Sinhgad Academy of Engineering

S.No.40/4A, Kondhwa-Saswad Bypass Road,
Near PMC Octroi Post, Kondhwa, Pune. 411048

Internal QualityAssurance Cell

Annual Quality Assurance Report
2016-17

Submitted
to

National Assessment and Accreditation Council, Bangalore, India

Certificate

This is to certify that the Annual Quality Assurance Report 2016-2017, forwarded to

the National Assessment and Accreditation Council, Bangalore is compiled from

the data collected from the official records and is true to the best of our knowledge

& belief.

(Dr. C.G.Patil)

IQAC Coordinator
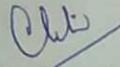
(Dr. K.P.Patil)

Principal

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Part – A

AQAR for the Year: 2016-17

1. Details of the Institution

1.1 Name of the Institution

> Sinhgad Academy of Engineering

1.2 Address Line 1

> S.No.40/4A, Kondhwa- Saswad Bypass Road,

Address Line 2

> Near PMC Octroi Post, Kondhwa

City/Town

> Kondhwa ,Pune,

State

> Maharashtra

Pin Code

> 411048

Institution e-mail address

> saeprincipal@sinhgad.edu

Contact Nos.

> (020)-26934550; (020)-26934550; (020)-26934441

Name of the Head of the Institution:

> Dr. Kishor P. Patil

Tel. No. with STD Code:

> (020)-26934550

Mobile:

> 9545754563

Name of the IQAC Co-ordinator:

> Dr. C. G. Patil

| Mobile | : | 9822743157 |

| IQAC e-mail address | : | iqac.sae@sinhgad.edu |

1.3 NAAC Track ID : MHCOGN26182

1.4 NAAC Executive Committee No. & Date: EC(SC-21)/DO/2017/21.1 dated 23 JAN.2017

1.5 Website address : http://www.sinhgad.edu

Web-link of the AQAR : http://cms.sinhgad.edu/sinhgad_engineering_institutes/saoe/naac.aspx

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1st Cycle	A	3.01	2016-17	2021-2022
2	2nd Cycle				
3	3rd Cycle				
4	4th Cycle				

1.7 Date of Establishment of IQAC :   DD/MM/YYYY   12/10/2015

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC :   *NA*

1.10 Institutional Status

University   State ☐   Central ☐   Deemed ☐   Private ☐

Affiliated College   Yes ☑   No ☐

Constituent College   Yes ☐   No ☑

Autonomous college of UGC   Yes ☐   No ☑

Regulatory Agency approved Institution   Yes ☑   No ☐

(eg. AICTE, BCI, MCI, PCI, NCI)

Type of Institution   Co-education ☑   Men ☐   Women ☐

                  Urban ☑   Rural ☐   Tribal ☐

Financial Status   Grant-in-aid ☐   UGC 2(f) ☐   UGC 12B ☐

                Grant-in-aid + Self Financing ☐   Totally Self-financing ☑

1.11 Type of Faculty/Programme

Arts ☐   Science ☐   Commerce ☐   Law ☐   PEI (Phys Edu) ☐

TEI (Edu) ☐ Engineering ☑   Health Science ☐   Management ☐

Others   (Specify)   .   NA

1.12 Name of the Affiliating University *(for the Colleges)*   **Savitribai Phule Pune University**

1.13 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University	NA		
University with Potential for Excellence	NA	UGC-CPE	NA
DST Star Scheme	NA	UGC-CE	NA
UGC-Special Assistance Programme	NA	DST-FIST	NA
UGC-Innovative PG programmes	NA	Any other (*Specify*)	NA
UGC-COP Programmes	NA		

2. IQAC Composition and Activities

2.1 No. of Teachers	**10**
2.2 No. of Administrative/Technical staff	**01**
2.3 No. of students	**01**
2.4 No. of Management representatives	**02**
2.5 No. of Alumni	**01**
2. 6 No. of any other stakeholder and community representatives	**01**
2.7 No. of Employers/ Industrialists	**01**
2.8 No. of other External Experts	**00**
2.9 Total No. of members	**17**

2.10 No. of IQAC meetings held | 3 |

2.11 No. of meetings with various stakeholders: No. | 5 | Faculty | 02 |

   Non-Teaching Staff Students | 01 | Alumni | 1 | Others | 01 |

2.12 Has IQAC received any funding from UGC during the year?   Yes | | No | √ |

   If yes, mention the amount | NA |

2.13 Seminars and Conferences (only quality related)

   (i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

   Total Nos. | | International | | National | | State | | Institution Level | 1 |

   (ii) Themes | **1. Quality Awareness in Teaching methodology** |

2.14 Significant Activities and contributions made by IQAC

- **Improvement in STR**
- **Collaboration with foreign university-Aalborg university Denmark and Westminster University London(UK)**
- **Faculties were motivated for getting funding for Research project.**
- **Got funding from SPPU of Rs. 14.58 Lacks in year 2016-17**
- **Financial approval for major activities**

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *

Plan of Action	Achievements
1) Encourage the faculty for research activity. 2) Student should encourage to go for skill development program & internship in industry. 3) Faculty to be recruited as per norms.	1) The funded research project increased 2) No. of students pursing such program increased. 3) Faculties recruited.

