

# **SELF STUDY REPORT**

**FOR**

**1<sup>st</sup> CYCLE OF ACCREDITATION**

## **SANDIP INSTITUTE OF ENGINEERING AND MANAGEMENT**

SANDIP INSTITUTE OF ENGINEERING AND MANAGEMENT AT POST-  
MAHIRAVANI, TRIMBAK ROAD TAL. NASHIK, DIST. NASHIK-422213  
422213

[www.siem.sandipfoundation.org](http://www.siem.sandipfoundation.org)

Submitted To

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**

**BANGALORE**

**(Draft)**

# 1. EXECUTIVE SUMMARY

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## 1.1 INTRODUCTION

Sandip Foundation campus founded in 2005 by visionary Chairman "Dr. Sandip Kumar Jha" with the aim to offer quality education in the fields of Engineering, Science, Arts, Management Studies, Polytechnic, Law and Pharmacy.

Sandip Institute of Engineering and Management (SIEM) is located in the scenic, eco-friendly and conducive-to-study campus at an elevation off the Trimbak Road, Mahiravani, Nasik- Maharashtra. SIEM is self-financing institute approved by All India Council for Technical Education (AICTE), New Delhi and affiliated to Savitribai Phule University.

SIEM started in the year 2010 with 5 programs namely Civil Engineering, Computer Engineering, Electrical Engineering, Electronics and Telecommunication Engineering and Mechanical Engineering.

The Governing Council of SIEM consists of distinguished industrialists and educationalists as members. The institute has world class infrastructure supported with well equipped laboratories among best-in-class equipments and instruments, spacious classrooms and well developed central and departmental library.

The Mission of the Institute is to inculcate knowledge of cutting-edge technologies and its implementation for solving real life problems. Industrial and International collaboration for sustainable growth with preservation of individuals to achieve excellence in the selected fields and to share the responsibilities of citizenship and service in a disciplined manner for creative environment to satisfy the desired goals is also the part of mission.

### **Vision**

We at SIEM aspire to be a globally recognized Institute that delivers a world class education to outstanding intellectuals by nurturing and grooming their interests, creative abilities and thrusts to acquire a life-long learning so as to imbibe values of their commitment towards society

### **Mission**

We at SIEM shall strive continuously

- To inculcate and imbibe knowledge of cutting-edge technologies and its implementation for solving real life problems in a conducive environment.
- To collaborate with national and international institutes/ industries/ universities of repute for sustainable growth through team work.
- To motivate and retain highly skilled and knowledgeable individuals, whose creativity and interest in teaching upholds to achieve desired goals.

- To provide a dedicated platform to cater the needs of individuals and inspire them for their intellectual growth and character building.
- To enable the students to achieve excellence in the chosen fields and to share the responsibilities of citizenship and service in a disciplined manner.

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

### **Institutional Strength**

Excellent infrastructure with modern state of art and well-equipped laboratories, classrooms, Seminar Halls etc.

Team of highly skilled and experienced faculty members with good number of Ph.D. holders.

Well equipped central library with adequate collection of books and e-resources.

Effective Value Addition Programs.

Transparent management with delegation of responsibilities to Deans and HODs.

Excellent placement record.

MoUs with International Universities for student internship.

Workshops, seminars, webinars and expert lectures on all domains.

Student's participation in co-curricular, extra-curricular and community services.

Effective implementation of Tutor system.

Hostels for girls and boys.

Employability skill training to all students.

IPR Cell to promote IPR activity.

Effective Entrepreneurship Development Cell.

Testing facility is available in some departments.

Inhouse facility for fabrication.

Transportation facility - connectivity in most of the corners of the city.

Banking and ATM facility.

Self dependant water resources as water supply tanks.

### **Institutional Weakness**

Consultancy needs to be strengthen in every department.

Industry Institute Interaction need to be improved.

Participation of alumni in overall growth of the Institute require to be enriched.

### **Institutional Opportunity**

To start Research Centre & PG Courses.

Interdisciplinary R & D Projects.

Quality research publications.

Collaboration with research institutes for projects and consultancy work.

Interface with industry for learning advanced technology and engineering practices.

### **Institutional Challenge**

Placements in core and blue-chip companies.

Attracting meritorious students.

Encouraging students for Entrepreneurship and startups.

Preparing students for higher studies and competative exams.

## **1.3 CRITERIA WISE SUMMARY**

### **Curricular Aspects**

The Institute follows the curriculum provided by Savitribai Phule Pune University (SPPU). The curriculum is designed by SPPU to meet the needs of the industry, modern research and social requirements. SPPU has provision of revision and updation in syllabus as per the demand of current needs of the industry and research area. The Institution provides necessary facilities for implementation of the curriculum to convene the Vision, Mission and core values. The curriculum implementation is effectively planned by the Academic Monitoring Committee (AMC). Institute has Enterprise Resources Planning (ERP) software for proper execution of formulated academic policies.

For effective delivery of the curriculum, the institution has well qualified and experienced team of faculty members. Experienced faculty members of the institution also contribute in designing and developing curriculum at the University level under their respective BOS. To further enrich the curriculum and improving teaching practices the institute supports the faculty members in various ways by providing the necessary resources. The institute provides academic flexibility to the students for selecting electives, which helps them to become competent as per industry needs. Obtaining regular feedback from the stakeholder is the regular the practice followed by the institute to satisfy all curriculum needs. All these feedbacks are analyzed and necessary steps are taken for further improvement in the curriculum.

In addition to this institute offers value added programs, add-on programs, summer school training programs and soft skill development programs for providing specialized training to the students in their respective field.

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

The Institute is taking continuous efforts to improve learning experience of the students. Institute organizes induction program for newly admitted students to give information about courses, examination pattern, ERP, Tutor System, scholarships etc. For the first year students foundation course is conducted before the start of academics to create awareness and bridge the knowledge gap. Tutor system is introduced for the first year students to mentor students for personal counseling and academic monitoring.

Institution has well defined process for monitoring teaching learning process through Academic Monitoring Committee (AMC). An academic calendar is prepared before the commencement of the semester. The calendar outlines the schedule of semester, internal & external examination, seminars, annual functions, sport activities, faculty development programs, industrial visit and parent meetings etc. The faculty members prepare the teaching plan and it is approved by AMC and HOD. AMC monitors the implementation of the teaching plan regularly by collecting the syllabus coverage report fortnightly. Remedial classes are conducted to improve the performance of weak students. Library facility with Book bank, departmental Library, e-learning facilities are provided to students. Add-on programs, value added programs, internship etc. are organized for advanced learners. Institute has adopted modern teaching learning practices with ICT enabled class rooms, spoken tutorial (IITB), Virtual labs etc.

Institute has adequate number of Ph.D. and experience faculties. Institute has encouraging policies for faculty recognition such as Best Tutor award, felicitation of Ph.D. awarded faculties, sponsoring visits to International Universities, financial support for attending conferences and workshops, etc.

### **Research, Innovations and Extension**

To endorse the research culture, the Institute has taken the initiatives to develop the research facility in the upcoming five years to match the R & D requisite at par with the top Institutions in the country. To accelerate the R&D activities, separate R&D cell is formed with allocation of funds for the same. In this direction, the institute has set up an incubation centre and is in the process of developing the advanced laboratory to provide the research facility looking into the requirement of various academic programs. Institute is providing financial support to the faculty members and students for converting their innovative ideas into projects, filing of IPR and the publication of technical/research papers in journals and conferences. This has resulted in filing of total 62 patents out of which 38 patents are published in last 4 years and good number of publications in journals. In order to provide better interaction between the institution and industry, the institute has activated a separate

Industry Institute Interaction cell.

Each department has a separate students association and membership of professional bodies. The institution promotes college-neighborhood network community development by conducting regular activities related to social responsibilities of the institute. Students are encouraged to participate in NSS and various social activities conducted by the institute. Institute regularly organizes the various activities such as Road Safety Abhiyan, Swachhata Mohim, Matdar Nondani Abhiyan, street plays, water conservation awareness and women empowerment programs for students as well as for neighborhood community.

### **Infrastructure and Learning Resources**

Institute continuously strives to create and maintain the state of the art infrastructure facilities catering to the current and future needs of the students. The institute has policies and procedures to build the infrastructure to meet the standards and norms set by AICTE and SPPU. Institute has a campus area of 11.039 acres with 24363.03 Sq. m. of built up area. The institute has 13327.64 Sq. m instructional area, 1697.42 Sq. m administrative area and 2051.08 sq. m amenities area. Total 40 class rooms with proper lighting, seating space and ventilation with LCD projector and LAN/Wi-Fi facilities, 10 Tutorial rooms, 66 laboratories equipped with good quality equipments are available.

Institute has total 541 personnel computers with adequate student computer ratio with separate computer centre. Workshop with area 1015 Sq. m and three well designed seminar halls equipped with modern audio visual system is available. Institute Library and reading room of area 757 Sq. m. is incorporated with digital library along with OPAC to get access to e- learning resources. Total 20614 books, 78 Journals/Magazines and 1750 CDs and DVDs are accessible in library.

The institute has safe drinking water facility through installation of R.O plant. Two playgrounds of area 28275Sq. m are available in campus for outdoor games. The institute has a facility of indoor Gym. Uninterrupted electricity supply is ensured in the campus with the help of an electrical generator and many inverters and UPS systems. Mass Transport facility is provided to the student to reach college from city.

### **Student Support and Progression**

Institute plays a major role in student support and progression in all possible ways. Every year induction program is conducted for the newly admitted students for introducing them with the institute and curriculum pattern. The Institute guides the eligible students regarding government scholarship which benefits more than 50% students. The Institute take keen initiatives for overall development of students through career counselling & skill development. Good number of students successfully completed their industrial training at various reputed industries. A special student counsellor is also appointed for counselling the students. Institute has different dedicated grievance cells to resolve the issue of students.

The Training & Placement activity of institute plays an important role for employability of student. Institute has good placement record with sufficient number of students in higher education and success in competitive exams.

Considering the importance of co-curricular activities, institute celebrates its annual festival known as “Sandipotsav”, which includes all forms of cultural events where students participate with enthusiasm. Institute

also organizes technical fest “AAYAM” every year. The institute has sports room and gym with dedicated physical director to help students to support the students in with sport activities. As far as sports & cultural interest is concerned, institute has produced around 15 national level achievers annually.

The Institute maintains a good link-up with alumni to develop mutual development. The alumni interaction session helps the students to get in touch with alumni to get idea about market requirements and skills needed to enter competitive market.

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

The Institute has well defined Vision and Mission in align with the objectives of technical education. The top management has provided excellent infrastructure facilities and strong teaching and learning environment to the students and faculty in order to implement the quality policy and plans. Principal and faculty take care in implementing the policies and plans to the satisfaction of stakeholders.

Organizational structure of the institute promotes culture of decentralization and participative management at various levels. The academic and administrative activities are designed and carried out in line with the policies and the strategic plans to obtain desired outcome. Institute has appointed Deans, HODs and various committee Co-ordinators for implementation of strategic plans for teaching and learning, research and development, placements, training programs with industries and International Universities. Institute promotes e-governance in various areas of operations such as administration, finance and accounts, admissions & examination.

Faculty members are recruited as per the norms and their competence is upgraded through professional development/administrative training programs organized in institute as well as promoting them to attend in other institutes with financial support. Institute has performance appraisal system and effective welfare schemes for teaching and non-teaching staff.

The Institute has a well-defined procedure to monitor effective utilization of available financial resources. Careful planning of budget for academic and administrative activities and monitoring the proper and optimal utilization of financial resources through internal and external audits ensure financial management at the Institute.

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

The institute observes gender equality and the co-education ensures the indiscrimination and fair attitude towards all students. Different seminars, workshops and speeches are conducted especially to promote equality and diversity, protect from the unfair gender discrimination and to establish professional culture in the institute.

Safety and security of girl students and female staff has been observed as top priority. The efforts like Women grievance Cell, CCTV surveillance at appropriate places, and 24x7 security in the campus. A common room with good ventilation and basic amenities is available.

Waste management on the campus is given an equally special consideration. The solid, liquid, waste generated are regularly collected prior to its efficient disposal. Three water storage reservoirs are built on campus and system of rain water harvesting, sprinkler irrigation, drip point irrigation systems are established at various places for watering the plants. Renewable energy through solar system is set in the campus that caters all 100

kw energy requirement of the Institute. LED lamps, electrically operated mini car and solar power together save a great expense on the energy and the campus remains pollution free.

Institute has implemented many best practices like academic audit, ERP system, patents, soft skill training and international summer school training. Institute engages in various social activities for benefit of the nearby community. SIEM has provided many toilets to some villeges , various awareness programs from teachers to the farmers, teachers and Grampanchyat in interior villages. All these have built a community-good will of the institute in the locality.

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## 2. PROFILE

### 2.1 BASIC INFORMATION

Name and Address of the College	
Name	Sandip Institute of Engineering and Management
Address	Sandip Institute of Engineering and Management at post-Mahiravani, Trimbak Road Tal. Nashik, Dist. Nashik-422213
City	Nashik
State	Maharashtra
Pin	422213
Website	<a href="http://www.siem.sandipfoundation.org">www.siem.sandipfoundation.org</a>

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Professor	Dr. Amol Balasaheb Saner	02594-222582	8551996633	02594-222584	amol.saner@siem.org.in
Principal(in-charge)	Dr. Kamini Chandrakant Nalavade	02594-222581	9545453247	02594-222585	principal@siem.org.in

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	30-06-2010
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**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
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>	30-03-2017	12	

**Details of autonomy**

Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?	Yes
If yes, has the College applied for availing the autonomous status?	No

**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	Sandip Institute of Engineering and Management at post-Mahiravani, Trimbak Road Tal. Nashik, Dist. Nashik-422213	Rural	11.039	24363.03

## 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,Mechanical Engineering	48	HSC	English	180	180
UG	BE,Civil Engineering	48	HSC	English	180	180
UG	BE,Computer Engineering	48	HSC	English	60	60
UG	BE,Electrical Engineering	48	HSC	English	120	120
UG	BE,Electronics And Telecommunication	48	HSC	English	60	60

### 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	14				27				81			
Recruited	0	0	0	0	4	1	0	5	22	3	0	25
Yet to Recruit	14				22				56			
Sanctioned by the Management/Society or Other Authorized Bodies	14				22				80			
Recruited	6	0	0	6	6	0	0	6	60	20	0	80
Yet to Recruit	8				16				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				32
Recruited	30	2	0	32
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				32
Recruited	30	2	0	32
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				31
Recruited	27	4	0	31
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				31
Recruited	27	4	0	31
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>
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Male</b>	<b>Female</b>	<b>Others</b>	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	6	0	0	4	1	0	3	1	0	15
M.Phil.	0	0	0	0	0	0	1	0	0	1
PG	0	0	0	6	0	0	75	25	0	106

<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>
	30		0		30

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

<b>Programme</b>		<b>From the State Where College is Located</b>	<b>From Other States of India</b>	<b>NRI Students</b>	<b>Foreign Students</b>	<b>Total</b>
		UG	Male	1495	157	0
	Female	555	26	0	0	581
	Others	0	0	0	0	0

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

<b>Programme</b>		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
SC	Male	54	28	6	8
	Female	25	8	8	5
	Others	0	0	0	0
ST	Male	20	4	6	2
	Female	11	2	6	1
	Others	0	0	0	0
OBC	Male	269	227	251	201
	Female	129	60	94	78
	Others	0	0	0	0
General	Male	141	210	289	183
	Female	42	44	62	40
	Others	0	0	0	0
Others	Male	100	68	64	59
	Female	25	15	25	18
	Others	0	0	0	0
<b>Total</b>		<b>816</b>	<b>666</b>	<b>811</b>	<b>595</b>

### 3. Extended Profile

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#### 3.1 Programme

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

**Response : 478**

**Number of self-financed Programmes offered by college**

**Response : 5**

**Number of new programmes introduced in the college during the last five years**

**Response : 2**

#### 3.2 Student

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

2016-17	2015-16	2014-15	2013-14	2012-13
2198	2273	2028	1613	1110

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

2016-17	2015-16	2014-15	2013-14	2012-13
602	386	396	341	306

**Number of outgoing / final year students year wise during the last five years**

2016-17	2015-16	2014-15	2013-14	2012-13
514	484	322	211	1

**Total number of outgoing / final year students**

**Response : 1531**

#### 3.3 Academic



**Number of teachers year wise during the last five years**

2016-17	2015-16	2014-15	2013-14	2012-13
152	145	129	108	76

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

2016-17	2015-16	2014-15	2013-14	2012-13
131	130	129	108	76

**Number of sanctioned posts year wise during the last five years**

2016-17	2015-16	2014-15	2013-14	2012-13
152	144	129	108	76

**Total experience of full-time teachers****Response : 927.5****Number of full time teachers worked in the institution during the last 5 years****Response : 574****3.4 Institution****Total number of classrooms and seminar halls****Response : 32****Total Expenditure excluding salary year wise during the last five years ( INR in Lakhs)**

2016-17	2015-16	2014-15	2013-14	2012-13
824.93	930.52	818.54	541.52	402.72

**Number of computers****Response : 540**

**Unit cost of education including the salary component(INR in Lakhs)**

**Response : 0.922**

**Unit cost of education excluding the salary component(INR in Lakhs)**

**Response : 0.37530**

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## 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:

- Sandip Institute of Engineering and Management (SIEM) is affiliated to Savitribai Phule Pune University (SPPU). The curriculum and academic calendar of Institute is conforming to SPPU academic calendar.
- Before commencement of every semester, Principal approves the academic monitoring committee (AMC) which is headed by dean academics of the Institute. AMC plans and prepares academic calendar. It is then circulated to all Heads of the departments for finalizing various departmental activities. Teaching load distribution is conveyed to all faculty members well in advance. This provides sufficient time to the faculties to prepare in advance, thereby resulting in smooth conduction of academics in each department. While finalizing the teaching load distribution, due consideration is given to subject choic, specialization and expertise of the faculty.
- Institute has well equipped Enterprise Resources Planning (ERP) software for proper execution of formulated academic policies. This software is utilized to upload timetable, monitor student's daily attendance, learning material and notices to students and parents. Academic performance data is collected through ERP, printed and posted. Student's progress status is conveyed to parents through ERP generated text messages. ERP provides various administrative & academic activities for its stake holders.
- Institute has well developed tutor system to monitor academic performance, mentoring and counseling of every student.
- The Institute has adopted continuous internal assessment system, which is in line with SPPU curriculum for the development of students.
- Each faculty prepares course file which contains information related to Program Educational Objectives (PEO), Program Specific Outcomes (PSO), Program Outcomes (PO), Course Outcomes (CO) and Mapping of CO's with PO's. This course file also includes Academic Calendar (AC), Individual Time Table (TT), University Structure and Syllabus (US), Teaching Plan (TP), List of References and Text Books (RB) & Question Bank. Faculty also prepares Unit-wise Notes (UwN), Question papers of Class Test/ In-sem/ End-sem Examinations (QP), University Question papers with solution (QP), Tutorials/ Assignments (if any). Each department aims at enriching students with updated field knowledge by - covering contents beyond syllabus, value added programs, workshops, seminars and expert lecture etc.
- Institute plans its activity in support and achievement of PO (Program Outcomes) defined by the apex body –AICTE.
- Institute promotes innovative teaching methodologies such as power point presentations, videos, animations, site visits and model demonstration to make teaching learning process interesting & efficient.
- To enhance the planning and implementation of curriculum, Institute provides extra library hours to the students. Students can also access various video lectures (like NPTEL) and other E-learning

material using digital library facility.

