Academic Quality Assurance Report
AQAR (First Cycle)
Second Report (Aug 2017-Sept 2018)

SINHGAD TECHNICAL EDUCATION SOCIETY'S
SINHGAD INSTITUTE OF TECHNOLOGY, LONAVALA

Submitted to

National Assessment and Accreditation Council
Bengaluru

Academic Quality Assurance Report (First Cycle) of Academic Year 2017-18

Submitted to

National Assessment and Accreditation Council

Bengaluru

by

SINHGAD TECHNICAL EDUCATION SOCIETY'S

SINHGAD INSTITUTE OF TECHNOLOGY

Lonavala, Maharashtra

Gat No.309/310, Off. Mumbai – Pune Expressway,
Kusgaon (Bk), Lonavala – 410401, Tal – Maval, Dist – Pune, Maharashtra
e-mail: principal_sit@sinhgad.edu Website: www.sinhgad.edu

SINHGAD TECHNICAL EDUCATION SOCIETY'S

SINHGAD INSTITUTE OF TECHNOLOGY

(Affiliated to Savitribai Phule Pune University & Approved by AICTE, NBA, NAAC)

Sinhgad Institutes   Gat No. 309/310, Kusgaon (BK.), Off Mumbai - Pune Express way, Lonavala, Dist Pune - 410 401.

PROF. M. N. NAVALE	DR. (MRS.) SUNANDA M. NAVALE	DR. M. S. GAIKWAD
M E (Elect.) MIE, MBA	B A, MPM, Ph D	M E, Ph D (Electronics Engg.)
Founder President	**Founder Secretary**	**Principal**

Ref. No.: SIT/NAAC/2018-19/ 211   Date: 26/09/2018
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To,

The Director,

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

P. O. Box. No. 1075, Opp: NLSIU, Nagarbhavi,

Bengaluru - 560 072 India

capuaqar@gmail.com

Sub: Submission of second AQAR of AY 2017-18

Res/Sir,

Greetings from Sinhgad Institute of Technology, Lonavala, Please find enclosed herewith, our Institute's second Annual Quality Assurance Report for the academic year August 2017 to Sept 2018. Our Track ID is MHCOGN26095. We are accredited with 'B++' grade during the NAAC peer committee visit in August 2016.

File name: http://www.MHCOGN26095-Sinhgad Institute of Technology Lonavala.doc

Kindly acknowledge the same.

Thanking You.

Dr. M.S.Gaikwad
Principal

Celebrating 25 Years
— of Academic Excellence —

Tel. : 91 2114 - 304 353, 304 355, 304 356 Telefax : 02114 - 278304 E-mail : principal_sit@sinhgad.edu Website : www.sinhgad.edu

Contents

VISION

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

MISSION

We believe in and work for holistic development of students and teachers. We strive to achieve this by imbibing a unique value system, transparent work culture, excellent academic and physical environment conducive to learning, creativity and technology transfer.

OBJECTIVES

- All-round development of students relevant to the needs of industry and making them competent to face the challenges of globalization.

- Empowerment of faculty and staff through continuing education.

- Develop strong Industry-Institute Interaction to offer expertise for projects, training, testing, and consultancy.

- Overall development of students through Student Training Programmes (STPs) and Value Addition Programmes (VAPs).

- Establish Centre of Excellence (CoE) in engineering research.

- To start Doctoral program in engineering.

- Serve as Engineering Knowledge Centre (EKC) for society in general.

PREFACE

Sinhgad Institute of Technology, Lonavala is pleased to present this **Academic Quality Assurance Report** (AQAR) to the National Assessment and Accreditation Council (NAAC), Bengaluru. Sinhgad Technical Education Society (STES) was established in the year 1993 under the dynamic leadership of Prof. M. N. Navale. The sole objective of the society is to provide quality education in the field of Engineering, Medical, Dental, Pharmacy, Management, Computer Applications, Architecture, Commerce, Law, Science and School education.

Sinhgad Institute of Technology (SIT) Lonavala was established in the year 2004. The institute is recognised by All India Council for Technical Education (AICTE) New Delhi and Directorate of Technical Education (DTE) Government of Maharashtra. It is affiliated to Savitribai Phule Pune University (SPPU), Pune. The Institute is located at lonavala, a popular hill station between two metros, Mumbai and Pune. The institute runs five undergraduate courses and four postgraduate courses. Undergraduate courses include Mechanical Engineering, Electronics & Telecommunication Engineering, Computer Engineering, Information Technology, and Electrical Engineering. Post-graduate courses include Mechanical Engineering (Design), Electronics & Telecommunication Engineering (VLSI & Embedded Systems), Computer Engineering (Computer Engineering), Electrical Engineering (Power Systems).

The faculty strives hard to impart knowledge to the students in order to enhance their competency. The institute has state of the art laboratories which are upgraded in tune with the updating of syllabus by SPPU Pune. The institute is fully residential which provides favourable environment and enormous learning opportunities for students. It fosters their research mindset and character building for a bright future so as to emerge as tomorrow's nation builders. Students are exposed to modern instruments and test facilities with well-equipped learning resources.

SIT believes in developing research culture in departments and supports innovative ideas from faculty and students. The extensive STPs are conducted to enhance the skills set and employability. Conduction of industrial visits, technical exhibitions and participation in various competitions are helpful to students in bridging the gap between industry and academia. Institute believes that it is contributing to engineering education; submission of this Academic **Quality Assurance Report** (AQAR) is a step towards assurance for quality in engineering education. While preparing this report we could very learn the status of our quality assurance program and we could analyse the gap between our planning and the goals achieved. This also helps to set the goal for coming academic year and efforts to be taken to satisfy that targets. We also understand that in current situation, Quality education to the students and faculty empowerment is the only way to sustain for long future.

Furthermore, institute is willing to assess its educational system and academic culture. In addition to it, it is essential for professional institute to receive stakeholder's perception towards teaching-learning process and supporting entities. Thus submission of this Academic **Quality Assurance Report** (AQAR) is a step towards self introspection leading to further development of the institute towards excellence

Dr. M. S. Gaikwad

NAAC   Committee at Institute

Sr.No.	Name of Staff Member	Designation	Designation for Steering Committee
1.	Dr. M. S. Gaikwad	Principal	Chairman
2.	Dr. D. D. Chaudhary	Vice-Principal	Coordinator
3.	Mr. S.M. Gaikwad	Associate Professor & HOD Mechanical Engineering	Member
4.	Mr. N.V.Lakal	Asst. Professor & Dean R & D	Member
5.	Dr. S. D. Babar	Professor & HOD Computer Engineering	Member
6.	Dr. V. V. Deotare	Associate Professor & HOD Electronics & Telecommunication Engineering	Member
7.	Dr. T. J. Parvat	Professor & HOD Information Technology	Member
8.	Dr. A.A.Kalge	Associate Professor & HOD Electrical Engineering	Member
9.	Dr. P. S. Patil	Associate Professor & HOD Engineering Sciences	Member
10.	Mr. Y. D. Jadhav	Training & Placement Officer	Member

NAAC   Committee at Institute

Composition of IQAC

Sr. No.	Name of the Member	Designation	Contact No.
1	Dr. M.S. Gaikwad, Principal	Chairman	9552569864
2	Prof. M.G. Bhat, Dean Engineering (STES)	Management Representative	9881056852
3	Prof. S.B. Pharkute		9850039354
4.	Dr. Dilip S. More ADYPCOE Pune	Member	7558581451
5	Mr. Kaustubh Bhadbhade, Persistent, Pune	Member	9623448243
6.	Mr. Yogesh Topale HR Cognizant Pune	Member	9763726061
7.	Mr. S.M. Gaikwad, HOD (Mech)	Member	9321003912
8.	Dr. S.D. Babar, HOD (Comp)	Member	9881383933
9.	Dr. V.V. Deotare, HOD (E&TC)	Member	7588191750
10.	Dr. T.J.Parvat, HOD (I.T.)	Member	9881920029
11.	Dr. A.A. Kalage, HOD (Elect.)	Member	8605033245
12.	Dr. P. S. Patil, HOD (App.Sci. Deptt)	Member	9420107701
13	Mr. N.V. Lakal, Dean R & D	Member	9820804509
14	Mr. Yogesh Jadhav, T & P Officer	Member	8308816115
15	Mr. S.L.Mehtre CEO	Member	9921838393
16	Mr. Sumit Devarshri NSS Prog. Officer	Member	9970027070
17	Mrs. A.S.Deshmukh Faculty (App.Sci. Deptt)	Member	9970127892
18	Dr. Mrs. Geetika Narang, Faculty Comp Deptt	Member	9689896065
19	Mr. R.V.Babar, Faculty E&TC Deptt.	Member	9822319270
20	Mrs.Pallavi Ahire Faculty IT Deptt	Member	9422533123
21	Mr. M.N.Kalgunde, Faculty Elect. Deptt.	Member	9011066137
22	Mr. Pravin Pandit, Librarian	Member	9890888240
23	Mr. D.R.Mali Office Admin. Staff	Member	9822900920
24	Mr.K.P. Gangadhara Ex. Engr. TATA power	Nominee of Parents	9223550654
25	Mr. Vipul Madani	Nominee of Alumni	8451857474
26	• Miss Muskan Dusad B.E. Comp	Student's Representative	9425936311
27	Mr. Kunal Kishore B.E.E&TC		8796157091
28	Mr. Vijay Soni S.E. Mech		9414664823
28	Dr. D.D. Chaudhary, Vice-Principal	**Coordinator**	9372810161

Reports of IQAC meetings

A. Minutes of IQAC Meeting held on 13th July 2018

Following Points were discussed in the meeting:

- Vice Principal, Dr. D.D.Chaudhary welcomed all the guests to the meeting. He called upon the Chairman and Principal Dr. M.S. Gaikwad to address the panel and present a welcome speech.

- Dr.M.S.Gaikwad mentioned in his speech about the achievements of SIT in the last year, based on the suggestions which were given in the meeting held last year. He mentioned two remarkable points that, three teachers have completed their Ph.D. and seven patents have been registered overall. He also mentioned that keeping the same zeal, enthusiasm and hard work, we will come to the expectations of the corporate world. Also, He has pointed that, last meeting was very much meaningful and useful since the positive results observed from 'Student Mentorship' and 'Shadow placement activity', which were discussed in the meeting.

- Dr. D. D. Chaudhary then briefed about the overview of the functioning of SIT. He mentioned the short term and long term goals, which include holistic development of students and developing strong industry institute relationship respectively. He also mentioned the various elements of enrichment which are the pillars of SIT. These are VAP, STP, Faculty development programme, Teacher Guardian scheme and so on. He ended with mentioning the training and placement details

- After this, discussion started with all the office bearers for the IQAC to attain its sole purpose.

- Prof. M.G. Bhat , Dean Engineering (STES) mentioned his views in following points:
  - He appreciated the presentation of Dr. D. D. Chaudhary. He mentioned that, most of the things were taken care of in the presentation. He suggested at few points the quantification would have been appreciated.

- o Additional focus should be given on outcome based learning and project based learning in which faculty should take efforts.
- o New NACC format should be consider as guideline for improvement.
- o Research Projects/Publications should boost in future.
- o Faculty should focus on Consultancy work.

- Prof. S. B. Pharkute mentioned the following points
  - o He congratulated to Dr. M.S.Gaikwad and his team for achieving good results.
  - o He also mentioned that placement data should be stated in terms of total eligible students and total students selected.
  - o Data related to students who are into higher education and entrepreneurship should also be mentioned in the presentation.
  - o He mentioned data should be mentioned related to number of workshop and paper published.
  - o He suggested, to study the new pattern of NAAC and NBA and prepare for NAAC – 2021.

- Mr. Kaustubh Bhadbhade, form Persistent, discussed following points,
  - o It is important to change the mindsets of students as well as faculty members.
  - o He also said that "teach students how to think". Listening is 70% part of communication. Students need to be taught about how to ask questions.
  - o He talked about four kinds of students – job oriented, higher education oriented, research oriented and others who just want a degree in hand. Level of institution can be raised when each of these set of students is treated separately.
  - o Also, communication should be perfected, not only english but communication as a whole. Faculty should act as a catalyst in the growth of the students.
  - o Suggestion scheme should be there for new implementation.
  - o In Mock interview, videos can be created so that student can learn themselves from their mistakes

- Dr. Dilip S. More from ADYPCOE Pune mentioned following points
  - o Feedback must be taken twice a semester
  - o In TG scheme try to generate innovative ideas

- o Collaborate with more organizations, sign MOU with these institutes which will help in placements.
- o Categories students so that placement ratio will increase.
- o To improve placement contact parents and relatives of students so as to enhance the industry level interaction.
- o Alumni network should be use for more internship and sponsor project.
- o For consultancy small companies should be targeted.
- o Every faculty should write for BCUD proposal.
- o Green audit should be there.
- o Goals should be high. At least 25 patents should be the target for coming year.

- Mr. Yogesh Topale HR Cognizant AMC, presented his views on following points:
    - o He congratulated SIT team for good result and R&D work
    - o He mentioned following points are important for placement:
        - The resume should be very strong as it is the first impression, in resume explain projects with tech stack and skills.
        - Communication plays a very important role in interview, since the person in front has only thirty minutes to judge you.
        - Learning ability and flexibility of students is very important because technology changes every now and then.
    - o Students should be given awareness of current industry trends.
    - o Student should do some certification also
    - o There should be bench mark for result.