(*Pl. refer Annex. II)

2.15 Whether the AQAR was placed in statutory body   Yes [√]   No [ ]

Management [√]   Syndicate [ ]   Any other body [ ]

Provide the details of the action taken

The IQAC status was discussed in Governing Body and Local Management Committee meeting.

Part – B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	2	-	2	-
PG	5	-	5	-
UG	5	-	5	4
PG Diploma	-	-	-	-
Advanced Diploma	-	-	-	-
Diploma	-	-	-	-
Certificate	-	-	-	-
Others	-	-	-	-
Total	12	-	12	4

Interdisciplinary	-	-	-	-
Innovative	-	-	-	-

1.2 (i) Flexibility of the Curriculum: ~~CBCS/Core~~/Elective option / ~~Open options~~

Elective Subject Opted by BE (E&Tc) Students:

Elective-I: Digital Image Processing
Students learn about one dimensional signal processing in subject like Signals and Systems (SAS) and Digital Signal Processing (DSP). A natural extension of many of the algorithms learnt in these subjects can be applied to 2D signal like image and video data. An application of many signal processing algorithms to image is Digital Image Processing (DIP). Commonly known social applications are image enhancement(quality improvement), finger print recognition, face detection, traffic violation. CBIR etc…

Elective-I: Embedded Systems and RTOS
This elective is offered by the department because It is helpful for students to able to Understand various stages of hardware, software in embedded domain. In Embedded domain, multitasking kinds of application are expected in today times and that kinds of topics are explored in this subjects. This subjects help students in to understand of fundamental concepts of RTOS and Embedded Linux OS. It also deals with MuCOS-II RTOS by studying features and kernels structures. Embedded RTOS topics expose students to integrate various domains and make them inter disciplinary projects.

Elective-II: Electronics Product Design
This elective is offered by the department because It is helpful for students to able to Understand various stages of hardware, software and PCB design , Know about importance of product test & test specifications , Understand special design considerations and importance of documentation after completion of course.
 Elective-III: Audio Video Engineering

After learning this subject students will get benefit to learn and understand the working of real life video system and the different elements of video system. Students will get overview of fundamentals of audio systems and basics of Acoustics.

Elective-IV: Wireless Networks

It is helpful for the engineers to completely understand the trends in communications of the future. Also student will able to understand and fully exploit packet based switching for Voice and Multimedia. After this course student will learnt Fundamental of mobile communication, WiLAN , 3G services , VoIP etc.

Elective-IV: Biomedical Signal Processing

To understand and study origins and characteristics of some of the basic biosignals most commonly generated by human being such as ECG, EEG, EMG, ENG, ERG, EOG etc. To understand use of bio signals in diagnosis, patient monitoring and physiological investigations. To explore research domain in biomedical signal processing and application of established engineering methods to complex biomedical signals problems.

Elective opted by Computer Engineering Department
Semester I:
Elective I

Data Mining Techniques and Applications

This subject provides students with a solid understanding of data mining concepts, techniques and tools which will help to meet business needs.

Elective II

Embedded Security There are good Opportunities for computer students who are particularly capable of hardware-related programming and of designing special hardware if required and integrating it into complete systems. This subject meets this demand

Semester II:
Elective – III
Cyber Security

Now days Cyber attacks are becoming more common and more harmful so awareness among students / people should be required & also Cryptanalyst, hackers are on demand.

Elective – IV
Business Analytic and Intelligence

This subject provides in-depth knowledge of handling data and Business Analytics' tools that can be used for fact-based decision-making.

Mechanical Engineering:
Semester I
Elective I- Reliability Engineering or Energy Audit
Elective II- Operation Research , Gas Turbine
Semester II
Elective III- Automobile Engineering
Elective IV- Finite Element Analysis

Reliability Engineering: It is multidisciplinary subject, can be used as analysis tool for heat power, design and production stream. Also can be used as interdisciplinary advanced tool for mechatronics systems and in management.

Energy Audit : Use and conservation of energy has become one of the important global concerned. Broader system approaches can be taught for proper use of energy

Operation Research : All mechanical subjects can be put in study for optimisation using OR

Gas Turbine : Because of energy crisis we need to increase the install capacity of power plant. To become a developed country its necessary to increase per capita energy.

Automotive Engineering : Global increase in automotive sector, greater opportunities are in Automobile industries

Finite Element Analysis : Modern tool for design and analysis. It is preferred by every as well as researchers

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	**5**
Trimester	**0**
Annual	**0**

1.3 Feedback from stakeholders*   Alumni [√]   Parents [√]   Employers [√]   Students [√]
   (On all aspects)

   Mode of feedback   :   Online [√]   Manual [√]   Co-operating schools (for PEI) [ ]

*(*Pl. refer Annex.-III)*

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

> - **Yes, SPPU is regularly updating the syllabi. The Teachers from this Institute are actively participating in this updating process. The marking scheme is changed to credit system, and audit course (non credit) has been introduced**
> - **Recently SPPU has revised SE- Information Technology, E&TC, Mechanical Engineering, Civil Engineering and Computer Engineering syllabi has been updated from Marking to Gradation -Credit scheme.**
> - **In this year, syllabus of T.E has been revised and it will be implemented from 2017-2018.**

Silent Aspects:

        In Mechanical Engineering the new structure and syllabus was introduced from 2015-16 and credit system will be followed. Mechanical engineering outcomes have been identified and curriculum and syllabus have been structured in such a way that the courses meet these outcomes. The outcomes are related engineering concepts, skills, software, knowledge, system design and also weightage is given for practical related subjects. These outcomes will be acquired by the students at the time of graduation. Each course in the programme defines clear instructional objectives which are mapped to the course outcomes.