- Prelims are conducted to observe the performance of the students at regular intervals. As per University norms, Institute conducts exams as planned and scheduled by the University.
- AMC ensures the timely completion of academic activity with their effectiveness in coordination with Head of Department.

File Description	Document
Any additional information	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

### 1.1.2 Number of certificate/diploma program introduced during the last five years

**Response: 2**

#### 1.1.2.1 Number of certificate/diploma programs introduced year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
0	0	1	1	0

File Description	Document
Details of the certificate/Diploma programs	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 1.1.3 Percentage of participation of full time teachers in various bodies of the Universities/ Autonomous Colleges/ Other Colleges, such as BoS and Academic Council during the last five years

**Response: 2.4**

#### 1.1.3.1 Number of teachers participating in various bodies of the Institution, such as BoS and Academic Council year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
11	3	0	0	1

File Description	Document
Any additional information	<a href="#">View Document</a>
Details of participation of teachers in various bodies	<a href="#">View Document</a>

## 1.2 Academic Flexibility

<p><b>1.2.1 Percentage of new courses introduced of the total number of courses across all programs offered during the last five years</b></p> <p><b>Response: 7.32</b></p>	
<p>1.2.1.1 How many new courses are introduced within the last five years</p> <p>Response: 35</p>	
File Description	Document
Details of the new courses introduced	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
<p><b>1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented</b></p> <p><b>Response: 100</b></p>	
<p>1.2.2.1 Number of programs in which CBCS/ Elective course system implemented.</p> <p>Response: 5</p>	
File Description	Document
Any additional information	<a href="#">View Document</a>
Name of the programs in which CBCS is implemented	<a href="#">View Document</a>
<p><b>1.2.3 Average percentage of students enrolled in subject related Certificate/ Diploma programs/Add-on programs as against the total number of students during the last five years</b></p> <p><b>Response: 9.25</b></p>	
<p>1.2.3.1 Number of students enrolled in subject related Certificate or Diploma or Add-on programs year wise during the last five years</p>	

2016-17	2015-16	2014-15	2013-14	2012-13
169	444	200	148	0

File Description	Document
Details of the students enrolled in Subjects related to certificate/Diploma/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 cross- cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum

#### Response:

#### Department of Electrical Engineering

In Application of **Solar and thermal energy** course, following topics were covered-

1. Basics of heat transfer
2. Absorption, reflection and transmission of radiation
3. Types of Solar thermal systems
4. Control systems for solar tracking
5. Various types of solar concentrators

In Application of **Wind Energy**, following topics were covered-

1. Wind electricity generation Systems
2. Controller of Wind energy generation systems
3. Grid integration of Wind energy generation systems
4. Operation and maintenance of Wind energy generation systems

#### Department of Electronics and Telecommunications Engineering

#### Soft Skills

**The course** will help students to develop leadership skills and team spirit in their professional life. A student over all personality is developed along with technical writing and documentation skills. Students are able-

1. To communicate, interact and present ideas
2. To develop positive attitude and social skills
3. To instill right professional and social ethical values

**Enrichment Activity:**

1. Syllabus content of Employability skills are enriched by Prof Indrajit S Sonawane (TPO, Sandip Foundation) and Prof Ashoo Gupta Khan ( Trainer & Counselor, Sandip Foundation).
2. Expert Talk on “BEE: Building empowering environment for youth employability” was conducted by Sarah Nehrling, Harvard University, USA & Mr. Kerron Vaishnav Founder Secretary, Disha International Foundation Trust, Aurangabad.
3. Expert talk on “Communication skills & Interview preparation” was conducted by Mr. Vinay Sharma, Executive Technical Cell, SewEuro Drive, Mumbai.

**Cyber and Information Security**

In Cyber and Information Security following topics are covered

1. Issues of security in IT
2. Investigation various security threats in IT
3. Awareness about cyber security
4. Awareness about information and network security

**Cyber Crime and law**

In Cyber and Information Security following topics are covered

1. Cyber Crimes and Types of Cybercrime
2. Hacking, Attack vectors, Cyberspace and Criminal Behavior
- 3 Traditional Problems Associated with Computer Crime,
4. A Brief History of the Internet, Recognizing and Defining Computer Crime,
5. Contemporary Crimes, Computers as Targets, Contaminants and Destruction of Data

## **Road Safety Management**

In Road Safety Management following topics are covered

1. Behavioral Training for Drivers for Improving Road Safety
2. Road Safety Education

## **Department of Civil Engineering**

### **Basic Civil and Environmental Engineering**

In Basic Civil and Environmental Engineering following topics are covered

1. Concept of environment
2. Introduction to solid waste management, electronic waste and its disposal
3. Use of various Eco friendly materials in construction.
4. Concept of green building
5. Sources, Causes and remedial measures associated with a) Air pollution b) Land Pollution c) Noise pollution d) Water pollution

### **Environmental Engineering-I**

In Environmental Engineering-I following topics are covered

1. Noise and Air Pollution
2. Water treatment
3. Rainwater harvesting

### **Enrichment Activity:**

Tree plantation was conducted on 23rd July 2016 at Ghoti. 1450 trees were planted to create awareness of pollution free green environment.

### **Environmental Engineering-II**

In Environmental Engineering-II following topics are covered

1. Unit operations and processes concept for physical and chemical treatment of wastewater.
2. Application of acquired knowledge of appropriate wastewater treatment system and eco friendly & sustainable disposal methods.



3. Sewage treatment
4. Phytoremediation technology for wastewater treatment.
5. Theory of root zone cleaning system

Enrichment Activity:

In 2016-17 collection of Lord Ganesha Idols drive was conducted in order to reduce immersion of the same in Godavari river. The idols were handed over to Municipal Corporation for further necessary action.

### **Department of Mechanical Engineering**

#### **Soft Skill**

1. In Soft Skill, following topics are covered-
2. SWOT (Strength weakness Opportunities and Threats) analysis of individual.
3. Internship openings over internet by writing an email to the company HR.
4. Organization of the group discussion on current topics
5. Writing of different resumes according to respective job profiles

#### **Applied Thermodynamics**

In Applied Thermodynamics, following topics are

1. Air Pollution due to I.C (Internal Combustion) engines and its effect.
2. Sources of emission from I.C. engines.
3. Emission norms like Euro Bharat Norms.
4. Emission control methods for S.I.(Spark Ignition) and C.I. (Compression Ignition) engines.

#### **Refrigeration and Air-Conditioning**

In Refrigeration and Air-Conditioning, following topics are covered-

1. Fundamental principles and applications of refrigeration and air conditioning system
2. Properties, applications and environmental issues of refrigerants
3. Analysis of refrigeration and air conditioning systems

#### **Energy Audit Management**

In Energy Audit Management, following topics are covered-

1. Energy Audit of residence / society / college
2. Electrical tariff calculation
3. Various methods to reduce energy consumption

### **Power Plant Engineering**

In Power Plant Engineering, following topics are

1. Design, erection and development of energy conversion plants.
2. Optimization of Energy Conversion plant
3. Scope of alternative erection of optimized, suitable plant

<b>File Description</b>	<b>Document</b>
Any Additional Information	<a href="#">View Document</a>

### **1.3.2 Number of valued added courses imparting transferable and life skills offered during the last five years**

**Response:** 3

1.3.2.1 Number of value-added courses imparting transferable and life skills offered during the last five years

Response: 3

<b>File Description</b>	<b>Document</b>
Details of the value-added courses imparting transferable and life skills	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### **1.3.3 Percentage of students undertaking field projects / internships**

**Response:** 9.46

1.3.3.1 Number of students undertaking field projects or internships

Response: 208

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

## 1.4 Feedback System

<p><b>1.4.1 Structured feedback on curriculum obtained from 1) Students 2) Teachers 3) Employers 4) Alumni 5) Parents For design and review of syllabus semester wise/ year wise</b></p> <p><b>A. Any 4 of the above</b></p> <p><b>B. Any 3 of the above</b></p> <p><b>C. Any 2 of the above</b></p> <p><b>D. Any 1 of the above</b></p> <p><b>Response: A. Any 4 of the above</b></p>	
File Description	Document
Any additional information	<a href="#">View Document</a>
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management	<a href="#">View Document</a>
URL for stakeholder feedback report	<a href="#">View Document</a>

<p><b>1.4.2 Feedback processes of the institution may be classified as follows:</b></p> <p><b>A. Feedback collected, analysed and action taken and feedback available on website</b></p> <p><b>B. Feedback collected, analysed and action has been taken</b></p> <p><b>C. Feedback collected and analysed</b></p> <p><b>D. Feedback collected</b></p> <p><b>Response: A. Feedback collected, analysed and action taken and feedback available on website</b></p>	
File Description	Document
Any additional information	<a href="#">View Document</a>
URL for feedback report	<a href="#">View Document</a>

NAAC

## Criterion 2 - Teaching-learning and Evaluation

### 2.1 Student Enrolment and Profile

#### 2.1.1 Average percentage of students from other States and Countries during the last five years

**Response:** 3.41

##### 2.1.1.1 Number of students from other states and countries year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
78	32	46	58	69

#### File Description

#### Document

Institutional data in prescribed format

[View Document](#)

Any additional information

[View Document](#)

List of students (other states and countries)

[View Document](#)

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

**Response:** 84.95

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

2016-17	2015-16	2014-15	2013-14	2012-13
816	666	811	595	617

##### 2.1.2.2 Number of sanctioned seats year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
978	892	886	713	673

#### File Description

#### Document

Institutional data in prescribed format

[View Document](#)

Any additional information

[View Document](#)

### 2.1.3 Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

**Response:** 100

2.1.3.1 Number of actual students admitted from the reserved categories year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
602	386	396	341	306

#### File Description

#### Document

Institutional data in prescribed format

[View Document](#)

## 2.2 Catering to Student Diversity

### 2.2.1 The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners

**Response:**

Institute assesses the learning levels of students by conducting various activities like:

- Assessment of learning levels after admission is carried out through the merit list of the students and interaction of faculty members during foundation course.
- In succeeding years academic performance of students is monitored through result analysis, class teachers report and tutors report.
- Induction Programme is conducted for First Year (FE) and Direct Second Year (DSE) students after admission for awareness about course, curriculum, rules and regulations of the institute. From current academic year institute have started Foundation Course for FE students before commencement of semester which aims to bridge the knowledge gap.
- At the beginning of the semester faculty members conduct orientation classes to ascertain knowledge based needs and skills of the students.
- Uniform distribution of weak, average and advanced learners is done in classes.
- Experienced Faculty members are appointed for teaching the subjects to cater the knowledge needs of students.
- Principal and Academic Monitoring Committee (AMC) addresses the faculty members related to the effective academic execution.
- The above mentioned exercise is carried out for identifying advanced and slow learners.

The institute responds to the special learning needs of advanced learners through the following means:

- Value Added Programs (VAP) such as AutoCAD, TAACT, STADD-Pro, Catia, CCNA, PHP/Linux, Zensar Employability skill development program, etc are arranged to impart transferable and life skills.
- Special efforts are taken by faculty members of every department for the students to qualify GATE and other competitive examinations. Computer Engineering department has started special GATE library and study room for the students.
- Opportunity is provided to students to participate in innovative projects, industry based projects, internships and global certification.
- Excellent infrastructure with morden state of art and well-equipped laboratories, classrooms, seminar halls etc. are provided to learn advanced technologies in the field.
- Students are motivated to read reference books and journals during library hours.
- Access is provided to the students for various video lectures of NPTEL and e-journals.
- Students are given financial support and motivation for paper publication in journals and filing patents.
- Expert lectures and seminars are organized for the students to guide them for higher studies and competitive exams.
- Co-curricular activities like AAYAAM, DESIRE, MechSummit, TECHFIGHT, IMPLEXON etc. are organized to provide competitive environment.

The following measures are taken to improve the performance of slow learners..

- Tutor monitors 15 to 20 students for low performance and less attendance and counsels them in tutor meetings. Parents are informed through phone calls, SMS and letters.
- For performance improvement extra lectures, remedial classes are conducted and assignments are given to students.
- Student's progress is discussed with their parents during Parents Meet.
- Question bank is provided by faculty for their respective subject.
- Solved model question paper is provided with answers and marking scheme for students reference.
- For online exam preparation students are encouraged to use portal like MyExamo.
- Book bank facility is provided to the first year students.
- Printed lab manuals are provided to the first year students to provide extra support.
- Departmental library facility is extended specially for all the students.

### 2.2.2 Student - Full time teacher ratio

**Response:** 14.46

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

### 2.2.3 Percentage of differently abled students (Divyangjan) on rolls

**Response:** 0

2.2.3.1 Number of differently abled students on rolls	
<b>File Description</b>	<b>Document</b>
Institutional data in prescribed format	<a href="#">View Document</a>
List of students(differently abled)	<a href="#">View Document</a>
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:

The institute is taking continuous efforts to enhance the learning experience of students.

#### Experiential Learning:

- Information and Communication Technology (ICT) enabled class rooms; interactive board, well-equipped laboratories and seminar halls are provided for enhancing learning experience.
- Application based projects are recommended to the students to increase technical ability and experimental learning. Guidance from industry and academic experts is provided to design and develop projects.
- Institute has the student chapters and memberships of professional bodies like Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE), Society of Automotive Engineers (SAE), Association of Consulting Civil Engineers (ACCE), Indian Plumbing Association (IPA), Computer Society of India (CSI), Institution of Electronics and Telecommunication Engineers (IETE), Institution of Engineers (IEI) and staff chapter like Indian Society for Technical Education (ISTE) which organizes events for students. These professional societies are helpful to the students for participative learning to enhance their learning experience.
- Student's participation in poster presentations, model making and project competitions nurture skills like experimental and participative learning. Approach to strengthen these attributes has lead to student achievements in project competitions, paper presentations, conferences. Institute organizes such events frequently to get more and more participative involvement.
- Industry-institute linkage is strengthened to give an exposure towards problem solving methodologies and real life problem solving.

#### Participative Initiative:

- The soft-skill training programs, entrepreneurship development programs, site visits, implant training are organized for students to make them better professionals and also to learn different problem solving methodologies.
- Different activities like group discussions, mock interviews, debate and special training sessions organized by training & placement.
- Institute inculcate social values in students by giving them projects related to social problems



which helps them to enhance their learning experience.

- Faculty members are encouraged to submit proposals for research grants.
- The involvement of students in co-curricular, extra-curricular and NSS activities helps them to develop their organizational skills, leadership qualities and team building.

### Problem Solving Methodologies:

- Institute conducts numbers of activities like Expert lectures, Workshops, Seminars, Guest Lectures, Value Added Programs (VAP) etc. to enhance the knowledge and skills amongst the students.
- Through mini project competitions students design small applications to general engineering problems which inculcate problem solving skills.
- Technical seminars are arranged for students which lead them to develop technical and presentation skills.
- Institutes supports e-learning through different resources like Technical Journals, Conference Proceedings, Reports as well as electronic form like e-books, e-journals, CDs and NPTEL video lectures related to Engineering discipline are linked and used.
- Online tests, competitive exam guidance and software training are organized.
- Students usually undertake projects in association with industry or in-house developments. Faculty member works as guide and actively involve themselves in facilitating the completion of project work. Project work carried out by students is product development which leads them for innovative thinking & problem solving.