- Mr. K.P. Gangadhara, Parent representative from Tata power mentioned following points
    - o He said QCF can be implemented in SIT for improvement
    - o Mentioned about his concern whether his child is doing good or not.
    - o He also mentioned about keeping the quality assurance session for communication enhancement.

- Mrs. Patekar, Parent representative mentioned following points
    - o Appreciated efforts of faculty, LG scheme, Viva, Internal assessment program.
    - o She mentioned college timing should be reduce in evening so that students can do more practice at home.

- o Yoga and meditation classes should be there.

- Mr. Vipul Madani Alumni Representative, shared his views on following points:
  - o Students should learn industry standards
  - o He mentioned his willingness to provide internship and projects to students
- Student Representative Miss. Muskan gave her thanks to institute for providing various opportunities.

- Mr. Yogesh Jadhav, TPO mentioned the placement details, which stated 273 placements, 38 companies in pipeline, 36 new companies added. Core companies for various departments EnTC – 72, Computer – 92, Mechanical – 63, Electrical – 19, 13 companies with salary package of more than 5 lakhs. We are taking initiative in employment enhancement activities. We have also initiated GATE coaching classes. In this three toppers from every branch will get free coaching. We have also focused on shadow placement in which same placement procedure is followed for SE and TE as of BE. He said we have placement APP. He asked for a suggestion for skills mismatch in students.

- Mr. N.V. Lakal said that, improvement to be done in patents will set the goals higher. He mentioned in last year we have grant of Rs 18, 20,000/-.

- At the end, Dr. M.S.Gaikwad thanks to panel and mentioned that we will follow suggestion step by step. And will try to keep more IQAC meeting every year.

- Dr. D.D.Chaudhary also thanks to panel and mentioned required documents will be mailed to members and request to Prof. Lakal for vote of Thanks.

- The Meeting ends with vote of thanks by Prof. Lakal to all members of panel and given assurance to work on suggestion given by panel.

B. Minutes of IQAC Meeting held on 15th July 2017

Following Points were discussed in the meeting:

Dr.D.D.Chaudhary as a coordinator of IQAC, initiated the session by giving a warm welcome to IQAC panel. He took the overview of last minutes meeting and highlighted some points to initiate the discussion.

Dr.M.S.Gaikwad, Principal, delivered the welcome speech, mentioning about the quarterly meeting. He announced about silver Jubilee program of the STES and suggestions were requested on celebration of this great occasion. He has mentioned the implementation of some suggestions given by members in the last IQAC meeting such as, Student Mentorship program, Feedback from stake holders, and research culture in staff and students.

Dr.V.V.Shinde presented the brief report about the last year's activities such as Student Mentorship, the project quality outlines, participation of students in certain National Events, promotion to higher studies, formats and assessment about Train the Trainer program. Project based learning was taken into consideration. The involvement of the stakeholders, particularly for the roles of the Industry, Students, Parents and Alumni were discussed. The GATE, CAT and GRE scores were also highlighted. Sustainability program and the research development were taken to be as challenge for the same.

Discussion started with all the office bearers for the IQAC to attain its sole purpose.

Prof. M.G. Bhat, Dean Engineering (STES) mentioned his views in following points:

o Activities are not Quantified, Efforts taken for higher studies/ Entrepreneurship / Faculty Qualification improvement.

o Lack of data related to Research Projects/Publications.

o Actions taken after stakeholders feedback

o Campus Connect should be in more detail, number of MoU and how many are actually running.

o Data should be available to all IQAC members at the time of meeting.

o Appreciated activities related to PBL and advised to make Lonavala Campus as a role model of PBL Campus.

Dr. S.N. Merchant sir, mentioned the following points

o Appreciated Bhatt Sir's views and mentioned to focus on Quantification.

o Faculty's Research publication data should be updated.

o Focus on Research Student reading group to encourage speaks out, once in a week two students should speak about innovations/research.

o He also mentioned that the results of GATE, GRE must be shared properly and what happens with those students like what are they pursuing in future should be known.

o Teachers should be involved in teaching for GATE/GRE exams. Mr. Kaustubh Bhadbhade, Ex. Persistent, discussed following points

o Mostly MoUs remains on paper, they must be effective.

o Students should be involved from of drafting of MoU till its execution.

o B.E projects are completion centric where as it should be learning centric.

o Critical feedback is the need of hour.

o Post classes time should be utilized.

o Peer to Peer Competition (Verbal/Technical competition)

o Allot at least 03 Students to each company.

Dr. Dilip S. More from ADYPCOE Pune mentioned following points

o For good quality projects Idea generation session should be conducted for students as well as for faculty.

o Schemes should be effectively communicated to students

o Entrepreneurship sessions should be conducted.

o Campus should be Kaizen oriented (Continuous Improvements)

o Set targets and try to achieve

Prof. S.B. Pharkute Member AMC, presented his views on following points:

o Formats of feedback should be finalized and should be discussed before using.

o Mapping of PO's and PEO's should be done.

o Status of signed MoUs.

o Lack of data related to University Rankers, Comparison of Current year result with last year result.

o For silver jubilee, he suggested to call Top Alumni/Industrialist.

o Project Exhibition with more industrial involvement may be arranged.

Mr. Girish Dekhmukh, Parent representative mentioned about parent teacher relationship. He said that teachers should have a regular interaction with parents. He also mentioned about lack of Practical knowledge among the students.

Mr. Yogesh Jadhav, the T&P officer, shared the AMCAT results that showed the Aptitude and the Technical knowledge of the students. New clubs that are running by the students were given the light of the hour. Shadow placement, QALR test, the GD training were also shared. Placement records were shared and the betterment of the future placements was discussed. He mentioned we are having 292 offers in hand and 52 have got selected.

Mr. Vipul Madhani Alumni Representative, shared his views on following points:

o Quality of final year projects should be improved.

o Categorization of students should be done from second year on the basis of their interest in Entrepreneurship/Higher studies/Placement. Student Representative Mr. Rachit Kaul expressed his views about including innovation into the education. Despite of having VAPs and STPs, the requirement of internships was discussed. Bridging the gap between the Industry and the Academics was made the prime concern. Student Representative Miss. Muskan, gave her point on the technicality and about the clubs that are trying to achieve the same goal for the implementation of better technology. Student representative Mr. Kunal Kishore mentioned students are lazy in performing the group activities, they may be motivated. Mr. N.V. Lakal, Dean R & D updated panel about , R& D programs running in Institute 40 faculty Research Group, ISRO proposal and AICTE proposal submitted.

Mr. V.H. Magar, NSS Prog. Officer told to panel how Institute is working through NSS for solving technical problems of rural area people. Dr. S.D. Babar, HOD (Comp), shared about the infrastructure developments that are on place in the campus this year. With better quality computers and good quality labs, college is also working on a big central library. Mr. N.A. Dhawas, HOD (IT), discussed about the various Students clubs and group activities that are working for the betterment of college on different aspects.

Mr. V.V. Deotare, HOD (ENTC), spoke about the industry-academic relation. The programs that are being initiated to work on the overall development of the students.

Dr. A.A. Kalage, HOD (Elect), shared the Green Audit program and the power analyser system that is being as a great resource for the college. At the end, Dr. M.S. Gaikwad concludes the meeting by giving the vote of thanks to panel and mentioned following points

o Proper communication would be made between the parents and the teachers.

o Committed work would be done in excellence in terms of academics and other activities too.

o Student Mentorship program and the MOUs with the companies would be made sooner.

o Formats for feedback will be followed.

o Comparative and Quantitative report will be present in next IQAC meeting.

The meeting ended with vote of thanks by Dr. D.D.Chaudhary.

Photos of IQAC Meetings

First meeting on 13th Jan 2017

Second meeting on 15th July 2017

Third meeting on 13th July 2018

Academic Quality Assurance Report

Part – A

AQAR for the year

| 2017-18 |

1. Details of the Institution

1.1 Name of the Institution

| Sinhgad Institute of Technology, Lonavala |

1.2 Address Line 1

| Gat No. 309/310, |

Address Line 2

| Off Mumbai –Pune, Expressway. |

City/Town

| Kusgaon (Bk.), Lonavala, Pune |

State

| Maharashtra |

Pin Code

| 410401 |

Institution e-mail address

| principal_sit@sinhgad.edu |

Contact Nos.

| 02114-673353/356 |

Name of the Head of the Institution

| Dr. M. S. Gaikwad |

Tel. No. with STD Code:

| 02114-673353/356 |

Mobile:

| +919552569864 |

Name of the IQAC Co-ordinator

| Dr. Dilip D. Chaudhary |

Mobile:

| +91-9372810161 |

IQAC e-mail address:

| iqac.sit@sinhgad.edu
dchaudhary.sit@sinhgad.edu |

1.3 **NAAC Track ID** *(For ex. MHCOGN 18879)*

| MHCOGN26095 |

OR

1.4 **NAAC Executive Committee No. & Date:**

(For Example EC/32/A&A/143 dated 3-5-2004. This EC no. is available in the right corner- bottom of your institution's Accreditation Certificate)

| EC (SC)/17/A&A/47.1 |

1.5 Website address:

| www.sinhgad.edu |

Web-link of the AQAR:

| http://cms.sinhgad.edu/SIT/IQAC-Meeting-13th-July-18.pdf |

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1st Cycle	B++	2.81	2016-17	5 Years
2	2nd Cycle	-	-	-	-
3	3rd Cycle	-	-	-	-
4	4th Cycle	-	-	-	-

1.7 Date of Establishment of IQAC :

| 13/01/2017 |

1.8 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC ((*for example AQAR 2010-11submitted to NAAC on 12-10-2011*)

AQAR 16-17   submitted to NAAC on 12-10-2017.

1.9 Institutional Status

University   State √ Central ☐ Deemed ☐   ☐ ate

Affiliated College   Yes √   No ☐

Constituent College   ☐ Yes √   No

Autonomous college of UGC   Yes ☐   No √

Regulatory Agency approved Institution   Yes √   No ☐

(e.g. 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 √

1.10 Type of Faculty/Programme

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

TEI (Edu) ☐   Engineering √   Health Science ☐
     Management

Others (Specify)   NIL

1.11 Name of the Affiliating University *(for the Colleges)*   Savitribai Phule Pune University, Pune.

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

Autonomy by State/Central Govt. / University

	No

University with Potential for Excellence	No	UGC-CPE	No
DST Star Scheme	No	UGC-CE	No
UGC-Special Assistance Programme	No	DST-F	No
UGC-Innovative PG programmes	No	Any other (*Specify*)	No
UGC-COP Programmes	No		

2. IQAC Composition and Activities

2.1 No. of Teachers	05
2.2 No. of Administrative/Technical staff	11
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	03
2.7 No. of Employers/ Industrialists	02
2.8 No. of other External Experts	02
2.9 Total No. of members	27
2.10 No. of IQAC meetings held	06

2.11 No. of meetings with various stakeholders: | 6 | No. | 3 | y

Non-Teaching Staff | 1 | Alumni | 2 | Others | 0 |

2.12 Has IQAC received any funding from UGC during the year? Yes | | 1 | √ |

If yes, mention the amount | 0 |

2.13 Seminars and Conferences (only quality related)

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

Total Nos. | 6 | International | 0 | National | 1 | State | 3 | Institution | 3 |
Level

(ii) Themes

Sr. No.	Theme	Events
1	Research	Conference (1 Events)
		Workshops 2
		PhD Consortium
		Paper presentation
		STP-IV (Applicable to all students)
2	Staff Development	Teaching: FDP, TTT, STTP (5 Events)
		Non-Teaching: PBL
3	Curriculum Development	Syllabus Revision
		VAP (6 courses)
		STP-V (Applicable to all students)
		Open Elective
		Seminar (2 Events)
4	Student Mentoring and Support	TG/LG Scheme (Applicable to all students)
		EDC
		NSS
		Competitive Exam Coaching: GATE
5	Innovations and Best Practices	STP (I to V)
		PBL
		Environmental Consciousness

2.14 Significant Activities and contributions made by IQAC

- HR Meet
- ISRO Internship (2 Students)
- Forty students participated in corporate training
- Two FDPs are conducted (Technical Training)
- Twelve Industrial visits had organised having more than 100 students in each
- Three Industrial clubs are active

2.15 Plan of Action by IQAC/Outcome

Plan of Action	Achievements
1. To organize the meetings with all stake holders. 2. To develop E-content on course curriculum. 3. To insure improvement in Student Training Program and related activities. 4. To promote the R & D activities institute level. 5. To Promote Entrepreneurship development programme. 6. To Promote Environmental awareness programme.	1. Two meetings with all members of IQAC, Four meetings with Teaching, and one meeting with nonteaching was organized. 2. Videos lectures based University syllabus using K point platform are developed by internal faculty. Various teaching methods like Multimedia Learning Techniques, Web based teaching and E-learning (NPTEL) were followed by the Faculty. 3. STP Contents were modified and Training to newly added faculty is given. 4. Research groups in every department are formed and work was initialized. 5. EDC cell is activated, MOU with NEN signed. Guest lecture by MCED officer was organized and MOU is in Process. 6. Plantation in the campus is done.