        In Electronics and Telecommunication SE (2015 Pattern) Theory subjects are based on core branch. Data Structure and Algorithm and Object Oriented Programming introduced in this curriculum to make the students familiar with basic concepts and techniques of object oriented programming in C++ & Java which will develop an ability to write programs in C++ and Java for problem solving.

        The Computer SE syllabus was modified considering the need of curriculum / industry. It was modified considering the feedback taken from stakeholders. Earlier pattern had 2 Practical heads and 1 Oral head, new syllabus has all 3 Practical heads in both semesters. This helped the students to learn all the core subjects from practical point of view. Data Structure and Problem Solving (DSPS) (2012 – Semester I) was divided into Data Structures and Algorithms (DSA) (2015 – Semester I) and Advanced Data Structures (ADS) (2015 – Semester II). This helped the students to thoroughly understand the core subject of Data Structure. Object Oriented Multicore Programming (OOMP)(2012 – Semester II) was introduced as Object Oriented Programming (OOP) in new syllabus for Semester I. This helped students to implement the OOP concepts for OOP as well as Data Structure subjects.

        In the year 2016-17 SE syllabus for IT was revised. The revised syllabus is a blend of hardware and software related subjects. The hardware related subjects are Digital Electronics and Logic Design, Computer Organization, Foundation of Communication and Computer Network, Processor Architecture and Interfacing. Software subjects like Fundamentals Of data Structures, Problem Solving and Object Oriented Programming and Data Structures and Files.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

No.

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
180	**159**	**6**	**7**	**8**

2.2 No. of permanent faculty with Ph.D.   **15**

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
159	**0**	**06**	**45**	**7**	**17**	**8**	**0**	**180**	**0**

2.4 No. of Guest and Visiting faculty and Temporary faculty   **145**   **46**   **0**

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	**10**	**2**	**3**
Presented papers	**21**	**4**	**0**
Resource Persons	**1**	**3**	**4**

2.6 Innovative processes adopted by the institution in Teaching and Learning:

- **Techniques like Video Lectures, Puzzles, Crosswords, Role Play, Animation, are used in Teaching Learning Process.**
- **Use of ICT techniques are effectively implemented**
- **Subjects like Structural Design are taught using Project Based Learning. Under this methodology, students are encouraged to make models of structural elements which helps better understanding of the subject.**
- **K-point recording , STP-Student Training Programme, Skill Development, AMCAT,QALR,VAP**

2.7 Total No. of actual teaching days during this academic year   **183**

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

- **The Institute has started Open Book Examinations for Unit test and Preliminary Examinations.**
- **The set of multiple choice questions are given to students for preparation of examinations**

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

| 01 | 03 | 11 |

2.10 Average percentage of attendance of students

| 76% |

2.11 Course/Programme wise distribution of pass percentage **:**

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
E&TC	**186**	**46.77**	**40.33**	**8.06**	**00**	**95.16**
Mechanical	**282**	**56.04**	**24.82**	**5.32**	**00**	**86.17**
Comp	**216**	**71.29**	**21.75**	**2.4**	**0.0**	**95.37**
IT	**75**	**75**	**21**	**04**	**0**	**96**
Civil	**159**	**54.10**	**34.59**	**7.54**	**00**	**96.23**

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

The IQAC plays a vital role in planning monitoring and evaluation of Teaching Learning.
- **IQAC provides the guidelines for planning of each semester by considering / discussing the following points.**
  - ✓ **Result of previous semester**
  - ✓ **Placement statistics and feedback of employers.**
  - ✓ **Feedback of Teaching, Alumni, Parents**
  - ✓ **Expert opinion**
  - ✓ **Outcome analysis**
  - ✓ **Monitoring of the teaching plan and other activities are undertaken by HOD and academic coordinator**
  - ✓ **The feedback from students about teaching is taken online at mid of semester and analyzed in IQAC meeting. The corrective measures are taken accordingly**
  - ✓ **The appraisal is filled by teacher at end of every academic year**
  - ✓ **Corrective action taken on the same**
- **The policies are decided as per the vision and mission of Institute and objective of NAAC**.

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	01
UGC – Faculty Improvement Programme	08
HRD programmes	01
Orientation programmes	36
Faculty exchange programme	00
Staff training conducted by the university	17
Staff training conducted by other institutions	21
Summer / Winter schools, Workshops, etc.	26
Others	04

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	16	0	2	0
Technical Staff	35	10	1	0

Criterion – III

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

> **The IQAC is taking lot of efforts to promote research climate in the Institute by**
> 1. **Motivation to faculty to carry out the research project, writing paper and carry out consultancy project**
> 2. **Recommending Study leave for higher education**
> 3. **Providing Financial support in registration fees for attending STTP/ FDP conf. etc.**
> 4. **Making Research laboratories available to the Faculty**
> 5. **Recommending Financial support for student research project like BAJA, SUPRA, etc.**
> 6. **Motivating students for participating in project competition at National and International level**