File Description	Document
Link for Additional Information	<a href="#">View Document</a>

### 2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

**Response:** 82.24

#### 2.3.2.1 Number of teachers using ICT

Response: 125

File Description	Document
List of teachers (using ICT for teaching)	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
Provide link for webpage describing the " LMS/ Academic management system"	<a href="#">View Document</a>

### 2.3.3 Ratio of students to mentor for academic and stress related issues

**Response:** 18.02

## 2.3.3.1 Number of mentors

Response: 122

File Description	Document
Year wise list of number of students, full time teachers and students to mentor ratio	<a href="#">View Document</a>

## 2.3.4 Innovation and creativity in teaching-learning

**Response:**

Some of the faculty members implements following innovative practices along with conventional teaching methods to enhance the learning experience of the students.

- Institute have signed Memorandum of Understandings (MOU's) with various foreign Universities like Klaipeda State University of Applied Sciences (Lithuania), Ural Federal University (Russia) and University of Strathclyde (United Kingdom) for summer school training. During training period the students and faculty members are exposed to the recent technological developments in their respective fields. Under the mentorship of foreign professors students are expected to complete project on their area of interest.
- Institutional Intellectual Property Right (IPR) cell provides guidance and financial support for innovative ideas in teaching learning. Through multiple intelligence and innovative ideas of project based learning, students and faculty members develop final year projects which would be beneficial to society.
- Textbook contents are supplemented with prototype models PPT's, movies and material that will help student's imagination thrive and grow. These methods will not only develop their ability to listen, but will also help them understand the concepts better.
- Animations simplify the learning of complex subjects of engineering. Some faculty members use animated PPT's and videos for enhancing students learning.
- Virtual labs like Amrita labs, IIT virtual labs are used to demonstrate some of the practical's by the faculty members.
- Relating and demonstrating through analogy, will make the concepts easy to understand and easy to learn. It will ignite their interest and get the students involved in learning.
- Some concepts are best learnt, when they are taught outside of the classroom or on the field. Field trips are organized for relevant subjects of the engineering.
- Consecutively for the last 3 years students under the guidance of faculty members has designed the All-Terrain Vehicle (ATV). In the SAE BAJA – 2015 this ATV has received All India 37th ranking.
- Many students and faculty members write blogs to share knowledge and ideas.
- Some students are selected as facilitator of GOOGLE and they conduct workshop for their peers. This activity is certified and sponsored by GOOGLE wherein students learn how to develop android applications.
- In problem based learning practices, computer engineering department faculty members along with student have developed two different android applications which are beneficial for engineering admissions and navigation in the campus. Faculty members and students of Electrical department have developed a sensor based Miniature Circuit Breaker (MCB) closing system for controlling the

electricity in faculty room.

- Faculty members encourage students for self-learning through access to NPTEL video lectures, extra library hours and reading rooms.
- Inspirational quotes of eminent personalities & scientists are displayed in the institute to motivate students. Learning space and discussion area is provided for students.
- Various hobby clubs such as Android development, Energy, Mathematics, Nature Club, Robotics, Music, Photography etc. are formed for overall development of the students. Club time of 30 minutes is provided daily to the student with an aim to provide freedom with focus. Students showcase their talent during different events throughout the year.
- Faculty demonstrates practicals before commencement of semester in front of AMC member and head of department. Institute have adopted practice of faculty presentations on latest library books and journal papers after every 15 days.

File Description	Document
Any additional information	<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	
<b>Response:</b> 95.29	
File Description	Document
Year wise full time teachers and sanctioned posts for 5 years	<a href="#">View Document</a>

2.4.2 Average percentage of full time teachers with Ph.D. during the last five years				
<b>Response:</b> 4.42				
2.4.2.1 Number of full time teachers with Ph.D. year wise during the last five years				
2016-17	2015-16	2014-15	2013-14	2012-13
16	4	3	2	2
File Description	Document			
Any additional information	<a href="#">View Document</a>			
List of number of full time teachers with PhD and number of full time teachers for 5 years	<a href="#">View Document</a>			

**2.4.3 Teaching experience of full time teachers in number of years****Response:** 6.1

File Description	Document
List of Teachers including their PAN, designation,dept and experience details	<a href="#">View Document</a>

**2.4.4 Average percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years****Response:** 4.47

2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
22	4	2	1	0

File Description	Document
e-copies of award letters (scanned or soft copy)	<a href="#">View Document</a>
Institutional data in prescribed format	<a href="#">View Document</a>

**2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years****Response:** 4.55

2.4.5.1 Number of full time teachers from other states year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
8	5	7	5	3

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	<a href="#">View Document</a>

## 2.5 Evaluation Process and Reforms

### 2.5.1 Reforms in Continuous Internal Evaluation(CIE) system at the institutional level

#### Response:

Evaluation is a measure of the learning of a student. Internal evaluation process developed by institute is as follows:

- Institute follows Savitribai Phule Pune University (SPPU) examination pattern. SPPU have adopted Credit Based System from 2015. The performance of a student is evaluated internally on a continuous basis by the respective subject teacher and concerned Head of department.
- Academic calendar of the institute is prepared before commencement of semester which contains schedules of internal tests, submission, examination, seminars, workshops, industrial visit, parents meet and display of monthly attendance.
- Institute evaluates the students based on attendance, performance in unit tests/prelims/online test and at least one of the following: home assignments, periodical quizzes, laboratory work, project reports, seminar reports, students overall performance or any other assignment that the instructor considers necessary for assessing the student's performance which supports the credit based system.
- The distribution of marks to the various components of assessment is decided by the AMC and communicated to the all teachers before commencement of semester. These are in turn communicated to the students in the class within the first week of the semester. The record of such distribution for each course will be maintained by the subject teacher and Head of the concerned department.
- Regarding the attendance of the students in the class, the class teacher will announce the norms to be followed by him or her during the semester. This motivates students to attend the classes regularly.
- Continuous evaluation of practical sessions is carried out by faculty members. Mock practical tests are planned and conducted to judge student's understanding of the subject.
- Continuous internal evaluation of project work of final year students is carried out throughout the year. The evaluation stages and weightages are informed to the students at the start of the semester. The marks awarded to the students are displayed to motivate students for improvement.
- Technical seminar presentations of third year students evaluated continuously during the semester. Evaluation schedule and marks of each stage are communicated to the students.
- In semester examination/online examinations result analysis is done for immediate improvements in teaching learning.
- Department wise unit tests were conducted during the semester to evaluate progress of student. As university adopted In-Semester examination pattern, institute conducts prelim examinations once the syllabus is completed and prior to university examinations to evaluate the course outcomes.
- The use of open book test was recommended by AMC during meeting to increase interest and involvement of students in prelim examinations. Open book test carrying substantial weightage has been widely accepted by the students.
- Due to changes in university examination pattern, pedagogic transformation has taken place. Institute guide students to adopt e-learning practices such as WeShine, MyExamo (Online examination portal) for online exam preparation. The subject incharge upload the question bank of multiple choice questions of their respective subject on the portal for practice and schedules practice test for the students. The students are free to give the test from anywhere with their feasibility. Students can even raise queries regarding the questions to the faculty in order to get the

hint to solve the related query.

## 2.5.2 Mechanism of internal assessment is transparent and robust in terms of frequency and variety

### Response:

- Institute displays academic calendar on notice board per semester, which consists of schedules of online exams, in-sem exam, prelim exam, practical exams, theory exams.
- An internal evaluation criterion is based on test performance, performance in practical, timely submission, regular attendance and overall performance of the student. This is conveyed to students at the time of start of the semester.
- Internal assessment of projects of final year students is done on continuous basis generally after every 15 days. The weightages are informed to students in the first week of semester. Performance record is maintained by project coordinator and communicated to students after each evaluation.
- Internal evaluation of technical seminar presentations of third year students is conducted one in each month. Each presentation stage carries weight. Equal weightage is given to attendance during the presentations alongwith technical knowledge, seminar report and presentation skills.
- The academic progress and attendance of the student is monitored by tutor and class teacher. Tutor meets are conducted twice a month, where students performance are discussed. Tutor communicates regularly to parents during parents meet, Telephone call or letter about internal examination marks and attendance of their ward. This helps the students and parents to ensure academic progress in a transparent way.
- Students are able to discuss issues regarding internal evaluation, reason for less attendance & test performance with the concerned teacher.
- Teacher evaluates students' practical every week and monitors their performance. Lab manual is provided to the students on commencement of semester as per the university guidelines. Practical evaluation is strictly based upon the performance of students in various parameters such as timely submission, performance in the practical. Students signatures are recorded in the practical evaluation book after showing his/her mark for the said practical.
- University appoints the examiners and evaluation is done by these examiners as per University rules and regulation. In sem exams of Third Year and Final Year students are corrected by these examiners. Each semester, In-sem examination results and online examination results and are displayed on the notice board for students as per University guidelines.
- As university adopted In-semester and End-Semester examination pattern, institute conducts prelim examination at the end of semester. Corrected answer sheets of unit tests / prelims are given away to the students after test every semester, for further improvements.
- The internal evaluation by each teacher is displayed on the departmental notice board at least one day before submitting the same to the respective Head of the department.
- If a student is not satisfied with the evaluation awarded by the subject teacher, displayed in the notice board, s/he can avail an opportunity to request in writing for review to the Head of the concerned department.
- Suggestion box is provided to students to express their issues regarding assessment, in case they want to maintain confidentiality.
- Students first request for photocopy of their exam paper and then they apply for re-evaluation to the University. Re-evaluation mark list, provided by University, is displayed on the notice board.
- E-assessment of faculty feedback is carried out to strengthen the teaching-learning process. On the

basis of syllabus coverage reports extra lectures and re-conduction of practical is arranged.

### **2.5.3 Mechanism to deal with examination related grievances is transparent, time-bound and efficient**

#### **Response:**

The students are the main stakeholders of the institute and it's our endeavour to make all efforts to ensure transparency in all the activities at different stages. Taking this spirit in consideration the institute has decided to provide mechanism to students for redressal of their grievances. As per the Savitribai Phule Pune University (SPPU), institute follows all the norms for examination related grievances. There is a Grievance Redressal Committee at the institute level to deal with the grievances of the students comprising of coordinator from each department.

Institute level mechanism for redressal of grievances as follows:

- Each department provides grievance redressal through Head of department and senior faculty members.
- Feedback is e-assessed by institute which is helpful for the faculty members to identify the improvements in the different fields like clarity in communication, practical application of the subject, review of the last lecture, etc.
- Students are made aware of the internal assessment methods at the beginning of the semester and whenever necessary by displaying notices and circulars on student notice board. In-Sem exam marks, Internal Test mark and online exam marks are displayed on notice board.
- The assessed answer sheets of prelim examinations are given to the students and performance is discussed by the subject teacher.
- The internal evaluation is carried out on continuous basis and communicated to the students. Final evaluation is displayed on department noticeboard by subject teacher.
- Students having grievances with the internal evaluation process can directly discuss with respective faculty members within one week of time
- A student who has the Grievance and not satisfied with decision of subject teacher can submit an appeal Head of Department. After verifying the facts Head of department will try to redress the grievance within a reasonable time, preferably within a week of the receipt of application of the student.
- If the student is not satisfied with the verdict or solution of the HoD, then the same should be placed before the Institute level committee.
- The Head of Institute, after verifying the facts, the papers furnished and having discussed with the Head of the Department places the matter before the Institute level committee which either endorses the decision of the department level committee or passes appropriate order in the best possible manner within a reasonable time, preferably within 10 days of receipt of complaint.

University level mechanisms for redressal of grievances:

- Redressal of grievances is permitted by University only for end semester examinations and not for In-sem exams, online exams, term work/oral/practical, project, and seminar examination.
- As per the university guidelines institute has appointed College Exam Officer (CEO) and

supporting staff for handling the examination related processes.

- For every theory/online exam institutes appoints a Senior Supervisor, Assistant to Senior Supervisor and supporting staff to conduct the examination, display schedule and instructions are given to the students related to schedule of examinations. Student can contact directly to the Senior Supervisor/CEO and or examination team to solve the exam related queries such as hall ticket, seat number etc.
- Institute has separate exam section where student can approach with the problems like Exam form filling, Eligibility, Results, Revaluation etc. Exam section team with CEO solve problems of the students if it comes under the institute level otherwise a proper channel is used to convey the problem to University for appropriate action.
- Theory examinations - The queries and compliant about this evaluation are applied by students through online examination portal of SPPU and it was recorded by examination section of the college and submitted to University for corrective action. These corrective actions include photocopies of answer sheets, applying for re-evaluation and request for re-checking, etc.
- Timely notifications are displayed on institute's notice boards.
- The University examiners re-verify, re-assess the answer books and the revised marks if any, are sent to the institute which are communicated to the respective department and to the student.
- Students applying for grievances have to apply through their own login provided by the university examination section portal <http://exam.unipune.ac.in/>

#### **2.5.4 The institution adheres to the academic calendar for the conduct of CIE**

##### **Response:**

Institution adheres to the academic calendar for the continuous internal evaluation process as follows

- Savitribai Phule Pune University (SPPU) provides an academic calendar before the commencement of academic year which contains the number of days for teaching and examination dates.
- To fulfil the program requirements institute level academic calendar is prepared by Academic Monitoring Committee (AMC). The committee consisting of Principal, Dean Academic, Departmental Academic Coordinators and College Exam Officer prepare the academic calendar well in advance before the commencement of the semester. The calendar outlines the semester as commencement of teaching, prelim examination schedule, tutor meets, annual functions, sport activities, display of monthly attendance, syllabus coverage reports, SPPU online/In-sem examination schedule, students feedback, parents meet, mid-sem and end-sem detention list, academics audits, term work submission, conclusion of teaching and practical examinations. The academic calendar is displayed on the notice board and accessible on website.
- Department academic calendar is prepared in tune with university and institute calendar by considering the workshops, seminars, industrial visit, Co-curricular activities, and value addition program (VAP), faculty development program and industrial visit etc.
- The concerned department gather the lists course choices for the coming semester from faculty members. The head of the department and Principal finalizes the course allocation for the faculty members based on their choice and area of interest or expertise. The faculty members prepares the teaching plan before the commencement of semester and it is duly reviewed by Academic Monitoring Committee (AMC) coordinator of the department and approved by the head of the department. The teaching plan submitted by the faculties includes Course Objectives, the topics to



be covered lecture wise including the evaluation process for each subject, teaching methods, etc. The teaching plan is made available to the students by the respective subject teacher.

- Timetable coordinator of each department prepares the timetable as per the guidelines of respective statutory bodies for the number of credit hours for each subject prior to the commencement of the semester. Time - table is uploaded on the ERP and displayed in the respective department notice boards.
- The induction and orientation programmes are conducted for students and parents after the admission process to convey evaluation process. Schedule and structure of institutional and SPPU's examination evaluation system, academic calendar, examination and assessment system along with extra-curricular activities scheduled in that academic year are acquainted with the students, during the induction program.
- Syllabus coverage reports are monitored by Head of department and AMC. Teachers are expected to complete the desired syllabus before the start of online examination, In-sem and end-sem examination as prescribed by Savitribai Phule Pune University (SPPU). In case of any lapse in teaching plan, Head of Department asks the faculty to conduct extra classes or take extra measures to complete the syllabus.
- Academic audit is conducted by Academic Monitoring Committee (AMC) to monitor the coverage of syllabus and practicals in the line of academic calendar.
- Regular assignments are given by subject teacher to monitor the understanding of content delivery.
- Online examination practice tests are scheduled to improve the performance in online examinations
- The results of all the internal tests are displayed and communicated to all the students and parents according to the academic calendar.
- To improve results and help students to face external examination for practical's, a mock practical test is carried.

## 2.6 Student Performance and Learning Outcomes

### 2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students

#### Response:

The institute has clearly stated the learning outcomes for each academic program [Programme Outcomes (PO)] and each course [Course Outcomes (CO)]. However our faculty members have identified some outcomes considering consistency to Vision and Mission of the department. The POs define the abilities of the students of that program expected at the time of graduation and COs are the learning outcomes that the students imbibe at the end of each course.

The program outcomes of the department are disseminated to all the stakeholders through following media:

- **Institute Website:** The Vision, Mission, POs, PEOs and PSOs are published through college website to disseminate among the stakeholders.
- **At orientation lectures:** The course objectives and outcomes for each subject along with program outcomes are shared with the students. Generally, all faculty members discuss PO's and CO's at the beginning of the course. Mapping of COs with the corresponding POs is achieved at the start of the semester.

- **At appropriate places in the department:** The PEOs and POs are published at various places like the entrance of the department, office of the head of the department, staff room, etc and disseminated amongst all the stakeholders.
- **Induction Programme:** The Induction programme is taken at the start of each semester, in which the head of the department and academic coordinators address the students regarding Vision, Mission, Goals, PEOs and POs of the department.
- Institute level yearly bulletin highlighting the special achievements and contribution of faculty, staff and students towards the four pillars viz. academics, research, student development and social concern and thus reflecting the overall development of students and also the progress of college. All Department level initiatives towards improvement of these four pillars along with their POs are also disseminated through Mrudgandh.
- **Parent Meet:** The parents meet is conducted once in semester for parents of SE, TE and BE students to inform them about departmental goals and activities carried out for students and discuss student performance in terms of academics, ethical and societal values, overall attitude, communication skills, confidence and behaviour in the department and get feedback from parents in this regard. The POs are disseminated to the parents during such meetings.