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

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

Provide the details of the action taken

First version of AQAR was sent for discussion and guidance in the statutory body, and with the corrections suggested by all concerned stake holders final report has been modified.

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	Nil	Nil	Nil	Nil
PG	3	Nil	4	Nil
UG	5	Nil	5	Nil
PG Diploma	Nil	Nil	Nil	Nil
Advanced Diploma	Nil	Nil	Nil	Nil
Diploma	Nil	Nil	Nil	Nil
Certificate	Nil	Nil	Nil	Nil
Others	Nil	Nil	Nil	Nil
Total	9	Nil	9	Nil

Interdisciplinary	Nil	Nil	Nil	Nil
Innovative	Nil	Nil	Nil	Nil

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

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	5
Trimester	NA
Annual	NA

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

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

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

- Syllabus is revised after every 5 years by the university itself.
  1. Syllabus of Third Year Engineering is revised in 2016-17

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

- CHES (Center for Hydrogen Energy Studies)
- Project Centre
- Skill development Centre

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of
permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
207	**150**	**16**	**5**	**36**

2.2 No. of permanent faculty with Ph.D.

14

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
188	+13	17	-32	05	-19	01	00	211	-40

2.4 No. of Guest and Visiting faculty and Temporary fac

Nil	Nil	Nil

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	**18**	**22**	**4**
Presented	**30**	**22**	**5**
Resource Persons	**4**	**2**	**21**

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

   i.   **PROJECT/PROBLEM BASED LEARNING (PBL):**

Project/Problem based learning is an effective method which is implemented in our institute to aid the conventional teaching practices. In this method the group of students is formed and given a problem relating to any of the topic from the syllabus. The group has to study the problem and give the solution to the problem. While working on the problem students get the theoretical knowledge behind the topic as well as by applying that theory they try to make any model, case study or sort of this, thus the skill to solve the problem practically is developed inside them.

   ii. **K-point Presentation and preparation of capsules**

In this the topic wise audio visual power point presentations are prepared by the staff for their respective subjects and the same are shared with the students so that they will be able to get the topics which they have missed during their absence in class.

iii. **NPTEL video lectures**

These video lectures are provided to students to clear the idea about the topic they missed during their absence in class and also as an aid for effective teaching.

iv. **Think, Pair and share**

In this before explaining any topic to the students, the teacher develops the atmosphere about that topic by asking some question about the topic known to students in their day to day life. Then pairs are made for students and they are asked to share their ideas regarding the question asked previously. Thus before starting the actual topic, the atmosphere gets developed in the class room.

v. **Classroom Teamwork**

Activities are given to the students which they need to complete in group. During this they get familiar to teamwork and sharing of their ideas is done.

vi. **Various teaching methods like Multimedia Learning Techniques, Web based teaching; Practical Learning and E-learning are followed by the Faculty.**

vii. **Teaching aids such as OHPs/LCDs are used.**

This helps in visualizing the phenomena and learning the topic effectively.

viii. **Design experiments are given to students apart from the curriculum and syllabus.**

This helps for their final year project.

ix. **Use of GD, Role Play, Poster Presentation, etc., as part of class room teaching is adopted.**

x. **Focus on student centered teaching is practiced by the Faculty members.**

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

83+67

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

Open Book Examination, Online Multiple Choice Questions, Double

2.9 No. of faculty members involved (as member of Board of Study/Faculty/Curriculum Development workshop) in curriculum

i. Restructuring

4

ii. Revision

4

iii. Syllabus development

26

2.10 Average percentage of attendance of students

70%

-

2.11 Course/Programme wise distribution of pass percentage:

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
Mechanical	337	53.41	27.29	4.74	0.296	85.25
E&TC	181	67	41	17	1	69.61
Computer	186	70.43	20.43	1.6	0	92.47
IT	57	64.91	26.31	3.5	00	94.74
Electrical	68	41	19	3	0	95.5

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

Internal quality Assurance Cell of our institute is having management representative and along with Principal and Heads of all respective departments. The online feedback from all the students is taken and based on various attributes of teaching –learning and report is prepared. An IQAC committee member evaluates this feedback reports and gives the suggestions to faculty accordingly. In addition to on line feedback, Principal, Vice Principal, HODs also take direct feedback from students. Conduction of daily lectures is also monitored by authorities. Teaching plan and subject notes are checked by concern academic coordinators and randomly by Principal.

Monthly Attendance is displayed on notice board and special attention is given on low attendance students. Parents of such students are informed accordingly time to time. Results of University exam, Prelim exams and class tests are analysed by departments and corrective measures are taken, so as to improve teaching learning process and outcome. Appreciation letter are given to faculty having good performance and letter of improvement is given to those faculty who are not performing up to the expectation. In addition IQAC also suggests various VAPs, STTPs and FDPs to bridge the gap between the industry and academia.

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	39
UGC – Faculty Improvement Programme	35
HRD programmes	3
Orientation programmes	127
Faculty exchange programme	10
Staff training conducted by the university	41
Staff training conducted by other institutions	90
Summer / Winter schools, Workshops, etc.	99
Others	45

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	161	0	11	0
Technical Staff	35	0	04	0

Criterion – III

3. Research, Consultancy and Extension

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

    i.   To promote the R & D activities, institute level policy is framed out through which funds are provided for research activities of students and faculties, as well as research proposals are sent to various funding agencies.

    ii.   Formed research groups in every department.

    iii.   Lab Innovation scheme is implemented.

    iv.   Industry sponsored projects are proposed.

3.2   Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	0	4	0	21
Outlay in Rs. Lakhs	0	8.55	0	60.00

3.3   Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	1	00	00	00
Outlay in Rs. Lakhs	0.65	Nil	Nil	Nil

3.4   Details on research publications

Peer Review Journals	2	0	0
Non-Peer Review Journals	23	0	0
e-Journals	0	0	0
Conference proceedings	11	1	0

3.5 Details on Impact factor of publications:

Range   0-5   Average   2.5   h-index   2   Nos. in SCOPU   5

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
Ph.D. projects	0	0	0	0
Interdisciplinary Projects	0	0	0	0
Industry sponsored	2017-18	ISHRAE	65,000	65,000

Projects sponsored by the University/ College	2016-18	BCUD, SPPU	8,55,000	4,27,500
Students research projects *(other than compulsory by the University)*	0	0	0	0
Any other(Specify)	0	0	0	0
Total				5,92,500

3.7 No. of books published   i) With ISBN No. [17]   Chapters in Edited Bo [2]

ii) Without ISBN No. [Nil]

3.8 No. of University Departments receiving funds from

UGC-SAP [NA]   [NA] AS   DST-FIST [NA]

DPE [NA]   DBT Scheme/funds [NA]

3.9 For colleges   Autonom [NA]   CPE [NA]   DBT Star Scheme [NA]

INSPIRE [NA]   CE [NA]   Any Other (specify [NA]

3.10 Revenue generated through consultancy [Rs. 60,000/-]

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	0	0	0	1	0
Sponsoring agencies	0	0	0	SPPU	0

3.12 No. of faculty served as experts, chairpersons or resource persons [0]

3.13 No. of collaborations   Internationa [0]   National [37]   Any othe [0]

3.14 No. of linkages created during this year [0]

3.15 Total budget for research for current year in lakhs: 18.55 lakhs

From funding agency [8.55]   From Management of University/College [10]

Total [18.55]

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	7
	Granted	0
International	Applied	0
	Granted	0
Commercialised	Applied	0
	Granted	0

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
0	0	0	0	0	0	0

3.18 No. of faculty from the Institution who are Ph. D. Guides

2

and students registered under them

2

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)

JRF   0   SRF   0   Project Fellows   1   Any other   0

3.21 No. of students Participated in NSS events:

University level   5   State level   4

National level   0   International level   0

3.22 No. of students participated in NCC events:

University level   0   State level   0

National level   0   International level   0

3.23 No. of Awards won in NSS:

University level   0   State level   0

National level   0   International level   0

3.24 No. of Awards won in NCC:

University level | 0 | State level | 0 |

National level | 0 | International level | 0 |

3.25 No. of Extension activities organized

University forum | | College forum | |

NCC | | NSS | | Any other | 1 |

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

The college is fully residential & placed in the rural area. It has been therefore necessary to create all kind of facilities in the campus. It was also visualized that curriculum doesn't focus on specific project- based skill sets, which industry demands. The students also need to be involved into cultural and sports activity. The following activities have been exercised in this campus.

- Tree Plantation
- Rain Marathon
- Visit to Snehwan Pune and contributed to the children's growth by providing necessities for day to day nourishment from every aspect.
- Rural School Visit for computer training
- Distribution of Books and food to students

Also with all these following activities are conducted under NSS

Sr. No.	Program	Purpose
1	International white cane day contribution for blinds.	Creating awareness in the society about blinds
2	Poster Presentation and competition on social awareness organized on the occasion of Lal Bahadur Shastri and Gandhi Jayanti.	To support Swachh Bharat Abhiyan
3	Road safety Abhiyan at Varsoli Toll plaza.	Creating awareness in the society regarding traffic rules like, Seat Belt wearing, Don't Drink and Drive
4	Street play organized on Rajmata Jijau Jayanti and Swami Vivekananda Jayanti.	It is organized to create awareness in the society, Women empowerment, Use of social

		media, Swachha Bharat
5	Maharashtra Youth Training program at Balewadi, Pune.	Youth Development Organized by Govt. of Maharashtra
6	National Integration camp at Allahabad, Uttarpradesh.	Organized by Nehru Yuva Kendra
7	Help for Police During Elections as special police force.	For smooth conduction of elections
8	Special winter camp at Kadadhe Taluka Maval.	To develop villages

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	64633	-	Self	64633
Class rooms	38	-	Self	38
Laboratories	54	-	Self	54
Seminar Halls	5	1	Self	6
No. of important equipment purchased (≥ 1-0 lakh) during the current year.(	-	18	Self	6
Value of the equipment purchased during the year (Rs. in Lakhs)	-	631784	Self	631784
Others	-	-	-	-

4.2 Computerization of administration and library

Web **OPAC** (Online Public Access Catalogue) facility is made available through Auto Library Management Software to know the bibliographical details about the collection. One separate node is made available in the Central Library for **OPAC** facility. And as it is a Web **OPAC**, user from any location can search the library collection. Search by giving Title, Author, and domain can be carried out.

Electronic Resource Management package for e-journals
The library subscribes to IEEE All-Society Periodicals package. In addition to that, link to scholarly open access journals/database is also available on the Library webpage.
A well-equipped Digital Library with 10 nodes having internet connectivity is housed in the Central Library for access to e-publications. As the access facility to e-journals is multi-user and IP address-based, students can access the e-publications from anywhere in the campus.

Library Automation:
All the active book collection is updated in the Auto Library Management Software database and the Web OPAC is available for the users. The issue and return of books has been activated with the Auto Library Management Software.

Administration

- Dedicated server for downloading several open source software like Adobe, Android OS, Corel Draw, Browsers, Java, TC and Turbo C++ etc.
- Online Access to ERP resource for knowing progressive performance of students.
- The computers provided to students is in adequate quantity.
- The Institute has a digital library.
- Also there are Wi-Fi access points available on campus.
- 24 x 7 hours internet access.

4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	19393	Rs.7668394/-	307	Rs.1,93,594/-	19700	Rs.79,02,278/-
Reference Books	4459		57		4516	
e-Books	257		25		282	
Journals	58	Rs.107542/-	58		58	Rs.1,07,542/-
e-Journals	2(IEEE , Science Direct	Rs.1498926/-	-	Proposed IEEE	100000/-	
Digital Database	8TB Data	Free from IIT Pawai	-8TB Data		8TB	Free from IIT Pawai
CD & Video	902		48		950	
Others (specify)						

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	741	18	30Mbps	1	1	4	741	-
Added	50	-	10Mbps	-	-	-	-	-
Total	791	18	40Mbps	1	1	4	741	-

4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)
- Dedicated 40 Mbps internet leased line.
- Guest lecture on "Internship by Wisdom sprouts" by Mr.Jayant Mohite of Wisdom Sprouts India Pvt. Ltd. on July 04, 2017

- Expert talk on " Java and Advanced Java" by Mr. S. Kunal for BE students conducted on July 04, 2017.
- Expert Lecture on "Internship by Opulent" on 11th July, 2017 by Mr. Bandyopadhyay, HR Opulent
- Expert talk on "Market IT trends and career" on July 17, 2017 by Mr.Deepak Kumar
- World Entrepreneurs Day Celebration organized on Thursday August 24, 2017 by Business Club of Computer Department. Guest of WED was Mr. Darshan Kadam(CEO and Founder of Inceptum Technologies)
- One Day Workshop on "Microsoft Window's Excel to Excel Your Skills" is organized by EnTC department under IEEE Student's forum on 15th October 2016.
- Workshop on "Cyber Crime and Laws
-

4.6 Amount spent on maintenance in lakhs:

i) ICT

| 9.40 |

ii) Campus Infrastructure and facilities

| 57.17 |

iii) Equipments

| 1.92 |

iv) Others

| 31.77 |

Total:

| 90.86 |

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services:

Institute has enhanced following support services to students,

i. New MoUs were signed with industries to strengthen the Industry-Institute Interactions.

ii. Specially designed Induction programme was conducted for first year engineering students who are new to engineering domain.

iii. Every department conducts an induction program for second year students to give them a warm welcome at department.

iv. College website and Governing Education Management System (GEMS) is used to provide the links that are web-based and intranet resources.

v. Mentoring scheme is implemented to have a face to face interaction with individual students.

vi. Student training programs are exercised for each branch.

vii. Organizing coaching classes for competitive exams (GATE)

viii. VAP are being exercised to bridge the curriculum gap.

ix. A major statistical assessment platform to assess employability in the form of Aspiring Minds Computer Adaptive Test (AMCAT) is undertaken which is well accepted by top Multi-National Companies (MNC's).

x. Institute has well established Microsoft Campus Club, IBM center of Excellence and Persistent Center of Excellence to support strong industry interaction.

xi. Remedial classes were arranged for weak students after each internal or university result analysis.