3.2 Details regarding major projects

	Completed (1)	Ongoing(2)	Sanctioned(3)	Submitted(4)
Number	**01**	**05**	**00**	**00**
Outlay in Rs. Lakhs	**11.75L**	**28.7 L**	**00**	**00**

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	**3**	**8**	**3**	**1**
Outlay in Rs. Lakhs	**5.3L**	**8.63L**	**5.25L**	**0**

3.4 Details on research publications

	International	National	Others
Peer Review Journals	**70**	**3**	**0**
Non-Peer Review Journals	**1**	**0**	**0**
e-Journals	**8**	**0**	**0**
Conference proceedings	**19**	**40**	**0**

3.5 Details on Impact factor of publications:

Range **0.5-2** Average **0.75** h-index **38** Nos. in SCOPUS **09**

3.6 Research funds sanctioned and received from various funding agencies, industry and

other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	2 years 4 years	ISRO-UOP	33.85L	27.85L
Minor Projects	2 years	BCUD	14.39L	7.98466L
Interdisciplinary Projects	-	-	-	-
Industry sponsored	-	-	-	-
Projects sponsored by the University/ College	2 years	BCUD-SPPU	9.39L	4.865L
Students research projects *(other than compulsory by the University)*	1 year	STES Pune	9.2L	7.3L
Any other(Specify)	-	-	-	-
Total	-	-	-	-

3.7 No. of books published   i) With ISBN No.   **17**   Chapters in Edited Books   **2**

ii) Without ISBN No.   **1**

3.8 No. of University Departments receiving funds from   **NA**

UGC-SAP [ ]   CAS [ ]   DST-FIST [ ]

DPE [ ]   DBT Scheme/funds [ ]

3.9 For colleges   Autonomy **NA**   CPE **NA**   DBT Star Scheme **NA**

INSPIRE **NA**   CE **NA**   Any Other (specify) **NA**

3.10 Revenue generated through consultancy   **Rs. 28160/-**

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	**0**	**0**	**1**	**0**	**0**
Sponsoring agencies	-	-	**Management**	-	-

3.12 No. of faculty served as experts, chairpersons or resource persons **21**

3.13 No. of collaborations   International **02**   National **06**   Any other **02**

3.14 No. of linkages created during this year **04**

3.15 Total budget for research for current year in lakhs :

From Funding agency **00**   From Management of University/College **14.58L**

Total **14.58L**

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	**05**
	Granted	**00**
International	Applied	**00**
	Granted	**00**
Commercialised	Applied	**00**
	Granted	**00**

3.17 No. of research awards/ recognitions   received by faculty and research fellows
     Of the institute in the year

Total	International	National	State	University	Dist	College
03	**00**	**00**	**00**	**01**	**00**	**02**

3.18 No. of faculty from the Institution
     who are Ph. D. Guides   **4**
     and students registered under them   **14**

3.19 No. of Ph.D. awarded by faculty from the Institution `0`

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)-Nil

JRF `00`   SRF `00`   Project Fellows `00`   Any other `00`

3.21 No. of students Participated in NSS events:

University level `10`   State level `00`

National level `00`   International level `00`

3.22 No. of students participated in NCC events: **NA**

University level `00`   State level `00`

National level `00`   International level `00`

3.23 No. of Awards won in NSS:

University level `00`   State level `00`

National level `00`   International level `00`

3.24 No. of Awards won in NCC: **NA**

University level [ ]   State level [ ]

National level [ ]   International level [ ]

3.25 No. of Extension activities organized

University forum `02`   College forum `02`

NCC `00`   NSS `06`   Any other `02`

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

As a social responsibility, the Institute has taken initiatives in organizing Social programmes such as

1. **Nirmal Wari Abhiyan**
2. **Sex Determination Prohibition Act**
3. **Water Supply & water Conservation Techniques**
4. **Tree Plantation**
5. **Site Visit to Water Treatment Plant and Water awareness**
6. **Traffic awareness & Safety**

Criterion – IV
4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	**5 Acres**	**-**	**Self**	**5 Acres**
Class rooms	**31**	**-**	**Self**	**31**
Laboratories	**51**	**-**	**Self**	**51**
Seminar Halls	**03**	**-**	**Self**	**03**
No. of important equipments purchased (≥ 1-0 lakh) during the current year.	**19**	**-**	**Self**	**19**
Value of the equipment purchased during the year (Rs. in Lakhs)	**-**	**7.49**	**Self**	**7.49**
Others	**-**	**12.86**	**Self**	**12.86**

4.2 Computerization of administration and library

> **The Library is automated with Easy Lib library management software and the operations of cataloguing, circulation, stock verification have been automated. Online   Public Access Catalogue (OPAC) enables user to search the books in the possession of the library.**

4.3   Library services:

	Existing 1.4.2015 to 31.3.2016		Newly added 1.4.2016 to till date		Total	
	No.	Value	No.	Value	No.	Value
Text Books	**59**	**31429**	**419**	**218223**	**478**	**249652**
Reference Books	**208**	**111929**	**746**	**415308**	**954**	**527237**
e-Books	**NIL**	**NIL**	**NIL**	**NIL**	**NIL**	**NIL**
Journals	**109**	**389150**	**NIL**	**NIL**	**125**	**416151**
e-Journals	**275**	**254948**	**449**	**1498926**	**449**	**1498926**
Digital Database	**NIL**	**NIL**	**NIL**	**NIL**	**NIL**	**NIL**
CD & Video	**28**	**NIL**	**27**	**NIL**	**55**	**NIL**
Others (specify)	**NIL**	**NIL**	**NIL**	**NIL**	**NIL**	**NIL**

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Deptt.	Others
Existing	**599**	**29**	**12MBPS**	-	-	-	-	-
Added	**00**	**00**	**43MBPS**	-	-	-	-	-
Total	**599**	**29**	**55MBPS**	-	-	-	-	--

4.5 Computer, Internet access, training to teachers and students and any other programme for technology Up gradation (Networking, e-Governance etc.)