File Description	Document
COs for all courses (exemplars from Glossary)	<a href="#">View Document</a>
Link for Additional Information	<a href="#">View Document</a>

### 2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

#### Response:

Outcome based education (OBE) is now inevitable for education. Course outcomes (CO) and Program outcomes (PO) are two crucial aspects pertaining towards effective OBE incorporation. To achieve this, mapping of course outcomes with program outcomes is a major concern. We are achieving this attainment level by following methods:

- Estimating CO and PO mapping and finding correlation between the CO and PO.
- Two direct schemes of CO attainment are designed along with one indirect scheme.
- Final attainment estimation is done by integrating the above proposed schemes.

#### A) Estimating CO and PO relationship mapping and finding correlation between the CO and PO.

- Each CO is mapped to address a subset of POs
- Based on the number of COs it is possible to identify the strength of mapping
- Strength of mapping is defined at three levels: **Low - 1, Medium - 2, Strong - 3**

PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

CO												
CO1	3	-	1	2	2	3	-	-	-	3	3	2
CO2	2	2	3	2	2	1	-	-	1	2	2	1
CO3	1	1	-	2	2	3	-	-	-	2	2	3
CO4	1	3	2	2	2	3	-	-	-	1	1	-
CO5	2	2	1	1	-	-	-	-	1	2	2	3
CO6	2	2	2	3	1	-	-	-	2	2	1	-

**B) Two direct schemes of CO attainment are designed along with one indirect scheme.**

### **1] Direct Schemes for CO-PO attainment**

#### **a) Method 1:-Target setting from University results:-**

The first method calculates the course attainment based on the university examination results. This method deploys the attainment calculation based on the set target levels. Steps are as follows:

Step1: Set the target Assessment level based on Previous 2 year's Results Analysis

Step 2: For Attainment:-Calculate the Percentage of student's performance in each band: - (First class with distinction, second class, and pass class)

Step 3: Attainment level 1:- 60 percent students securing more than set target level

Step 4: Attainment level 2:- 70 percent students securing more than set target level

Step 5: Attainment level 3:- 80 percent students securing more than set target level

#### **b) Method 2:- Attainment through Internal Assessment**

Procedure to calculate second direct attainment method is as follows:

Step1: Perform the result analysis of various examinations of SPPU, Unit Tests and PR.

Step 2: Identify the students in the range of marks below 50 %. [Atainment level 1(Low)]

Step 3: Identify the students in the range of marks between 51 % to 60 % [Atainment level 2 (Moderate)]

Step 4: Identify the students in the range of marks above 60 % [Atainment level 3 (High)].

Step 5: Apply Attainment Formula (No of Students Passed in low level \*1 + (No of Students Passed in moderate level \*2 + (No of Students Passed in high level \* 3) /No. of students Passed.

### **2) Indirect Scheme for CO-PO attainment**

#### **a) Method 1:-Attainment through course exit survey forms.**

A questionnaire is prepared for the students to know the understanding of the subject. The questionnaires had three point scale estimation for every question.

Attainment: = No of students with low scale\*1/ 100 + No of students with medium scale\*2/ 100+ No of students with high scale\*1/ 100

**C) Final attainment estimation is done by integrating the above proposed schemes.**

Final Course outcomes attainment is calculated as eighty percent on the average of three direct attainment methods and 20 percent on the attainment achieved by indirect methods.

### 2.6.3 Average pass percentage of Students

**Response:** 83.17

2.6.3.1 Total number of final year students who passed the university examination

Response: 514

2.6.3.2 Total number of final year students who appeared for the examination

Response: 618

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

## 2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

**Response:**

File Description	Document
Database of all currently enrolled students	<a href="#">View Document</a>

## Criterion 3 - Research, Innovations and Extension

### 3.1 Resource Mobilization for Research

**3.1.1 Grants for research projects sponsored by government/non government sources such as industry ,corporate houses, international bodies, endowment, chairs in the institution during the last five years**

**Response:** 17.68

3.1.1.1 Total Grants for research projects sponsored by the government/non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year wise during the last five years(INR in lakhs)

2016-17	2015-16	2014-15	2013-14	2012-13
5.86884	0.99220	8.33811	2.47728	0

File Description	Document
List of project and grant details	<a href="#">View Document</a>

**3.1.2 Average number of research projects per teacher funded by government and non government agencies during the last five years**

**Response:** 0.01

3.1.2.1 Number of research projects funded by government and non-government agencies during the last five years

Response: 6

File Description	Document
List of research projects and funding details	<a href="#">View Document</a>
Supporting document from Funding Agency	<a href="#">View Document</a>

### 3.2 Innovation Ecosystem

**3.2.1 Institution has created an ecosystem for innovations including incubation centre and other initiatives for creation and transfer of knowledge**

**Response:**

Sandip Institute of Engineering and Management (SIEM) has started an incubation centre in the year 2015, where students can get technical guidance, mentoring, sufficient working space and network for teamwork.

The context is to give a perfect bridge to an idea towards execution, awareness about entrepreneurship through expert advice, direction and platform where students are free to express their abilities. In recent times, incubators are home to investors who are able to mentor entrepreneurs, who can create and transfer knowledge to fulfil market demand. As success speaks, today's youth is motivated to apply their knowledge of business in practice. In order to reap the benefits of young minds, government and various private organizations are extending their helping hand in the formation of incubation centre.

The objectives of incubation centre are listed as follows-

- To provide platform to the students of different disciplines to work as a team and share their innovative ideas, views and knowledge.
- To provide opportunities for experimentation and exploration of newer solutions and methods.
- To share updated knowledge of technological transformation in every discipline.
- To test and implement innovative ideas for product development as per the need of market.
- To educate the students to nurture their ideas and projects into feasible business.

For smooth conduction of the incubation centre related activities, various committees like core committee, advisory committee and student committee are formed. The committee members are selected from different domains like teaching, industry, entrepreneurs, alumni, and students. The main theme of this centre is to work for the sectors like Digital India, Make in India, smart city, green technology etc as it is the need of the hour.

The institute has provided the necessary facilities to the incubation centre. To enhance the conceptual knowledge of the participants, different activities like webinars and seminars on recent trends in engineering and technology along with workshops and hands on trainings are conducted regularly. Selection of venture, mentoring, seed funding, infrastructure support, review of ventures, resource network development are some of the proposed activities.

Some of the projects developed under the incubation centre are

- Solar powered mobile charger with LED lantern.
- Sandip navigation android application.
- Android application for admission enquiry
- Automatic gate pass kiosk system.
- Automatic campus management system.

Our problem solving approach proved extremely beneficial and enabled us to focus on some more product development.

- Deputy collector of Nasik along with his team approached for designing of "Automatic ration distribution system". The prototype of the same is successfully implemented in the incubation centre.
- Continuing with the previous project of Automatic Campus Management System, Hon'ble Chairman Dr. Sandip N Jha, has suggested adding few more modules in view of smart campus like Canteen Management, Transportation Management, Admission management etc.
- "National Institute of Solar Energy (NISE)" and "Maharashtra Energy Development Agency (MEDA)" in coordination with "Maharashtra Centre for Entrepreneurship Development (MCED)", conducted three months training program in the institution on "Design and Installation of Rooftop

Solar Power Plant (Suryamitra)". Said program was funded by the "Ministry of New and Renewable Energy (MNRE)".

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

### 3.2.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the last five years

**Response:** 86

3.2.2.1 Total number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
19	30	12	15	10

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

### 3.3 Research Publications and Awards

3.3.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research

**Response:** Yes

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

3.3.2 The institution provides incentives to teachers who receive state, national and international recognition/awards

**Response:** Yes

File Description	Document
e- copies of the letters of awards	<a href="#">View Document</a>
List of Awardees and Award details	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 3.3.3 Number of research papers per teacher in the Journals notified on UGC website during the last five years

**Response:** 0.12

#### 3.3.3.1 Number of research papers in the Journals notified on UGC website during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
38	22	12	03	00

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

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

**Response:** 0.28

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

2016-17	2015-16	2014-15	2013-14	2012-13
26	68	37	22	13

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



### 3.4 Extension Activities

#### 3.4.1 Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years

##### Response:

Institute organizes a number of activities to promote institute–neighbourhood-community network to sensitize the students towards societal needs and bring about social sensitivity.

Institute is fully aware of its onerous responsibility of developing responsible global citizens. Department wise students' association, students' chapters and National Service Scheme (NSS) are promoted with the objective of imbibing service orientation and feeling of reciprocity and sensitization among students. Students have an opportunity to enrol for NSS and are encouraged to participate in awareness campaigns on environment, sustainability, gender and civic issues.

Participation in these activities inculcates good citizenship. Students associations and NSS strengthen the sense of community service responsibility, leading to their holistic development. One of the objectives of NSS scheme is 'Education and Service' to the community. Participation in annual rural camps of NSS enables the volunteers to get a feel of real life situations in the neighbouring community. While interacting with rural community students understand their day to day life problems. Students encourage villagers to

- Enrol their children in school.
- Importance of tree plantation
- Women Empowerment
- Cleanliness
- Cashless transactions etc.

Institute encourages students to participate in campaigns like "SwachaBharath", HIV/AIDS awareness etc. Every year on "The Foundation's day", blood donation camp, tree plantation, health check-up camps are organized.

Institute regularly organizes various activities for students as well as for neighbouring community such as:

- Road Safety Abhiyan
- Swachhata Mohim
- Matdar Nondani Abhiyan
- Street plays
- Water conservation awareness
- Women empowerment programs etc.

Tree plantation at various places instils ecological and environmental values in students. The above activities are displayed on notice boards and on website.

KumbhThon - a technological hackathon for Kumbh 2015 was organized at Sandip Foundation, Nashik. KumbhThon an innovative workshop and competition was open to all engineers, working professionals

and all willing to contribute for betterment of society.

Our goal was to create social entrepreneurs who can solve diverse problems like

- Civic Issues
- Crime and Police,
- Hotel and Housing,
- Language and Translation
- Crowd management
- Pollution etc.

Students who participated in KumbhThon received guidance from world renowned experts of MIT Media Lab (USA), iNOVATION circle Nashik, MKCL, Khandbahale.Com, Maharashtra Police, Reliance, Mahindra, Computer Society of India, NIMA, IETE, IEEE etc.

Students of Mechanical Engineering Students Association (MESA) organised a candle march to pay homage to 17 soldiers of Indian army cruelly killed by terrorists in Uri, in Jammu and Kashmir. The march was organized at Hostel to appeal for world peace. They observed two-minute silence for the fearless hearts who sacrificed their lives in service of the nation.

Students (Students Associations of various departments) regularly visit Orphanages and Old age Homes nearby and spend time with them, distribute required clothes, books, food items etc. Students of computer department visit neighbouring community and spread awareness about computer literacy, regularly.

These social activities in the neighbourhood community, teaches students sense of self-actualisation and holistic development. The institute has received various awards and accolades for its service towards society.

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

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

**Response:** 10

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

2016-17	2015-16	2014-15	2013-14	2012-13
7	0	2	1	0

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

### 3.4.3 Number of extension and outreach programs conducted in collaboration with industry, community and Non-Government Organisations through NSS/NCC/Red cross/YRC etc., during the last five years

**Response:** 18

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

2016-17	2015-16	2014-15	2013-14	2012-13
07	6	2	2	1

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

### 3.4.4 Average percentage of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the last five years

**Response:** 59.42

3.4.4.1 Total number of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
1344	1482	1156	1219	424

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>

### 3.5 Collaboration

<p><b>3.5.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc during the last five years</b></p> <p><b>Response: 236</b></p> <p>3.5.1.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years</p> <table border="1"> <thead> <tr> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> <th>2012-13</th> </tr> </thead> <tbody> <tr> <td>123</td> <td>49</td> <td>32</td> <td>26</td> <td>6</td> </tr> </tbody> </table>					2016-17	2015-16	2014-15	2013-14	2012-13	123	49	32	26	6
2016-17	2015-16	2014-15	2013-14	2012-13										
123	49	32	26	6										
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File Description	Document													
Copies of collaboration	<a href="#">View Document</a>													
Number of Collaborative activities for research, faculty etc.	<a href="#">View Document</a>													
<p><b>3.5.2 Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. during the last five years (only functional MoUs with ongoing activities to be considered)</b></p> <p><b>Response: 40</b></p> <p>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</p> <table border="1"> <thead> <tr> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> <th>2012-13</th> </tr> </thead> <tbody> <tr> <td>11</td> <td>18</td> <td>5</td> <td>4</td> <td>2</td> </tr> </tbody> </table>					2016-17	2015-16	2014-15	2013-14	2012-13	11	18	5	4	2
2016-17	2015-16	2014-15	2013-14	2012-13										
11	18	5	4	2										

<b>File Description</b>	<b>Document</b>
Details of functional MoUs with institutions of national, international importance, other universities etc. during the last five years	<a href="#">View Document</a>
e-copies of the MoUs with institution/ industry/ corporate house	<a href="#">View Document</a>

NAAC

## Criterion 4 - Infrastructure and Learning Resources

### 4.1 Physical Facilities

**4.1.1 The institution has adequate facilities for teaching- learning. viz., classrooms, laboratories, computing equipment, etc.**

**Response:**

Institute has adequate infrastructure which meets the needs of all the stakeholders in the institute. Institute fulfils the norms and essential conditions of AICTE for physical facilities including infrastructures. All required areas are as per statutory body such as instructional area, administrative area, amenities area and circulation areas which are adequate and fulfil all norms.

**Details are as follows:**

Particulars	Area required as per AICTE norms (Sq.m)	Area available (Sq.m)	Surplus area (Sq.m)
Instructional area	8958	13327.64	4369.64
Administrative area	1240	1697.42	457.42
Amenities area	470	2051.08	1581.8
Circulation area and others	2667	4276	1609

**Bifurcation of Instructional area is as follows:**

- 1. Classrooms:** As per AICTE norms number of class rooms and area required are 29 and 2508 sq.m respectively. Institute has 40 class rooms of total area 4034.81 sq.m.
- 2. Tutorial rooms:** Institute has 10 number of tutorial rooms with 376.10 sq. m.
- 3. Laboratories:** Institute has 66 well equipped Laboratories with total area 5817.93 sq.m.
- 4. Drawing Hall:** Two drawing halls are available with total area 352.18 sq.m which is more than statutory body norms.
- 5. Workshop:** As per AICTE norms workshop of 800 sq.m area is required. Institute has a workshop of area 1015 sq.m.
- 6. Seminar hall:** Institute has 3 Seminar halls of total area 684.61 sq.m.
- 7. Computer centre:** Institute has a computer centre of area 290 sq.m which is equipped with 46 computers.
- 8. Library and Reading room:** As per AICTE norms area for Library and Reading room required is 550 sq.m. Institute has a Library and Reading room of area 757 sq.m.
  - Institute adopted modern audio-visual teaching learning aids with installation of LCD projectors in

class rooms.

- Institute has well equipped laboratories to perform practicals and demonstrations to enhance teaching learning process.
- Institute has sufficient number of books in central library with OPAC system, which helps to search the status of the book. Adequate volumes and titles of books per discipline are available.
- Institute provides digital library to get access to e-books, e-journals and e- learning resources.
- Adequate number of computer laboratories with computing facilities like computers, printers, scanners etc. are available in each department of Institute.
- Network facilities are available to enhance e-resources like virtual labs, NPTEL, Swayam Portal etc.

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

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

##### Response:

- Institute has shared playgrounds of total area 28275 sq.m for outdoor games. First playground is established in 2011-12 and second play ground in 2014-15 for all types of sports activities and competitions at various levels.
- Institute has facilities for indoor games such as chess, carrom, and table-tennis.
- Provision of Indoor gymnasium with adequate equipment and accessories is available.
- Green gymnasium is available in hostel premises.
- Institution has provision for Yoga and Meditation.
- Institution has adequate sports equipment to encourage students for sports participation.
- Amphitheatre is available in campus for conducting cultural activities.
- Several cultural activities are also carried out in seminar hall and open space of the Institution.
- As per record of indoor and outdoor sports facility uses by students and staff is 14.51%.

File Description	Document
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

**Response:** 100

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

Response: 32

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	<a href="#">View Document</a>
any additional information	<a href="#">View Document</a>

#### 4.1.4 Average percentage of budget allocation, excluding salary for infrastructure augmentation during the last five years.

**Response:** 48.59

4.1.4.1 Budget allocation for infrastructure augmentation, excluding salary year wise during the last five years (INR in lakhs)

2016-17	2015-16	2014-15	2013-14	2012-13
134.70630	146.27027	337.66091	416.57179	373.33664

File Description	Document
Audited utilization statements	<a href="#">View Document</a>
Details of budget allocation, excluding salary during the last five years	<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:**

**About Central Library: -**

Sandip Institute of Engineering and Management's (SIEM) Central Library is established in 2010. Area of Library is 757 sq. m. The library has vast collection of more than 20,500 books which includes handbooks, dictionaries, standard reference books, quality textbooks, journals, magazines, newspapers. The collection has been classified as per the Dewey Decimal Classification (DDC) system and arranged subject wise.

The library has open access to all students. Students are allowed to enter the book stack, select the book and avail reading room facility, which has a seating capacity of around 180 students. Library uses KOHA (Library automation) software, along with barcode technology.

- **Name of the ILMS software:** : **KOHA**
- **Nature of automation (fully or partially)** : **Fully**
- **Version** : **3.18.11.000**



• Year of automation : 2011

**Library Collection at a glance :**

Sr. No.	Particulars	Qty.
1	No. of Books	15500
2	No. of Books (Book bank)	4920
2	No. of Reference Books	194
3	No of Journals/ Magazines	78
4	CD/DVD	1750
5	No of e-resources	4
6	E-library/ Digital Library facility	Yes
7	Total Area	757 sq.m
8	Seating Capacity	180
9	Reprographics Facility	Yes
10	Library Networking Facility	Yes

**IT Information:**

Sr. No.	Particulars	Qty.
1	Computers	18
2	Printer	01
3	Scanner	01
4	Barcode Scanner	02
5	CCTV Camera	07

**E-Resources: -**

Library has taken Membership of the Institution Engineers of India (IEI), National Digital Library (NDL) and also Member of DELNET Database.

