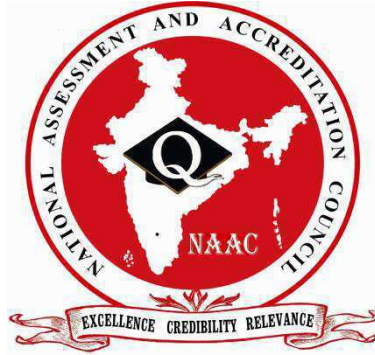


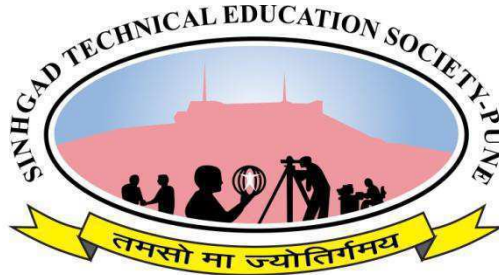
Self Study Report (SSR)

Submitted to



National Assessment and Accreditation Council,
Bangalore

Submitted by



Sinhgad Institutes

Sinhgad Technical Education Society's
SINHGAD ACADEMY OF ENGINEERING
Kondhwa (Bk), Pune.

S. No. 40, Kondhwa-Saswad Road, Kondhwa (Bk), Pune-411048.

Sinhgad Technical Education Society's
SINHGAD ACADEMY OF ENGINEERING
(Affiliated to Savitribai Phule Pune University, Pune and recognized by AICTE, Delhi)



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ABBREVIATIONS

AICTE	All India Council for Technical Education
AMCAT	Aspiring Minds Computer Adaptive Test
APART	Academy of Professionals for Aptitude, Research and Training
ARAI	Automotive Research Association of India
ARC	Application-Form Receipt Center
AY	Academic Year
BCUD	Board of College and University Development
BE	Bachelor of Engineering
BOS	Board of Studies
CAP	Centralised Admission Process
CEO	Course Educational Objectives
CESA	Civil Engineering Student Association
CET	Common Entrance Test
CGPA	Cumulative Grade Point Average
Civil	Civil Engineering
CO	Course Outcomes
Comp	Computer Engineering
CPC	Centralized Placement Cell
CSI	Computer Society of India
CSR	Campus Social Responsibility
CWPRS	Central Water and Power Research Station
Dept	Department
DG	Diesel Generator
DRDO	Defence Research and Development Organization
DTE	Directorate of Technical Education
DST	Department of Science and Technology
EBC	Economically Backward Class
EDC	Entrepreneurship Development Cell
E&TC	Electronics and Telecommunication Engineering
ETSA	E&TC Students' Association
FDP	Faculty Development Programmes
FE	First Year Engineering
FEA	Finite Element Analysis
FESA	First Year Engineering Students' Association
FGM	Functionally Graded Material
FOSS	Free and open-source software
FPGA	Field Programmable Grid Array
FY	Financial Year
GATE	Graduate Aptitude Test for Engineering
GB	Governing Body
GEMS	Governing Educational Management System
GoM	Government of Maharashtra
GPS	Global Position System

HOD	Head of the Department
ICT	Information Communication and Technology
IEEE	Institute of Electrical and Electronic Engineers
IETE	Institute of Electronics and Telecommunication Engineers
I-I-I	Industry Institute Interaction Cell
IIT	Indian Institute of Technology
IPR	Intellectual Property Rights
IQAC	Internal Quality Assurance Cell
ISRO	Indian Space Research Organization
ISTE	Indian Society for Technical Education
IT	Information Technology
LAN	Local Area Network
LMC	Local Management Committee
MBA	Master of Business Administration
Mbps	Megabits per seconds
ME	Master of Engineering
MECH	Department of Mechanical Engineering
MESA	Mechanical Engineering Student Association
MIDC	Maharashtra Industrial Development Corporation
MNC	Multinational Company
MoU	Memorandum of Understanding
NA	Not Applicable
NAAC	National Assessment and Accreditation Council
NGO	Non-Governmental Organization
NIT	National Institute of Technology
NPTEL	National Programme on Technology Enhanced Learning
NSS	National Service Scheme
N/W	Network
OD	On Duty
OS	Operating System
PDF	Portable Document Format
PEO	Program Educational Objectives
PI	Principal Investigator
PID	Preoperational Integral Derivative
PO	Program Outcomes
QALR	Quantitative Aptitude and Logical Reasoning
RC	Research Committee
R&D	Research & Development
SN	Serial Number
SoC	System on Chip
SPPU	Savitribai Phule Pune University
STES	Sinhgad Technical Education Society
STP	Student Training Programme
SWD	Social Welfare Department
SWOC	Strengths-Weaknesses-Opportunities-Challenges

TAP	Teachers Advancement Program
TBI	Technology Business Incubation
TFWS	Tuition Fee Waiver Scheme
TG	Teacher Guardian
T-L-P	Teaching Learning Practices
TTT	Train the Trainer
TW	Term Work
VAP	Value Added Programme
VLSI	Very Large Scale Integration
WiFi	Wireless Fidelity



Sinhgad Institutes

Prof. M. N. Navale

M.E. (Elec.) MIE, MBA
FOUNDER PRESIDENT

SINHGAD TECHNICAL EDUCATION SOCIETY'S
SINHGAD ACADEMY OF ENGINEERING

(Affiliated to University of Pune & Approved by AICTE)

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Dr. (Mrs.) Sunanda M. Navale

B.A., MPM, Ph.D.
FOUNDER SECRETARY

Dr. V. M. Wadhai

B.E., M.E., Ph.D.(E&TC)
MIEEE, MIETE
PRINCIPAL

Ref.: SAE/Office/2015-16/2174

Date: 28/03/2016

To,
The Advisor,
National Assessment and Accreditation Council,
P. O. Box No. 1075, Opp. NLSIU,
Nagabhavi, Bangalore-560072

Subject: Submission of Self Study Report (SSR)

Respected Sir,

We are submitting herewith the Self Study Report (SSR) of STES's Sinhgad Academy of Engineering, Kondhwa (Bk), Pune-411048. We would like to inform you that the copy of SSR is also uploaded on our institute's website http://cms.sinhgad.edu/sinhgad_engineering_institutes/saoe/about_us.aspx on 28/03/2016 for your kind perusal.