5.2 Efforts made by the institution for tracking the progression

i. TG (Teacher Guardian) Scheme: All the departments follow TG scheme. The TGs conduct meeting with their respective student batches once in a week and discuss about the policies of the college, take a review of attendance, problems faced by students as well as boost the students to improve their performance.

ii. Monitoring and evaluating results of internal and University examinations: This is done regularly to track the progression of students and actions are taken depending on the results.

iii. Online Students Feedback: Feedback system helps in judging the efforts taken by the faculties and for rectifying the problems. This helps in self-improvement of the faculties.

iv. Carrying out continuous assessment for practical subjects: By doing continuous assessment the performance of the students is monitored and disciplinary actions are taken to the defaulters.

v. Encouraging lab innovations: Lab innovation scheme is to boost the students to work on their innovative ideas which can help them for final year project as well as overall development.

vi. T&P Cell: Training and placement cell monitors the performance of the students and gives the inputs to improve the placements.

5.3 (a) Total Number of students

	UG	PG	Ph. D.	Others
	656	15	-	-

(b) No. of students outside the state | 106 |

(c) No. of international students | 0 |

No	%	
523	80	Men

No	%	
133	20	Women

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
407	79	05	164	00	655	313	78	7	164	00	562

Demand ratio = 100%   Dropout % = 5%

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

   i.   GATE Coaching Classes
   ii.   Foreign language classes (German, Japanese Language)
   iii.   Expert lectures and seminars are conducted on regular basis for students

No. of students beneficiaries | 277 |

5.5 No. of students qualified in these examinations

NET | 0 | SET/SLET | 3 | GATE | 96 | CAT | 16 |

IAS/IPS etc | 0 | State PSC | 0 | UPSC | 14 | Other | 20 |

5.6 Details of student counselling and career guidance

   i.   STP (Student Training Program): STP involves provision of special training over wide spectrum of attributes an engineer is supposed to possess. The whole training is sub divided in to five phases in five semesters. Curricula for these STP phases have been designed quite thoughtfully and are reviewed and revised suitably from time to time.

ii. TG (Teacher Guardian) Scheme: All the departments follow TG scheme. The TGs conduct meeting with their respective student batches once in a week and discuss about the policies of the college, take a review of attendance, problems faced by students as well as boost the students to improve their performance.

iii. Coaching classes for competitive exams: Coaching for competitive exams (GATE) are being conducted in the institute so that the students can get its benefit in the campus itself.

iv. EDC (Entrepreneurship Development Cell): To improve employability and aid the placement activity, students are guided regarding entrepreneurship and boosted to become an entrepreneur through EDC.

No. of students benefitted | 2510

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
186	528	266	NIL

5.8 Details of gender sensitization programmes

o Institutional Women Grievances cell is in place under which following women empowerment activities are conducted.

• Rain marathons are arranged with themes like — "Run for Women Safety" and "Save girl child."

• The committee of Women's Grievance cell- Internal Complaint Committee (WGC-ICC) had arranged a seminar on "Menstruation in Women" which was delivered by Dr. Kalyani (MBBS intern-Pune). It was organized on February 08, 2017.

• The committee had also invited Mrs. Uma Mehta (President Lions Club-Lonavala) and Mrs. Rekha Pav (Secretary Lions Club- Lonavala) for inaugurating workshop on 'People united Against Sexual Harassment-PUSH' on February 27, 2017. More than 450 students participated in it.

5.9 Students Activities

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

State/ University level | 2 | National level | 0 | International level | 0 |

No. of students participated in cultural events

State/ University level | 1 | National level | 0 | International level | 0 |

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

Sports: State/ University level [1]   National level [0]   International level [0]

Cultural: State/ University level [2]   National level [0]   International level [0]

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution	108	10 Lakhs 15 Thousand
Financial support from government	1489	9 Cr 74 Lakhs 57 thousand
Financial support from other sources	0	0
Number of students who received International/ National recognitions	NA	NA

5.11   Student organised / initiatives

Fairs   : State/ University level [   ]   National level [   ]   International level [   ]

Exhibition: State/ University level [   ]   National level [1]   International level [   ]

5.12   No. of social initiatives undertaken by the students [7]

5.13 Major grievances of students (if any) redressed: 00

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

VISION

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

MISSION

We believe in and work for holistic development of students and teachers. We strive to achieve this by imbibing a unique value system, transparent work culture, excellent academic and physical environment conducive to learning, creativity and technology transfer.

6.2 Does the institution has a management Information System

A Governing Educational Management System (GEMS) is maintained at institute level. Paperless governance is carried out through GEMS online, the ERP platform.

GEMS used for online management of,

- Infrastructure
- Staff Profiles and Service Records
- Staff attendance biometric and leave approval
- Student Profiles
- At the departmental level it is used for faculty load distribution, time table management, planning of resources, faculty members upload their course material on GEMS that can be accessed easily by students.

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

6.3.1 Curriculum Development

The institute is affiliated to Savitribai Phule Pune University (SPPU). Board of studies (BoS) is a body in the University to formulate the curriculum. The department has representation in BoS. Faculty members from this institute are nominated on the committee of faculty coordinators at the University. These members of BoS/ CoS use the inputs collected by the institute and contribute in curriculum development for quality improvement.

Inputs are obtained by following means-
- Interaction with the industry through R and D cell.
- Interaction with parents through Parent Teacher Association
- Interaction with Alumni
- Interaction with academicians through workshops

- Comparative study of curriculum of various universities through Open sources

    According to the feedbacks taken from the stakeholders following programs are designed to cope up with the industry needs.
- STP
- VAP

6.3.2   Teaching and Learning

Inputs from Student feedback, Alumni and Industries are considered for improving the teaching-learning. Quality improvement strategies adopted by the institution for Teaching and Learning

Semester Pre-commencement Preparations-
- Departmental Academic Calendar
- Teaching Plan
- Course learning Objectives and Course Outcomes
- Lecture notes
- A further useful resource is provided in the form of Audio Lectures on the K-Point Platform. These lectures are accessible to all the students and teachers in the institute.
- Updating the library with appropriate books as suggested by the faculty.
- Modifying the laboratories to cater for the needs of revised syllabus and new technology.
- Use of GEMS platform

This platform is developed as a resource to the students. Course related entire material, attendance of students, test performance of students are uploaded here by the faculty.

Monitoring students' performance through
- Internal Unit Test-I and II
- Improvement tests
- Mock Tests and practicals
- Assignments, tutorials and seminars, projects

Monitoring the teaching process through
- Online feedback from students (once in semester)
- Oral feedback from students by Head of Department
- Academic audit by peer committee
- Audit of completed syllabus
- Result analysis for internal as well as external (University) examinations.

Addressing issues of individual student
- Remedial classes for slow learners
- Personal guidance to students approaching with difficulties
- Mentoring of students through Teacher-Guardians

Addressing issues related to course

- Extra lectures are allocated in the time table for courses of difficult nature.
- Teaching methodology workshops are conducted in the form of orientation programs.
- Expert lectures are conducted on topics related to the course, but, outside the syllabus to bridge the curriculum gap.

Addressing issues of faculty
- Course assignment as per Competency.
- Mentoring and guidance to faculty members provided by senior/competent faculty.
- Train The Trainers (TTT) and Faculty Development Program (FDP) programs are organized for faculty by the institute and University respectively for different courses.

6.3.3 Examination and Evaluation

- Two internal unit tests are conducted per semester. A preliminary examination is conducted at the end of semester. Improvement tests are also conducted after result analysis for poor performers.
- E-Exam portal is used for addressing mock practice of online examinations.
- Remedial classes are conducted for slow learners.
- Standard question banks and model answers are prepared by the faculty members and distributed to the students.
- Timely assessment of tests is done and the result is displayed.
- Term work evaluation is done on continuous basis. Students are made aware of their term work performance on early basis so that they get an opportunity to improve their credentials.
- External theory examination and practical/oral examinations are conducted by SPPU schedule and rules.
- The Faculty members contribute in the examination work like- setting question paper, being invigilators for theory examination, senior super visors, examiners, moderators etc.

6.3.4 Research and Development

The institute has collaborations with reputed industries, national and international institutions and universities. The institute also believes in research culture and supports innovative ideas from faculty and students.
- Several faculty members take advantage of this facility and enhance their career by obtaining doctorates, publishing technical papers, books etc.
- Well-equipped Research Labs are developed for the funded projects and for the PG programs to improve quality of the research.

- The institute motivates the faculty to undertake research activities through post graduate studies and doctoral studies. It motivates them to publish research papers. For this, an incentive such as financial assistance for research paper presentation etc. is provided.
- Potential research collaborators are identified and MoUs are established.

6.3.5 Library, ICT and physical infrastructure / instrumentation

ICT
- The department regularly updates ICT facilities for classrooms, tutorial rooms and Laboratories. Presently, Department has all class rooms that are equipped with LCD system, Wi-Fi facility and wired internet/ network facility.
- The department regularly enhances the Power backup facility for laboratories.
- Special attention is provided in enhancing Internet connectivity. In year 2016-17, the Internet speed is enhanced from 30Mbps to 40 Mbps.
- Internet security assured with firewall worth Rs. 9,75,000/-
- The department has FTP Server for resource access and is regularly increasing the usage of GEMS by the faculty and Student community; Lecture notes, assignments, question banks, quiz are uploaded. The GEMS platform itself is revised to enhance user friendliness.

Library
- Central Library committee gives guidelines for improving the quality of library resource.
- Suggestions from Library committee and IQAC suggestions are used for improvement in quality of library resource.
- Automation in Library management is increased.
- New books/journals are purchased every year to update the library.
- Each Department has its own Departmental Library facility that includes text books, project and seminar reports and papers published.

Physical Infrastructure
Physical infrastructure is always monitored to address the needs courses or the intake capacity of the institute.

6.3.6 Human Resource Management
While recruiting and retaining the HR, the institute adheres to the quality improvement strategy.
- For professional development of the HR, the institute delegates the faculty and staff to undergo development programs outside the institute, provides technical resources and financial assistance to undertake such development programs.
- The institute organizes HR development programmes for skill up gradation and training of faculty, staff and students.

- Faculty are felicitated for their academic achievements.
- For compensation and benefits of the students and the staff, welfare scheme exist in the institute.
- The institute uses performance evaluation methods for the HR. At the end of every academic year, Performance evaluation of the staff is done by online appraisal system provided on GEMS.
- Weekly department meetings with the heads are conducted to ensure healthy relations and communication among the members.
- Occasionally, meetings of faculty, staff and students with the top management are conducted.

6.3.7 Faculty and Staff recruitment

- Periodic staff recruitment is done with the procedures and norms of UGC and SPPU. Recruitment is done on the basis of field knowledge and interaction skills.
- In case a need arises to recruit a faculty on temporary basis, the selection is done judging the course knowledge and lecturing/ interaction skills from the demonstration lecture conducted by the candidate and Technical interview of the candidate.
- Qualified and experienced faculty are identified and appointed as guest faculty or adjunct faculty.
- Higher administrative post and attractive packages are offered to eminent faculty.
- The institute provides freedom of work, opportunity to excel in the individual's domain area and functional office infrastructure.

6.3.8 Industry Interaction / Collaboration

- Eminent speakers from industry and service sector are invited for interaction with the students and faculty.
- The Entrepreneurship Development Cell (EDC) orients students to start their own business ventures.
- Industry Internship programs, industry designed certification courses and Industrial training during vacation are organized for the students as well as for staff by Training and Placement cell.
- Bright students of department are allotted some of the industry projects.
- Alumni placed in the reputed industries are invited for informal dialogue with the students.
- Study tours are conducted for students to visit industries.

6.3.9 Admission of Students

Admission of the students is done through a central process conducted by a state government body (Directorate of Technical education) where students choose an institute as per their choice. The institute maintains this repute by adopting following strategies-

- Maintaining good results in University examinations by means of quality trends in teaching learning

- Providing quality infrastructure and facilities
- Maintaining good training and placement records.
- Maintaining Ragging-free environment
- Institute has maintained lush green picturesque campus that easily attracts student community.
- Ample hostel facility for girls and boys is provided on the campus.
- Various sports facilities are available to students like 25-acre sports complex with grounds for football, cricket, basketball, athletic track, swimming pool, gymnasium, etc.
- The institute conducts admission process awareness programmes, counselling sessions for prospective students.

