting. For library members, SLIM 21 provides a portal to search in-house collection as well as external resources. Through AMC this software is upgraded annually.

Following services are provided by the library to its users with the help of SLIM 21:

- 1.Data conversion from existing system
- 2.Barcode labels format customization
- 3.Barcode labels Printing
- 4.Library IDcard Format customization
- 5.Library IDcard printing
- 6.Copy Cataloguing from Amazon

Various reports are generated with the help of this SLIM 21 software which help library for its smooth conduction.

File Description	Document
Upload any additional information	<a href="#">View Document</a>

### 4.2.2 The institution has subscription for the following e-resources

- 1.e-journals
- 2.e-ShodhSindhu
- 3.Shodhganga Membership
- 4.e-books
- 5.Databases
- 6.Remote access to e-resources

**Response:** A. Any 4 or more of the above

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Details of subscriptions like e-journals, e-ShodhSindhu, Shodhganga Membership , Remote access to library resources, Web interface etc (Data Template)	<a href="#">View Document</a>

#### 4.2.3 Average annual expenditure for purchase of books/e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)

**Response:** 25.31

##### 4.2.3.1 Annual expenditure of purchase of books/e-books and subscription to journals/e- journals year wise during last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
25.68	24.85	32.83	34.42	8.79

File Description	Document
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the last five years (Data Template)	<a href="#">View Document</a>
Audited statements of accounts	<a href="#">View Document</a>

#### 4.2.4 Percentage per day usage of library by teachers and students ( foot falls and login data for online access) during the last completed academic year

**Response:** 7.4

##### 4.2.4.1 Number of teachers and students using library per day over last one year

Response: 152

File Description	Document
Details of library usage by teachers and students	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 4.3 IT Infrastructure

### 4.3.1 Institution frequently updates its IT facilities including Wi-Fi

#### Response:

Institute ensures extensive use of IT facilities by providing adequate access to computers with internet facility to students and faculties. Internet Leased Line (ILL) of 300Mbps provided by Tata Teleservices is available in the college campus. Wi-Fi internet access is provided to staff and students.

The Institute has following license software:

- To roll out and outreach activities of Virtual Lab, our college has a Virtual Lab Nodal Center (Id 226) made available to all colleges for online implementation of practicals in the AY 2020-21.
- The Institute has MW Full suite (MATLAB-2019b) and MW one year MAOTS – ML online training suite in the AY 2020-21 . MW campuswide suite(CWS) (MATLAB-2020a) is made available for the entire campus in the AY 2021-22.
- Institute updated Microsoft Campus agreement- Microsoft EDU Cloud Program during the AY 2019-20 and AY 2020-21 under this latest windows system software, server softwares are purchased. Also windows server CAL and Remote System CALs are available .
- Microsoft teams for conduction of online lectures and meetings are utilised by all faculty.
- Library is well-equipped with the latest infrastructure and is fully automated with SLIM 21 ILMS.
- Cadence software related to the VLSI field is available for E&TC students in the VLSI & Design lab during AY 2018-19.
- NI labview software is available for students in the mechanical department NI labview Academy.
- The college has open source system software installed on computers.
- Many open source application softwares are utilised by students and faculty for online teaching and learning.

#### Hardware & other facilities:

The Institute is well equipped with 3 high end servers which are utilised by students and faculties. Our Institute has more than 700 computers for students and faculties, laptops for all departments. All labs are equipped with printers and are utilised by students and teaching and nonteaching staff. The Institute has all the classrooms and Seminar halls well equipped with LCD projectors. Our library is well equipped with fully automated 1 server, 20 Computers for students and 6 Computers for library staff.

File Description	Document
Upload any additional information	<a href="#">View Document</a>

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

**Response:** 3:1

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Student – computer ratio	<a href="#">View Document</a>

#### 4.3.3 Bandwidth of internet connection in the Institution

**Response:** A. 750 MBPS

File Description	Document
Upload any additional Information	<a href="#">View Document</a>
Details of available bandwidth of internet connection in the Institution	<a href="#">View Document</a>

### 4.4 Maintenance of Campus Infrastructure

#### 4.4.1 Average 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:** 76.06

##### 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)

2020-21	2019-20	2018-19	2017-18	2016-17
174.99	264.17	277.51	330.37	262.65

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Details about assigned budget and expenditure on physical facilities and academic support facilities (Data Templates)	<a href="#">View Document</a>
Audited statements of accounts	<a href="#">View Document</a>

#### 4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

##### Response:

There are established systems and procedures for maintaining and utilizing physical, academic, and support facilities such as laboratory, sports complex, computer, classrooms in the institute. The maintenance of physical, academic, and support facilities are carried out by the respective departments with the help of in house staff on daily basis, and periodically record is also maintained. And care has been taken to keep the equipments, machine, etc in working condition. In case of breakdowns, standard procedure is followed to bring the equipment/machine in working condition. A supervisor is appointed to monitor and maintain the physical facilities and Housekeeping. A brief description is presented below on the maintenance and utilization of some facilities.

- Laboratories :** Each laboratory has 1 faculty as lab in charge, a Lab Assistant, and an attendant. The lab in charge is responsible to maintain and upgrade the laboratory with necessary equipment from time to time to cope with changes in the syllabus. Deadstock verification (Physical Verification) is carried out to verify working/nonworking/missing equipment etc. Preventive maintenance and performance monitoring is carried out. Every laboratory assistance keeps a record of the utilization of equipment, computers, and other required material for experiments.
- Library:** A librarian with supporting staff has been appointed to maintain the central library. They focus on the availability and utilization of instructional material in the teaching and learning process. At end of the Academic year, stock verification is done. Librarian will prepare the report on the same and utilization of books by the students and staff. Procurement of books as per the requirement is initiated through the library committee by inviting the requirement of books from various departments this is then processed following the procurement procedure. Also keeping a record of the utilization of staff and students.
- Sport complex/ ground/ equipment:** College has a playground for practicing sports activities. It is well prepared for various sports games. The maintenance of ground is carried out on a regular basis. Separate Gymnasium facility for boys and girls in the campus. It is maintained under the supervision of the physical director. The sports equipment is issued to the students as per the schedule of the events. If any types of equipment get faulty sports director submits a proposal for maintenance. Preventive maintenance measures are taken in time. The sports director is responsible for keeping the record of the utilization of sports Facilities, activities held, awards for the students, etc.
- Class Rooms:** Classrooms are allocated to all departments along with necessary ICT tools. The classrooms are utilized as per the timetable of the department. The classrooms are cleaned on daily basis monitored by the institute supervisor. Head of the institute, HODs, and Class teachers also

monitor the cleanliness and ensure that the cleanliness is maintained in the classrooms.