Institute is ready for the accreditation and assessment by NAAC Peer Team. You are kindly requested to accept our SSR for further processing.

This is for your kind information and consideration please.

DR. VIJAY M. WADHAI
PRINCIPAL



❧ STEERING COMMITTEE ❧

Sr. No.	Name of the Committee Member	Designation	Designation in Steering Committee
1	Dr. V. M. Wadhai	Principal	Chairman
2	Dr. K. P. Patil	Vice Principal	Vice Chairman
3	Dr. D. N. Kamble	Professor	Coordinator
4	Dr. S. S. Kore	HOD - Mech	Member
5	Prof. M. M. Sardeshmukh	HOD - E&TC	Member
6	Prof. B. B. Gite	HOD - Computer	Member
7	Prof. A. N. Adapanawar	HOD - IT	Member
8	Prof. R. R. Sorate	HOD - Civil	Member
9	Dr. Daljeet Kaur	HOD – Engg. Sci.	Member
10	Prof. S. C. Shilwant	Professor	Member
11	Prof. C. G. Patil	Asstt. Prof.	Member

Preface

The Sinhgad Technical Education Society's, Sinhgad Academy of Engineering (SAE) is a private unaided institution established in 2005. The Sinhgad Technical Education Society is playing a significant role in the field of technical education since last 24 years. Under the guidance and competent leadership of Honorable Founder President Prof. M. N. Navale, the society has set up various bench marks in imparting quality education. Major point of focus of the Society is to nurture each and every institute under its umbrella as Center of Excellence.

SAE offers bachelor degree (B.E) in Mechanical Engineering, Electronics & Telecommunication Engineering, Computer Engineering, Information Technology and Civil Engineering. It also offers Masters Degree (M.E) in Mechanical Engineering (Design & Automotive Engineering), Electronics & Telecommunication Engineering (VLSI & Embedded System), Electronics Engineering (Digital System) and Computer Engineering. Savitribai Phule Pune University (SPPU) has approved two PhD research centers in the department of Mechanical and Electronics & Telecommunication Engineering. All the programs are approved by All India Council for Technical Education (AICTE) and affiliated to SPPU. Institute follows the curriculum provided by the SPPU. Department of Mechanical and Electronics & Telecommunication Engineering have already been accredited by National Board of Accreditation (NBA). Transparent Work Culture, Student Centric Activities and Participative Management are the major features of this Institute.

The institute was established with an objective of holistic development of the important stake holders such as students, faculty, alumni, parents and industry. The qualified, dedicated and experienced faculties play significant role for quality teaching and research.

The Institute provides necessary atmosphere to inculcate ethical and moral values in faculty and students. Institute encourages Entrepreneurship, Research and Development activities. Faculty members are continuously encouraged and motivated for carrier advancement. The Industry-Institute interaction and excellent infrastructure facilitate quality learning and various activities are organized for overall development of students.

PRINCIPAL

Executive Summary

Criterion I: Curricular Aspects

STES's Sinhgad Academy of Engineering (SAE) is affiliated to the Savitribai Phule Pune University (SPPU) and follows the curriculum provided by the University. The institute follows a standard process to plan and execute activities for effective implementation of the curriculum delivery. There is a formal mechanism to ensure that the curriculum objectives are achieved. This process is called as Course Outcome (CO) attainment. CO attainment is judged based on various tools like unit test, mock test, guest lectures, assignments etc.

The institute encourages faculty to actively participate in the syllabus discussion meetings conducted by Board of Studies (BoS) at university level. This helps the faculty to get an insight of the subject as per BoS vision and also helps to interact with subject experts from other institutions. The faculty members participate and organize various workshops, Faculty Development Programs(FDP) and Short Term Training Programs(STTPs) to understand the breadth and depth of the subject for effective delivery of the curriculum.

The institute has signed up Memorandum of Understanding (MOU) with companies from different domains to gain a broader view of the subject from industry perspective. The suggestions received are communicated to the BoS to be incorporated into the curriculum.

Apart from the courses in program affiliated to SPPU, Institute offers value added certification courses. These kind of value added courses help in bridging the gap between curriculum and industry needs and gain the knowledge on recent trends and technologies. The institute has started a Student Training Program (STP) that helps the students to build a personality along with exquisite technical and non technical skills. The objectives of STP are to enhance the employability skills, to prepare the students for entrepreneurship and to promote them for higher education. To enrich the curriculum delivery, the institute organizes various events for the students like guest lectures, industrial visits, workshops, industrial training and value added programs.

The institute has different cells like National Service Scheme(NSS): Through which the students acquire moral and ethical values; Teacher Guardian(TG) Scheme: It is for continuous academic monitoring as well as providing support system to guide and motivate the students; Women Empowerment Cell: It looks after the challenges faced by girl students staying in hostel and staying away from home; Anti-Ragging cell: It is to prevent ragging in the college premises; Grievance Cell: It is to solve any grievances among faculties and students. These cells help in keeping healthy environment at institute.