6.4 Welfare schemes

Teaching	- Group insurance scheme - Accidental insurance - Staff quarters - Free medical treatment - Registration fee for FDP programs - Maternity leaves are provided as per the government and university rules - Employee Provident Fund (EPF) with 100% gratuity for all staff
Non-teaching	- Group insurance scheme - Accidental insurance - Staff quarters - Free medical treatment - Maternity leaves are provided as per the government and university rules - Employee Provident Fund (EPF) with 100% gratuity for all staff
Students	- Teacher guardian scheme - Students' welfare Cell - Women's grievance cell - Training & Placement activities - Sports facilities and cultural festival - Alumni activities - Social activities - Earn & learn scheme - Scholarship

6.5 Total corpus fund generated   NA

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	AICTE/NAAC	Yes	HOD/Principal
Administrative	Yes	AICTE/NAAC	Yes	HOD/Principal

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

For UG Programmes   Yes [ ]   No [√]

For PG Programmes   Yes [ ]   No [√]

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

   i.   Unit by unit preparation and practice, self-simplified internal test questions, self-learning sessions, and tutorial benefits are given to such students.
   ii.   Faculties provide model solutions of university question papers.
   iii.   Conduction of mock practical for practice
   iv.   Online e-Exam portal is available for students for online examination practice.
   v.   Personalized guidance is being provided to students to reduce the risk of dropout.
   vi.   The slow learners are motivated to attend extra lectures after college working hours.
   vii.   The failed students are encouraged to attend remedial classes.

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

   i.   Institute collects feedback from the employers in the prescribed format during campus interviews, formal meetings and from alumni during alumni meets conducted
   ii.   The feedback helps in designing the training modules prepared by T & P cell for the current students. Alumni give valid suggestions on curriculum development as well as infrastructure facilities.
   iii.   Online suggestions are taken from graduates. These suggestions are reviewed by IQAC/AMC. Adequate measures are taken depending on committee recommendations to improve the performance.

6.12 Activities and support from the Parent – Teacher Association

     i.   Parents Teachers meetings twice in a year

    ii.   Phone calling by TGs regarding student's performance

   iii.   Feedback system

6.13 Development programmes for support staff

     i.   TAP (Teachers Awareness Program)

    ii.   TTT (Train The Trainer)

   iii.   PBL (Project Based Learning)

   iv.   STTP (Short Term Training Program)

    v.   Workshop

   vi.   FDP/ FOP (Faculty Development/Orientation Program)

  vii.   Guest Lecture

 viii.   Seminar

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

     i.   Tree Plantation

    ii.   Fort cultivation

   iii.   Street plays (Supporting Clean India)

   iv.   Winter Camp (For developing awareness regarding various environmental issues)

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.
- ❖ STPs (Student Training Program)
- ❖ Lab innovations

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

1. Feedback of last year programs are taken from all stake holders
2. Content modification is done based on feedback
3. Training sessions are conducted for teachers for effective implementation

7.3 Give two Best Practices of the institution *(please see the format in the NAAC Self-study Manuals)*

- i.   Project Based Learning Environment
- ii.   Comprehensive Student Training Program (STP)

7.4 Contribution to environmental awareness / protection

- ❖ Tree Plantation
- ❖ Fort Cultivation
- ❖ Street plays (Supporting Clean India)
- ❖ Winter Camp (For developing awareness regarding various environmental issues)
- ❖ Rain marathon.

7.5 Whether environmental audit was conducted?   `[   ]`   `[ √ ]`

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

- ❖ **Strengths**
    - ▪ Enthusiastic and self-motivated Staff.
    - ▪ Well maintained labs to support curriculum
    - ▪ Learning environment is a blend of traditional teaching and Project Based Learning and Activity Based Learning.
    - ▪ Classrooms equipped with good quality LCD projectors, screen, and ambiance.

- MoU with the industries for research and development as well as to support the curriculum.
- Research publication and books by faculties.
- Student oriented and student operated clubs to support overall development of students.

❖ **Weaknesses**
- Lack of consultancy activities.
- Inadequate research grants.

❖ **Opportunities**
- Scope for strengthening the industry institution interaction for better placements of students.
- To achieve university rankers.
- Interdisciplinary approach in research & industrial training.
- Good opportunity for community projects.
- To develop research centre.

❖ **Challenges**
- To cope up with international / global challenges in terms of academic quality.
- Admission challenge due to geographic location.
- Low ranks and diversity of incoming students.
- Induction and retention of senior faculty.

Annexure I   Academic Calendars

Sinhgad Institute of Technology Lonavala
Tentative Academic Calendar for 2017-18 Sem.- I.
(For SE/TE/BE)

Sinhgad Institutes

Week No.	Dates	Teaching Days	Programs
1st	15/06/17 to 16/06/17	2	**Commencement of Teaching** and Registration of students. Parent's meeting.
2nd	19/06/17 to 23/06/17	5	
3rd	26/06/17 to 30/06/17	4	Ramazan Id on 26th June
4Th	03/07/17 to 07/07/17	5	
5Th	10/07/17 to 15/07/17	5	
6th	17/07/17 to 21/07/17	5	
7Th	24/07/17 to 28/07/17	5	
8th	31/07/17 to 04/08/17	5	Unit Test-I (30 Marks/1hour /2 Units)
9th	07/08/17 to 11/08/17	5	**SPPU In-Sem Exam for TE / BE**
10th	14/08/17 to 18/08/17	4	Independence Day on 15th Aug. / Midterm submission
11th	21/08/17 to 25/08/17	4	Ganesh Chaturthi on 25th Aug.
12th	28/08/17 to 01/09/17	5	
13th	04/09/17 to 09/09/17	5	**SPPU Phase -1 Exam for FE/SE**
14th	11/09/17 to 15/09/17	5	
15th	18/09/17 to 22/09/17	5	
16th	25/09/17 to 29/09/17	5	End of Teaching on 29th Sept.
17th	03/10/17 to 09/10/17	5	Prelim Exam for TE/BE, **SPPU Phase-II Exam for FE/SE**
18th	10/10/17 to 13/10/17	4	MOCK Practices/Orals & Final submissions
	24/10/17 to 09/11/17		Tentative dates for university practical exam.
	14/11/17 to 11/12/17		Tentative dates for university theory exam.
	12/12/17 to 15/12/17		Selections for cultural events.
	18th Dec 2017		College reopens for next sem. (Sem. II)
	Total teaching days	83	

- The attendance of students will be displayed on 2nd day of every month.
- Students are advised to note the registration process and life skill / Technical skill activities notified separately by respective departments.
- Refer strategy and time tables for Unit Test/ Re-test notified separately at department level.

Dr. M. S. GAIKWAD
PRINCIPAL
SINHGAD INSTITUTE OF TECHNOLOGY
Kusgaon (Bk.), Lonavala-410 401.

SINHGAD TECHNICAL EDUCATION SOCIETY'S
SINHGAD INSTITUTE OF TECHNOLOGY
Kusgaon (Bk), Lonavala-410401.

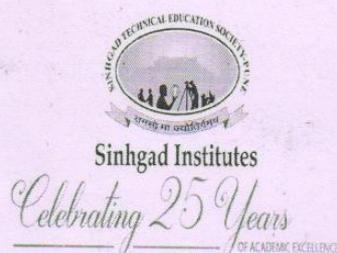Tentative Academic Calendar for SE/TE/BE AY 2017-18 / SEMESTER – II

Week No.	\multicolumn{6}{c}{December 2017}	Teaching Days TE/BE	FE/SE	Particulars
	Mon	Tue	Wed	Thu	Fri	Sat	TE BE	FE SE	
W1	18	19	20	21	22	23	5		Commencement of Teaching SE/TE/BE
W2	25	26	27	28	29	30	4	4	Holiday on Christmas
January 2018	
	Mon	Tue	Wed	Thu	Fri	Sat			
W4	1	2	3	4	5	6	4	4	
W5	8	9	10	11	12	13	5	5	
W6	15	16	17	18	19	20	5	5	Surabhi 2018
W7	22	23	24	25	26	27	4	4	Republic Day
W8	29	30	31				3	3	Unit Test I for FE/SE
February2018	
	Mon	Tue	Wed	Thu	Fri	Sat			
W9				1	2	3	2	2	Unit Test I for TE/BE
W10	5	6	7	8	9	10	5	5	SPPU On line Phase I – FE/SE, Units:1,2
W11	12	13	14	15	16	17	2	5	TECHTONIC - 2018
W12	19	20	21	22	23	24	5	5	Mid Term Submission
W13	26	27	28				3	3	
March 2018	
	Mon	Tue	Wed	Thu	Fri	Sat			
W14				1	2	3	1	1	Holiday on HOLI
W15	5	6	7	8	9	10	5	5	SPPU Phase II FE/SE & In-Sem TE/BE
W16	12	13	14	15	16	17	5	5	
W17	19	20	21	22	23	24	5	5	
W18	26	27	28	29	30		5	5	End of Teaching
\multicolumn{7}{c}{April 2018}	68	66	
	Mon	Tue	Wed	Thu	Fri	Sat			
W19	2	3	4	5	6	7			Prelim Exam TE/BE (70 Marks/ 6 units)
W20	9	10	11	12	13	14			Mock Practical & Final Submission
	\multicolumn{5}{c}{16 to 23 April 2018}	22			University Examinations: Practical/Oral
	\multicolumn{6}{c}{02 to 29 May 2018}			University Examinations: Theory
	\multicolumn{6}{c}{12 June 2018}			Start of next Academic Year

For detail time schedule, STP and T&P activities, students should refer departmental Notice boards.
Holidays as per Circular from Savitribai Phule Pune University and STES orders.

Dr. M. S. Gaikwad
Principal
PRINCIPAL
SINHGAD INSTITUTE OF TECHNOLOGY
Kusgaon (Bk.), Lonavala-410 401.

Sinhgad Institute of Technology Lonavala
Tentative Academic Calendar for 2018-19 Sem- I.
(For SE/TE/BE)

Sinhgad Institutes
Celebrating 25 Years
OF ACADEMIC EXCELLENCE

Week No.	Dates	Teaching Days	Programs
1st	15/06/18	1	Commencement of Teaching and Registration of students.
2nd	18/06/18 to 22/06/18	5	
3rd	25/06/18 to 29/06/18	5	
4Th	02/07/18 to 06/07/18	5	
5Th	09/07/18 to 13/07/18	5	
6th	16/07/18 to 20/07/18	5	
7Th	23/07/18 to 27/07/18	5	
8th	30/07/18 to 03/08/18	5	
9th	06/08/18 to 10/08/18	5	Midterm submission week
10th	13/08/18 to 17/08/18	4	Independence Day. Unit Test-I (50 Marks/ 3 Units)
11th	20/08/18 to 24/08/18	4	Bakri Id on 22th Aug.
12th	27/08/18 to 31/08/18	5	
13th	03/09/18 to 07/09/18	5	
14th	10/09/18 to 14/09/18	4	Ganesh Chaturthi on 13th Sept.
15th	17/09/18 to 21/09/18	5	
16th	24/09/18 to 28/09/18	5	End of Teaching on 28th Sept.
17th	01/10/18 to 07/10/18	5	Prelim / MOCK Practices / Orals & Final submissions
	08/10/18 to 19/10/18		Tentative dates for university practical exam.
	05/11/18 to 25/11/18		Tentative dates for university theory exam.
	10/12/18 to 14/12/18		Selections for cultural events.
	17th Dec 2018		College reopens for next sem. (Sem. II)
	Total teaching days	78	

- The attendance of students will be displayed on 2nd day of every month.
- Students are advised to note the registration process and life skill / Technical skill activities will be notified separately by respective departments.
- Strategy and time tables for Unit Test/ Re-test will be notified separately at department level.
- Timetables regarding In-Sem for TE/BE and on line phase exam for FE/SE will be display as per University guidelines time to time.

Dr. M. S. GAIKWAD
PRINCIPAL
(Dr. M. S. Gaikwad)
PRINCIPAL
SINHGAD INSTITUTE OF TECHNOLOGY
Kusgaon (Bk.), Lonavala-410401.

Annexure II

FEEDBACKS FORM THE STAKEHOLDERS:

The experts from industry are involved during the process of curriculum development at the university level. The institute has a feedback mechanism to record the views of the stakeholders regarding curriculum and syllabus.

The feedbacks are taken in the online and offline mode through informal discussions, surveys and suggestions alumni, parents, industry/employer, and academicians. Also, the institute has an online student feedback system in which all students can post their opinion about the course contents. In addition, Teacher Guardian (TG) meetings are conducted on regular basis to obtain feedback from the students regarding curriculum as well as other development activities. Following tables show sample survey conducted by one of the department.