The Internet speed has been increased from 12 MBPS to 55MBPS

4.6 Amount spent on maintenance in lakhs :

i) ICT **00**

ii) Campus Infrastructure and facilities **532898**

iii) Equipments **1001175**

iv) Others **40835**

Total: **1574911**

Criterion – V
5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

In continuation with all the facilities provided by institute like,
1. **Students clubs**
2. **Canteen**
3. **Hostel**
4. **Health centre**
5. **Parent teacher activities**
6. **Gym and**
7. **Library and Dept. Library**

following facilities have been added as per the guidelines by IQAC.
8. **Improved the Internet connectivity from 12 mbps to 55 mbps**
9. **IIT spoken tutorial support**
10. **Awareness about Quality Learning is made among the students by Students council ,Students associations, Students clubs and Teacher Guardian**

5.2 Efforts made by the institution for tracking the progression

1. **Continuous monitoring and assessment of student**
2. **Remedial classes for slow learner**
3. **Students project like BAJA, SUPRA, ROBOCON for advance learner**
4. **TG scheme for monitoring and counselling**
5. **Conducting of AMCAT/ QALR test**
6. **Internship opportunity improved by collaboration with foreign university.**
7. **History card for all the students**

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
3619	**205**	**2**	**0**

(b) No. of students outside the state

269

Men **72.72** % Women **27.27** %

(c) No. of international students **NA**

This Year (FE to BE Students 2016-17)						This Year (FE Students 2016-17)					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
2442	**326**	**39**	**793**	**0**	**3600**	**590**	**59**	**8**	**163**	**0**	**820**

Demand ratio : **1.15**

Dropout % : **1.36%**

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

Seminar on higher education is conducted

No. of students beneficiaries   **179**

5.5 No. of students qualified in these examinations

NET **00**   SET/SLET **00**   GATE **10**   CAT **01**

IAS/IPS etc **00**   State PSC **02**   UPSC **00**   Others **06**

5.6 Details of student counselling and career guidance

- **Students counselling done at 2 levels.**
  1. TG : One teacher guardian is appointed for 20 students who take care of the problems of students
  2. He/She is also counselling the students
  3. The meeting of the students and TG is conducted fortnightly
  4. Regular encouragement of the students for the advancement in their career is an usual practice of this Institute
  5. Medical problems of the students are also undertaken and further assistance if required is provided from the campus doctors

No. of students benefitted

1) TG :- All
2) Special counselling - 02

5.7 Details of campus placement

On campus			Off Campus
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
91	**884**	**157**	2

5.8 Details of gender sensitization programmes-**01**

> **A Seminar was organized on "Sex Determination prohibition Act"**

5.9 Students Activities

    5.9.1   No. of students participated in Sports, Games and other events

State/ University level **01**   National level **12**   International level **00**

No. of students participated in cultural events

State/ University level **25**   National level **00**   International level **00**

    5.9.2   No. of medals /awards won by students in Sports, Games and other events

Sports : State/ University level **06**   National level **00**   International level **00**

Cultural: State/ University level **03**   National level **00**   International level **00**

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution	**0**	**0**
Financial support from government	**2067**	**118914832**
Financial support from other sources	-	-
Number of students who received International/ National recognitions	-	-

5.11   Student organised / initiatives

Fairs   : State/ University level | 01 | National level | 00 | International level | 00 |

Exhibition: State/ University level | 01 | National level | 01 | International level | 00 |

5.12   No. of social initiatives undertaken by the students (Club I/C) | 12 |

5.13 Major grievances of students (if any) redressed: **01**

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision Statement:

उत्तमपुरूषान् उत्तमाभियंतृन् निर्मातुं कटीबध्दाऽवयम

"We are committed to produce not only good engineers but good human beings, also."

Mission Statement:

"Holistic development of students and teachers is what we believe in and work for. We strive to achieve this by imbibing a unique value system, transparent work culture, excellent academic and physical environment conducive to learning, creativity & technology transfer. Our mandate is to generate, preserve and share knowledge for developing a vibrant Society."

6.2 Does the Institution has a management Information System

Yes
Institute use GEMS software for office and technical work.