5. **IT facilities:** All departments in the institute are having PCs, essential software, and peripherals. The laboratory technicians and system administrator maintain the IT facilities in the institute. In case of major issues of maintenance, vendors are hired for the maintenance of IT facilities.
6. **Electrical, Drinking water coolers, Lift, Ramp etc.:** Institute has employed technicians (electrician and plumber) for up keeping and maintenance of electrical and water drinking facilities. Institute has also appointed housekeeping staff to maintain the plants. Municipal Corporation water supply is available in the campus round the clock and it is utilized for drinking purposes after filtration. Beside this well, water is also available in campus, which is used for all purposes other than drinking. AMC for Generators, lifts are carried out on a regular basis. Repairing is carried out whenever needed in case of emergency. Ramp at entrance, wheelchair is provided for physically disabled persons for smooth movement.
7. **CCTV, Security, etc:** To maintain internet connectivity and CCTV security system, a network and system administration team is appointed. LCD projectors, EPBX systems, air conditioners are maintained with the help of external agencies. Security staff including ladies guards under a security supervisor is employed to safeguard the whole premises. To prevention current pandemic of Covid- 19, hand sanitizer machines are provided at the entry of the college building and other important locations. For firefighting, a firefighting system with a fire alarm system is provided, A Sprinkler system is provided in the main passages. Fire extinguishers are provided at multiple locations as per requirement. Multiple exits in case of emergency are provided in the building. Fire audit is done on a regular basis.
8. **Canteen / ATM / Post office Facility :** The canteen facility is available for students and staff members. Each department has a first-aid kit for minor injuries. A free medical check-up is arranged for students taking admission in the college. Besides this the campus has a medical centre. The staff and students can visit the medical centre in case of any health issues. A branch of Bank of Baroda is located near the campus along with an ATM. It caters to all students and faculty. It is used for various transactions like salary payment. The Post Office is located in the campus for effective outside communication. It offers all postal services like delivery of mails and parcels and other related services.

9. **Student Development Activity/ NSS Activity :** Training programmes are conducted for students to promote awareness about women empowerment, importance of new skills of education, and social awareness. It works for student development (welfare) activity. It operates schemes like Earn and Learn. It organises various camps for students. It motivates students to participate in various social activities like Tree Plantation. It celebrates various days like Sadbhavna Day, Marathi Bhasha Din. It organises workshops on Power of Mind under Fit India Movement, Python and Machine Learning, COVID-19 Pandemic Disaster Management, Nirbhay Kanya Abhiyan and monitored by Student Development Officer.

10. **Rain water harvesting project** is implemented in the campus to save a significant amount of water expenses maintaining the campus ecology. The plant collects rain water from the roof of the buildings and surrounding areas. The campus groundwater level has shown a significant growth, achieving the green campus goal.

<b>File Description</b>	<b>Document</b>
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

NAAC

## Criterion 5 - Student Support and Progression

### 5.1 Student Support

#### 5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during last five years

**Response:** 62.6

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

2020-21	2019-20	2018-19	2017-18	2016-17
1398	1290	1134	1071	1004

#### File Description

#### Document

upload self attested letter with the list of students sanctioned scholarship

[View Document](#)

Upload any additional information Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years (Data Template)

[View Document](#)

#### 5.1.2 Average percentage of students benefitted by scholarships, freeships etc. provided by the institution / non- government agencies during the last five years

**Response:** 0.1

##### 5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution / non- government agencies year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
6	4	0	0	0

#### File Description

#### Document

Upload any additional information

[View Document](#)

Number of students benefited by scholarships and freeships institution / non- government agencies in last 5 years (Date Template)

[View Document](#)

**5.1.3 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
Details of capability building and skills enhancement initiatives (Data Template)	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
Link to Institutional website	<a href="#">View Document</a>

**5.1.4 Average percentage of students benefitted by guidance for competitive examinations and career counselling offered by the Institution during the last five years**

**Response:** 10.65

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

2020-21	2019-20	2018-19	2017-18	2016-17
188	213	275	136	191

File Description	Document
Number of students benefitted by guidance for competitive examinations and career counselling during the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**5.1.5 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 any additional information	<a href="#">View Document</a>
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	<a href="#">View Document</a>
Details of student grievances including sexual harassment and ragging cases	<a href="#">View Document</a>

## 5.2 Student Progression

### 5.2.1 Average percentage of placement of outgoing students during the last five years

**Response:** 40.58

#### 5.2.1.1 Number of outgoing students placed year - wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
179	197	258	127	166

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Self attested list of students placed	<a href="#">View Document</a>
Details of student placement during the last five years (Data Template)	<a href="#">View Document</a>

### 5.2.2 Average percentage of students progressing to higher education during the last five years

**Response:** 17.28

#### 5.2.2.1 Number of outgoing student progression to higher education during last five years

**Response:** 84

File Description	Document
Upload supporting data for student/alumni	<a href="#">View Document</a>
Details of student progression to higher education (Data Template)	<a href="#">View Document</a>

### 5.2.3 Average percentage of students qualifying in state/national/ international level examinations during the last five years (eg: IIT-JAM/CLAT/ NET/SLET/GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/State government examinations, etc.)

**Response:** 47.06

#### 5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: IIT/JAM/ NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations, etc.) year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
9	16	17	9	25

#### 5.2.3.2 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

2020-21	2019-20	2018-19	2017-18	2016-17
10	96	84	107	25

File Description	Document
Upload supporting data for the same	<a href="#">View Document</a>
Number of students qualifying in state/ national/ international level examinations during the last five years (Data Template)	<a href="#">View Document</a>

## 5.3 Student Participation and Activities

### 5.3.1 Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter-university/state/national / international level (award for a team event should be counted as one) during the last five years.

**Response:** 40

**5.3.1.1 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) year-wise during the last five years.**

2020-21	2019-20	2018-19	2017-18	2016-17
2	12	11	11	4

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at university/state/ national/international level during the last five year	<a href="#">View Document</a>
e-copies of award letters and certificates	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**5.3.2 Institution facilitates students' representation and engagement in various administrative, co-curricular and extracurricular activities following duly established processes and norms (student council, students representation on various bodies)**

**Response:**

Students are the key stakeholders of our institute and we ensure maximum involvement of our students by their participation in various committees like the Anti-Ragging Committee, Internal committee, IQAC, Cultural Committee, Sports Committee etc. MESCOE also has a Students Development Committee which works towards the all-round development of students.

**Co-curricular and extracurricular Activities:**

Clubs such as Google developer club, Roboclub, designers club, Nakshatra astronomy club, enthusiast club, etc. provide an opportunity for students to organize, participate and also win prizes in both intra-collegiate events as well inter-college and university level competitions. These clubs are completely managed by the student community and thus help them inculcate leadership qualities.

All the departments have student associations namely Association of Computer Engineers (ACE), Electronics & Telecommunication Engineering Students' Association (ETSA) and Mechanical Engineering Students' Association (MESA). These student associations provide a platform for the students to apply their knowledge and develop their skills by organizing and participating in technical events. All these clubs are completely run and managed by the students of various branches. Additionally, the college encourages students to participate in

National and International technical events like Techfest (IIT Bombay), Robo Con, BAJA by SAE India, etc with financial assistance and infrastructural facilities. Such activities help inculcate leadership and team

building skills in our student community.

In addition to technical events, various social issues are explored by “Astitva” organization of students. It is actively involved in spreading social awareness among students.

National Service Scheme (NSS) was introduced in the academic year 2005-06 and is a student-centred program in which projects such as tree plantation, blood donation camps, River Cleanliness Drive, Fire Safety Training, Donation of Books to Orphanage, Swachh Bharat Abhiyan, International Yoga Day, NSS special camp, Science exhibition Road Safety Awareness, etc. are organized by the NSS volunteers.

The Institution Innovation Council (IIC MESCOE) helps students explore the areas of startup, innovation and IPR. This council has representation from the students of all the branches who are working towards developing an ecosystem of startups and entrepreneurship at MESCOE. The students organize activities related to the above areas to create awareness amongst their fellow students.

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

**Response:** 27.6

#### 5.3.3.1 Number of sports and cultural events/competitions in which students of the Institution participated year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
02	26	31	44	35

File Description	Document
Report of the event	<a href="#">View Document</a>
Number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions (Data Template)	<a href="#">View Document</a>

## 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:**

Alumni association of Modern Education Society's College of Engineering Pune was registered on 14th June 2019 with registration number “MH/929/2019/Pune”. The main purpose of the alumni association is

to build a strong bond between the alumni and institute. Following are the objectives of the alumni associations:

- Encourage alumni to take an active interest in the progress of the institute by contributing towards the growth of their Alma Mater.
- To utilize the valuable experiences of the alumni for the benefit and progress of the present students.
- To guide the present students for better employment and higher studies.
- To promote the institute through alumni working in reputed industries.