1. Feedback from the Industry

Table 1.1 Feedbacks from the Industry

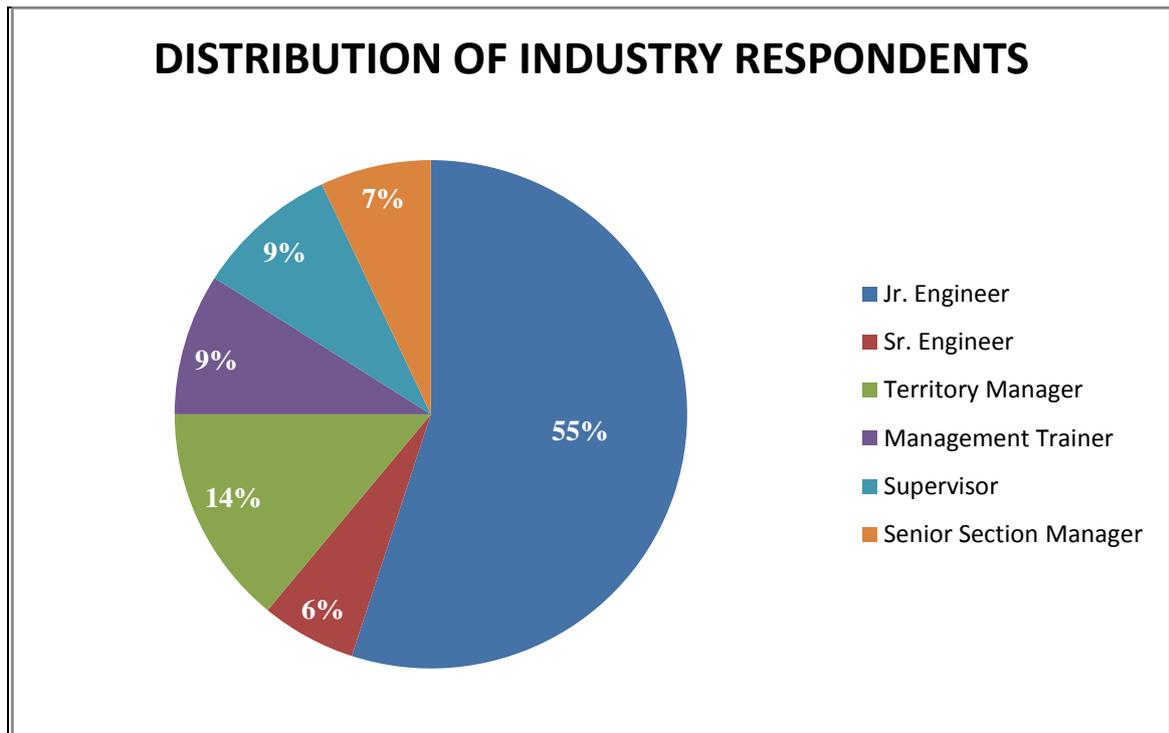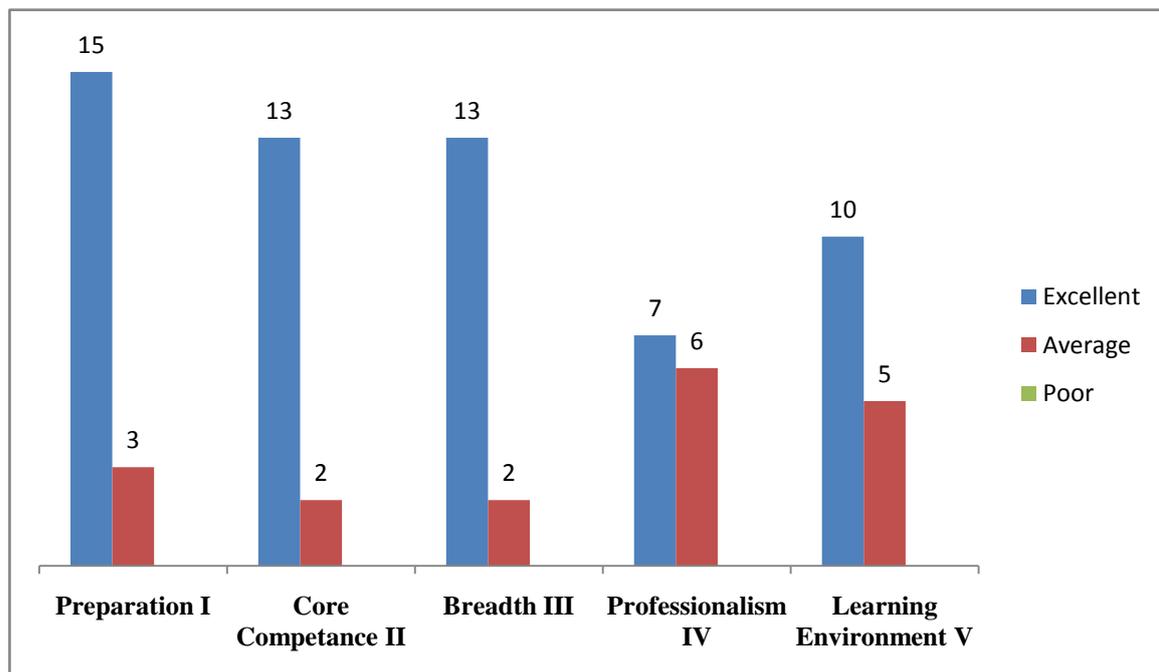| PEO	Program Educational Objectives	Excellent	Average	Poor	Remark
I	Preparation	15	3	-	1. More focus on applied Mathematics and its application can be considered 2. Need to have more updated knowledge as per industry requirement
II	Core Competence	13	2	-	1. Can have more focus on personality development 2. Research lab set up can be done
III	Breadth	13	2	-	Focus on interdisciplinary Programs
IV	Professionalism	7	6	-	1. Industry interaction can be increase. 2. Training program can be schedule regarding ethical attitude in student
V	Learning Environment	10	5	-	1. Practical knowledge as per the industry standard can be more beneficial for students

Figure 1.1 Distributions of Industry Respondents

Figure 1.2 Results of PEO reviews by industry

2. Feedback from the Academicians

Table 1.2 Feedbacks from the Academicians

PEO	Program Educational Objectives	Excellent	Average	Poor	Remark
I	Preparation	70	3	-	Project-based learning is required.
II	Core Competence	72	2	-	Industrial training is required, professional attitude and ethics are valuable.
III	Breadth	65	5	-	Students should be able to write a review paper and research paper.
IV	Professionalism	65	6	-	Should allow students to attend industrial training.
V	Learning Environment	62	7	-	Industry sponsored projects should be motivated.

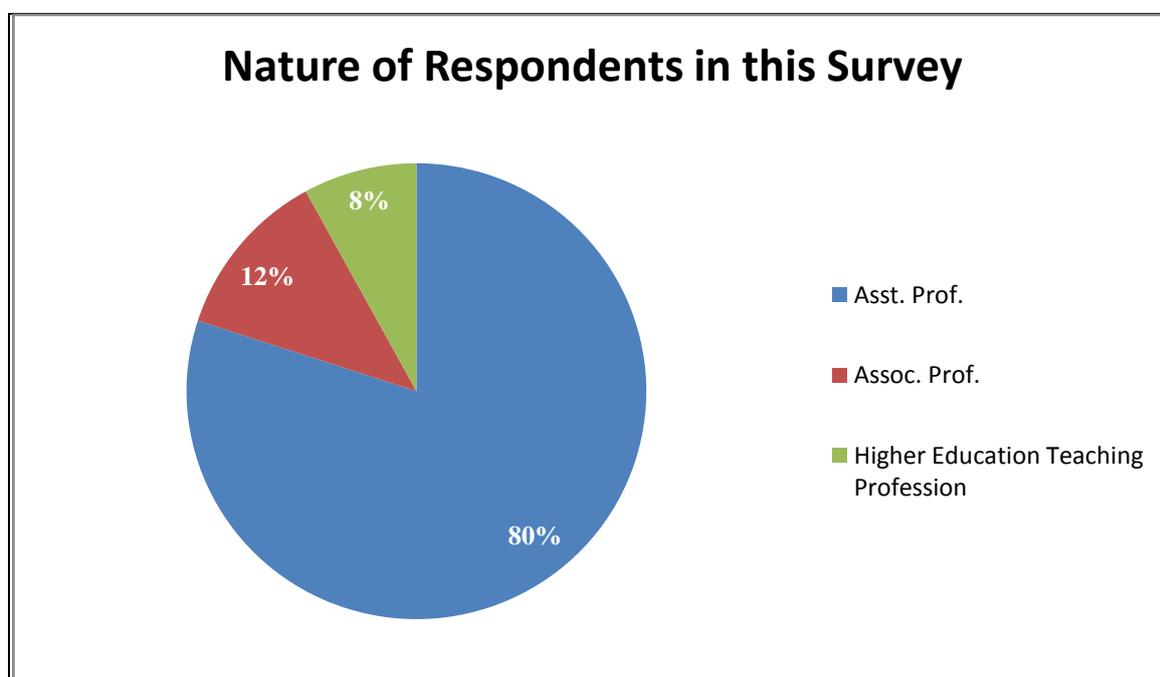Following pie chart shows nature of respondents in this survey.

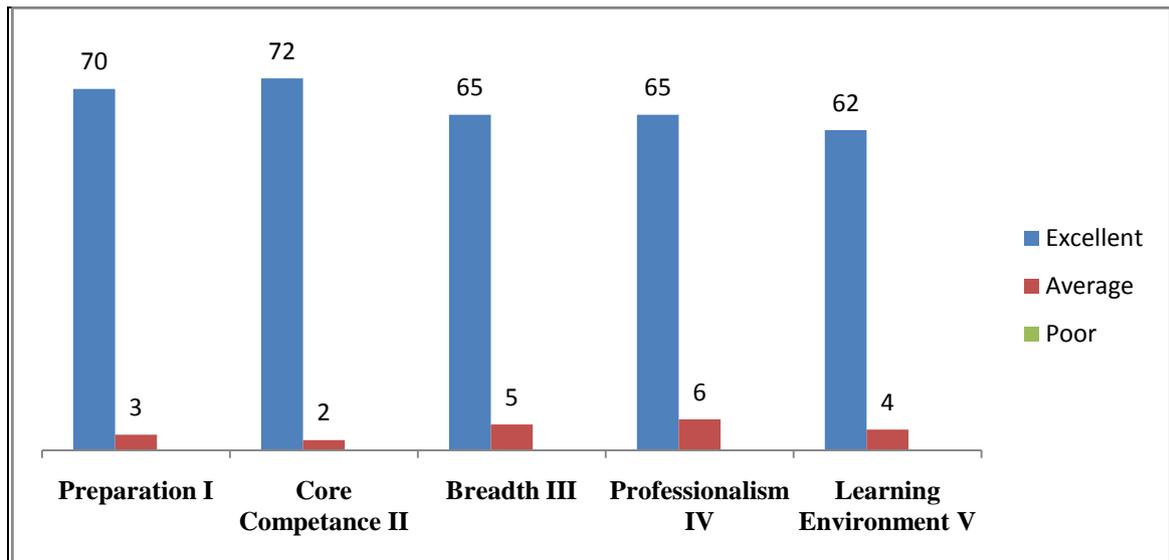**Figure 1.3 Distributions of the Academicians**

Figure 1.4 PEO reviews feedback by Academicians

These suggestions are discussed in the ' Board of Studies ' meeting, and the required amendments are incorporated in the curriculum and syllabus. These inputs are also used to design enrichment programmes.

**3. Feedback received in Exit Survey from Final Year Students**

Opinions of Students from question number 1 to 5 are categorized as

1- Disagree, 2- Strongly Disagree, 3- Mixed Feelings 4- Agree, 5- Strongly Agree
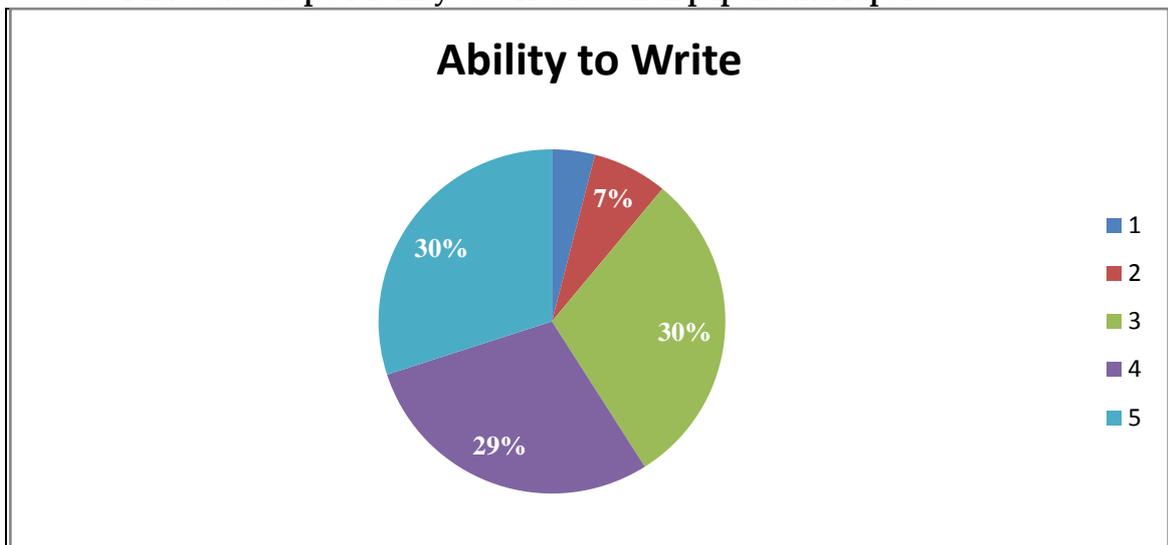
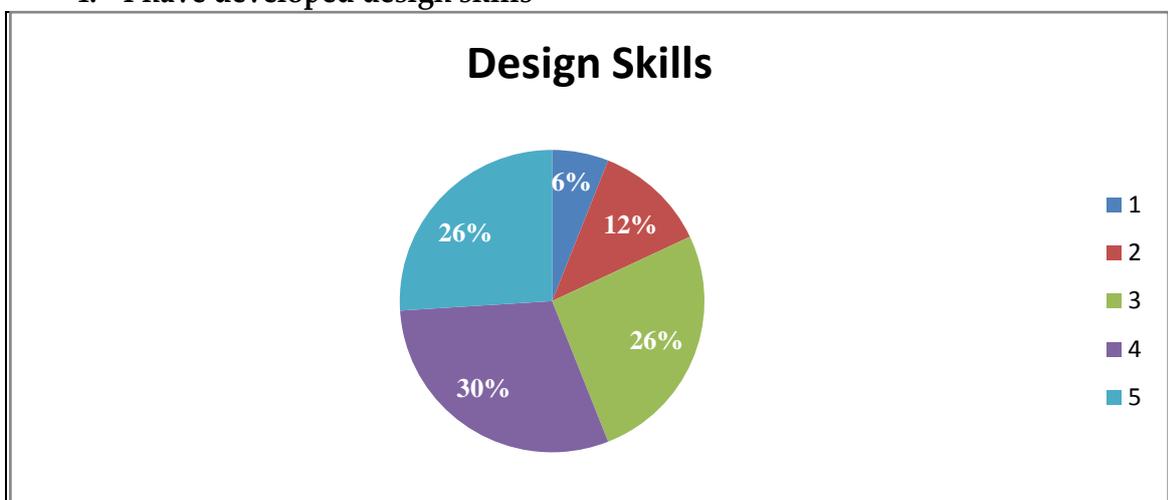**1. I am ready to join my professional practice after graduation**