To address the integrated cross cutting issues various programs are arranged for staff and students in the institute like awareness programs on social issues, health issues and environmental education. The institute organizes various cultural and sports activities. Under CSR (Campus Social Responsibility) various activities are conducted like blood donation camp, Visit to orphanage or other such organizations, Funds collection for natural calamity affected areas etc. These activities help the students to understand their social responsibilities towards the society and also help in holistic development of faculty members and students towards the national development.

Yearly Feedback on the curriculum is taken from different stake holders like students, faculty, alumni, parents and industry. These suggestions are incorporated by organizing various events like guest lectures, content beyond syllabi and value added courses.

Criterion II : Teaching-Learning and Evaluation

Sinhgad Institutes are well known for the Academic Excellence at state and national level. This is achieved through retaining qualified and experienced teachers and a well defined teaching learning process. The admissions to various programmes are made in accordance with the procedure prescribed by the state government and Directorate of Technical Education(DTE), Maharashtra. At institute level unique STP program is introduced for enhancing the quality of students, that consist of five modules spoken skills, writing skills, technical skills, Group Discussion and Personal Interview.

Students' performance is assessed continuously on the basis of internal exams and tests like AMCAT and QALR (Quantitative Aptitude and Logical Reasoning). The performance of students is evaluated in summative assessment like internal examination, mock practical examination etc and formative assessment that is done through continuous assessment. Remedial classes and tutorials are conducted for the slow learners.

The Heads of all the departments and Academic Monitoring Committee (AMC) monitors the effective implementation of teaching plan and adherence to academic calendar. The innovative teaching methodologies like role play, quiz, crossword, and animation and working models are used in teaching for conceptual understanding. The students are motivated for participation and collaborative learning. They are encouraged in problem solving through technical application oriented industrial projects. Various competitions are organized and students are encouraged to take part at National and International level to nurture their critical thinking and leadership quantities.

The faculty members are recruited as per the rules and norms of SPPU, DTE and Government of Maharashtra. Faculty members are motivated and encouraged for their higher education, in-service training, research and development activity and consultancy periodically. The different programs

like Teacher Advancement Program (TAP) and Train the Trainer (TTT) are organized for soft skills and technical skills enrichment. Faculty members are financially supported to participate in STTP/ FDP and National and International conferences to get exposure to the advance trends and technology. The institute has developed well defined process to evaluate learning outcomes. Proper Teaching learning outcome process is defined to attain the desired program outcome.

Criterion III: Research, Consultancy and Extension

To build research culture among the students, staff and external stake holders and for quality enhancement the institute promotes research. The institute takes initiative to publicize the facilities and resources available through the institute's website.

SPPU has a recognized research and development cell established in the year 2015-16, for E&TC & Mechanical Engineering departments.

R & D cell monitors the smooth and efficient coordination of research and development activities in the institute for fostering research and innovation.

Four R & D labs to carry out research activities for students and faculty are made available 24X7 by institute. The college has all academic resources like central library with advanced books, journals, e-resources, fully equipped laboratories and internet facility to all departments. Well qualified and senior staff with their expertise in their respective field contributes for research and innovation. Also veteran professors and company executives are invited as a resource person for seminars / conferences / workshops / UG & PG projects. Financial assistance is given to the staff and students to promote research activities like minor / major research projects, research publication, attending seminars / conference / workshops etc.

The research committee in the institute sensitizes the faculty the essentials of research, enlists the funding agencies for financial assistance for research projects or seminars / conference / workshops at National / International levels to be conducted at the institute. The committee recommends faculty members to pursue PhD, identifies eligible departments for up gradation of research centers to higher authorities.

A Technology Business Incubation (TBI) center, Entrepreneur Development Cell (EDC) and Industry Institute Interaction (III) cell have been set up to enhance research activities to create competent manpower. Through these cells the institute promotes self development of students by encouraging them to participate in national, international events like BAJA, SUPRA, GOKART, ROBOCON etc. As a result each year the students have won various state, national and international level awards. This year also students have won first prize at national level in the competition of BAJA.

The R & D cell has contributed to considerable research outcome and given various solutions as per industry requirement. The institution has 12 PhDs, 04 PhD guides, 40 faculty members pursuing PhD, 53 books published, 32 patents filed and 03 faculty members are reviewers of reputed journals. Ongoing research projects worth Rs. 64 lakhs received through different funding agencies, Rs 18.95 lakhs funded research projects completed. Eight faculty members have received reputed awards and 848 research papers have been published in last 4 years.

50 Memorandum of Understanding (MOU) with industries has been signed by institute to establish a bond with the industry for the purpose of inclusive growth. The institute encourages and promotes research projects to be carried out with outside agencies / industries like ISRO, DST and BCUD-SPPU, so as to provide solutions to industrial problems and creating more research facilities at the institute. These linkages with industries, agencies, institutions & research centers have manifested into providing hands-on experience /on job training for students, placements and also carrying out social service programs to the community.

Criterion IV: Infrastructure and Learning Recourses

All the necessary state of art infrastructure, learning resources and facilities as per the AICTE norms to meet various requirements of teaching-learning process are made available. These resources are used for conducting curricular, co-curricular and extracurricular activities. Spacious, well ventilated classrooms equipped with modern ICT tools, tutorial rooms and well equipped laboratories with the state of art facility for students to perform their practical and projects is provided. C.C.T.V. cameras are installed at the institute for surveillance and monitoring of academic activities and university examination. A modern, air conditioned seminar hall with audio visual equipment and power backup for conducting workshops, conferences, seminars and various college functions is available. Conference hall for conducting group discussions and workshops is provided. Institute has a well-furnished central library with reading room, digital library and with a large number of text books, reference books, journals and e journals to provide information and intellectual requirements to its students and faculty. All the departments are well equipped with computers, peripherals, Internet service, internal networking and browsing facility to access to worldwide information and to enhance their academic excellence. The campus has Wi-Fi connectivity and high speed (12Mbps) broad band Internet facility. The institute offers excellent medical facilities to staff, students and others in the community. The staff and students can avail this facility at the STES Urban health Centre, Kondhwa and at Smt. Kashibai Navale Medical college and General Hospital free of cost. Well furnished separate hostels for boys and girls are provided with the capacity of 500 respectively.