Library has subscribed Inventi Journal (12) and Enriched Publications Journal. The institutional repository of the college consists of e-books, Question Papers, NPTEL Video.

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

**4.2.2 Collection of rare books, manuscripts, special reports or any other knowledge resources for library enrichment**

**Response:**

Details of rare books and other knowledge resource for library enrichment

Sr. No	Name of the book	Name of the publisher	Name of the aut
--------	------------------	-----------------------	-----------------

1	Remote sensing in civil engineering	Glasgow Surrey University Press New York Halsted Press	Kennie, T.J.M. &
2	Elementary Structural Analysis	USA McGraw Hill Book Company	Wilbur J.B. Norri
3	Building Construction and Drawing	Mitchell Charles F.	Mitchell Charles
4	Machine Component Design	JAICO Publishing House	Orthwein William
5	Electronic Circuit	Mc GrawHill New York	Angelo E. j
6	Engineering Electronics	Mc GrawHill Book Company, Inc	George E Happel
7	Circuit Theory of Electronic Devices	John Willey & Sons Inc.	Milton E Boone
8	Electrical Communication	John Willey & Sons Inc	Arthur Lemuel A
9	Electronic Circuit Theory	H. J. Zimmerman	John Willey & S
10	Electronic Circuit and Tubes	Havard University	Mc GrawHill Bo
11	Electronic Circuit Thomas	Printice- Hall, Inc	L.Martin
12	FM Transmission and Reception	John F. Rider Publisher, Inc	John F. Rider
13	Circuit Theory and Design	John Willey & Sons Inc.	John L. Steward
14	Introduction to Topology and Modern Analysis	Robert E. Krieger	George, F. Simm
15	Seismic Design for Buildings	Department of the army the air force	Department of the
16	Reinforced Concrete	BT batsford	Frederick rings M
17	Earthquake Engineering for Concrete Dams	National academy Press	Committee Repo
18	Concrete abstraction	Imprint of Brooks/Cole Publishing	max hailperin
19	CONCRETE ENGINEER Concrete Engineering Handbook	Mcgraw Hill	George hool S B
20	Concrete and reinforced concrete	Sir Isaac pitman & sons Ltd	w. Noble twelvet
21	A Manual of Land Surveying	The F. Hodgman Co.	Hodgman M.S.

#### 4.2.3 Does the institution have the following:

- 1.e-journals
- 2.e-ShodhSindhu
- 3.Shodhganga Membership
- 4.e-books
- 5.Databases

A. Any 4 of the above

B. Any 3 of the above

C. Any 2 of the above

D. Any 1 of the above

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

File Description	Document
Details of subscriptions like e-journals,e-ShodhSindhu,Shodhganga Membership etc.	<a href="#">View Document</a>

#### 4.2.4 Average annual expenditure for purchase of books and journals during the last five years (INR in lakhs)

**Response:** 16.9

4.2.4.1 Annual expenditure for purchase of books and journals year wise during the last five years (INR in lakhs)

2016-17	2015-16	2014-15	2013-14	2012-13
12.46090	11.58688	25.26395	12.86829	22.31569

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

#### 4.2.5 Availability of remote access to e-resources of the library

**Response:** Yes

File Description	Document
Details of remote access to e-resources of the library	<a href="#">View Document</a>

#### 4.2.6 Percentage per day usage of library by teachers and students

**Response:** 0.38

4.2.6.1 Average number of teachers and students using library per day over last one year

**Response:** 9

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

## 4.3 IT Infrastructure

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

#### Response:

The institute is equipped with an adequate IT infrastructure including computers, software, internet connectivity *etc.* Various software are made available as per the requirements of different programs. The institute has internet leased line connectivity. Institute always keeps track on changing technology and the change or addition of the infrastructure is made available accordingly. Wi-Fi connectivity is also provided by institute. Service engineers are appointed for providing various maintenance services. Communication services, LAN network is also available in the institute which is regularly updated and maintained. Most of the computers are equipped with antivirus software Quick heal. Institute also uses open source operating system like Linux/Ubuntu *etc.* Cyber roam firewall is used to provide access and authority to users. The details of updating of various IT facilities are given in the following tables.

#### Detail description of Wi-Fi Facility

Date of updating	Description	Cost in Rs.
30-03-2017	Brovis BZ 150-ABGN-outdoor Extended, 2.4 Ghz 12 dBi Omni MIMO Antena, Advance controller [Unified Command Control Centre]	2,81,927.00

#### Detail description of Software Packages

Date of Updating	Description	Cost
14-04-2017	E-tab	490153
09-08-2017	Microsoft campus Agreement	575958
06-05-2016	PS_CAD SW	270000
01-08-2016	Microsoft Campus Agreement	559602
31-03-2016	Quick Heal Antivirus	541275
31-03-2016	MATLAB	600005
11-05-2015	WTP	24000
02-02-2015	Firewall CYBERROAM	223695
31-03-2015	CATIA	449800
31-03-2015	MSP	25058.5
03-07-2014	OS WINSL8.1SNGL	281806
12-09-2013	ANSYS	435000

09-10-2013	Quick Heal Antivirus	312900
05-03-2013	Staad-pro	245507
04-12-2013	e-surveying	63300
30-01-2013	Opticon Construction ERP SW	629497
19-11-2013	Gram++	62400
29-09-2012	LAB View	196875
04-10-2012	T-CAD	271688
07-03-2011	IBM RSA Rational Architect	29300
03-08-2011	Quick Heal Antivirus, Advance C++ ACDMC, Windows 7 Pro Paper License	470150
20-12-2011	Cadence SW	364875
16-09-2011	Linguaphone L21 Language lab software	382000
16-09-2011	Proteus VSM 8051-52	120000
16-03-2011	TechnoInfotech Firewall Proxy	27300
14-09-2011	Matlab Simulink	363285
06-05-2010	TechnoInfotech Firewall Proxy	26000
28-10-2010	ITAIMS IT Asset and Inventory Management SW	65000
28-04-2010	OS Winserver 2008,CAL Paper license. Win Pro Upgrade/downgrade Turbo C, Paper license acdmc, Visual Studio 5user, Quick Heal 3 yrs	7548442
14-12-2009	Pro-E	175000

### Detail description of Printers and Scanners

Date of	Description	Cost in Rs.
<b>Updating</b>		
24-08-2017	HP Plotter 52024	107000
22-09-2017	Printer HP M1005 LJ	26500
03-03-2016	HP Scanner G3110	19500
20-12-2016	Canon LBP 2900 LJ	7738
23-03-2016	Canon IR 2520	103950
01-09-2015	Laser Printer Canon LBP2900, HP Scanner G3110	15125
24-06-2015	RiSO Make CZ180 Copier	158000
05-09-2014	HP G 3110 A4	8,195
12-09-2014	Epson L210 Inkjet colour Printer	10200
27-04-2013	Laser Printer Canon LBP2900, DMP EPSON LQ 300, EPSON 1170,	12 0880
10-12-2013	Canon IR6000	199500
11-12-2012	Laser Printer Canon LBP2900, DMP EPSON LQ 300, EPSON 1170,	149640
11-07-2011	Laser Printer Canon LBP2900, DMP EPSON EPSON 1170, HP Scanner 2410, HP Plotter, HP Inkjet all in one	243259
28-04-2010	Laser Printer Canon LBP2900, DMP EPSON LQ 300,	286959

EPSON 1170, HP Scanner 2410, Canon IR6000
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**4.3.2 Student - Computer ratio****Response:** 4.07**File Description****Document**

Student - Computer ratio

[View Document](#)**4.3.3 Available bandwidth of internet connection in the Institution (Lease line)**

&lt;5 MBPS

5-20 MBPS

20-35 MBPS

35-50 MBPS

**Response:** >=50 MBPS**File Description****Document**

Details of available bandwidth of internet connection in the Institution

[View Document](#)**4.3.4 Facilities for e-content development such as Media Centre, Recording facility, Lecture Capturing System (LCS)****Response:** No**File Description****Document**

Facilities for e-content development such as Media Centre, Recording facility,LCS

[View Document](#)

## 4.4 Maintenance of Campus Infrastructure

### 4.4.1 Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

**Response:** 50.56

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

2016-17	2015-16	2014-15	2013-14	2012-13
404.85056	449.91185	344.99423	308.61561	226.44141

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	<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:**

The institute has developed policies and modus operandi to create the infrastructure at par with the standards and norms of AICTE. The development is with respect to human resources (Faculty, Technical and Administrative staff), laboratory equipment, built-up place, learning resources, (print and electronic and teaching learning aids). The Policies regarding maintaining and utilizing the physical facilities, academic facilities and support facilities are uploaded on the website as well.

The various policies for maintaining and utilizing physical, academic and support facilities are:

- 1.Laboratory and Classroom policy
- 2.Library Policy
- 3.Sports Policy
- 4.Computers Policy etc.

File Description	Document
Link for Additional Information	<a href="#">View Document</a>

## 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 the last five years

**Response:** 60.33

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

2016-17	2015-16	2014-15	2013-14	2012-13
1547	1358	1135	941	635

#### File Description

#### Document

upload self attested letter with the list of students sanctioned scholarships

[View Document](#)

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

[View Document](#)

#### 5.1.2 Average percentage of students benefitted by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

**Response:** 2.28

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
94	0	49	31	31

#### File Description

#### Document

Number of students benefited by scholarships and freeships besides government schemes in last 5 years

[View Document](#)

Any additional information

[View Document](#)



**5.1.3 Number of capability enhancement and development schemes –**

1. For competitive examinations
2. Career counselling
3. Soft skill development
4. Remedial coaching
5. Language lab
6. Bridge courses
7. Yoga and meditation
8. Personal Counselling

**A. 7 or more of the above**

**B. Any 6 of the above**

**C. Any 5 of the above**

**D. Any 4 of the above**

**Response:** A. 7 or more of the above

File Description	Document
Any additional information	<a href="#">View Document</a>
Details of capability enhancement and development schemes	<a href="#">View Document</a>

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

**Response:** 36.71

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

2016-17	2015-16	2014-15	2013-14	2012-13
537	590	882	682	526

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>

**5.1.5 Average percentage of students benefitted by Vocational Education and Training (VET) during the last five years****Response:** 2.66

## 5.1.5.1 Number of students attending VET year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
92	53	106	12	9

**File Description****Document**

Details of the students benefitted by VET

[View Document](#)

Any additional information

[View Document](#)**5.1.6 The institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases****Response:** Yes**File Description****Document**

Details of student grievances including sexual harassment and ragging cases

[View Document](#)

Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee

[View Document](#)

Any additional information

[View Document](#)**5.2 Student Progression****5.2.1 Average percentage of placement of outgoing students during the last five years****Response:** 57.64

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

2016-17	2015-16	2014-15	2013-14	2012-13
304	305	89	81	1

File Description	Document
Details of student placement during the last five years	<a href="#">View Document</a>
Self attested list of students placed	<a href="#">View Document</a>

### 5.2.2 Percentage of student progression to higher education (previous graduating batch)

**Response:** 7.78

#### 5.2.2.1 Number of outgoing students progressing to higher education

Response: 40

File Description	Document
Details of student progression to higher education	<a href="#">View Document</a>
Upload supporting data for student/alumni	<a href="#">View Document</a>
Any additional information	<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: NET/SLET/GATE/ GMAT/CAT, GRE/ TOFEL/ Civil Services/State government examinations)

**Response:** 30.34

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

2016-17	2015-16	2014-15	2013-14	2012-13
11	15	10	9	1

#### 5.2.3.2 Number of students who have appeared for the exams year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
93	97	84	72	1

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

### 5.3 Student Participation and Activities

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

**Response:** 46

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

2016-17	2015-16	2014-15	2013-14	2012-13
21	15	3	7	0

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

#### 5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

**Response:**

The institute has elected members of Student Council, who represents students' community in Academic & Administrative Issues. We consider that it is beneficial for felicitating student's representation in various working bodies in the institute. The members of the council include Class representatives from each class from First to Final year; and office bearers like NSS coordinator; a Cultural coordinator; a Sports coordinator and Ladies representative. The committee is headed by Student welfare officer and assisted by NSS coordinator.

The student council helps share students' ideas, interests, and concerns with faculties and management to

create environment, conducive to educational and personal development. The council acts as a link between department and fellow students towards enhancing learning environment. The students actively participate in organizing both technical & non-technical activities, thereby contributing towards fulfilling goals of the institute.

Students help in arranging Industrial interactions / Expert Talks sessions. Every activity arranged for students are assessed by student feedback for improving future activities. Students also help in Administrative activities in the institute. Students coordinate in arranging all Co-Curricular, Extra-curricular and cultural activities at institute level. Student teams helps in maintaining discipline during any events & supports the smooth conduction of the event.

Students are active members of NSS group of Institute. Under the guidance of NSS Coordinator, students actively arrange various events focusing on the objective of NSS. Students get involved in NSS camps and provide their services towards the society. As a part of Students Association, all activities are coordinated and supported by students who perform all the necessary tasks. Also many organize educational and recreational activities for students. Students participate in sporting events at the institute from participation to event management. Students actively participate in marketing of events organized by the institute.

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

### 5.3.3 Average number of sports and cultural activities/ competitions organised at the institution level per year

**Response:** 18.4

5.3.3.1 Number of sports and cultural activities / competitions organised at the institution level year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
26	21	17	13	15

File Description	Document
Number of sports and cultural activities / competitions organised per year	<a href="#">View Document</a>
Report of the event	<a href="#">View Document</a>

## 5.4 Alumni Engagement

5.4.1 The Alumni Association/Chapters (registered and functional) contributes significantly to the

**development of the institution through financial and non financial means during the last five years****Response:**

Presently, we have Alumni Association who is working with the initiative of “STAY CONNECTED”. We have registered our Alumni Association as per the government norms with registration number - MAHA/243/NA. Alumni Association consists of office bearers like President, a Vice-President, a Secretary, Treasurer and 5 alumni members. This team looks after the Alumni activities of the institute.

The Alumni Association contributes in the institute through the following manners:

1. The alumni members are invited to attend events & activities.
2. Alumni Interaction Session or Guest Lectures are conducted where they share their expertise and current technological trends.
3. The students interact with alumni to get updated information on market requirements, as they get realistic inputs related to usefulness of the academics
4. Alumni guides the present students through sessions for building their professional personality.
5. The alumni share their professional experiences with students and encourage them to develop trade skills.
6. Alumni Meets are being arranged regularly towards suggestions related to curriculum design, placement activities and value – added programs.
7. Alumni suggestions are involved for defining the Program Specific Outcomes, Program Educational Objectives, and in the Mission & Vision of department and institute.
8. Alumni Feedback helps in planning activities for professional skill development and contributes to the well- being of the Alma Mater.
9. Alumni members help the department to get in contact with industrial / corporate world towards good academic-industry tie-ups and maintaining relations.

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

**5.4.2 Alumni contribution during the last five years**

**<1 Lakh**

**1 Lakh - 3 Lakhs**

**3 Lakhs - 4 Lakhs**

**4 Lakhs - 5 Lakhs**

**Response: <1 Lakh**

<b>File Description</b>	<b>Document</b>
Any additional information	<a href="#">View Document</a>
Alumni association audited statements	<a href="#">View Document</a>

### 5.4.3 Number of Alumni Association / Chapters meetings held during the last five years

**Response: 1**

5.4.3.1 Number of Alumni Association /Chapters meetings held year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
1	0	0	0	0

<b>File Description</b>	<b>Document</b>
Number of Alumni Association / Chapters meetings conducted during the last five years.	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## Criterion 6 - Governance, Leadership and Management

### 6.1 Institutional Vision and Leadership

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

##### Response:

##### Vision

We at SIEM aspire to be a globally recognized Institute that delivers a world class education to outstanding intellectuals by nurturing and grooming their interests, creative abilities and thrusts to acquire a life-long learning so as to imbibe values of their commitment towards society

##### Mission

We at SIEM shall strive continuously

- To inculcate and imbibe knowledge of cutting-edge technologies and its implementation for solving real life problems in a conducive environment.
- To collaborate with national and international institutes/ industries/universities of repute for sustainable growth through team work.
- To motivate and retain highly skilled and knowledgeable individuals, whose creativity and interest in teaching upholds to achieve desired goals.
- To provide a dedicated platform to cater the needs of individuals and inspire them for their intellectual growth and character building.
- To enable the students to achieve excellence in the chosen fields and to share the responsibilities of citizenship and service in a disciplined manner.

The institution believes in transparent and visionary governance which motivates all the stakeholders for overall growth.

The management supports all the activities to facilitate the need of stakeholders for providing quality education and endorses vision that represents the best thinking about teaching and learning, Research, Entrepreneurship & Promotion to higher studies.

Principal of the Institute performs all administrative and academic activities in line with All India Council for Technical Education (AICTE) and Savitribai Phule Pune University (SPPU) in essential, desirable and mandatory parameters.

Dean academics coordinates with Principal and HOD's for proper implementation of academic policies by planning, supervision and reforms.

Dean administration looks after general administration such as overall discipline, transportation, Hostel facilities, maintenance, canteen etc.

Responsibilities of Dean International affairs are to establish new Tie-Ups and Exchange programs with



International Universities and Industries.