Various events are also organized during the alumni meet such as poster presentation competition for the final year students. Through this poster presentation competition, the final year students get benefited from the valuable experience and guidance of alumni which they can utilize in their final year projects.

Various MoU's have been signed with alumni who have established their own company so that current students can be benefited by doing an internship in their company. Alumni who have had remarkable achievements in their careers are invited to deliver guest lectures for the students which helps the students to choose the correct path for their careers.

MESCOE Alumni Portal (Url: <http://www.mescoepune.org/alumni/index.php>) is developed by the students of Google developers' club. This portal can be used by the alumni to get in touch with all registered alumni of various batches so that everyone can be benefited in some or other way.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

#### 5.4.2 Alumni contribution during the last five years (INR in lakhs)

**Response:** E. <1 Lakhs

## Criterion 6 - Governance, Leadership and Management

### 6.1 Institutional Vision and Leadership

#### 6.1.1 The governance of the institution is reflective of and in tune with the vision and mission of the institution

##### Response:

**Institute Vision:** To Groom - Motivated, Environment Friendly, Self-esteemed, Creative and Oriented Engineers.

**Institute Mission:** To Develop Industry Oriented Manpower to accept the challenges of Globalization by

- Promoting value education through motivated trained faculty
- Maintaining a conducive environment for education at affordable cost
- Promoting industry institute interaction
- Involving alumni

The vision and mission statements of the college are available at the college website and also have been displayed in each department and other prominent locations of the institute.

The institute has ensured that its vision and mission statements define the institution's distinctive characteristics clearly.

- The Institute has been set up with a mission to impart such knowledge that may be necessary for the holistic development of students thereby making them capable of being better employable and at par with the highly competitive job market.
- The institute pursues a three-fold system that involves curricular, co-curricular and extra-curricular activities. The curriculum being followed is designed in such a way so as to enhance and empower the knowledge base of students. The main focus is on the recent trends in technology.
- The institute visualizes facilitating young adult learners with opportunities to inculcate ethics and leadership potential thereby sensitizing learners towards inclusive social concerns, human rights, gender and environmental issues.
- The institute has drawn a clear perspective plan for future development and to maintain competitive edge in imparting quality education.

All the teaching faculty in the institute, strive hard to impart training for the students to make them competent, motivated engineers ultimately developing the institute as a center of academic excellence. They serve the purpose of inculcating a solid foundation of knowledge and enhancing confidence, creativity and innovation in the students.

The inputs from the industries and alumni are also sought. MESCOE Alumni Association is established with website and there are groups on social media of alumni for quicker communication. Alumni meet is organized periodically for interaction between current students and alumni. MESCOE has huge successful alumni contributing across the globe.

There are various clubs in the institute for skill development of students. National Service Scheme (NSS)

has been introduced at Modern Education Society's College of Engineering in academic year 2005-06 as a part of the extra-curricular activity and since then NSS MESCOE unit is functioning by conducting various activities. NSS develops the sense of social and civic responsibility in students. It also nourishes the leadership qualities.

File Description	Document
Paste link for additional information	<a href="#">View Document</a>

### 6.1.2 The effective leadership is visible in various institutional practices such as decentralization and participative management

#### Response:

The institute practices participative management and decentralization in all academic as well as non-academic activities. The Institute has formed various committees for effective implementation of these activities.

The institute has two main statutory committees namely Monitoring and Development Cell (MDC) and Internal Quality Assurance Cell (IQAC) framed as per norms of AICTE. These bodies play an important role in framing policies and its execution.

There are several committees such as College Development Committee, Training & Placement Cell, Research Committee, Academic monitoring Committee, Exam Committee etc. Each committee has departmental as well as institutional in-charge. These committees take the decisions regarding the concerned activity.

The Local Managing Committee is constituted as per statutes of the Savitribai Phule Pune University. The Local Managing Committee members are representatives from Management, elected Teaching & Nonteaching Representatives. The committee takes a decision about administration policies and takes follow up of activities.

There is effective communication in various stakeholders in college premises and using technology like emails, whats-app, mobiles, intercom, Microsoft Teams for organizing lectures and events. This has been particularly useful during Covid pandemic. Students enjoyed online learning from institute.

#### Case study : budget preparation

The process of budget preparation is described here as an example of participative management.

- For every financial year, the heads/in-charge of various departments call for the requirement of equipment/materials/software etc. from the department staff. Faculty/co-ordinators give the requirements considering various factors such as expected syllabus change, contents beyond syllabus, the status of available equipment/materials/software, co-curricular and extra-curricular and other development activities and give an estimated budget.
- The budget that includes the estimated salary, maintenance cost, etc. is prepared as well and

presented to the authorities for approval.

- The budget is approved by the higher authority.
- Actual expenditure as per budget is reviewed in third quarter and revised budget for current financial year and estimated budget for next financial year is proposed.

File Description	Document
Paste link for additional information	<a href="#">View Document</a>

## 6.2 Strategy Development and Deployment

### 6.2.1 The institutional Strategic / Perspective plan is effectively deployed

#### Response:

The institute planned and carried out several strategies during the period 2016-2020 effectively.

#### Strategy planned:

To provide a robust platform for expression of cognitive thoughts and promote research among faculty and students.

#### Strategy deployment:

To provide such a platform, the three departments of the institute organize a national conference every year. The conference sparks innovative ideas, foster research relations, or partnerships between the various institutions and build strong research and development community. The conferences bring together researchers, engineers, and scientists in the domain of interest from variety of disciplines.

The national conference on ‘Advancements in Communication, Computing, and Electronics Technology’ (ACCET) is a series of conferences organized by Electronics and Telecommunication Engineering department. ACCET provides a platform for researchers, academicians, and students to discuss recent advances and trends in the fields of theoretical, experimental, applied Communication, Computing and Electronics Technology.

The national conferences on “Recent Advances in Computer Engineering” [RACE-2021] is the premier forum for presentation of new advances and research results in the field of Computer Engineering. The conference will bring together researchers, engineers and scientists in the domain of interest from a variety of disciplines such as Computer, Information Technology.

‘Recent Developments in Mechanical Engineering’ (RDME) is a series of national conferences organized by department of Mechanical Engineering with objective to provide the platform for students, engineers, researchers, and scientists to share the knowledge and ideas in the field of mechanical engineering. The conference aims to bring together researchers, engineers, and scientists in the domain of interest from variety of disciplines such as Design, Heat Power, Production, & Automation Technology.

The institute grants fund for organizing these conferences.

The department committees are formed to organize the conference effectively. Members of Board of studies, academicians and domain experts from industries act as advisory board.

Brochures are designed and published. Registrations are accepted through authenticate platforms such as easy-chair. Paper presentation schedule is sent to participants on mail.

Highlight of these conferences are the keynote speeches delivered by eminent subject experts from academia and industry.

After the plagiarism check the papers are sent for review from domain experts and authors are duly informed. Final papers are selected based on recommendations from reviewers.

Papers are presented session wise and best papers are awarded. Each conference publishes souvenir and published the selected papers in renowned journal.

Following table shows funds sanctioned by MES College of Engineering for annual conferences and number of papers presented in each year.