The institute has other amenities and facilities like well maintained lawn, botanical garden, play ground for outdoor games, gymnasium for indoor games, canteens, mess, bank, ATM and general stores. Uninterrupted electricity supply is ensured in the campus with the help of 320 KVA generators and UPS systems. The institute has provided safe drinking water facility through installation of aqua-guards at various places in the campus and in the hostels. Sewage treatment plant is also setup for recycling and reuse of waste water.

The institute has effective mechanism for all kind of maintenance and upkeep of the infrastructure, campus facilities and equipments. The institute's housekeeping staff looks after day to day cleanliness, hygiene and maintenance of the premises. Security staff maintains security and safety in the campus. Electrician for repair and maintenance of electrical works is available at the institute. Laboratory equipments, electronic maintenance, computers and other gadgets are repaired, calibrated and maintained internally as well as by placing annual contract to relevant agencies. Campus estate manager looks after the repair and maintenance of civil works of the institute. Annual maintenance contracts are executed for the maintenance of UPS, generators and water coolers. Plantation in the campus is been taken care by gardening agency. Adequate budget is allocated for maintenance, up keeping and for the up-gradation of infrastructural facilities.

Criterion V: Student Support and Progression

The institute has about 4000 students from diverse background. Various schemes have been implemented to conduct activities for academics and progression towards employment, higher learning and entrepreneurship. Institute provide support to diverse category students like SC,ST,OBC and economically weaker sections of society through various scholarships, freeship and earn and learn scheme. Facilities like competitive examinations, career counseling, soft skill development etc. are made available to make students globally competent.

The institute has active placement cell that helps students to identify job opportunities and arrange campus interviews and a separate ED cell to develop entrepreneurship skills among the interested students to start their own business. Institute maintains strong association with alumni in the way of feedbacks, by career guidance sessions and by technical lectures etc.

The progression of student in various departments of the institute is regularly monitored by AMC using the parameters such as attendance, result analysis, student feedback, placement and progression to self employment and higher studies. The corrective actions are taken to improve the results periodically.

Feedback is taken from students during the course and after exit, for planning and developing support services.

Student participation in co curricular and extracurricular activities is encouraged which is evident from the track record of participation and achievements. SAE arranges two mega events “Sinhgad KARANDAK (Sports)” and “Tectonic (Co- curricular)” in which thousands of students participates.

College has various student clubs such as NSS, Rotract club, yoga, women empowerment cell, sports club, cultural club, robotics club, environmental club, health club, personality development club, social club, technical innovation club and student welfare club. Many events are organized under these cells for developing the various qualities among the students like team work, management, leadership and responsibility towards society etc. In addition to this every department has a student association which helps the students to arrange trainings, competitions and to promote publications.

The institute has a college magazine “MOSAIC” that not only serves a platform for students to express their creativity and talents but also creates awareness among students with recent affairs. “MOSAIC” has been a award winner at the University level competition for consecutively five years.

Criterion VI: Governance, Leadership and Management

This Institute has mission to provide quality higher education for building a center of excellence in engineering education. The focus is on holistic development of students and teachers. Research and Development culture is developed among faculty members and students. The students are encouraged and motivated to participate in extra-curricular and co-curricular activities. The concrete efforts are taken for strengthening the Industry-Institute interaction and for gaining the knowledge in the field of recent trends and technologies along with entrepreneurship domain.

Institute exhibits transparent work culture. Student centric activities are always performed at this Institute by adopting participative management strategies. Decentralization of powers are executed at institute level. The faculty members are involved in decision making processes for generating academic and administrative leaders. Periodic interaction is made with all stakeholders for preparation and execution of perspective plans, policies and strategies of the institute.

The Institute has well defined organizational structure. Recruitment norms are followed which are set by the affiliating University, Government of Maharashtra and AICTE. Institute offers various Welfare schemes to Teaching and Non teaching staff members. Up gradation of skills of teaching and non-teaching members is ensured by conducting different FDP/STTP/FOP, workshops. Feedback system is deployed to ensure quality of faculty members.

Institute has adequate provisions for academic and administrative budgets. Optimum utilization of the available resources and funds is been taken care for efficient functioning of institute. The handling and mobilization of funds received from external agencies like ISRO, IST, etc. is also monitored and audited periodically.

Principal, Vice Principal and HODs are continuously monitoring teaching-learning process and overall development of students along with Academic Monitoring Committee (AMC). AMC is part of Internal Quality Assurance Cell (IQAC). This committee audits and assesses the quality of departmental day to day activities periodically.

Criterion VII: Innovation and Best Practices

The institute promotes eco-friendly practices in the campus. These include regular plantation drive, treatment and reuse of waste water, proper disposal of e-waste and use of solar energy for hot water purpose at the hostels.

The institute has introduced many innovations in the last four years which has created a positive impact in its functioning. These innovations include use of Governing Education Management System (GEMS) module for administrative work like maintaining and updating staff profiles, service books, annual appraisals, training and placement activity etc. To promote applications and problem based learning among the students several programs like “Project Based Learning” and “Student Training Program” has been initiated and facilities such as financial support, research labs, studio and classroom with ICT have been provided by the institute. Many groups like ED Cell, Social Cell named “Life Editor” etc. have been initiated to foster innovations as well as the overall development of students.