Dean Research and Development looks after the external sponsored research projects , inhouse sponsored research projects and overall research promotion. We have dedicated R and D Team which is formed considering thrust areas and area of interest. These teams are currently working on two major projects sponsored inhouse. These projects are on Robotics and Communication Engineering.

Head of the Department (HOD) looks after all the affairs of the department in coordination with the Principal and Deans. HOD looks after departmental teaching, learning, research, Co-curricular and extra-curricular activities, value added programmes, Industrial visits, Expert Lectures and aspects of physical and infrastructure resources. HOD also deals with the issues related with faculty, staff and students of the department as a key authority.

Registrar has been assigned with responsibilities of various sections such as Student section, Exam section, Account section, Establishment section and submission of information and reports to Apex and Constitutional affiliating bodies in co-ordination with supporting staff of respective section.

File Description	Document
Link for Additional Information	<a href="#">View Document</a>

### 6.1.2 The institution practices decentralization and participative management

#### Response:

The Institute promotes culture of decentralization and participative management at various levels. At the Institute level Governing Council (GC) is formed as per the University Grants Commission (UGC) and All India Council for Technical Education (AICTE) guidelines. Governing Council is the central decision-making body of the college, composed of members of the management, representative from AICTE, DTE Maharashtra, University, Principal and senior faculty members. The institute has formed College Development Committee (CDC) as per the University guidelines. CDC composed of members of the Management, Principal, representative elected from teaching and non-teaching staff, Secretary of student Council. College Development Committee gives guidance on strategic development and its implementation methodology. Principal, Dean Administration and Registrar looks after the overall administrative functions of the institute. Principal, Dean Academics and Heads of department hold regular meetings to discuss on various academic initiatives and issues. For smooth administrative and academic functions, Institute formed various committees with its roles and responsibilities, in facilitating the decentralization policy.

#### Case Study: Training and Placement cell

Training and Placement cell works in coordination with T&P co-ordinator. Training and Placement cell takes numerous initiatives to enhance Placement opportunities of students and emphasize on industry ready candidates. The various initiatives includes-

1. Qualified Faculty provide basic conceptual knowledge to students. This helps the students to

achieve maximum eligibility criteria for recruitment.

2. Value Added Programs are designed in such a way that it matches with recent industrial requirements.
3. To strengthen Industry-Institute interaction, experts with diverse experience are invited to deliver a lecture on recent trends and developments.
4. Aptitude Training develops strategic thinking, logical reasoning and specific technical competencies of students.
5. Soft Skill Training helps in achieving excellence in communication and employability skills, to be a global citizen.
6. Mock Interviews are conducted regularly to boost their confidence and reduce stress and anxiety about interviewing.
7. Resume writing practice helps students to emphasize on relevant accomplishments and highlights of their academics and extra-curricular profile.
8. The institute has signed MOU's with local and multinational industries to provide better platform to candidates for internship, sponsored projects and industrial visit.
9. Campus Recruitment and job fair are conducted where students get exposure to various companies which enhance their prospects.

Training and placement cell functions with decentralization of responsibilities percolated from faculty to management.

The nature of roles and responsibilities towards strengthening of T&P activities is as follows:

Department Coordinator- Training and Placement coordinator - Training and Placement officer - Head of the departments - Principal - Management.

The efforts exerted by each individual leads to the decentralization and participative involvement of all.

Training and Placement cell is well supported and motivated by the management. Management takes consistent reviews of T&P cell as it helps in strengthening the placement as well as Industry - Institute Interaction through participative involvement.

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

## 6.2 Strategy Development and Deployment

### 6.2.1 Perspective/Strategic plan and Deployment documents are available in the institution

#### Response:

The institute has a perspective plan developed for its overall growth as below-

- 1] Increase in intake/ Initiative of various courses

- 2] Recruitment of Teaching and Non-Teaching staff
- 3] Infrastructure Development
- 4] Library expansion, Laboratory expansion towards R&D.
- 5] Tie-Ups and Exchange programs with Institute of repute, International Universities and Industries / Agencies.
- 6] Accreditation from various Accrediting Bodies

**Table 6.2.1 Strategic and Perspective plan:**

Academic Year	1	2	3	4	5	6
2010-11		•	•	•		
2011-12	•	•	•	•		
2012-13	•	•	•	•		
2013-14		•	•	•	•	
2014-15	•	•	•	•	•	
2015-16		•	•	•	•	
2016-17		•	•	•	•	
2017-18		•		•	•	•
2018-19		•		•	•	•
2019-20		•		•	•	•

**Case Study: Tie-Ups with International Universities:**

International collaboration is an effectual tool of merit in technical education which is required for exploring talents of young researchers. These collaborations will help students to connect with researchers across the globe, discuss and share their innovative ideas in their area of interest. With this objective, the institute has various International Collaborations with reputed foreign Universities in scientific research, educational, technical and cultural domains.

The Institute seeks to increase the quantum of exchange for both students and faculty members. The major emphasis of this collaboration is on faculty and students exchange and joint innovative projects for the former and collaborative research.

The Institute works on academic mobility and scientific research cooperation. The Institute also focuses on International cooperation as well as support for organization of collaborative symposiums, international scientific-practical conferences and workshops on actual problems of education and science.

At present MOU's are signed with several renowned Universities across the globe for facilitating exchange of knowledge and technical insights. This has provided sharper focus and greater visibility to the Institute's program in these verticals.

Some activities like Summer School Training program, staff and students exchange for higher education and research, and collaborative learning and research etc are in process. Presently, we are working with Universities like Klaipeda State University of Applied Sciences, KVK, Lithuania; Ural Federal University, Ekstanburg, Russia; Technical University of Sofia (Bulgaria); St. Petersburg University of Telecommunication, St. Petersburg, Russia; Athens Institute of Technology (Greece); The Malaysian Solid State Science & Technology Society, University of Putra, Malaysia.

Since its inception, institute has completed following major training program with collaborated Universities in abroad-

In year 2014, total 5 students participated in Summer School Training Program at Technical University of Sofia, Bulgaria organized in association with CTIF India.

In year 2015, total 17 students participated in Summer School Training Program at Technical University of Sofia, Bulgaria organized in association with CTIF India.

In year 2016, total 27 students participated in Summer School Training Program at Technical University of Sofia, Bulgaria, Athens Information Technology, Greece and Ural Federal University, Russia organized in association with CTIF India.

In year 2017, total 18 students participated in Summer School Training program at Klaipeda State University of Applied Sciences, (KVK) Lithuania.

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

### **6.2.2 Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism**

#### **Response:**

The Institution has well defined organisational structure. This depicts the formal flow of Instructions, information and movement of documents for various processes. It ensures timely completion of assignments, submission of reports to various bodies such as AICTE, DTE etc. The display of organisational structure/organogram at website exhibits the proper administrative set up and gives the proper visibility to the visiting stakeholders as to whom one should approach.

The Governing council and the College Development Committee with regard to the rules and regulations by various apex bodies like AICTE and the affiliating University is there in place and the organisation functions on the directions deliberated and resolved in the various meetings of the these council and committee. The Governing Council is the composition of experts from various facets of life to have minimum 11 members. The Chairman of the Foundation and the Principal of the Institute is Chairman of governing council and the member secretary respectively. Nomination minimum two technocrats/educationist and two faculty members, one Associate Professor and another Professors are to

be nominated by Institute. There are nominees of Affiliating University, AICTE and State Government. The college development committee is composed of total 14 members and is chaired by the Chairman of the foundation. The CDC is constituted as per the guideline and provision given by university act.

As far as the administrative set up is concerned six academic Departments besides the Administrative Department, Library and sports are directed by the Principal. Periodical meeting are conducted to Plan and implement/execute the resolutions. In all the Departments, as on date, there are total 122 faculty members which ensures effective teaching and learning process. The supporting staff members (Non Teaching and Technical) on roll are 63.

The institute has well defined service rules which includes recruitment and promotional policies for all the teaching and non-teaching staff members. Institute follows the recruitment process of teaching faculty as prescribed by SPPU. For an effective implementation of the policies like time office management, leave rules, increment and promotion etc. are framed and followed.

There ought to be certain grievances major or minor, to mitigate and to resolve there is mechanism in the form of various committees like Internal Committee for Grievance Redressal Committee/Sexual Harassment at Work Place, Minority, OBC and SC/ST. These committees meet periodically.

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

### **6.2.3 Implementation of e-governance in areas of operation: 1.Planning and Development 2. Administration 3. Finance and Accounts 4. Student Admission and Support 5.Examination**

**A. All 5 of the above**

**B. Any 4 of the above**

**C. Any 3 of the above**

**D. Any 2 of the above**

**Response:** A. All 5 of the above

File Description	Document
ERP Document	<a href="#">View Document</a>
Details of implementation of e-governance in areas of operation Planning and Development,Administration etc	<a href="#">View Document</a>
Screen shots of user interfaces	<a href="#">View Document</a>

### **6.2.4 Effectiveness of various bodies/cells/committees is evident through minutes of meetings and**

## implementation of their resolutions

### Response:

Academic Monitoring Committee (AMC) in its meeting has suggested and resolved the implementation of tutor system with corrective reforms. Institute has implemented this suggestion and adopted the reform in the form of effective number of students assigned to each tutor.

### Example:

### Effectiveness of Tutor System:

Institute has implemented Tutor system, where a senior teacher is appointed as Institute level Tutor coordinator. Institute level tutor coordinator works in coordination with all the departmental Tutor coordinators. Departmental tutor devises a plan for respective tutors with a batch of 15-20 students. Each Tutor acts as a guardian and guides students to solve their personal as well as professional problems. Students shares their personal and academic related issues with their tutors. It bridges the gap between students, faculty, hostel wardens and parents. Tutor system helps in overall development of students, decision making skills and confidence through regular counseling.

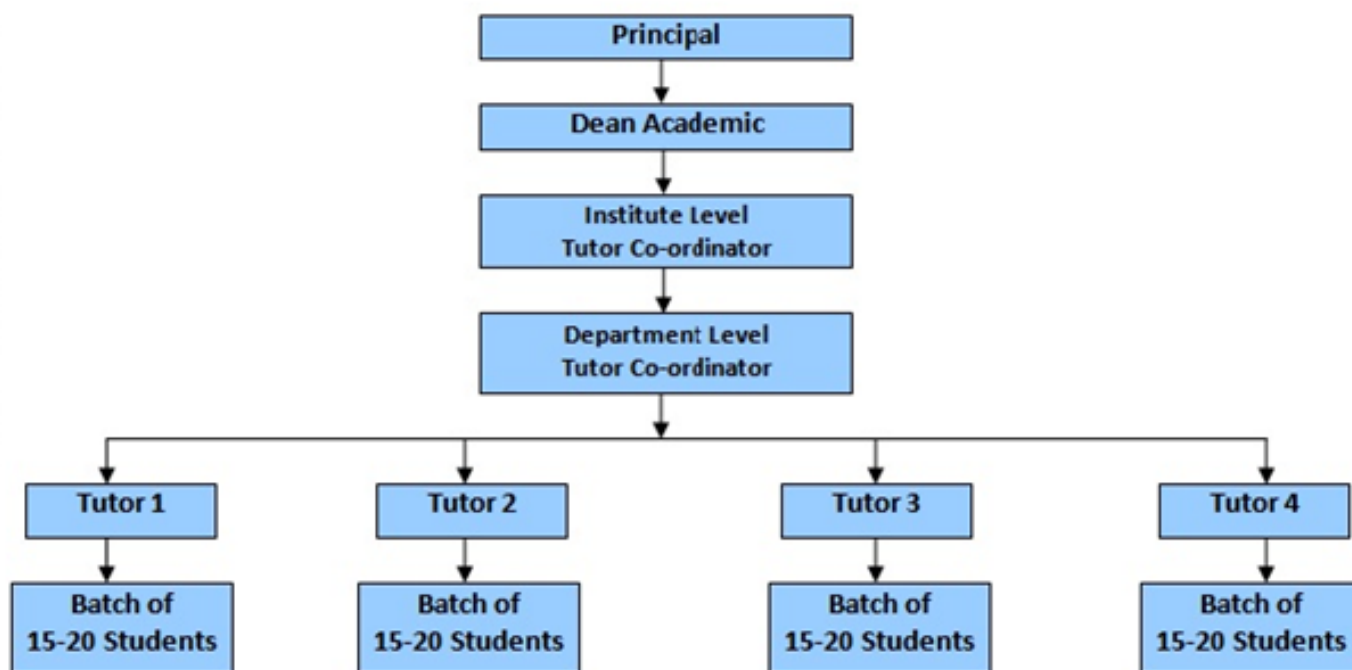


Fig. 6.2.4.1 Tutor System of Institute

After discussing the problems with students, tutor tries to solve minor problems at his/her own level anything beyond this is forwarded to department level tutor coordinator. Then Department level tutor co-ordinator collectively forwarded these problems to Institute level Tutor coordinator. After receiving the problems from all departments, Institute level tutor coordinator does the analysis and discusses all problems with Principal and respective Deans. After discussion, issues are forwarded to respective sections for corrective action.

Further issues raised by students are reviewed and conveyed to them in subsequent tutor meets. The institute believes in continuous evaluation and follow up actions on issues related to stakeholders. This

process continues till students gets overall solution and satisfaction regarding the problem raised. If needed parents are also involved in the process.

Following are the general problems raised during Tutor meets-

1. Hostel facility.
2. Canteen facility.
3. Institute Transport facility.
4. Academic relates issues.
5. Sports activities.
6. Increase frequency and number of state Buses.

### **Tutor System Minutes of meetings and implementation of their resolutions:**

The Institute is known for providing bus facility on various routes of Nashik city, for the transportation of the students and faculty members. Initially our first pick up point was Devlali bus stop, but students who were staying further 2.5 km away from Devlali had to come at Devlali bus stop to reach first bus pick up point in order to reach college by college bus. These students raised the issue of starting college bus service from Bhagur instead of Devlali, in their tutor meet held on August 2014. This issue was taken further by the tutor to the departmental tutor. Department level tutor coordinator forwards these to Institute tutor coordinator after the requisites and facts.

Later this matter was discussed in detail by Principal and Dean Administration. The issue went to the transport department via Dean Administration, as it was put forth by our main stakeholders and was in the benefit of their well being. In a very short span of time, college extended its bus service commuting from Bhagur bus stop and resolved it further. Facility saw many more admissions next year from the same region with satisfaction of students and parents.

<b>File Description</b>	<b>Document</b>
Any additional information	<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:**

1. Loan Facility from the Institute's Cooperative Credit Society.
2. Lien facility.
3. Women Empowerment Program.
4. Provident Fund.

5. Gratuity.
6. Maternity leaves for female Teaching & Non-Teaching staff.
7. Study Leave, Medical leave, etc.
8. Medical Insurance for Employees.
9. Free Health Check-up camp.
10. Financial support for up gradation of knowledge through QIP/ conferences/ Workshops/STTP/Seminars.
11. Transportation facilities for staff.
12. Emergency service (Ambulance etc.)
13. Superannuation Scheme.
14. Subsidize family and batchmates accommodation for needy staff.
15. Tie up with Hospital.
16. Recognition of faculty members for achievements - felicitation of faculty members after PhD.

### 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:** 17.24

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

2016-17	2015-16	2014-15	2013-14	2012-13
9	30	40	23	3

File Description	Document
Any additional information	<a href="#">View Document</a>
Details of teachers provided with financial support to attend conferences,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:** 6.6

6.3.3.1 Total number of professional development / administrative training programs organized by the Institution for teaching and non teaching staff year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
8	11	8	4	2



File Description	Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
Reports of the Human Resource Development Centres (UGC ASC or other relevant centres).	<a href="#">View Document</a>

### 6.3.4 Average percentage of teachers attending professional development programmes viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programme during the last five years

**Response:** 44.49

6.3.4.1 Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
60	78	73	35	21

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

### 6.3.5 Institution has Performance Appraisal System for teaching and non-teaching staff

**Response:**

Institute has well defined process for performance appraisal of teaching and non-teaching staff members.

General Parameters for performance appraisal of teaching staff are-

1. Results of subjects taught
2. Students Feedback
3. Publications in National/ International Journals and Conferences, patents,
4. Research Projects / Testing and Consultancy
5. Participation in Co-curricular Activities like (Value Added Program, Workshop, Expert Lecture,

- Industrial visit, Hobby Club etc.)
6. Participation in Extra Curricular Activities like (Sandipotsav, National Service Scheme etc.)
  7. Contribution in departmental activities
  8. Effective implementation of Tutor System
  9. Qualification Up gradation
  10. Behavioral Attitude
  11. Efforts taken for Placement and promotional activities etc.

Parameters for Performance appraisal of non-teaching staff members includes-

1. Technical Competency
2. Participation in Co-curricular Activities like (Value Added Program, Workshop, Expert Lecture, Industrial visit, Hobby Club etc.)
3. Participation in Extra Curricular Activities like (Sandipotsav, National Service Scheme etc.)
4. Contribution in departmental activities
5. Contribution in foundation level work, CSR activities and overall behavioral Attitude of an individual.

Performance appraisal form of administration staff members includes parameters are qualification improvement, overall experience of the candidate, Grade on basis of performance.

All the staff members have to fill their respective performance appraisal form and submit to their respective department or section head. Head assesses the form of all staff members and assigns the points, based on the information provided by an individual. Then it is forwarded to the Principal for approval and authentication, and then it is submitted to management for compliance if any in the appraisal actions.

File Description	Document
Any 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:

Institute conducts Internal and External Financial audit every year to ensure financial compliance.