Year	2017	2018	2019	2021(online mode)
<b>Electronics and Telecommunication Engineering</b>				
Funds from College in Rs.	86,467.00	87,500	52,579.00	25,000.00
No.of Papers Presented	58	48	44	57
<b>Computer Engineering</b>				
Funds from College	49,141.00	55,185.00	26,739.00	34,000.00
No.of Papers Presented	81	69	60	92
<b>Mechanical Engineering</b>				
Funds from College	79,911.00	77,407.00	98,000.00	34706
No.of Papers Presented	72	40	49	129

Following are the links for conference websites

ACCET - <http://www.mescoepune.org/accet/>

RACE- <http://www.mescoepune.org/race/>

RDME- <http://www.mescoepune.org/rdme/>

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

### 6.2.2 The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, etc.

**Response:**

**Roles & Responsibilities of various committees are as follows:**

#### 1. Internal quality assurance cell (IQAC)

- Planning developmental activities and monitoring of academic development of the institute.
- Accreditation & Ranking related all activities (NBA, NAAC, ARIIAA, NIRF etc.)
- Initiation of various processes for overall development of students and faculty for improving the academic and administrative performance of the institute.

#### 2. Academic Monitoring Committee

- Academic Monitoring & Action
- Academic Audit
- Result Analysis, Students Data, B.E. Project, Internships, etc.

#### 3. Interaction with Outside world Cell

- Consultancy, MOU, Grants, Revenue Generation
- FDP, Conference, Skill Dev Training, Guest Lecture, Industrial Visit
- R&D, Innovation, Entrepreneurship development programme (EDPs)
- Publications & Patents

#### 4. Student Development Cell

- Conduct placement drives
- Campus recruitment training programme (CRT)
- Guidance for higher education

File Description	Document
Link to Organogram of the Institution webpage	<a href="#">View Document</a>

### 6.2.3 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
Screen shots of user interfaces	<a href="#">View Document</a>
Details of implementation of e-governance in areas of operation, Administration etc	<a href="#">View Document</a>

## 6.3 Faculty Empowerment Strategies

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

**Response:**

Growth of an institute is contingent on its employees. Employees are valued and their needs are well-perceived. The purpose of employee welfare scheme is to enhance the holistic development of the employee's personality which enables them to perform their work in satisfactory and healthy environment. The institute has effective welfare schemes that are implemented for the benefit of teaching and non-teaching staff.

The institute provides following welfare schemes for teaching and non-teaching staff members:

- The institute motivates teachers by providing Special/ study Leave to pursue post-graduation / doctoral research to bridge the gap between the latest trends in technology and industry.
- The Institute encourages and supports staff members to participate in various conferences / workshops / staff training programmes / faculty development programmes.
- Staff members are encouraged to take membership of professional societies.
- The teaching and non-teaching staff is given other benefits like casual leave, maternity leave, medical leave, earned leave, and vacation as per SPPU norms.
- Staff members of the Institute can avail the loans from Modern Education Society's colleges employee's Co-op Credit Society Ltd.
- Employees are eligible for retiral benefits like gratuity as per the Gratuity Act.
- The Institute has in-campus medical assistance.
- Training programmes are arranged for overall development of faculty.
- The institute has group insurance for staff.
- Uniforms facility is provided for Class IV employees.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

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

**Response:** 10.5

#### 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

2020-21	2019-20	2018-19	2017-18	2016-17
1	0	30	12	24

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Details of teachers provided with financial support to attend conference, workshops etc during the last five years	<a href="#">View Document</a>

### 6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

**Response:** 5.6

#### 6.3.3.1 Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
22	2	0	1	3

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Details of professional development / administrative training Programmes organized by the University for teaching and non teaching staff	<a href="#">View Document</a>

### 6.3.4 Average percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDP) during the last five years (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course ).

**Response:** 51.88

#### 6.3.4.1 Total number of teachers attending professional development Programmes viz., Orientation / Induction Programme, Refresher Course, Short Term Course year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
70	56	44	60	55

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Details of teachers attending professional development programmes during the last five years	<a href="#">View Document</a>

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

**Response:**

The institute strictly follows the recruitment and promotional policies as stipulated by AICTE, Savitribai Phule Pune University as well as Government of Maharashtra.

- Each and every faculty member completes the self-appraisal procedure every year in the format prescribed by SPPU.
- Self-appraisal is done on the basis of the following points:
  - Teaching learning process evaluation
  - Specific duties / tasks assigned by Heads of the Department
  - Major contribution for the benefit of student/ staff / Institute
  - Awards/ rewards obtained by the faculty and staff
  - Contribution towards extracurricular and co-curricular activities
  - Execution of exam duties assigned by SPPU
  - Research contribution of staff in terms of research projects, publications and guidance provided to students for involvement in research

File Description	Document
Paste link for additional information	<a href="#">View Document</a>

## 6.4 Financial Management and Resource Mobilization

### 6.4.1 Institution conducts internal and external financial audits regularly

#### Response:

The institute has the well-established mechanism for internal as well as external audits. The accounts department is headed by Registrar and maintains financial accounts. The financial statements are prepared and submitted to statutory bodies.

Year	Auditor
2019-20	Kalyaniwala and Mistry LLP Chartered accounts
2018-19	Kalyaniwala and Mistry LLP Chartered accounts
2017-18	V.A.Dudhedia &Co. Chartered accounts
2016-17	V.A.Dudhedia &Co. Chartered accounts

#### File Description

#### Document

Paste link for additional information

[View Document](#)

### 6.4.2 Funds / Grants received from non-government bodies, individuals, philanthropers during the last five years (not covered in Criterion III)

#### Response: 5.63

6.4.2.1 Total Grants received from non-government bodies, individuals, Philanthropers year wise during the last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
0	0.48	5.14553	0	0

#### File Description

#### Document

Details of Funds / Grants received from of the non-government bodies, individuals, Philanthropers during the last five years

[View Document](#)

Any additional information

[View Document](#)

### 6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

#### Response:

The institute has well-developed strategy for mobilizing funds that ensures the optimal utilization of resources while maintaining the transparency in the financial management. The strategy is focused on quality enhancement.

The primary financial resource for the Institute is the tuition fee. The tuition fee is fixed by concerned statutory committee.

The resources are optimally utilized as per the sanctioned budget.

The expenditure heads are as follows -

- Major component of expenditure - employee Salaries
- Furniture, laboratory equipment and consumables
- Industry collaborative laboratories
- Library
- Establishing centers of excellence
- Research & development activities
- Training & placement
- Software procurement, up-gradation, and maintenance
- Internet facility
- Student services- NSS, Sports
- Power and fuel
- Printing and stationery
- Postage and telephones
- Affiliation and renewals
- Travel and conveyance
- Repair, replacements, and maintenance
- Taxes and licenses

File Description	Document
Paste link for additional information	<a href="#">View Document</a>

## 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**

**Response:**

**Internal Quality Assurance Cell (IQAC) mainly focuses on following major aspects.**

### **1. Industry Institute Interaction:**

Main objective is to establish and maintain relationships with the corporate world through MoUs, Centre of Excellence, sponsored projects, industrial visits and in-plant training for students and faculty members.

Institution has taken initiative to interact with various industries through the Industry Institute Interaction committee that maintains professional relations with industries.

Under this, following practices are performed

- Membership of professional technical bodies (ASHRAE, SAE, ASME, CSI, IETE, ISTE)
- MoU with industries (Baker Gauges India, CSI, ICT Academy)
- Lab development under Center of Excellence (NI Lab, Tribology Lab, Baker Gauges Lab, TechNex, JALTAP, Sapours, StackZeal, ICT, SDR lab)
- Industrial visit
- Guest lecture
- Promote students for internship and industry sponsored projects

## 2. Student Skill Development Activity

The technical skill and job skill of students that is necessary for industries are developed through co-curricular and extra-curricular activities. These activities are significant for enriching students on an emotional, cognitive, physical and social level.