One of the best practices followed at the institute is the “Teacher Guardian Scheme & Student Training Program”. This practice is aimed at continuous academic monitoring as well as providing support system to guide and motivate the students. It enables the enhancement of technical and soft skills of students to improve their employability skills.

Another best practice followed at institute is enhancing the quality of technical education through guest lectures by eminent personalities, industry interactions as well as inculcating passion in students and faculty members towards the pursuit of research.

SWOC

1. Strengths:

- Excellent Teaching Learning Process
- Consistent excellence in University Result
- Experienced, skilled and dedicated Faculty
- State of art laboratories and Infrastructure for qualitative teaching
- Entrepreneurship Development Cell
- Technology in Business Incubation Cell
- Research centre with dedicated research labs
- K-Point Software for E learning resource
- Planned Activities like FDP/STTP, workshop and guest lecture etc.
- Best practice Student Training Programme and Teacher Guardian scheme.
- Tie-up with European Universities and MOU with Industries
- Well equipped studio to develop the e-contents
- Support to Faculty and students for holistic development and making them globally competent

2. Weakness:

- Consultancy and extension activity
- More Value added programs for academic flexibility
- Number of faculty with PhD qualification
- Tie up with R&D Labs and research center with IIT's and Top academic institutions
- Sponsored Projects by Industry

3. Opportunities

- Collaboration with Reputed Institutes
- Fostering the research and development to support industry around Pune
- Enhancing the entrepreneurship activity to join with Make in India and start up activity Government of India.
- Enhancing number of patents and commercialization
- Development of Applied Lab in support with Industry

4. Challenges

- Need of certification courses for academic flexibility
- Improving the Training and Placement Record
- Intellectual property generation
- Technology Commercialization
- Community Development project execution
- To make our majority of students globally competent

Profile of the College

1. Name and Address of the College :

Name : Sinhgad Academy Of Engineering.
 Address : S.No. 40, Kondhwa-Saswad Road, Kondhwa (Bk),
 Pune-411048.
 City : Pune, Pin: 411048, State : Maharashtra.
 Website : <http://www.sinhgad.edu>.

2. For Communication :Description

Designation	Name	Telephone with STD code	Mobile	Fax	Email
Principal	Dr. Vijay M. Wadhai	O: (020)-26934550	9921843549	26934297	saeprincipal@sinhgad.edu
Vice Principal	Dr. Kishor P. Patil	O: (020)-65300504	9545754563	26934297	kppatil.sae@sinhgad.edu
Steering Committee Co-ordinator	Dr. Dinesh. N. Kamble	O: (020)-26934441	9503598026	26934297	dnkamble.sae@sinhgad.edu

3. Status of the Institution :

Affiliated College ☒
 Constituent College ☐
 Any other (specify) ☐

4. Type of Institution:

(a) By Gender:- i. For Men <input type="checkbox"/> ii. For Women <input type="checkbox"/> iii. Co-education <input checked="" type="checkbox"/>	(b) By Shift:- i. Regular <input checked="" type="checkbox"/> ii. Day <input type="checkbox"/> iii. Evening <input type="checkbox"/>
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5. It is a recognized minority institution?

Yes ☐
 No ☒

6. Sources of funding :

Government ☐ Grant-in-aid ☐
 Self-financing ☒ Any other ☐

7. a. Date of establishment of the college : 03/08/2005
 (dd/mm/yyyy)

b. University to which the college is affiliated : Savitribai Phule Pune University, Pune.

c. Details of UGC recognition : Not Applicable

Under Section	Date, Month & Year (dd-mm-yyyy)	Remarks (If any)
i. 2 (f)	NA	NA
ii. 12 (B)	NA	NA

d. Details of recognition/approval by statutory/regulatory bodies other than UGC (AICTE, NCTE, MCI, DCI, PCI, RCI etc.)

Under Section/ clause	Recognition/Approval details Institution/Department Programme	Day, Month and Year (dd-mm-yyyy)	Validity	Remarks
Regulations 2012 by the council vide notification F. No. 37/3/legal 2012 at 27/09/2012	<u>F. No.</u> 06/07/MS/Engg/2005/002 <u>UG:</u> <i>i.</i> E&TC Engg. <i>ii.</i> Computer Engg. <i>iii.</i> Mechanical Engg. <i>iv.</i> IT	22/06/2005	One Year	Approval is extended every year by submitting the required documents as per AICTE
	<u>F. No.</u> 06/07/MS-Engg/2006/04 <u>PG:</u> <i>i.</i> MBA	05/06/2009	One Year	
	<u>F.No.</u> Western Region, Maharashtra/1- 4676331/2010/EOA <u>UG:</u> <i>i.</i> Civil Engg. <u>PG:</u> <i>i.</i> E&TC Engg. (VLSI & Embedded Systems) <i>ii.</i> Mechanical Engg. (Design Engg.)	08/11/2010	One Year	
	<u>F.No.</u> Western/1-40194204/ 2011 /EOA <u>PG:</u> <i>i.</i> Electronics Engg. (Digital Systems)	01/09/2011	One Year	

	<u>F.No.</u> Western/1-709561542 /2012/EOA <u>PG:</u> <i>i.</i> Mechanical Engg. (Automotive Engg.) <i>ii.</i> Computer Engg.	15/05/2012	One Year	
	<u>Ph.D Research Center</u> Ph.D Mechanical Engineering Ph.D E&TC Engineering	24/07/2015	Three Year	Approved by SPPU, Pune.

8. Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?

Yes ☒ No ☐

If yes, has the College applied for availing the autonomous status?