Internal audit is conducted by the parent body of Sandip Foundation. It is conducted twice a year. Financial compliance report of internal audit report is submitted to the Management of Sandip Foundation.

The institution is having qualified practicing Chartered Accountant as an external auditor. Statutory financial audit of Institute is conducted in two sessions

1. First in the month of November/ December for period of six months starting from April to September

2.Second in the month of May/ June for the period from October to March.

Finalization of account is completed in June and audited statement is prepared in July.

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

**Response:** 0

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

2016-17	2015-16	2014-15	2013-14	2012-13
0	0	0	0	0

File Description	Document
Details of Funds / Grants received from non-government bodies during the last five years	<a href="#">View Document</a>

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

**Response:**

The major source of institutional funding is through tuition fees. The collected fund is deposited in bank and all expenses are carried out through bank transaction process. The institute has adopted well defined process for optimal utilization of resources including financial resources.

- 1.Before the beginning of academic year, each department and section are preparing and submitting the budget to the Principal.
- 2.The Institutional budget includes major expenses like salary, maintenance, purchasing apparatus.
- 3.The departmental budgets are discussed by the Principal, HOD's, Registrar, Account section in meeting and then sent to the management for approval. Then it is put up to the Governing Body for final approval.
- 4.Sanctioned budget copy is sent to the Principal, HOD's, Registrar, account section and Central Purchase Committee (CPC).
- 5.Requirement note with detail technical and non-technical specification is prepared by the concerned faculty of the department, which is signed by the HOD, Principal & then approved by the Honorable Mentor.
- 6.Approved copy of the requirement is sent to the CPC.
- 7.CPC sends the price request letters to the registered vendors to call upon the quotations for the same.
- 8.Comparative statement is prepared by the CPC as per the quotations received & signed by the CPC,

HOD & Principal as per due process.

9. Meeting is arranged with the HOD, CPC & lab in charge or experts for the discussions on Technical specifications mentioned in the quotation by the vendor.
10. Shortlisted vendors are called upon for negotiation meeting with the HOD, CPC & lab in charge or experts.
11. The vendor is finalized on the basis of the specifications, rates quoted, quality of the product, past experience discussed in the negotiation meeting.
12. Purchase order is prepared along with terms and conditions by the concerned department on the basis of the comparative statement & signed by the CPC, HOD, Principal, Honorable Mentor & Chairman.
13. PO is prepared in triplicate format. One signed copy is given to the vendor, one copy is kept with department & one copy is submitted to the account department.
14. Once the material is delivered, installation, testing and demonstration is carried out.

The concerned department makes the entry of the material in dead stock register/ consumable register.

1. Internal Audit is carried out by department to requisite the specifications and financial requirement.
2. Department sends one copy of PO along with the bills & delivery challan (stamped by security) to the store department.
3. Store department makes the entry in central good register, and prepares the bill form.
4. The bill form along with the PO, bills & delivery challan is signed by the store, account section, registrar & Principal.
5. According to the bill form, payment is made by cheque to the vendor.
6. Servicing, maintenance and repairs of instruments and equipment is carried out regularly.
7. Inter-departmental verification of dead stock and records is regularly maintained. Reports of which are regularly submitted to the Principal.
8. If in case, the requirement amount exceeds the sanction budgeted amount, then respective department head or section in charge put special sanction requirement note. This note clearly mentions the excess amount and gets it approved from Principal and management.

## 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:

IQAC plays an important role in improving the quality of academic and administrative activities of the Institution. Institute has Academic Monitoring Committee (AMC) which is working in line with the parameters of Internal Quality Assurance Cell (IQAC). The formal constitution of AMC includes Principal, Dean Academics and Academic Co-coordinators of all the departments. The major role of AMC is to look after the regular and timely completion of academics, student feedback and support. The objective of AMC is to strengthen the overall teaching learning process and to ensure maximum academic performance of the students.

Functionality of AMC is describes as below-

- To Prepare the Academic Calendar of the Institute at the beginning of each semester as per the University Academic calendar.
- To monitor the Load / Subject distribution of all departments along with Head of the respective department.
- To monitor the academic activities in the Institute i.e. the regularity of the Theory and practical classes.
- To monitor the activities of Class Teachers & Tutors with Head of respective department.
- Monitoring of Staff Feedback system along with Head of the respective department.
- To finalize the formats related to academics along with Head of Department.
- Conduction of Academic Audit.

### **Best Practices in institute**

- 1.Regular Academic Audit
- 2.Customized ERP system
- 3.Tutor System
- 4.Earn and learn scheme
- 5.Proficient Student association
- 6.Tie-Ups and Exchange programs with International Universities and Industries/Agencies
- 7.Scholarship to Meritorious students
- 8.Multidimensional Training and Placement cell
- 9.Innovative EDP cell
- 10.Enriching Faculty Development Program
- 11.Adaptive Employability Skill Program
- 12.Creative IPR and Copyrights

### **Best Practices:**

#### **1. Title of the practice: Academic Audit**

#### **Objectives of the Practice:**

- To stream line academic functions and standardize practices.
- To ensure every faculty member performs his/her best in teaching and research.
- To provide feedback to faculty members on the areas which need improvement.
- To make sure uniformity in teaching-learning process.
- To ensure topics beyond curriculum are covered in every subject.
- To ensure practical and project based teaching-learning approach.

#### **The Context:**

- Innovative teaching pedagogy by faculty members.
- Full proof documentation and standardized formats.
- Improved performance of students in internal as well as external examinations.
- Overall development of students.
- Standardization of practices for quality control.
- Monitoring and control mechanisms.

- Benchmarking for improved performance.

### **The Practice:**

Academic audit is conducted once in every semester. Every faculty member maintains course file and manual for practical subjects handled during a particular semester which includes

- Attendance records
- Question bank on every unit
- Lab manuals
- Content beyond syllabus
- Samples of answer papers
- Qualities assessment samples
- Copies of teaching material
- Copies of test question papers
- List of experiments conducted
- The course files are assessed by departmental academic coordinator and feedback of the same is given to Head of Department and Academic monitoring committee.

### **Evidence of successes:**

- The audit mechanism has enhanced teaching quality and faculty member's contribution which enhance student's satisfaction and performance.
- Overall performance of the students in written/practical/oral examination is increased due to innovative and effective teaching methodology of faculty members.
- Students have excelled in their creative skills, working models and presentations.
- Attendance and assessment records maintained by faculty members are up to the standards.
- Placement percentage is improved due to academic monitoring, innovative and project Based teaching-learning.

## **2. Title of the practice: Tutor System**

### **Objectives of the Practice:**

- To solve personal and professional issues of students.
- To bridge the gap between students and faculty members.
- To develop positive attitude of students.
- To improve the attendance of student.
- To improve result of students.
- To create interest of student in teaching-learning process.
- To motivate students to take part in extra activities and Co-curricular activities.

### **The Context:**

- Monitoring and control mechanisms of student attendance.
- Monitoring of students academic Progress.
- Overall development of students

- Standardization of practices for quality control

### The Practice:

The institute appoints a Institute level tutor coordinator for tutor system assisted by the departmental tutor Coordinator. Each Departmental Time Table Co-ordinator assigned one Tutor slot for a batch of 15 – 20 students. Tutor meetings are held as per schedule given by Institute level Tutor coordinator.

In First Tutor Meet, students write their personal information, fill academic record, achievements, awards, participation in extra and co-curricular activities before joining the institute in the tutor book. This helps to identify the past academic record, skill and area of interest of student. Afterwards every fortnight tutor meet is conducted, where problem faced by student is discussed. Department level problem is solved in department, while others institute level problems like hostel, transport etc. are forwarded to Departmental level Tutor Coordinator. Department tutor co-ordinator forwards these to Institute level Tutor Co-ordinator for further action. Institute level Tutor Coordinator raised all the problems in front of Dean Academics and Dean Administration. Further actions are taken by Dean academic and Dean Admin to resolve the students Problem.

### Evidence of successes:

- Tutor System bridges formal as well as communicative gaps between the students and faculty members of institution.
- Effective in easing out the students' personal difficulties.
- Positive influence on the student's academic performance & interest in learning.
- Students are able to understand importance of self-Development.
- Improves Interpersonal relationship.
- Setting goals of educational, career & personal.

File Description	Document
Any 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

#### Response:

Institute has separate Academic Monitoring Committee (AMC) which monitors all academic related activities in consultation with Dean Academics. AMC is working in line with the parameters of Internal Quality Assurance Cell (IQAC) set up by the college recently. AMC reviews teaching learning process regularly and take appropriate cognizance for the respective changes in teaching learning process, structures & methodologies of operation. Based on such receiving AMC suggests the reform to enhance the quality of education.

Following are the two examples of institutional reviews and implementation of teaching learning reforms.

**1) Syllabus coverage as per University Exam pattern:**

Savitribai Phule Pune University, Pune has changed its examination pattern for First year engineering in 2012 and for second year engineering in 2013. Instead of 100 marks theory exam, they introduced 50 marks In-sem online exam and 50 marks for end-sem theory exam. AMC analyzed and identified the need of online based syllabus coverage, hence changed the pedagogy accordingly. The decision to convert practical slots in theory was taken after meetings of AMC. This conversion benefited students to have enough time for the preparation of online exam within the time slots. Further extra time slots are provided for practical completion.

Similarly in 2014, SPPU introduces In-sem exam for Third year and final year engineering students at the mid of semester. In-sem pattern require covering first 03 units out of 06 units. AMC gives special attention on timely conduction of unit wise syllabus coverage. From syllabus coverage report AMC ensures the completion of syllabus before the commencement of In-sem examination schedule.

**2) Problem based Pedagogy**

As per the guidelines of SPPU course structure, definite number of hours has been assigned for each subject. Some subjects have assigned 4 lectures while others have 3 lectures per week. Faculty members having subject of 03 lectures per week were facing problem to complete syllabus in specific duration. Considering the need of Faculty members, AMC has suggested to allocate one extra lecture in time table. This decision was helpful in syllabus coverage; beneficial for understanding the basic concepts, thereby enhancing their learning capabilities.

These reforms are adopted by the Institute based on the suggestion of IQAC/AMC.

**6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year**

**Response:** 1

**6.5.3.1 Number of quality initiatives by IQAC for promoting quality year-wise for the last five years**

2016-17	2015-16	2014-15	2013-14	2012-13
1	1	1	1	1

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	<a href="#">View Document</a>

**6.5.4 Quality assurance initiatives of the institution include:**

**1. Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual**



**Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements**

2. Academic Administrative Audit (AAA) and initiation of follow up action
3. Participation in NIRF
4. ISO Certification
5. NBA or any other quality audit

A. Any 4 of the above

B. Any 3 of the above

C. Any 2 of the above

D. Any 1 of the above

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

File Description	Document
Details of Quality assurance initiatives of the institution	<a href="#">View Document</a>

### 6.5.5 Incremental improvements made during the preceding five years (*in case of first cycle*) Post accreditation quality initiatives (*second and subsequent cycles*)

**Response:**

Following quality enhancement initiatives are incorporated by the institution

In the year 2012-13 Institute has started Aptitude training and Soft skill for students of FE to BE. Aptitude sessions proved to be beneficial in their career development, sharpening their technical skills, logical and reasoning abilities. Soft skill enhances their interpersonal communication skills, adapting with diverse culture and personality development.

In the year 2013-14 Institute has started patent and publications of projects of final year student's reputed journals. By Patent activity students gain exposure to patent, intellectual property and copyright law essentials and publications practice encourage undergraduate students to disseminating their work at global level by publishing their paper in reputed academic journals.

In the year 2014-15 Institute started Summer School Training Program for students with collaborated universities in abroad. These collaborations will help students in connecting the researchers around the globe and to discuss and share their innovative ideas with students of their area of interest.

In year 2015-16 Institute started its National Service Scheme. NSS Students conducted tree plantation, visit to old homes and orphanages, Swachata Abhiyan, blood donation camp, free medical checkups, organ donation awareness etc. These activities instill social skills, exploring different situations and cultures, self-satisfaction among students.

In year 2016-17 Hobby club was launched in considering the needs of students to nurture and develop their hidden skills and talents. The activities are like Photography, Robotics, Sports, Art and Craft club. These activities improve student's self-esteem, competitive spirit and sportsmanship.

NAAC

## Criterion 7 - Institutional Values and Best Practices

### 7.1 Institutional Values and Social Responsibilities

#### 7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

**Response:** 9

##### 7.1.1.1 Number of gender equity promotion programs organized by the institution year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
3	4	0	0	2

#### File Description

#### Document

Any additional information

[View Document](#)

List of gender equity promotion programs organized by the institution

[View Document](#)

#### 7.1.2

##### 1. Institution shows gender sensitivity in providing facilities such as:

1. Safety and Security
2. Counselling
3. Common Room

**Response:**

Anokhi group is created to bring awareness to all girls students and ladies staff for women empowerment and gender equality. SIEM believes in values of equality, liberty, justice and fraternity enshrined in the Preamble of our Constitution.

The institute has organized several programmes like speeches, discourses, awareness and action oriented programs to promote Gender Equality. The Institute adheres to promote equal opportunities to boys and girls by providing quality based education as social and economic outcomes are no longer impacted by the gender.

Security and Campus Safety is 24 hour, 365-day to provide a safe and secure environment. CCTV Surveillance in sensitive areas is implemented to ensure safe and secured environment. Girls and boys hostels are guarded by security to ensure the safety of the residents. SIEM Hostel girls and boys are counselled regularly regarding life away from parents as it teaches sense of responsibility and independence, self-learning, interpersonal skills and financial management. Two lady rectors are in-charge of girls hostel. A counsellor is available to address the personal & professional problems of students.

Students can refer the counsellor regarding career advice, academic counselling or to provide guidance towards troubles in personal lives. Teachers as mentors, ensure inculcating social values and responsibilities, self-motivation and professional ethics in students. Due to sufficient number of lady faculties in each department, there is good bonding and rapport with all students.

Girls and boys common room is provided in all departments for the faculties and students for the general purpose and in case of emergency. Common room is spacious, well ventilated having two cots, a table, some chairs and vending machine. All students are made aware of various social issues at regular intervals by speeches and seminars given by experts. A lady and male doctors are available on 2 specified days a week for 2 hours. In addition, a male doctor is available for 6 days a week, for 2 hours daily for hostel and the college.

All students fill up anti-ragging form at the beginning of the academic year to exercise empathy and create respect for all on the campus. Medical check-up camps are organised every year to inculcate healthy habits and lifestyle in all students. The institute has tie-ups with nearby hospitals for the timely service in emergency.

CR is nominated from each class. One LR each for hostel and day scholars are appointed to attend to the grievances and inform the authority as and when required. Two lady faculties remain present in each college bus to prevent any kind of harassment and to ensure respectful learning environment for all.

- Every year women day is celebrated on 8th March. Experts share their experiences and interact with girl students to discuss gender equality in a conducive environment.
- Sports activities are organized for all students to build strong mind, body and spirit.
- Students learn good sportsmanship by participating in various indoor and outdoor games.

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

### 7.1.3 Alternate Energy initiatives such as:

#### 1. Percentage of annual power requirement of the Institution met by the renewable energy sources

**Response:** 24.67

#### 7.1.3.1 Annual power requirement met by the renewable energy sources (in KWH)

**Response:** 109281

#### 7.1.3.2 Total annual power requirement (in KWH)

**Response:** 442901

File Description	Document
Any additional information	<a href="#">View Document</a>
Details of power requirement of the Institution met by renewable energy sources	<a href="#">View Document</a>

#### 7.1.4 Percentage of annual lighting power requirements met through LED bulbs

**Response:** 7.99

7.1.4.1 Annual lighting power requirement met through LED bulbs (in KWH)

Response: 7057

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 88308

File Description	Document
Any additional information	<a href="#">View Document</a>
Details of lighting power requirements met through LED bulbs	<a href="#">View Document</a>

#### 7.1.5 Waste Management steps including:

- Solid waste management
- Liquid waste management
- E-waste management

**Response:**

Cleaning and Gardening services in the campus are outsourced. The solid waste generated in the campus from gardens, green belts and the canteen is collected by the external agency and taken to the municipality waste for its proper disposal where municipality takes up further treatment. Due to daily working in ERP, generation of paper waste is very low. Cleaning staff is engaged in cleaning the campus from 8:30 am to 5:30 pm on working days. Awareness of **no use** of plastic has brought the usage of plastic to minimum. Separate dust-bins are provided for collecting biodegradable and non-biodegradable wastes. Modern tools and machines are used for cleaning purpose.

The installation of a proprietary biogas generation plant in the campus is under consideration which will be fed from the biodegradable solid waste such as food waste, garden waste, dried plants etc. generated on the campus.

The wastewater is generated from the wash rooms, canteen, hostels. SIEM, SIP, Canteen have a common soak pit of 35' x 35' x 25' situated in the nearby vicinity. The top slab cover of the soak pit also acts as a base for the rose garden which is developed full-fledged over the years. However, a separate sewage

treatment plant (STP) is under construction at a different location in the campus. The liquid waste is collected at a point to take it to the plant. This plant is based on the symbiosis principle in which green algae and hyacinth treat the sewage. The treated sewage is planned to discharge for gardening, flushing, and irrigation purposes. Efficient plumbing and subsequent drainage systems exist in the campus. Sufficient quantity of wash water is available at the required places which also helps in handling of liquid waste efficiently.