6.3 Quality improvement strategies adopted by the institution for each of the following:

    6.3.1   Curriculum Development

- **The curriculum is developed by SSPU Pune gets upgraded after every 4 years**
- **Faculties are actively participating in the process of design and development of curriculum at various levels such as member BOS, coordinators for subject revision, etc.**
- **The course objectives and course outcomes are analyzed regularly to find the gap if any, and the domain experts along with the subject teachers are deciding the corrective measures such as Content beyond syllabi, Industrial visit, The guest lectures, Workshop, etc.**

6.3.2 Teaching and Learning

- **ICT based Teaching Learning process is followed**
- **Innovation teaching methodologies are included in teaching plan like cross word puzzle, role play etc.**
- **Content beyond syllabus is planned to meet the objectives**
- **Course allocation is done to faculties prior to start of semester**
- **Teaching Plan is prepared and made available to student**
- **Implementation is done and monitored as per plan**

6.3.3 Examination and Evaluation

- **Examination is conducted as per norms rules and regulations by SPPU Pune**
- **Formative and summative assessment is done**

6.3.4 Research and Development

- **Policies for consultancy are finalized and made available to faculty**
- **Faculty and students are motivated and promoted to carry out research**
- **Student and faculty re encourage to file the patents**

6.3.5 Library, ICT and physical infrastructure / instrumentation

The Library is automated with Easy Lib library management software and the operations of cataloguing, circulation, stock verification have been automated. Online Public Access catalogue (OPAC) enables user to search the books in the possession of the library.

6.3.6 Human Resource Management

- **The service rules, Pay-packages and other facilities are given to faculty and staff as per norms by SPPU & Govt. Of Maharashtra**
- **The facilities like 1) EPF 2) Gratuity 3) GIS 4) EMBF and leaves like CL, SL, ML, Maternity Leave, EL, Vacation are given to faculty and staff as per norms**
- **Promotion and assistance for professional development**
- **Support for higher education**
- **Performance appraisal evaluates quantitatively and qualitatively the academic, administrative and research contribution of the faculty and staff**

6.3.7   Faculty and Staff recruitment

- **Well defined procedure is followed for local selection**
- **Roster and university selection procedure is follows as per SP Pune University norms**

6.3.8   Industry Interaction / Collaboration

- **The III cell is actively interacting with Industry**
- **60+ reputed organizations are working with the Institute under MOUs**
- **Different National/International activities like GL workshop internship, projects, sponsorship, faculty training are carried out**

6.3.9   Admission of Students

- **The entire admission process of the student is governed as per norms by AICTE, DTE and Govt. Of Maharashtra**

6.4 Welfare schemes for

Teaching	∗ **Gratuity** ∗ **Study Leave** ∗ **Staff Development** ∗ **Staff Quarters** ∗ **Medical Facility**
Non teaching	∗ **Gratuity** ∗ **Study Leave** ∗ **Staff Development** ∗ **Staff Quarters** ∗ **Medical Facility**
Students	∗ **Students Insurance** ∗ **Earn & Learn Scheme**

6.5 Total corpus fund generated

Nil

6.6 Whether annual financial audit has been done   Yes **√**   No ☐

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	**Yes**	**SPPU,NAAC,DTE**	**Yes**	**IQAC**
Administrative	**Yes**	**M/S K. S. Mali & Co. Chartered Accountant**	**Yes**	**Internal Audit Department STES, Erandwane, Pune-004**

6.8 Does the University/ Autonomous College declares results within 30 days? **NA**

For UG Programmes   Yes [ ]   No [ ]

For PG Programmes   Yes [ ]   No [ ]

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

NA

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

NA

6.11 Activities and support from the Alumni Association

- **Alumni meet- The Institute is organizing an Alumni meet every year**
- **Interaction of Alumni with Faculty- For taking feedback from our Alumni, an interaction of Alumni is arranged at Institute with faculty**
- **Guest lecture of Alumni- The guest lecture of Alumni is arranged at Department level in order to establish an interaction between present and passed out students**
- **Any achievement of Alumni is shared with present students to motivate them**
- **Placement Assistance -Some of the Alumni either entrepreneur or working at senior positions in Industry are offering assistance for placement of the students from this Institute**

6.12 Activities and support from the Parent – Teacher Association

- **The institute is in continuous contact with parents**
- **For First and Second Year Engineering students, an orientation program is organized every year**
- **The major intention behind organizing this orientation programme is to introduce faculty with parents**
- **For every class, Teacher Guardian system is implemented, where 20 students are allotted to one faculty member**
- **This faculty member is establishing communication with the parents either online or offline**
- **The academic, extracurricular or any other progress of the student is informed to the parents and both of them are solving the problems faced by the students if any**

6.13 Development programmes for support staff

- **The supporting staff is encouraged for improving their academic /educational qualification**
- **On up-gradation of their qualification, the management is promoting these staff as a reward**
- **Some of the programmes are also organized by the Departments to improve their professional skills like soft skills, different software training, etc. for example demonstration of video editing tools was organized by Department of information Technology for supporting staff to develop video editing skill in supporting staff.**

6.14 Initiatives taken by the institution to make the campus eco-friendly

1.Green Audit conducted

2.Tree Plantation activities are regularly carried out

Criterion – VII

7. <u>Innovations and Best Practices</u>

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

> 1. **Students are encouraged to enrol for various online courses conducted by IIT Bombay such as Advance C, Python etc.**
> 2. **New Software named "ASPIRE" has been introduced for administrative work along with TALLY, GEMS and ZOOM**
> 3. **Administrative staff is trained on new examination techniques and account related software by SPPU**