Under this, following practices are performed

- Formation different student chapter (ASME, SAE, ASHRE, ACE, IETE, ISTE)
- Promoting and supporting students to participate in different national and international competitions (M-BAJA, E-BAJA, RoboCon, etc.)
- Development of laboratories with the latest experimentation facility and machines
- Latest software and computing facility as per and beyond curriculum for academic development (MATLAB, Ansys, MasterCAM etc.)
- Support for internships and sponsored projects
- Provision of E-content for advance Learning (NPTEL, Coursera, Spoken tutorials, etc.)

## 3. Workshops and webinars organized by IQAC for the skill development:

- IQAC has arranged a 3-days national level support staff skill development program on "MS Office-Word, Excel and Corel Draw". This workshop has been arranged for all supporting staff, administrative, library staff working in higher education institutions.
- IQAC has organized a Webinar for the supporting staff, administrative, library staff, titled - "Support Staff Soft Skill Development Program".
- As a part of promoting innovation and startups, IQAC had arranged a webinar on "Intellectual Property and Patent Life Cycle" for the students and faculty.

File Description	Document
Paste link for additional information	<a href="#">View Document</a>

**6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the**

**incremental improvement in various activities ( For first cycle - Incremental improvements made for the preceding five years with regard to quality For second and subsequent cycles - Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives )**

**Response:**

MATLAB software is utilized by the faculty and students of UG, PG and research scholars of all departments. Currently, these departments are using full suite campus-wide license for MATLAB with recent version MATLAB 2021b and can be used online and offline mode. Mathworks provided strong technical support in installation, updation, and modification of software. Mathworks conducted FDP on Machine learning.

During the pandemic situation for smooth and effective conduction of practical, institute have taken initiative to facilitate students with the platform of the virtual lab developed by IITs. The institute has been officially designated as Nodal Centre for the Year 2021.

File Description	Document
Upload any additional information	<a href="#">View Document</a>

**6.5.3 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)**
- 3.Participation in NIRF**
- 4.any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)**

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

File Description	Document
Upload e-copies of the accreditations and certifications	<a href="#">View Document</a>
Upload details of Quality assurance initiatives of the institution	<a href="#">View Document</a>
Upload any additional information	<a href="#">View Document</a>
Paste web link of Annual reports of Institution	<a href="#">View Document</a>

## 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 during the last five years.

##### Response:

The institution constituted the following committees as per norms laid by University/UGC: Institution Grievance Redressal Committee, Anti-Ragging, Internal Committee and Mentoring Programme cares for the well-being of students and staff in the institution. The functions of these committees are displayed on the website of the institution and information is being disseminated to the students through orientation and induction programs. The institution provides safety and security facilities for the staff and students such as CCTV Surveillance throughout the campus and security arrangement. Students wear ID cards at all times and outsiders are checked by security staff before allotting visitor IDs. The institution has a good mentoring system for the students to take care of their academic, emotional, social and cognitive development. Personal Counseling is provided to the students at different levels. There are separate washroom facilities for girls and boys. Washrooms are provided with sanitary napkin vending and disposal machines for the safe and hygienic disposal of sanitary napkins. The institution has organized several programs in gender equity in curricula. The institution promotes gender sensitization through co-curricular activities like workshops, seminars, guest lectures and counseling by Parent Teacher etc. The Department of Electronics and Telecommunication Engineering conducted a Guest lecture on "Women Health Management after 35" to increase awareness among working ladies about their health and to inform and empower women to take responsibility for their health on the eve of Women's Day i.e.8th March. In accordance with the Nirbhay Kanya Abhiyaan scheme introduced by the Board of student development, SPPU, the college organised a workshop on Implementation of Health of girl students. Also the institute organized a one day Program on Personality Development for Girls (Stress Management) to develop the confidence and personality of a lady student who comes from the rural areas and are deprived sections of society. The institute also organized a one day Workshop on "Self Defense" on 25 Feb 2019 for girl students to give training in health, law, and Student activities.

File Description	Document
Link for specific facilities provided for women in terms of: a. Safety and security b. Counselling c. Common Rooms d. Day care center for young children e. Any other relevant information	<a href="#">View Document</a>
Link for annual gender sensitization action plan	<a href="#">View Document</a>

#### 7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

- 1.Solar energy
- 2.Biogas plant
- 3.Wheeling to the Grid

**4.Sensor-based energy conservation****5. Use of LED bulbs/ power efficient equipment**

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

File Description	Document
Geotagged Photographs	<a href="#">View Document</a>
Any other relevant information	<a href="#">View Document</a>

**7.1.3 Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)**

- **Solid waste management**
- **Liquid waste management**
- **Biomedical waste management**
- **E-waste management**
- **Waste recycling system**
- **Hazardous chemicals and radioactive waste management**

**Response:**

**Solid waste management-**

- In every room, dustbins are placed to collect waste and also centrally wet and dry waste inserted into green and blue big dustbins respectively.
- Generated waste is collected and segregated in the college premises in the category of dry and wet garbage.
- Recyclable waste is forwarded for further decomposition process to the Vermiculture Vermicomposting unit situated in college premises.
- Solid waste in terms of used papers, files are collected and sent for paper recycling to vendors.
- The vermiculture project is implemented in campus to prepare fertilizer, which is used for the plants in the campus. Vermicompost, like conventional compost,

provides many benefits to agricultural soil, including increased ability to retain moisture, better nutrient-holding capacity, better soil structure, and higher levels of microbial activity. The vermicompost is superior to conventional aerobic compost in a number of areas like level of plant-available nutrients, level of beneficial microorganisms, ability to stimulate plant growth, ability to suppress disease, ability to repel pests. The application of vermicompost in the agriculture field has benefits, it improves the soil health, the micro-organisms in the vermin-compost break down the complex organic matter into simple organic matter, so that the plant can take it easily, it works as soil conditioner. The vermicomposting project indicates the Institute's ecofriendly approach.

**Liquid waste management-**

- **Water Harvesting:** A network of rainwater harvesting systems ensures continuous recharging of groundwater tables. Institute has successfully implemented a rain water harvesting Project. Ground

water recharging pit is prepared on the Institute campus. Arrangement has been made so that storm water flows from the playground to fill a pit and filter pit to well. The Institute has implemented a rain water Harvesting Project, that has saved a significant amount of expenses beside it maintains campus ecology.

#### **Biomedical waste management- Not Applicable**

**E-waste management-** The e-waste is taken care of properly. The old unused unrepairable electronic equipment is disposed of properly.

**Hazardous chemicals and radioactive waste management-** The chemicals used in chemistry laboratories are disposed of carefully. The workshop machining waste chips are collected together and sold to scrap merchants for further reuse.