As the institute is only 8 years old, the E-waste may be generated in near future. However certain measures in advance are considered to take care of E-wastes. Updating the systems, donating the systems to the needy organizations/schools where latest configuration is not required, making MOU with the vendors including the clause for used systems, giving back the systems, peripherals to the manufacturing company for recovery of the parts in order to reuse.

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

### 7.1.6 Rain water harvesting structures and utilization in the campus

#### Response:

Rain water harvesting is done to store and conserve the rain water available in rainy season so that it can be used as and when required during the year. Second purpose is to help recharge the ground water table.

The institute's green campus is naturally existing as well as artificially created contours have helped creating beautiful landscape and useful watershed areas. Watershed area at the top with sloping ridges at its sides have facilitated maximum collection of water, without wastage, at certain points on the ground which discharges in the surface drains located at the side of the pedestrian roads. The uncollected freely flowing rain water is intercepted by the green plants which are present abundantly in the campus.

Typically, the rain water is collected in two water reservoirs of capacity 90,000 cu.m and 65,000 cu. m and nine usable natural wells which are sufficient to fulfill the needs of the institute and the campus. Due to effective water management, ecosystem & flora & fauna is maintained; underground water table increases; and water supply is available in critical times.

During monsoon when the reservoirs gets flooded, excess water is diverted to Kapila river which is connected to Godavari. Everybody including students and faculties participate in maintaining green campus.

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

**7.1.7 Green Practices**

- **Students, staff using**
  - a) **Bicycles**
  - b) **Public Transport**
  - c) **Pedestrian friendly roads**
- **Plastic-free campus**
- **Paperless office**
- **Green landscaping with trees and plants**

**Response:**

Wide verandas & passages, large sliding windows of classrooms allow sunlight and air to come in thereby reducing usage of power. The faculty, staff and students are advised to switch off power supply, if it is not required.

Majority of college staff and students commute by college buses as well as by car-sharing. (Battery) Electrically operated vehicle is at the service inside the campus for staff and visitors. Solar water heaters in hostels, LED lamps in campus use renewable energy which reduces electricity. Shady trees and shrubs are planted all over the campus. No burning of wastage is maintained and garbage is disposed of with proper methodology. ERP system favors the paperless office. All this help in carbon neutrality.

Gardening is outsourced. Sprinkler irrigation system is used for the optimization of use of water. The campus greenery consists of 2917 fruit trees, 838 big trees, and around 50000 shrubs surrounding the institute. Motivational slogans are displayed in campus in favor of green campus and no-plastic zone. Seminars of carbon neutrality, Workshop for Reuse, Reduce and Recycle, are organised in college to inculcate and implement objectives of environment friendly green campus. RO waste water is used in gardening.

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

**7.1.8 Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years****Response:** 7.47

7.1.8.1 Total expenditure on green initiatives and waste management excluding salary component year wise during the last five years(INR in lakhs)

2016-17	2015-16	2014-15	2013-14	2012-13
26.79827	69.37269	68.39446	61.72065	27.72657

File Description	Document
Details of expenditure on green initiatives and waste management during the last five years	<a href="#">View Document</a>
Green audit report	<a href="#">View Document</a>

### 7.1.9 Differently abled (Divyangjan) Friendlines Resources available in the institution:

1. Physical facilities
2. Provision for lift
3. Ramp / Rails
4. Braille Software/facilities
5. Rest Rooms
6. Scribes for examination
7. Special skill development for differently abled students
8. Any other similar facility (Specify)

A. 7 and more of the above

B. At least 6 of the above

C. At least 4 of the above

D. At least 2 of the above

**Response:** B. At least 6 of the above

File Description	Document
Resources available in the institution for Divyangjan	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years

**Response:** 12

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
4	4	4	0	0



File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	<a href="#">View Document</a>

**7.1.11 Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere)**

**Response:** 21

7.1.11.1 Number of initiatives taken to engage with and contribute to local community year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
7	5	9	0	0

File Description	Document
Report of the event	<a href="#">View Document</a>
Details of initiatives taken to engage with local community during the last five years	<a href="#">View Document</a>

**7.1.12**

**Code of conduct handbook exists for students, teachers, governing body, administration including Vice Chancellor / Director / Principal /Officials and support staff**

**Response:** Yes

**7.1.13 Display of core values in the institution and on its website**

**Response:** Yes

**7.1.14 The institution plans and organizes appropriate activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations**

**Response:** Yes

File Description	Document
Details of activities organized to increase consciousness about national identities and symbols	<a href="#">View Document</a>

**7.1.15 The institution offers a course on Human Values and professional ethics**

**Response:** Yes

File Description	Document
Provide link to Courses on Human Values and professional ethics on Institutional website	<a href="#">View Document</a>

**7.1.16 The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions**

**Response:** Yes

**7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years**

**Response:** 22

7.1.17.1 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year wise during the last five years

2016-17	2015-16	2014-15	2013-14	2012-13
5	5	4	4	4

File Description	Document
List of activities conducted for promotion of universal values	<a href="#">View Document</a>

**7.1.18 Institution organizes national festivals and birth / death anniversaries of the great Indian personalities**

**Response:**

SPPU has instructed to celebrate national festivals and birth / death anniversaries of Great Indian personalities. National festivals like Diwali, Ganpatiustav, Id, Christmas, Janmashtami, are celebrated by wishing each other on those days and holidays are declared on such days by the University.

Birth days or death anniversaries of all Great Indian Leaders are celebrated every year with pride to commemorate them. On such a day, a photo of the leader adorned by garland and a lamp, is kept near the reception counter of the institute. The teachers, staff and the students offer flowers and light a lamp to the photo religiously. To name a few, some of the National personalities remembered on their anniversaries are

as follows.

Sr No	Name of the Personality	Date
1	Savitribai Phule (Birth Anniversary)	3 January
2	Veer mata Jijabai (Birth Anniversary)/ International Youth Day	12 January
3	Netaji Subhashchandra Bose (Birth Anniversary)	23 January
4	Republic Day	26 January
5	Chatrapati Shivaji Maharaj (Birth Anniversary)	19 February
6	Yashwantrao Chavan (Birth Anniversary)	12 march
7	Shahid Din	23 March
8	Mahatma Jyotiba Phule (Birth Anniversary)	13 April
9	Dr. Babasaheb Ambedkar (Birth Anniversary)	14 April
10	Maharana Pratap (Birth Anniversary)	28 May
11	Lokmanya Tilak (Birth Anniversary)	23 July
12	Independence Day	15 August
13	Lal Bahadur Shastri (Birth Anniversary)	2 October
14	Mahatma Gandhi (Birth Anniversary)	2 October
15	A P J Abdul Kalam (Birth Anniversary)	15 October
16	Indira Gandhi (Death Anniversary)	31 October
17	Rashtriya Ekatmata Diwas	31 October

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

### 7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions

#### Response:

Institute maintains complete transparency in financial matters like investments in academic facilities, fee collection, remuneration of exam, investments towards the technical fest and cultural festival, project exhibition, purchase of equipments, softwares and furniture. Audited financial information and complete audit report, is sent to the Income Tax Department, the Charity Commissioner, the State Government and Fees Regulatory Authority (FRA). The complete audit report and the letter received from FRA are also uploaded on website which remain there on the website of the institute for that particular academic year for public domain till next upload.

The teacher prepares the teaching plan that involves the distribution of the syllabus contents within the stipulated number of teaching hours. The teacher teaches as per the plan and also covers some portion beyond the syllabus. Every effort is made to complete the syllabus. If any lecture is missed against the plan, then teacher tries to compensate it at other times. The important notes and practice-question bank are intimated with hints to the students before the tests or exams. The teachers evaluate the results of the exams, talk to the students who have acquired less marks, suggests or teaches difficult parts and ethically takes responsibility for the best understanding of the subjects to the students. Teacher also monitors the performance of each students in his/her subject and accordingly deals with the subject. Teacher also tries to ensure that the result of the concerned subject is improved every year and accordingly modifies

teaching plan and pedagogy. Teachers keep themselves updated with the current knowledge and technological changes of the concerned subjects. This Academic transparency ensures the better performance of the students in exams and co-curricular activities.

Administration transparency is maintained in implementing the uniform policies, faculty selection and retention, quality services to the students, acting as the interface between the university and the institute. Important information like Institute level quota seats for admissions, fees fixed by the Fees Regulating Authority etc are uploaded on institute website and the notice boards. Similarly the various details submitted to AICTE for extension of approval (EoA) are uploaded on the website. Mandatory disclosure is also uploaded on the institutes website.

Auxiliary function transparency : The functions like watering the plants outside the campus, the transport arrangements on time for the students for industry visits, Sports day, cultural day, technical fests and the other important days are organized with advance notice for the students and the faculty. The prizes, certificates and medals on particular days are distributed to the students as planned.

## 7.2 Best Practices

### 7.2.1 Describe at least two institutional best practices (as per NAAC Format)

**Response:**

**Best Practice:**

**1. Title of the Practice : International Internship**

**Objectives:**

To provide an opportunity to work on projects in future technology

To provide International exposure to the students.

To develop global employability skills.

**Outcomes of the Training:-**

Exposure to professional behavior

Better chances of employment

improving problem-solving and critical thinking skills.

Certification from the University.

**The Practice:**

The training is offered under the Project Based Learning (PBL) environment. The parameters considered for students' selection for Summer School are Area of Interest and Academic Performance, along with the information about student's participation in value addition programs and co-curricular activities. During the training of 45 days, students work on the selected projects of the training under the guidance of the tutor assigned by the host University and try to complete minimum one project.

#### **Evidence of successes:**

Summary of the students participated in the Summer school Training is as follows.

- 5 students for Technical University, Sofia, Bulgaria (2014)
- 19 students for Technical University, Sofia, Bulgaria (2015)
- 9 students for Technical University, Sofia, Bulgaria (2016)
- 6 students for Athens Information Technology, Greece (2016)
- 5 students for Ural Federal University, Russia (2016)
- 18 students for Klaipeda State University of Applied Sciences, Lithuania (2017)

Total 62 participants are benefited from the training in terms of their projects, publication of papers and placements.

#### **Problems Encountered:**

- students interests and the topics covered under VAPs In India, may not be available at in collaborated university.
- Some students face problems in Food, new environment, and different weather conditions existing abroad.

#### **Resources required**

The resources required are (1) MOUs of host institute /University with the foreign Universities (2) Financial support to students (3) Permission from the parents (4) Authentic documents of the travel (5) selection process

## **2. Title of the practice: Intellectual Property Rights (IPR)**

#### **Objectives of the Practice:**

- To identify, protect and leverage the rights of IPs that are generated from research, patents and copyrights.
- To Provide a fair balance between the rights of inventors/applicants and third parties.

#### **The Context:**

- Promote innovation via the reward granted to the inventor.
- Promote technology diffusion via publication and access to patents documents.
- Promote competitions through innovations.

**The Practice:**

- The main IP policy (Part A) presents the generic position of SF. The *inventions related IP policy* (Part B) relates to patent, design, layout, trademark, bio diversity and related rights whilst the *expressions related IP policy* (Part C) provides direction for the copyright and related rights.
- Various forms that explain in detail the sub processes, various situations and required documentation will be included as a part of the implementation of this policy.
- Working out the financial outlays for patents with registration process and filing of the patents proposals.

**Evidence of successes:**

- Due to moral support of Institute, enhancement in filing national level patents has been observed and till date total 62 patents are filled in Indian Patents.

The Controller General of Patents Designs and Trademarks (CGPDTM), Government of India published nation-wide ranking of institutes in which Sandip Foundation's Sandip Institute of Engineering and Management, ranked Eighth 8th among top 10 Indian Applicants for Patent from Institute & Universities, 2014-2015 along with IITs, IISc and few eminent universities.

**Out of 62 patents filed, 38 patents are published. Summary is as follow:**

Academic Year	Number of Patents Department wise										Total year
	E&TC		Mechanical		Electrical		Computer		Civil		
	Filed	Published	Filed	Published	Filed	Published	Filed	Published	Filed	Published	
2017-18	1	0	4	0	8	0	0	0	0	0	<b>13</b>
2016-17	1	0	8	0	2	0	0	0	0	0	<b>11</b>
2015-16	0	0	0	4	0	0	0	0	0	0	<b>0</b>
2014-15	0	7	0	9	0	4	0	3	0	0	<b>0</b>
2013-14	0	6	0	2	0	3	0	0	0	0	<b>0</b>
Total	2	13	12	15	10	7	0	3	0	0	<b>24</b>
<b>Total Patents</b>	15		27		17		3		0		<b>62</b>

**Patents are filed and published in collaboration with Industries as below.**

A Y	Name of inventor	Title	Application No	Filing Date	Date of Publication	Sponsored by
<b>File Description</b>			<b>Document</b>			
Any additional information			<a href="#">View Document</a>			

**7.3 Institutional Distinctiveness****7.3.1 Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust**

**Response:**

Training and Placement Cell of Sandip Institute of Engineering and Management has taken various initiatives to enhance training, placement and internship opportunities for all the students of Engineering in strengthening its mission towards the institute's excellence. Sandip Foundation believes that "Placement is the result of quality Training". From first year of Engineering, Faculties start moulding students in basic technical aspects. Continuing with Quality technical syllabus, every possible efforts are made to prepare students ready for recruitment process from second year onwards. The mock Interviews are conducted twice in a semester to make sure that students present themselves in a professional manner fearlessly. Through this session students are also mentored to prepare their profiles suited professionally.

With a dedicated Training-Placement Officers (TPO) and excellent support of Department Training-Placement Coordinator (TPC), students get maximum opportunities. While TPO focuses on Global Market; Department TPC strives to fetch maximum opportunities from local industries. Effective teaching-learning process ensures best results in academics that helps maximum students to attain the eligibility criteria for recruitment. Apart from regular curriculum, students are also nurtured in various Value Added Programs (VAPs) designed to make the students aware of current industry market-trends for their branch. Experts from academics and industry and engineers involved in multitasking are invited for interactions to emphasize and explore possible collaboration with the industry. Also thanks to Symposiums and HR Meets that take place. Sandip Foundation is trusted by many Industries; like Mahindra & Mahindra, Bosch, Rishabh Instruments, Thyssenkrupp, Kryfs Components, Zensar Technologies, Yazaki Corporation, Eternus Solutions, Technoforce, Prothious to name a few.

Students are also promoted and motivated to take part in recruitment drives at other places. With rigorous training and grooming sessions, students have shown significant results in placements since last 4 years. Institute has organized Job Fair in 2016 to initiate "zero cost recruitment opportunity" to industries and students as well. Students from other institutes of Maharashtra were invited to take a part in quality Job Fair. Approximately 200 jobs were offered to students of various branches. Leading with a vision of providing industry-ready candidates, the institute has taken major initiative to seek cooperation from various industrial organizations from variety of sectors, ranging from multinational (MNCs) to small scale industries (SMIs). To cope up with corporate challenges, institute has signed MOUs with local and multinational industries to provide better platform to all the candidates in terms of Internship, Sponsored Projects, Industrial Visit, Pre-placement Offers and Final Placements. Institute has taken up a step forward to achieve collaboration with leading giants in India. Sandip Foundation, leading with Vision- to be the best- is creating a bench mark in Placements every year by the virtue of Quality Staff and Supporting Management.

## 5. CONCLUSION

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### Additional Information :

- **Sandip Institute of Engineering and Management** has been Awarded with “ **ISTE Best Campus (Engineering) Award 2018**“ for year 2017-18 by Indian Society for Technical Education (ISTE), Maharashtra – Goa Section.
- **Principal of Sandip Institute of Engineering and Management** will be felicitated with " **ISTE Best Teacher (Engineering) Award**" for the academic year 2017-18 by Indian Society for Technical Education (ISTE), Maharashtra – Goa Section.
- Sandip Institute of Engineering and Management has been awarded with Smart Shiledar Award by – Sakal News Paper- Mar 2017 having Clean, Green and Smart Campus.
- **Sandip Institute of Engineering & Management** is awarded as "Best Engineering Institute" by **Singapore’s prestigious BERG Awards** for Education on 10th Oct-2014 at **Singapore**.
- **Estrade Education Award 2017 – Singapore – Sandip Institute of Engineering and Management** has been conferred with **Best Higher Education Institute award** of the year.
- **Times of India in 2016** have ranked **Sandip Institute of Engineering and Management top 6th Emerging Private Institute**.
- Office of the **Controller General of Patents, Designs, Trade Marks and Geographical Indications, Govt of India** has, in it’s Annual Report 2014-15 **ranked the Sandip Institute of Engineering and Management as 8th amongst top 10 applicants for patents from Institutes and Universities**.

### Concluding Remarks :

The conclusion from the report as discussed with the help of content based analysis of available documents, feedback and reviews of all stakeholders is summarized as follows:

- The Institute has lush green campus with world class facilities to support all functional developments required for higher performing institute. The Institute has been awarded with Clean, Green and Smart Campus Award and recently it is honored with Best Campus Award by ISTE, New Delhi.
- The slogan of Sandip Foundation, “Faculty and Facility Simply World Class” which itself depicts its vision and mission to achieve all desired goals in near future by satisfying its stakeholders.
- Institute focuses on academic excellence to improvise quality of teaching learning process in a conducive environment. This enables in acquiring desired skill and knowledge base required to withstand in a highly competitive environment.
- Institute is planning to cater needs of all individuals by supporting them in applied research in respective area of expertise. Institute is continuously putting all out efforts for International tie-ups in various fields like summer school trainings, industrial internship etc. Institute is striving hard for placements, consultancy and sponsored research projects.
- Institute earned various awards, rewards and recognitions in a short span.