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

TASK	ACTION TAKEN	OUTCOME
1. Training the Civil Engineering students in soft ware required for Civil Industry	**Department of Civil Engineering has conducted in house three weeks training course (VAP) on "AUTOCAD 2D" by CADD CENTER.**	**50 second year students have been benefitted by the Training**
2. Improvement in mass recruitment	**10 hours training to final year students on GD & PI**	**159 students placed till date**

7.3 Give two Best Practices of the institution

> **1. "Teacher Guardian" scheme for continuous academic monitoring of students accompanied by "Student Training Program" for technical as well as soft skill enhancement of students for improved employability**
>
> **2. Enhancing the quality of technical education through Guest Lectures by eminent personalities, Industry interactions as well as inculcating passion in student and faculties towards the pursuit of research**

7.4 Contribution to environmental awareness / protection

> 1. **Tree Plantation drive has been conducted within and outside the Institute campus**
> 2. **Monitoring the effective utilization of water in campus**
> 3. **Environmental awareness program has been conducted for students and staff**

7.5 Whether environmental audit was conducted?   **Yes**

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

> 1. **Strengths:**
>   1. **Adequate infrastructure for engineering courses**
>   2. **Sincere and dedicated faculty**
>   3. **Subjects taught at UG and PG level**
>   4. **Located in an Industrial hub**
>   5. **Support from founding society**
> 2. **Weakness:**
>   1. **Low publication rate of faculty at international journals**
>   2. **Inadequate patents and consultancy**
>   3. **No academic flexibility as an affiliated college**
> 3. **Opportunities:**
>   1. **May be developed as a centre of engineering in collaboration with educational institute in the locality**
>   2. **Introduction of job-oriented Add-on courses**
>   3. **Support from industries in state**
>   4. **Widening scope for consultancy and add financial resources**
>   5. **Interdepartmental collaboration for research**
> 4. **Challenges:**
>   1. **Involving more industries for development**
>   2. **Creating more research facility for faculty**
>   3. **Attracting better quality students and faculty**
>   4. **Widening scope for more extra-curricular and collaborative work**
>   5. **Add on bridge courses to meet the ever changing industries requirement**.

8. Plans of institution for next year

Plan of IQAC for Academic year 2017-18:

Besides the regular day-to-day Planning, Implementation ,Monitoring and Correction of Quality of holistic development of students ,IQAC is taking up the following weaknesses for improvement.

1. IQAC will try to establish a solid linkage between the Institute and Industry to take projects that are the requirements of the society
2. To achieve this each department will try to connect with at least one reputed industry
3. More efforts will be taken to widen the consultancy services
4. Every department will try to start at least one job-oriented add-on course

Name Dr. C. G. Patil   Name : Dr. K. P. Patil

Signature of the Coordinator, IQAC   Signature of the Chairperson, IQAC

***

Abbreviations:

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UPE	-	University with Potential Excellence
UPSC	-	Union Public Service Commission

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Academic Calendar

Academic Calender (2017-18) SEM-I (SE)

1	Commencement of Academic Semester	15/06/2017 **(Thu)**
2	AMCAT Test	10-13/07/2017 (Mon-Thu)
3	SE Mock Online + Theory Examination - 2 Units [25 Marks]	19 - 21/07/2017 **(Wed-Fri)**
4	Declaration of Result (Online Exam) & Submission of Mark sheets to HOD	21/07/2017 **(Fri)**
5	Mid-Term Submission	31/07 - 04/08/2017 **(Mon-Fri)**
6	(SE Mock Online + Theory Exam) 2 Units [25 Marks]	22-24/08/2017 **(Tue-Thu)**
7	Declaration of Result (SE Mock) Online Examination	28/08/2017 **(Mon)**
8	Conclusion of Class room teaching	29/09/2017 **(Fri)**
9	Prelim Exam (50 Marks / 2 Hours) Online (1 to 4 Unit)+Theory	03-06/10/2017 **(Tue-Fri)**
10	Declaration of Prelim Results, submission of mark sheets. Prelim Exam and discussion of Paper with Students	09/10/2017 **(Mon)**
11	Mock Oral / Repeat Turns for Practical Submission Work	09-13/10/2017 **(Mon-Fri)**
12	Issue of Term Grant Certificate to All Clear students in Prelim Exam and Mock Practical	13/10/2017 **(Fri)**
13	**SPPU** Practical / Oral Examination	30/10 to 06/11/2017 (Mon-Mon
14	**SPPU** Theory Examinations	14/11 to 11/12/2017 (Tue-Mon)
15	SPPU Online Exam (Phase I +II)	To be Declared by SPPU
16	Commencement of Second Term for the Year 2017-18	18/12/2017 (Mon)

(Dr. K. P. Patil)
Principal

Academic Calender (2017-18) SEM-I (TE/BE)