<b>File Description</b>	<b>Document</b>
Any other relevant information	<a href="#">View Document</a>
Link for Geotagged photographs of the facilities	<a href="#">View Document</a>

#### **7.1.4 Water conservation facilities available in the Institution:**

- 1. Rain water harvesting**
- 2. Borewell /Open well recharge**
- 3. Construction of tanks and bunds**
- 4. Waste water recycling**
- 5. Maintenance of water bodies and distribution system in the campus**

**Response:** C. 2 of the above

<b>File Description</b>	<b>Document</b>
Geotagged photographs / videos of the facilities	<a href="#">View Document</a>

#### **7.1.5 Green campus initiatives include:**

- 1. Restricted entry of automobiles**
- 2. Use of Bicycles/ Battery powered vehicles**
- 3. Pedestrian Friendly pathways**
- 4. Ban on use of Plastic**
- 5. Landscaping with trees and plants**

**Response:** Any 4 or All of the above

<b>File Description</b>	<b>Document</b>
Geotagged photos / videos of the facilities	<a href="#">View Document</a>

**7.1.6 Quality audits on environment and energy regularly undertaken by the Institution and any awards received for such green campus initiatives:**

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

**Response:** C. 2 of the above

File Description	Document
Certificates of the awards received	<a href="#">View Document</a>
Any other relevant information	<a href="#">View Document</a>

**7.1.7 The Institution has disabled-friendly, barrier free environment**

- 1.Built environment with ramps/lifts for easy access to classrooms.
- 2.Disabled-friendly washrooms
- 3.Signage including tactile path, lights, display boards and signposts
- 4.Assistive technology and facilities for persons with disabilities ( Divyangjan) accessible website, screen-reading software, mechanized equipment
- 5.Provision for enquiry and information : Human assistance, reader, scribe, soft copies of reading material, screen reading

**Response:** A. Any 4 or all of the above

File Description	Document
Policy documents and information brochures on the support to be provided	<a href="#">View Document</a>
Geotagged photographs / videos of the facilities	<a href="#">View Document</a>

**7.1.8 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities (within 500 words).**

**Response:**

The NSS unit of MESCOE, Pune organized the “Sadbhavana Day Pledge” taking ceremony on the occasion of “Sadbhavana Diwas” on 31 October 2018 in our college porch at 12.00 noon. All students, teaching and non-teaching staff of MESCOE were present for the program. Principal Dr.A.A.Keste had given “Sadbhavana Day Pledge ” to all students and staff of the college to promote national integration and communal harmony among people of all religions, languages and regions and to abstain from violence and

to promote goodwill among the people across the nation. A Guest lecture was arranged on the 150th birth anniversary of Mahatma Gandhi to understand and to know the detailed devotion and dedication of Mahatma Gandhi in our struggle for Independence and to learn the importance of Non-violence movement. NSS unit of MESCOE organized Swachh Bharat Abhiyan (Street play) & cleanliness drive on Monday, 1st October 2018 to make people aware of healthy sanitation practices by bringing behavioral changes in people and to create a social culture and give a platform to work in a team. The NSS Volunteers went to a PMC (Pune Municipal Corporation) School named 'Mahatma Jyotiba Phule School' which is located on Dhole Patil Road, near Wadia College Campus and interacted with students from poor socio economic backgrounds. Gandhi Jayanti is celebrated by the entire nation to commemorate the birth anniversary of the father of our nation-Mahatma Gandhi. The birthday anniversary of Mahatma Gandhi is also celebrated as the International Peace Day all across the world. NSS volunteers celebrate Gandhi Jayanti by participating in the Peace rally, which is organized by "Yuvak Kranti Dal". The route of the rally was Alka Chowk to Mahatma Phule Mandai. NSS volunteers of Various Colleges, students, teachers and social workers joined the rally with great zeal, enthusiasm and patriotism. This activity was introduced by the Board of Student Welfare, Savitribai Phule Pune University to create awareness about management during natural and man-made disasters.

File Description	Document
Link for supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	<a href="#">View Document</a>

### **7.1.9 Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens (within 500 words).**

#### **Response:**

Modern Education Society's College of Engineering organizes activities that strengthen our constitutional values and deepen our allegiance and responsibility towards our nation. The National Service Scheme (NSS) and Board of Student Development are two integral bodies under SPPU that commit to programs and activities to inculcate constitutional obligations and patriotism among students and staff.

#### **Programs instilling citizens' responsibilities:**

The college fosters community responsibility by organizing blood donation camps routinely. In every camp, around 100 volunteers donate blood. They also organize books, food and clothes donation programs regularly. The college renders national service by organizing road-safety awareness programs routinely. Students are informed about traffic rules and regulations and instill the importance of safeguarding human life. To promote a sustainable environment, Swachh Bharat campaigns and Tree Plantation drives are organized. As part of the campaigns, environmentally safe practices such as plastic ban, water conservation, waste segregation, cleanliness and anti-pollution campaigns are implemented regularly. To protect human lives and property of the college during a disaster, MESCoE organized disaster management workshops. The college also organized awareness drives and mock drills for disaster management in association with the NDRF team. MESCoE organizes a seminar on "Intellectual Property Rights" to create awareness about copyright, plagiarism, patenting, trademark, and several other

related aspects to cultivate professional ethics. The college promotes linguistic diversity and cultural plurality by organizing programs such as annual gathering JHANKAR and other cultural programs.

#### **Democratic values**

The college enshrines the sovereign and democratic values of our nation by commemorating the Independence Day and the Republic Day annually. Constitution Day is celebrated every year in college. Voter's Awareness Programs are organized in the college to create awareness of youth towards their constitutional rights and duties. Routine drives are organized to facilitate issuance of voter ID for students.

<b>File Description</b>	<b>Document</b>
Link for details of activities that inculcate values necessary to render students in to responsible citizens	<a href="#">View Document</a>

#### **7.1.10 The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.**

- 1. The Code of Conduct is displayed on the website**
- 2. There is a committee to monitor adherence to the Code of Conduct**
- 3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff**
- 4. Annual awareness programmes on Code of Conduct are organized**

**Response:** C. 2 of the above

<b>File Description</b>	<b>Document</b>
Code of ethics policy document	<a href="#">View Document</a>

#### **7.1.11 Institution celebrates / organizes national and international commemorative days, events and festivals (within 500 words).**

**Response:**

Modern Education Society's College of Engineering celebrates national and international commemorative days to implant constitutional responsibilities, to engrain patriotic spirit and to encourage unity among fellow citizens.

1. Every year Independence Day and Republic Day are celebrated in the college by hoisting the Indian flag.
2. National Youth Day is celebrated on 12th January 2016 to commemorate the birth of Swami Vivekananda.
3. Marathi Language Day'' Celebrated on 27th February 2019 and 05 March 2021.
4. Every year International Women's Day is celebrated on 8th March.

5. Every year International Yoga Day is celebrated on 21st June.
6. Every year Teachers Day is celebrated on 5th September.
7. Every year Engineers Day is celebrated on 15 th September by organizing various activities like expert talk on advanced technology, eco-social roles of engineers in society.
8. Gandhi Jayanti Celebrated on 2nd October 2018 and 2019.
9. Sadbhavana Day Celebrated on 31 st October 2019.
10. Constitution Day is celebrated on 26th November 2019 in order to create awareness of fundamental duties as enshrined in the Indian constitution.
11. To honor and express gratitude for all the instruments that add meaning to our life, Saraswati and Ayudh pooja takes place every year.

File Description	Document
Link for Annual report of the celebrations and commemorative events for the last five years	<a href="#">View Document</a>

## 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:**

**Best Practice I**

**1. Title of the Practice: 'Industry Institute Interaction'**

**2. Goal:**

Main objective is to establish and maintain relationships with the corporate world through MoUs, Centre of Excellence, sponsored projects, industrial visits and in-plant training for students and faculty members.

**3. The Context:**

Institution has taken initiative to interact with various industries through the Industry Institute Interaction committee that maintains professional relations with industries.