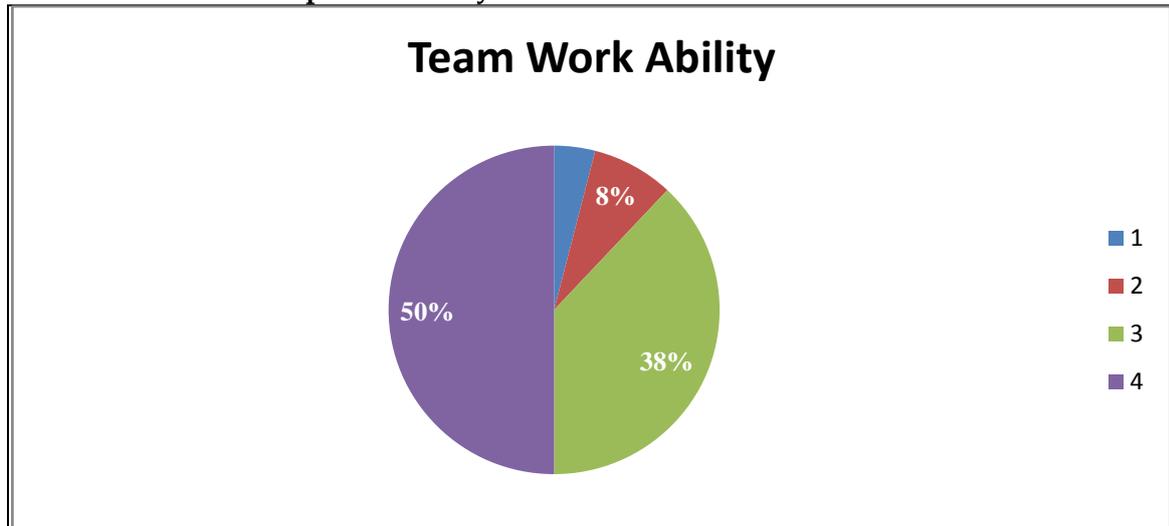2. **I am Confident about my understanding of professional practice and ethics**

Confident about Professional Practice
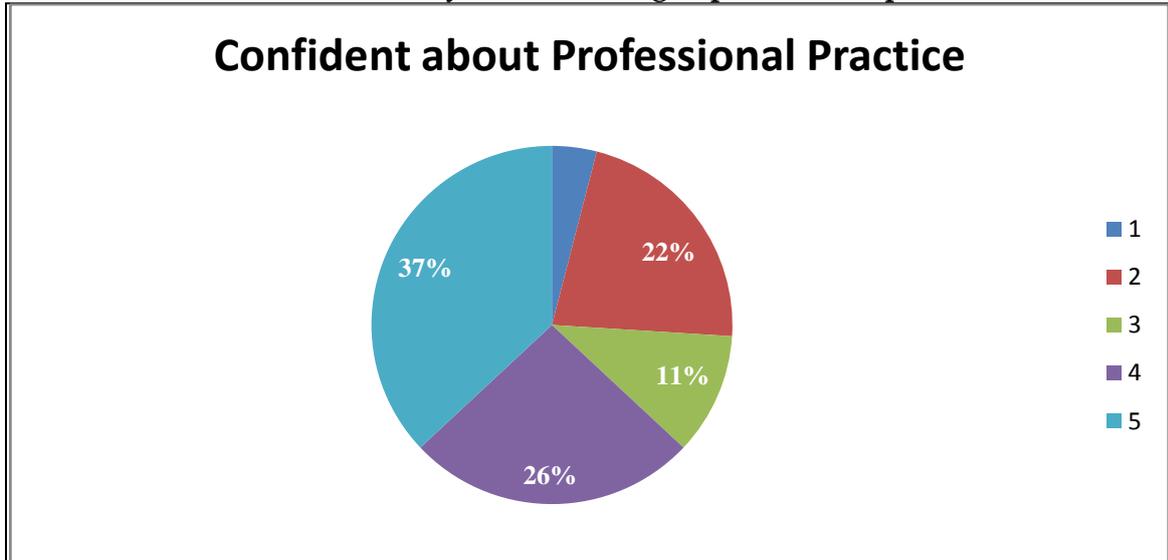
3. **I have developed ability to write research papers and reports**
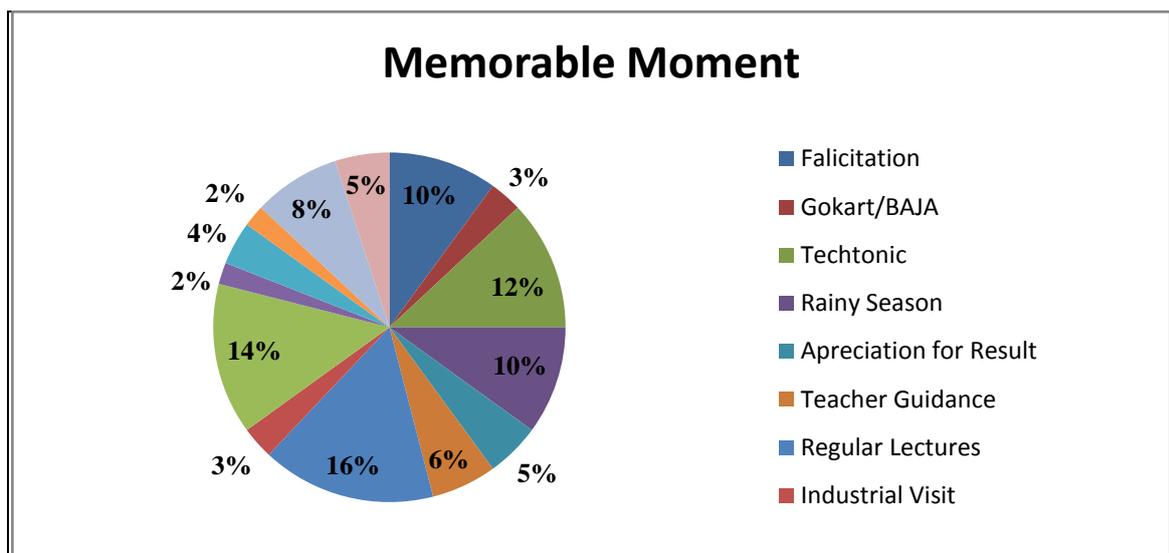
Ability to Write

4. **I have developed design skills**
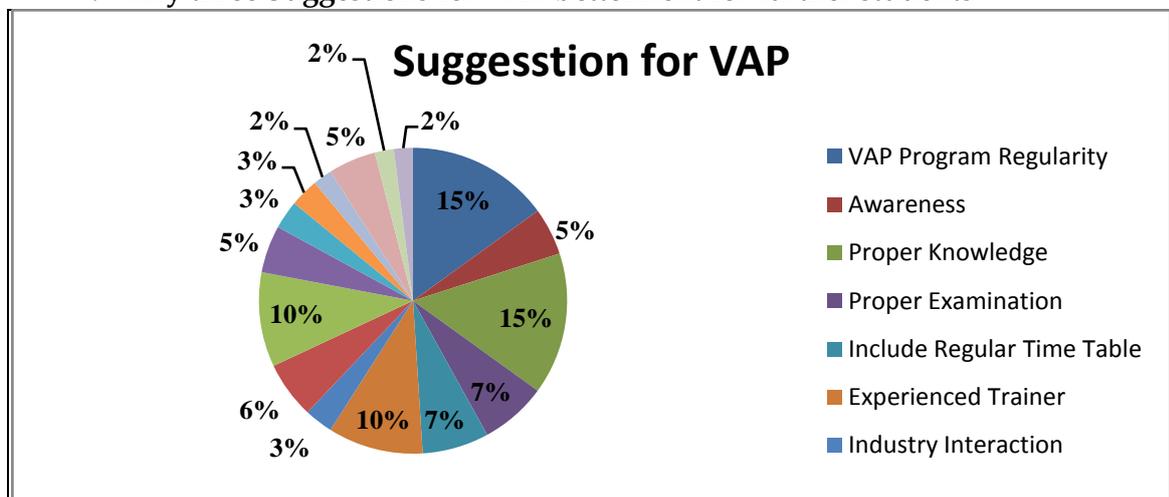
Design Skills

5. **I have developed an ability to work in team**
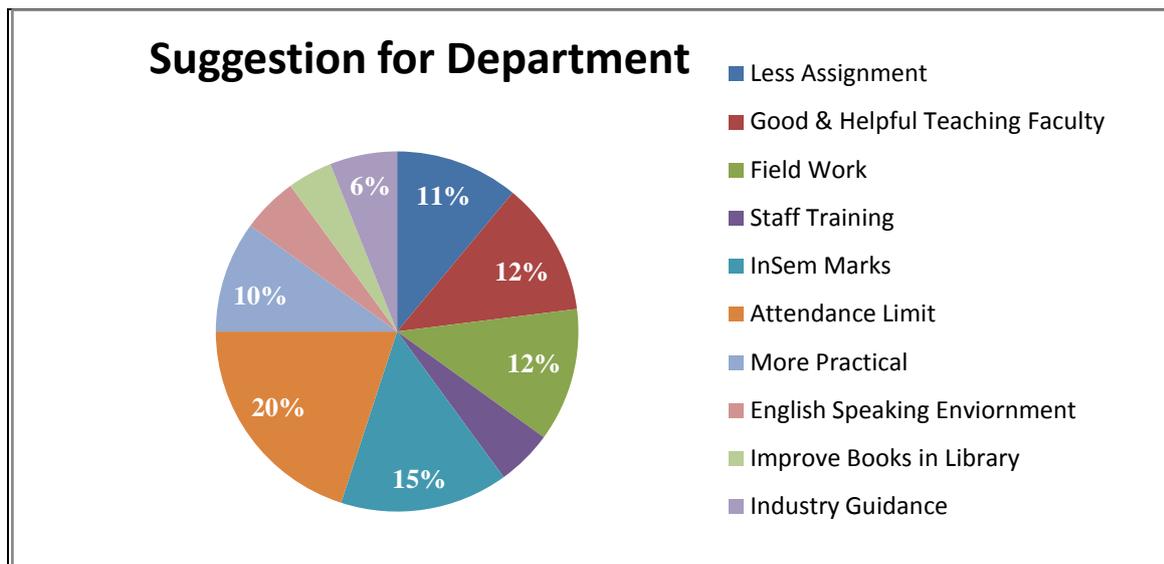

6. **Please share any particular rewarding educational moment that you remember during your experience in the SIT**
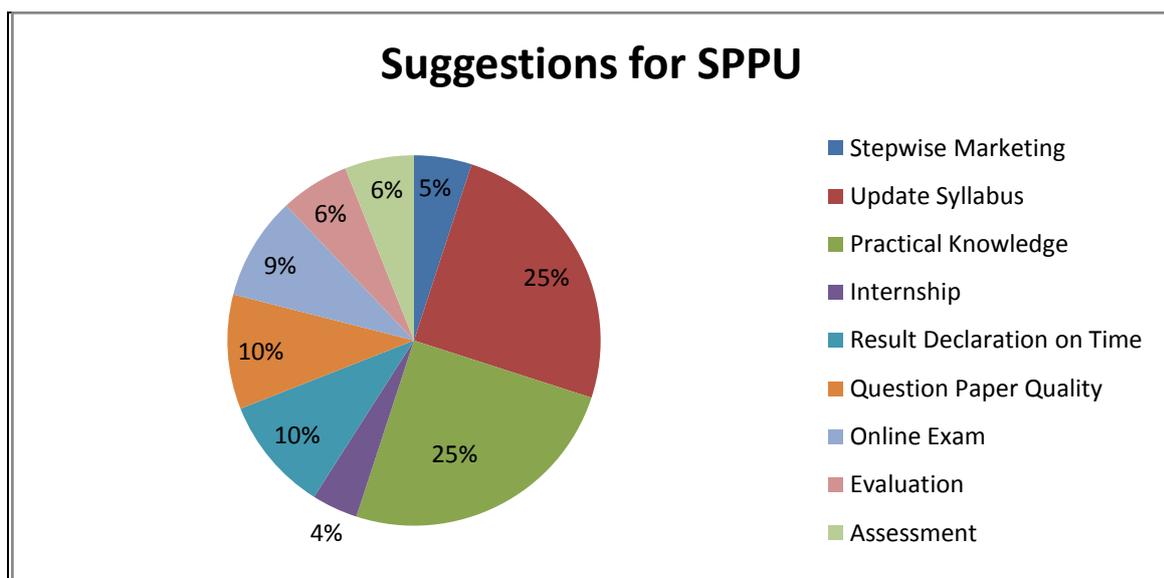