Yes ☐ No ☒

9. Is the college recognized

(a) By UGC as a College with Potential for Excellence (CPE)?

Yes ☐ No ☒

If yes, date of recognition: **Not Applicable**

(b) For its performance by any other governmental agency?

Yes ☐ No ☒

If yes, Name of the agency **Not Applicable**

10. Location of the campus and area in sq.mts:

Particular	Description
Location *	URBAN
Campus area in sq. mts.	20234.28 sq.mtr.
Built up area in sq. mts.	25064 sq.mtr.

(* Urban, Semi-urban, Rural, Tribal, Hilly Area, Any others specify)

11. Facilities available on the campus (Tick the available facility and provide numbers or other details at appropriate places) or in case the institute has an agreement with other agencies in using any of the listed facilities provide information on the facilities covered under the agreement.

- Auditorium/seminar complex with infrastructural facilities ☒
- Sports facilities
 - * Play Ground ☒ * Swimming Pool ☐ * Gymnasium ☒
- Hostel
 - Boys' hostel ☒

- i.** Number of Hostels - 2 **ii.** Number of Inmates - 400
- iii.** Available Facilities
- a) Attached toilet & bathroom of extra large size per room. ☒
 - b) Drinking Water Purifier (AquaGuard) floorwise separate provided. ☒
 - c) Water Cooler ☒
 - d) Wi Fi system ☒
 - e) Mess ☒
 - f) Canteen ☒
 - g) Cafeteria ☒
 - h) 24 hrs. Medical facilities with well equipped Ambulance. ☒
- Girls' hostel ☒
- i.** Number of hostels - 2 **ii.** Number of inmates - 200
- iii.** Available Facilities
- a) Attached toilet & bathroom of extra large size per room. ☒
 - b) Drinking Water Purifier (AquaGuard) floor wise separate provided. ☒
 - c) Water Cooler ☒
 - d) Wi Fi system ☒
 - e) Mess ☒
 - f) Canteen ☒
 - g) Cafeteria ☒
 - h) 24 hrs. Medical facilities with well equipped Ambulance. ☒
- Working women's hostel – Not Applicable
 - i.** Number of inmates
 - ii.** Facilities (mention available facilities)
- 4.** Residential facilities for teaching and non-teaching staff
- i.** Teaching Staff – 3
 - ii.** Non Teaching Staff – 2
- 5.** Cafeteria ☒
- 6.** Health centre ☒
- First aid, Inpatient, Outpatient, Emergency care facility, Ambulance.....
- Health centre staff –
- Qualified doctor: Full time: 02 Part-time : NIL
- Qualified Nurse: Full time: 03 Part-time : NIL
- 7.** Facilities like banking, post office, book shops
- i.** Bank – Canara Bank ☒
 - ii.** Book shop – In the premises ☒
 - iii.** Post Office - Beside College Campus ☒

8. Transport facilities to cater to the needs of students and staff ☐ x
9. Animal house – NA ☐ x
10. Biological waste disposal – NA ☐ x
11. Generator or other facility – 320 KVA Kirloskar ☐ √
Genset available for management
/regulation of electricity and voltage
12. Solid waste management facility ☐ √
i. Wet Waste : Campus Biogas plant ☐ √
13. Waste water management – ☐ √
i. STP Facility : Sewage treatment plant is installed. ☐ √
ii. Recycling of sewage water for gardening ☐ √
& lawn purpose.
14. Water harvesting ☐ √

12. Details of programmes offered by the college (Give data for current academic year)

Sr	Program me Level	Name of the Programme/	Course Duration	Entry Qualification	Medium of instruction	Sanctioned / approved Student Strength	No. of Students Admitted
1	UG First Shift	Mechanical Engg.	4 Years	12 th Pass	English	180	189
		E&TC Engg.				120	128
		Computer Engg.				120	127
		IT				60	63
		Civil Engg.				120	127
2	UG Second Shift	Mechanical Engg.	4 Years	12 th Pass	English	60	59
		Computer Engg.				60	59
		E&TC Engg.				60	59
3	PG	Mechanical Engg. (Design Engg.)	2 Years	BE/ B.TECH. /GATE	English	24	24
		Mechanical Engg. (Automotive Engg.)				18	08

Sr	Program me Level	Name of the Programme/	Course Duration	Entry Qualification	Medium of instruction	Sanctioned / approved Student Strength	No. of Students Admitted
		E&TC Engg.(VL SI & Embedded System)				18	15
		Electronic s (Digital System)				18	10
		Computer Engg.				24	12
4	Ph.D	Mechanic al Engg., E&TC Engg.	3 Years	ME/ M.Tech.	English	-	02

13. Does the college offer self-financed Programmes?

Yes ☐ No ☒

14. New programmes introduced in the college during the last five years if any?

Yes ☒ No ☐ Number : **05**
[PG-3, Ph.D-2]

15. List the departments:

Faculty	Departments (e.g. Phy, Bot etc.)	UG	PG	Research
Science, Arts, Commerce	NA			
Engineering	Mechanical Engg.	√	√	√
Engineering	Electronics & Telecommunication Engg.	√	√	√
Engineering	Computer Engg.	√	√	
Engineering	Information Technology	√		
Engineering	Civil Engg.	√		

16. Number of Programmes offered under

(Programme means a degree course like BA, BSc, MA, M.Com...)