**4. The Practice:** Under this, following practices are performed

1. Membership of Professional Technical Bodies
2. MoUs with industries
3. Lab development under Center of Excellence

4. Industrial visit, Guest Lecture,
5. Promotion to do internship and industry sponsored project for students
6. Curriculum development at par with industry requirement
7. Formation of Students Clubs

#### **5. Evidence of Success:**

##### **1. Membership of Professional Technical Bodies :**

1. Faculties and students are encouraged to take membership of professional societies. Membership of SAE, ASHRE, ISHRE and ASME was taken by faculty of the mechanical department. CSI by Computer Engineering and IETE by E&TC Engineering.

##### **2. MoUs with industries**

1. Institute formed a MoU with ICT academy and conducted different programs under it to promote students and faculty in the area of IOT, Artificial intelligence etc.

2. MoU with Spoken Tutorial, Initiative by IIT, Mumbai to free training on Free Open Source Software (FOOS) like Openfoam, R Language, Python etc. for both students and faculties.

3. Institute formed MoU with TechNex Technologies Pvt. Ltd, JALTAP, Spurs Technology Pvt. Ltd., StackZeal Pvt. Ltd., Seed InfoTech, ICT academy, and conducted different programs under it to promote students and faculty in the various areas.

3. **Lab development under Center of Excellence:** (3D Printing Lab, NI Lab, Industrial Tribology Lab, Baker Gauges Lab, Advanced Manufacturing, TechNex, JALTAP, Sapours, StackZeal, ICT,HPC)

##### **4. Industrial visit**

1. Multiple Industrial visits were organized for Mechanical Engineering students to different industries and government establishments e.g. Mahindra and Mahindra Pvt Ltd. Chakan, Cold Storage Plant etc.

2. Industrial visit to Persistent Systems, Hinjewadi, Pune organized on 14.02.2020 for TE Computer students to enhance interpersonal skills and communication techniques.

3. Industrial visit to Giant Metrewave Radio Telescope (GMRT) at Khodad, Pune on 28.02.2020 for SE Computer students to make students aware of industry standards, career opportunities, and product development life cycle.

4. Industrial visit at Chheda Electricals and Electronics Pvt.Ltd. on 14th Feb 20 and Bhira Power Plant 7th Feb. 20 for E&TC students.

5. Study tour Science Park, Chinchwad.was organised on 25 January,1 February and 8 February 2020 for FE students to encourage them to look beyond classrooms.

## 5. Guest Lecture

1. Multiple Guest lectures by eminent personalities from central research facilities and industries were conducted by Mechanical department for both students and faculty e.g Guest lecture on sustainable environment, emission and alternate energy sources.
2. Multiple Guest lectures by eminent personalities from central research facilities and industries were conducted in the Computer Engineering Department on various emerging topics.
3. Multiple lectures by eminent personalities from central research facilities and industries were conducted in the E & TC Engineering Department on National language processing etc.
4. Various webinars and workshops have been conducted under 4 cells of Institution's Innovation Council (IIC) MESCOE namely; IIC INNOVATION, IIC STARTUP, IIC IPR, IIC INTERNSHIP in collaboration with all departments such as Computer, E&TC, Mechanical, and FE.
5. Various programs for FE Students on subjects like Introduction to College Facilities and activities, Yoga ,Essence of Engineering, Stress Management, Success Factors of Engineering, Art of learning ,Project Based Learning, Developing skills in self and others etc were organized under the Induction program for newly admitted students.
6. **Internship opportunity** to students in both core and other allied industries and also government research organization like DRDO, Ammunition factory ( AY 2020-21, 22 students completed internship and in AY 2021 -22, 16 students registered for internship)
7. **Project sponsorship** for UG project: Students received sponsorship for their UG projects by both external agencies and institutes.
8. **Curriculum development** at par with industry requirement
  1. Senior faculties from all departments participated in the syllabus structure revision and implementation process for the subjects form SE to BE of SPPU Pune.

## 6. Problems Encountered:

Due to COVID pandemic,

- a. Many scheduled activities like industrial visits, guest lectures, STTPs etc. were cancelled.
- b. Manufacturing /Fabrication of students projects were suspended due to lockdown hence funds allocated for projects were not utilized.

## Best Practice II

### Title of Practice: Student Skill Development Activity

1. **Goal:** Development of students' technical skill and job skills necessary for industries through Co-curricular and Extracurricular activities.

### 2. The Context:

Co-curricular activities are significant for enriching students on an emotional, cognitive, physical, and social level. At the same time, extracurricular activities incorporating NSS, art and music can play a vital role in nation-building, psychomotor development and dexterity.

### 3. The Practice:

Under this, following practices are performed

1. Formation Different Student Chapter
2. Co-Curricular and Extra Co-Curricular Activities
3. Development of laboratories with the latest experimentation facility and machines like 3D Lab Printing.
4. Latest software and computing facility as per and beyond curriculum for academic development (MatLab, Ansys, etc.)
5. Support for Internship and Sponsored Project
6. Provision of E-content for advance Learning (NPTEL, video Lectures)

### 4. Evidence of Success:

#### 1. Formation Different Student Chapter (ASME, SAE, ASHRE, ACE, IETE)

1. SAE Student chapter formed under which students were financed and motivated to participate in events like M-Baja which is Multi Terrain vehicle making competition and E-Baja which is electric vehicle making competition to enhance students technical skill, build teamwork, leadership and presentation skill. Institute continuously supports students to participate in such competitions. Special provision in department Budget is made available for manufacturing vehicles under M-BAJA and E-BAJA.

2. ASHRE, a student's chapter is formed to promote students' interest in the area of Refrigeration and Air conditioning and also enhance their knowledge about this core area of mechanical engineering. .

3. Initiative is started to form ASME student chapter to increase students interest in Mechanical engineering by conducting different activities

4. Students are encouraged to take membership of Professional Technical bodies. In this year 62 Students enrolled in IETE membership

5. ACE Event “ALPHA QUEST 2019” was organized on 24.09.2019 to develop the ability to express ideas through oral communication. The Alpha Quest 2019 is an Intra-Collegiate event which includes the following 14 events.

6. ACE Event “Quarantine Digital Renaissance 2020” was organized online during lockdown. In line with its name it is truly a renaissance amidst the lockdown to help everyone utilize their time and sharpen their skills. It’s time to say goodbye to the lockdown boredom as everyone participates in the Quarantine Digital Renaissance 2020. Prizes for this national level event were sponsored by TechNex Harvestgrid Pvt Ltd, Pune and registration is completely free.

7. ACE Events “ALPHA QUEST 2020” and “ALPHA QUEST 2021” were organized online due to pandemics in 2020 and 2021 respectively.

## **2. Co-Curricular and Extra-Curricular Activities**

1. Different Co-Curricular Activities under MESA Technical Event “PHOENIX-2k19-20” were conducted to develop different technical and life skills like teamwork, presentation, stage daring, leadership soft skills etc.

2. Different days were conducted to promote awareness about social issues like environment and brotherhood in students e.g. Independence Day, Swachha & Swasth Bharat Abhiyan (Shramsanskar Shibir) etc.

3. Different Co-Curricular Activities under ACEMESA Technical Event “ALPHA QUEST 2019” were conducted to develop different technical and life skills like teamwork, presentation, stage daring, leadership soft skills etc.

4. ETSA Association “Cygus 2019” was organized on 19th and 20th September 2019. The fest consisted of 10 events in total. They were broadly categorized into Technical and Non-technical events to enhance student’s technical and non-technical skills.

5. ETSA group “INERVE 2020” was organized on 10th Feb.2020 which contained technical and non-technical activities. It consists of 7 events to help everyone utilize their time and sharpen their skills.

6. Students were encouraged and supported to form different hobby clubs like Nakshatra Astronomy club, Google developer student club, Workattech MESCOE, Designers’ Club etc.