1	Commencement of Academic Semester	15/06/2017 **(Thu)**
2	AMCAT	10 - 13/07/2017 **(Mon-Thu)**
3	TE/BE InSem MOCK Exam (25 Marks) 2 Units	17 - 21/07/2017 **(Mon-Fri)**
	MID TERM SUBMISSION	31/07 - 04/08/2017 **(Mon-Fri)**
4	**SPPU** InSem Examination TE/BE (30Marks) 3 Units	08-12/08/2017 (Tue-Sat)
6	Conclusion of Class room teaching	29/09/2017 **(Fri)**
7	Prelim Exam (70 Marks / 2.5 Hours) (TE/BE Theory Exam) All 6 Units	03-06/10/2017 **(Tue-Fri)**
8	Declaration of Prelim Results, submission of mark sheets. Prelim Exam and discussion of Paper with Students	09/10/2017 **(Mon)**
9	Mock Oral / Repeat Turns for Practical Submission Work	09-13/10/2017 **(Mon-Fri)**
10	Issue of Term Grant Certificate to All Clear students in Prelim Exam and Mock Practical	13/10/2017 **(Fri)**
11	**SPPU** Practical / Oral Examination	24/10 to 06/11/2017 (Tue-Mon
12	**SPPU** Theory Examinations	14/11 to 11/12/2017 (Tue-Mon)
13	Commencement of Second Term for the Year 2017-18	18/12/2017 (Mon)

(Dr. K. P. Patil)
Principal

Academic Calender (2017-18) SEM-I (BE)

|		
1	Commencement of Academic Semester	15/06/2017 **(Thu)**
2	BE InSem MOCK Exam (25 Marks) 2 Units	17 - 21/07/2017 **(Mon-Fri)**
3	**SPPU** InSem Examination BE (30Marks) 3 Units	08-12/08/2017 (Tue-Sat)
4	MID TERM SUBMISSION	31/07 - 04/08/2017 **(Mon-Fri)**
5	Conclusion of Class room teaching	29/09/2017 **(Fri)**
6	Prelim Exam (70 Marks / 2.5Hour) (BE Theory Exam) All 6 Units	03-06/10/2017 **(Tue-Fri)**
7	Declaration of Prelim Results, submission of mark sheets. Prelim Exam and discussion of Paper with Students	09/10/2017 **(Mon)**
8	Mock Oral / Repeat Turns for Practical Submission Work	09-13/10/2017 **(Mon-Fri)**
9	Issue of Term Grant Certificate to All Clear students in Prelim Exam and Mock Practical	13/10/2017 **(Fri)**
10	**SPPU** Practical / Oral Examination	30/10 to 06/11/2017 (Mon-Mon
11	**SPPU** Theory Examinations	14/11 to 11/12/2017 (Tue-Mon)
12	Commencement of Second Term for the Year 2017-18	18/12/2017 (Mon)

AMCAT Test :
QALR Test :

(Dr. K. P. Patil)
Principal

Feedback Analysis

PO ATTAINMENT FOR EXIT SURVEY 2016-17												
	PO1	PO 2	PO3	PO 4	PO5	PO6	PO 7	PO8	PO9	PO 10	PO11	PO12
Exit Survey	7.95	8.09	7.62	76	7.69	7.65	7.87	7.91	7.65	7,87	8.24	7.87
PERCEN TAGE	79.56	80.9	76.20	76.0	76.9	76.5	78.70	79.10	76.50	78.70	82.40	78.70
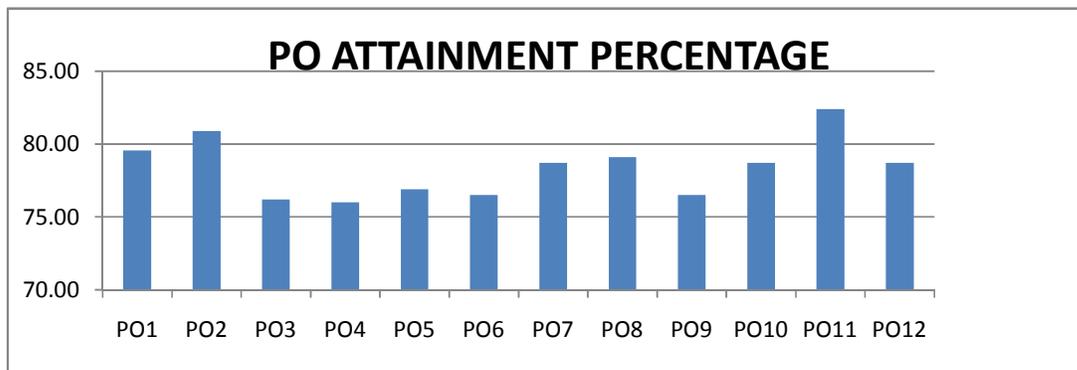
Questions For feedback

Sr. No.	Question	Rating(A-C)
1	What is your comfort ability level with the problems based on Basic Engineering, Science ,Design Engineering and Telecommunication?	
2	Can you identity, formulate, solve and implement the solution for engineering, managerial and societal problems? How much you are confident to tackle the assigned job and work out solution of the problems?	
3	What is your capability to design and conduct and experiments, analyze and interpret data through simulated industrial environment?	
4	How much success you are gaining in solving multidisciplinary problems by systematic approach?	
5	How much you are inclined towards the continuous up gradation of your knowledge through consistent learning?	
6	What extent of economical, environmental, social ethical and technological requirements you can fulfill by designing the products, processes and systems?	
7	According to you, how much you are effective in verbal and no verbal communication?	
8	As per your opinion how, much you feel confident in facing challenges in the carrier, developing the team leadership and managerial along with project management skills?	
9	Grade your research and development thirst in your carrier.	

Date: **Signature of the Student**