- (a) Annual System
- (b) Semester System
- (c) Trimester System

17. Number of Programmes with

- (a) Choice Based Credit System : NA
- (b) Inter/Multidisciplinary Approach : NA
- (c) Any other (specify and provide details) : --

18. Does the college offer UG and/or PG programmes in Teacher Education?

Yes ☐ No ☒

19. Does the college offer UG or PG programme in Physical Education?

Yes ☐ No ☒

20. Number of teaching and non-teaching positions in the Institution

Positions	Teaching faculty						Non-teaching staff		Technical staff	
	Professor		Asso. Professor		Asst. Professor					
	*M	#F	*M	#F	*M	#F	*M	#F	*M	#F
Sanctioned by the UGC / University /State Government	17	09	35	17	105	50	NA	NA	NA	NA
Recruited	01	00	02	00	53	31	NA	NA	NA	NA
Yet to recruit							NA	NA	NA	NA
Sanctioned by the Management /society or other authorized bodies	04	01	03	01	52	38				
Recruited	04	01	03	01	52	38	55	20	28	08
Yet to recruit	12	08	30	16	00	19	09	08	06	08

21. Qualifications of the teaching staff

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	*M	*F	*M	*F	*M	*F	
Permanent Teachers							
D.Sc./D.Litt.							
Ph.D.	4	1	5	1	1		12
M.Phil.					1		01
PG/ME	1				83	62	146
Temporary teachers					19	08	27
Part-time teachers : Not Applicable							

22. Number of Visiting Faculty /Guest Faculty engaged with the College.
47**23. Furnish the number of the students admitted to the college during the last four academic years.****UG- Categorywise**

Categories		(2015-16)		(2014-15)		(2013-14)		(2012-13)	
		M	F	M	F	M	F	M	F
SC		56	16	58	10	53	14	53	16
ST		8	00	10	01	14	01	10	01
OBC		114	21	125	33	105	41	112	41
General		462	100	418	106	416	108	414	136
Others	TFWS	23	07	19	08	23	06	19	10
	J&K	02	02	02	01	03	00	03	02

PG - Categorywise

Category	2012-13		2013-14		2014-15		2015-16	
	M	F	M	F	M	F	M	F
SC	6	3	10	5	7	8	2	3
ST	0	0	0	1	0	1	0	0
OBC	7	9	24	18	26	18	06	05
General	79	49	102	46	69	39	27	26
TOTAL	92	61	136	70	102	66	35	34

24. Details on students' enrollment in the college during the current academic year:

Type of students	UG	PG	M. Phil.	Ph.D.	Total
Students from the same state where the college is located	714	66	-	02	782
Students from other states of India	97	3	-	-	100
NRI students	-	-	-	-	-
Foreign students	-	-	-	-	-
Total	811	69	-	02	882

25. Dropout rate in UG and PG (average of the last two batches)

UG : 1.73 PG: 0

26. Unit Cost of Education (*Unit cost total annual recurring expenditure (actual) divided by total number of students enrolled*)

(a) Including the salary component Rs. 65,596/-

(b) Excluding the salary component Rs. 14,689/-

27. Does the college offer any programme/s in distance education mode (DEP)?

Yes ☐ No ☒

28. Provide Teacher-student ratio for each of the programme/course offered :

Sr. No.	Programme	Ratio
1	UG	1 : 18.46
2	PG	1 : 12.00

29. Is the college applying for Accreditation :

Cycle 1 ☒ Cycle 2 ☒ Cycle 3 ☒ Cycle 4 ☐

Re-Assessment: ☐. (Cycle 1 refers to first accreditation and Cycle 2, Cycle 3 and Cycle 4 refers to reaccreditation)

30. Date of accreditation* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only) : NA

31. Number of working days during the last academic year : 219.

32. Number of teaching days during the last academic year : 173.

(Teaching days means days on which lectures were engaged excluding the examination days)

33. Date of establishment of Internal Quality Assurance Cell (IQAC)

12/10/2015 (dd/mm/yyyy)

34. Details regarding submission of Annual Quality Assurance Reports (AQAR) to NAAC.

Not Applicable

35. Any other relevant data (not covered above) the college would like to include.

Department of Electronics & Telecommunication and Department of Mechanical Engineering are accredited by NBA for 2 years, from November 2013.



Sinhgad Academy of Engineering

Criteria 1
Curricular Aspects

1.1. Curriculum Planning and Implementation

1.1.1. State the vision, mission and objectives of the institution, and describe how these are communicated to the students, teachers, staff and other stakeholders.

Vision of the Institute:

उत्तमपुरुषान् उत्तमाभियंतृन् निर्मातुं कटीबद्धावयम

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

Mission of the Institute:

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.

Objectives:

- To provide qualitative technical education as per need of the industry along with co-curricular and extracurricular activities for enhancement of society and thus become a centre of excellence in engineering.
- To establish healthy atmosphere for students and teachers by encouraging exchange of thoughts and discussion leading to their holistic development.
- To craft research centre by means of innovative and unique idea to serve a vivacious society.
- To get the recognition across the globe by strengthening the academics and professional skills.
- To provide opportunities for students to work with reputed industries through collaborative activities.