## **3. Development of a lab with the latest experimentation facility and machines.**

1. Labs were provided with latest software and instrument to give students facility to do their interest research area and also provide correct experimentation reading hence helping them to correctly correlate the theory and practical knowledge

2. Latest version of MATLab were purchased with additional tool for simulation

#### 4. Support for Internship and Sponsored Project

1. Institute provides special finance to students project to promote students innovative ideas in the form of projects
2. Department gives special permission to attend and complete internships and support them.
3. Computer Students participated and received achievement in Smart India Hackathon 2020 (SIH-2020)-Total 18 Teams had participated for SIH 2019. Two teams were selected for the final Round. 18 Teams had given solutions to 58 different hardware and software problem statements. Two teams were selected for the final Round which is virtual from 2nd Aug to 4th Aug 2020.
4. Supporting students to participate in National project competitions. Two projects from the Mechanical engineering department participated in National Project Competition 2020 organized by MIT WPU, Pune and one project won First prize.

#### 5. Provision of E-content for advance Learning

1. Library has access to different eLearning material like NPTEL, journals both technical and non-technical to expose students to the latest developments in mechanical engineering.

#### 5. Problems Encountered and Resources required:

1. Due to COVID19 pandemic, the Annual Gathering function planned on March 19, 2020 to promote students' hobbies and non-technical skills like dancing, singing, acting were postponed and then cancelled.

File Description	Document
Link for Best practices in the Institutional web site	<a href="#">View Document</a>

### 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 Institution Distinctiveness

Institute has taken special efforts to develop the research culture among both staff and students. Institute is always keen to provide and build an environment which can promote and encourage research in not only core areas but also in multidisciplinary areas. Institutes believe that to promote the research in the students, the faculties must be equipped with knowledge and process related to research areas. This is achieved by continuously promoting the faculty to pursue higher education like PhD through special duty leaves to

attend research work and conferences, research Lab etc. Institutes also promote organization of conferences to create a platform for sharing of latest knowledge and bring together researchers from different areas of the nation. This has helped the institute to have a maximum number of faculties with PhD qualification and some as PhD Guide. The distinctive efforts by institute can be witness through following achievements

**Faculty with PhD awarded:**

- Computer department has six faculty members who have completed PhD during AY 2016-17 to AY 2020-21.
- The Mechanical Department has three Faculty members who have completed PhD during AY 2016-17 to AY 2020-21.
- E & TC has five Faculty members who have completed PhD during AY 2016-17 to AY 2020-21.
- Two faculty members from the First year Department completed PhD during AY 2016-17 to AY 2020-21.
- Presently total 31 faculties with PhD while other pursuing PhD.

**PhD Guideship:**

- Two faculty members from the Computer Department were recognized as Ph.D. Guides under SPPU.
- Five faculty members from the Mechanical Department were recognized as Ph.D. Guides under SPPU.
- Two faculty members from the E & Tc Department were recognized as Ph.D. Guides under SPPU.
- One faculty member from the FE Department were recognized as a PhD Guide under SPPU.

**Grant Received:**

- Computer department received two research and one Young Scientist International Travel grant from BCUD SPPU and one AICTE research grant during AY 2016-17 to AY 2020-21.
- Mechanical department received two research grant and one Young Scientist International Travel grant from BCUD SPPU, one MoDROB Grant for Lab Development from AICTE during AY 2016-17 to AY 2020-21
- The E & Tc department received one AICTE research grant during AY 2016-17 to AY 2020-21.
- First year department has received one research grant from BCUD, SPPU during AY 2016-17 to AY 2020-21

**Publications:**

- Computer department has published 128 papers in reputed journals/conference proceedings during AY 2016-17 to AY 2020-21
- Mechanical department has published 126 papers in reputed journals/conference proceedings during AY 2016-17 to AY 2020-21
- E & Tc department has published has published 77 papers in reputed journals/conference proceedings during AY 2016-17 to AY 2020-21
- First year department has published 33 papers in reputed journals/conference proceedings during AY 2016-17 to AY 2020-21

### **Invites Session Chair/ Experts/ Guests:**

- 5 faculty members from Computer department were invited as session chair for National/ International conferences and 9 faculty members as expert talk, 4 faculty members worked as a mentor for Smart India Hackathon (SIH) 2019 and SIH 2020 during AY 2016-17 to AY 2020-21
- 4 faculty members from Mechanical department were invited as session chair for National/ International conferences and 4 faculty members as expert talk during AY 2016-17 to AY 2020-21
- 2 faculty members from E & Tc department were invited as session chair for National/ International conferences and 1 faculty members as expert talk during AY 2016-17 to AY 2020-21

### **Patent /Copyright:**

- 10 patents and 12 copyrights from Computer department were published and received a patent grant for 1 patent in June 2021
- 2 patents from Mechanical department were published
- 2 patents from E & Tc department were published
- 3 patents from First year department were published

### **Conference Organized:**

- Four National conferences of RACE were organized by Computer department during AY 2016-17 to AY 2020-21
- Four National conferences of RDME were organized by Mechanical department during AY 2016-17 to AY 2020-21
- Four National conferences of ACCET were organized by E&Tc department during AY 2016-17 to AY 2020-21
- One International conference ICMESCoE was organized by institute during AY 2016-17 to AY 2020-21

### **Research Lab Development:**

- Centre of Excellence with High Computing Facility developed by Computer Department during AY 2016-17 to AY 2020-21
- Centre of Excellence, 3D Printing Lab thorough "MODROB" scheme of AICTE were developed by Mechanical department during AY 2016-17 to AY 2020-21
- Centre of Excellence SDR Lab developed by E & Tc Department during AY 2016-17 to AY 2020-21

### **Innovation Promotion:**

- 49 difference activities like webinar, hands-on, competition related to innovation were conducted through different cells of IIC MESCoE like IIC innovation, IIC startup, IIC IPR, IIC Internship, NIRF and AIIRI etc.to promote the innovation and research

<b>File Description</b>	<b>Document</b>
Link for appropriate web in the Institutional website	<a href="#">View Document</a>

NAAC

## 5. CONCLUSION

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### Additional Information :

- With a fast changing academic environment, the college is well poised to take on future challenges of higher education.
- The Institute strives to maintain standards of teaching-learning, research and innovation through the better integration of the ICT with teaching- learning process
- Twenty two years of service and a distinct growth in Higher Education.
- Our Institute has a host of distinguished alumni holding good positions at various reputed organizations around the globe.

### Concluding Remarks :

- The institution is working hard to bring up the best models in educational field with an inclusive approach and it is consistently looking for sustainable development.
- Committed to offer the best possible opportunities in education to the under privileged and marginalized.
- The Institute strives to cater to the needs of stakeholders and bring up the budding engineers with enough potential to compete with the challenges in the digital world scenario.
- The institute acknowledges the support of all stakeholders in developing the Institute as a leading institution under the SPP University of Pune.
- The Institute takes feedback from students, parents and society and uses these valuable inputs in addressing the changing needs of the time, and in striving to make the college a Centre of Excellence.
- The Institute lays emphasis on building a highly competitive environment conducive for academic excellence and extracurricular accomplishments through different activities, Interdisciplinary projects and clubs.
- All activities in the Institute are driven towards attaining the mission of nurturing self-reliant students with a strong sense of community responsibility.
- This balance in curricular and extracurricular engagements fosters a holistic development of students.
- Despite certain weaknesses and challenges, the institute strives to offer opportunities and provide the finest infrastructure and facilities in its pursuit of excellence.
- Moreover, the staff and students continue to work consistently towards realizing the mission of the Institute.