7. **Any three Suggestions for VAP betterment for further students**

8. **Your suggestions about the department**

Suggestion for Department

- Less Assignment — 11%
- Good & Helpful Teaching Faculty — 12%
- Field Work — 12%
- Staff Training
- InSem Marks — 15%
- Attendance Limit — 20%
- More Practical — 10%
- English Speaking Enviornment
- Improve Books in Library — 6%
- Industry Guidance

9. **Any five suggestions for SPPU curriculum Development**

Suggestions for SPPU

- Stepwise Marketing — 5%
- Update Syllabus — 25%
- Practical Knowledge — 25%
- Internship — 4%
- Result Declaration on Time — 10%
- Question Paper Quality — 10%
- Online Exam — 9%
- Evaluation — 6%
- Assessment — 6%

10. **How would you rate your Educational experience at SIT**

Overall Experience at SIT

- Awesome
- Average — 15%
- Satisfactory — 70%
- Not Satisfctory
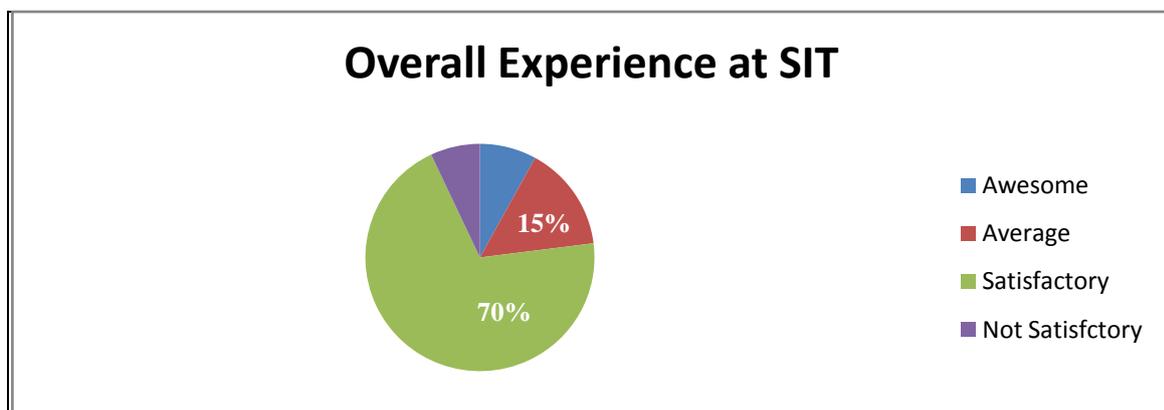
Annexure III   **Best Practices**

Ex. 1. A PBL model developed to understand the topic Internet of Things

Project Title 1: Implementation of smart class room using internet of things

Aim: -   Implement a smart classroom to control lights, fans and curtains using remote.

Objectives:

To study fundamental concepts of IoT

To understand roles of sensors and actuators in IoT

Equipment's:– Arduino Uno, PIR sensor, TSOP sensor, Relay bank, L293D module, DC Motor

Procedure: -Necessity to implement smart class room   -----

60 min

1. State – Introduction to sensors and actuator in internet of things.

2. Explain – Protocols to transmit and receive data using remote.

2.1 PIR sensor, 2.2 L293D module, 2.3 DC motor2.4 TSOP sensor

3. Demonstration – Interfacing of all sensor and actuator with Arduino Uno.

   3.1 Interfacing of TSOP sensor with Arduino Uno.

   3.2 Interfacing of PIR sensor with Arduino Uno.

   3.3 Interfacing of L293D Module with DC motor and Arduino Uno.

   3.4 Interfacing of relay module with appliances in classroom.

4. Calculate – Calculate number of PIR sensor required for a classroom   ----

60 min.

   4.1 Angle of area covered to cover a classroom – (Formula)

   4.2 Range of TSOP sensor – (Formula)

5. Compare – Summaries and Compare readings of different sensor

Sr. No.	Name of Sensor	Number Required	Remark
01	TSOP sensor	01	With the help of single TSOP sensor 99 devices can be controlled.
02	PIR sensor	04	The area covered by each sensor is 120°, so to cover a classroom need 04 PIR.
03	L293D module	01	Two window curtains can be controlled using two DC motor and to control it need one L293D module.
04	Relay Module	10	In a class there are 04 tubes, 04 fans and 02 windows, so total 10 relays required.

Conclusion: Group of 8 with total 64 students has conducted the interfacing of sensor and actuator. Group of 4 with 24 works on programming of arduinouno. The demonstration of project is implemented in B108 in Department of Electronics and Telecommunication.

Ex 2. Remedial Action model developed to improve result of weaker students:

Project Title 2: Implementation of Remedial Action model to improve result of weaker students.

Aim: To develop education, basic skills education, compensatory education preparatory education, and academic upgrading.

Objective:

- To give additional helps to the students who for one reason or another, have fallen behind the rest of the class in the subjects.
- To teach individually or in groups and targets academic weakness that may hinder learning.
- To teach basic skills that are foundation for learning a subject in greater detail, such skills must be learned before students can develop detailed understanding.
- To improve in academic results of students, due to that available various type of jobs for students in industry.
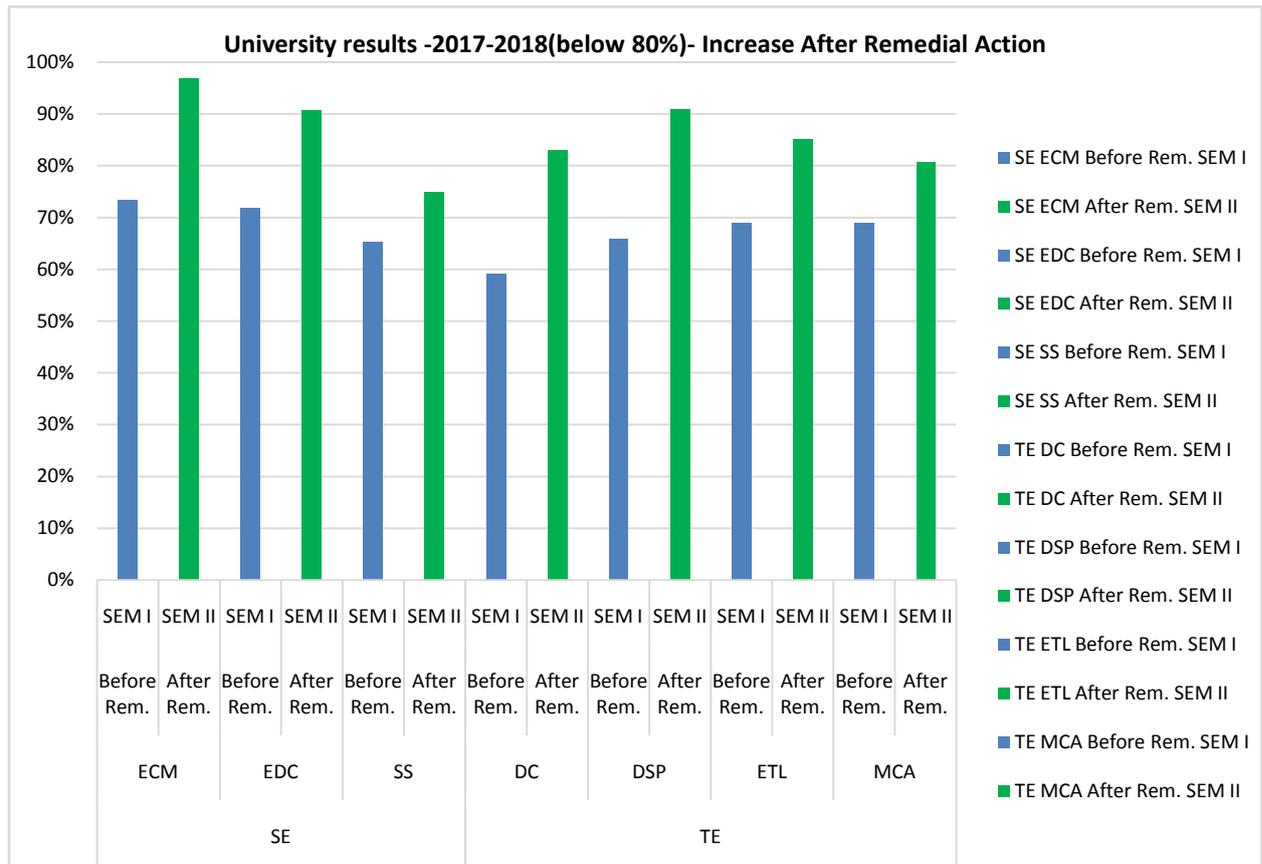
Procedure: ------ time required: as per syllabus

1) Find out weaker Students.

2) Arrange Remedial classes (Lectures) for weaker students.

3) Give the assignment to students

4) Schedule the Tests.

5) Compare the results- Before Remedial and After Remedial.

Result: Summarise and Compare results before remedial action and after remedial action

Outcome: Remedial programs help students to close the gap between what they've been taught and what they've learned at a certain grade level.

Abbreviations

AAU	Aalborg University
ACES	Association of Computer Engineering Students
AMC	Academic Monitoring Committee
AICTE	All India Council for Technical Education
AMCAT	Aspiring Minds Computer Adaptive Test
BOS	Board of Studies
CAP	Centralized Admission Process
CAS	Career Advanced Scheme
CCD	Café Coffee Day
CEO	Chief Examination Officer
CBCS	Choice Based Credit System
CLOs	Course Learning Outcomes
CoE	Centre of Excellence
CTC	Corporate Training Centre
DTE	Directorate of Technical Education
EDC	Entrepreneurship Development Cell
EKC	Engineering Knowledge centre
ETP	Enhancement Training Program
EPF	Employee Provident Fund
ERP	Enterprise Resource Planning
EU	European Union
FDP	Faculty Development Program
FDPs	Faculty Development programmes
GATE	Graduate Aptitude Test for Engineering
GD	Group Discussion
GEMS	Governing Educational Management System
GISFI	Global ICT Standardization Forum for India
HOD	Head of Department
ICEM	Indira College of Engineering and Management
IETE	Institute of Electronics and Telecommunication Engineers
IIIC	Industry Institute Interaction Cell

IQAC	Internal Quality Assurance Cell
IQAS	Internal Quality Assurance System
ISP	Internet Service Provider
ISR	Institutional Social Responsibility
JAES	Journal of Advances in Engineering Science
LIC	Local Inspection Committee
MESA	Mechanical Engineering students Association
MITAE	MIT Academy of Engineering
MNC	Multinational Company
MoUs	Memoranda of Understandings
NAAC	National Assessment and Accreditation Council
NPTEL	National Programme on Technology Enhanced Learning
NSS	National Service Scheme
OPAC	Online Public Access Catalogue
OS	Office Superintendent
PBL	Project Based Learning
PEOs	Program Educational Objectives
PI	Personal Interview
PLOs	Programme Learning Outcomes
POs	Programme Outcomes
PPP	Profile and Project Presentation
PWD	The Persons With Disabilities Act
QA- LR	Quantitative Aptitude – Logical Reasoning
R&D	Research & Development
RHTC	Rural Health Training Centre
SETU	School of Enterprises Tie-Up
SIT	Sinhgad Institute of Technology
SLS	Self Learning Session
SPPU	Savitribai Phule Pune University
SSR	Self Study Report
STES	Sinhgad Technical Education Society
STP	Student Training Program
SWOC	Strength Weakness Opportunity Challenges

T&P	Training & Placement
TAP	Teacher's Advancement Program
TFWS	Tuition Fee Waiver Scheme
TG	Teacher-Guardian
TTT	Train The Trainers
VAP	Value Addition Program
WSN	Wireless Sensor Network

8. **Plans of institution for next year**

Planning for A.Y. 2018-19	
Sr. No.	Details
1	Research collaborations (VJTI/IIT/NIIT) :- 05
2	SETU activity 05
3	Consultancy- 05 Lakhs
4	To file for Patents- 10
5	Good Governance & Leadership Activities- 02
6	To increase in PhD guides- 03
7	Research Fellowship- 05
8	To make MoU with MCED/DIC- 02
9	To Promote of higher education (PhD) 20
10	NPTEL Certifications- Staff + Student) 25 +50
11	Conference/ Workshops/STTP/FDP 05 each
12	Start-ups 30
13	MHRD Programme: 02
14	Scopus Indexed Journal papers: 10

Name   Dr. D.D. Chaudhary   *Name: Dr. M.S. Gaikwad*

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

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