Communication to Stakeholders:

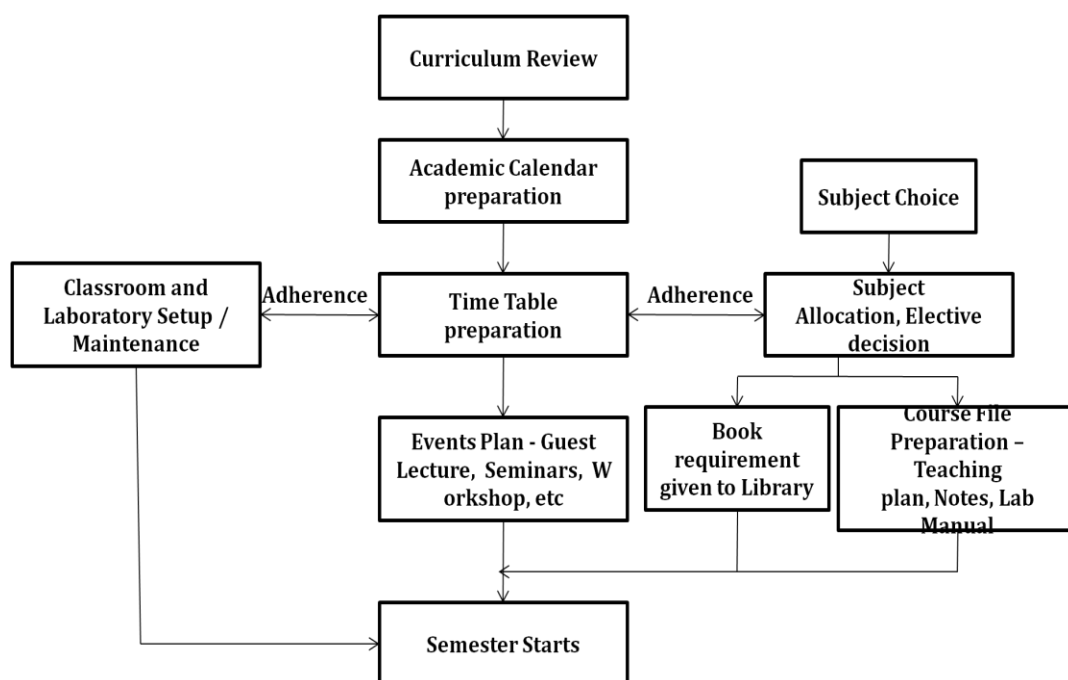
The institutes Vision, Mission are communicated to the Stakeholders in the following way:-

- The institutes Vision, Mission is available on the Website.
- It is also displayed on prominent places in the Institute like Principal and Vice Principal cabin, entrance and corridors.
- Vision Mission statements are available on all the Notice boards, HOD cabin, Staff Cabins, corridors, laboratories
- The institutes Vision, Mission is available in the Admission Broachers', College Magazine, Newsletters, student project reports & journals.
- The MOU files also contain Vision & Mission of the institute.

1.1.2. How does the institution develop and deploy action plans for effective implementation of the curriculum? Give details of the process and substantiate through specific example(s).

Following is the action plan of the Institute for effective implementation of the curriculum:-

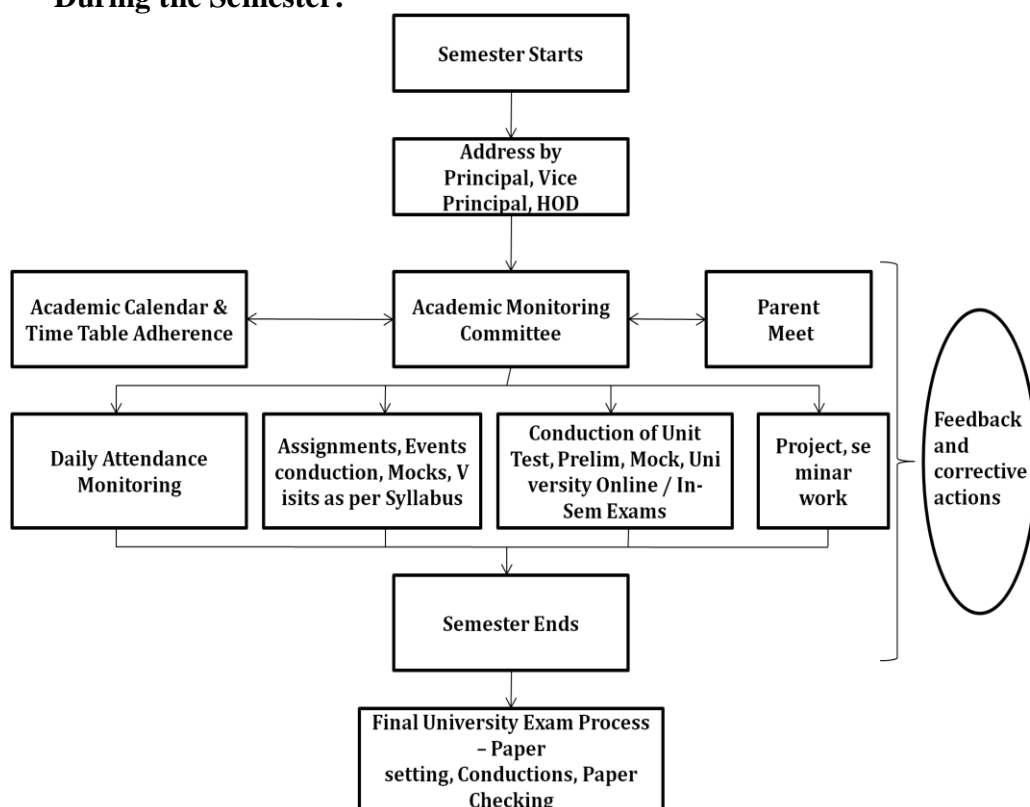
Before the Semester starts:



- The HOD conducts department meeting to review the syllabus given by University.
- The HODs asks for three choices of subjects from each faculty.
- Subject allocation is finalized by HOD depending on choice given by faculty, expertise over the subject, overall experience and subject teaching experience, time table constraints, etc.
- Students give subject choice for electives.
- The subject allocation to faculty is done well in advance. So that the faculty can study the subject, prepare course file, subject notes, PPTs, Question bank and other study material.
- All study material is made available to students on the Server or via email
- Laboratory manual is prepared as per the guidelines given by University for practical conduction.
- University designs the Academic Calendar

- The Institute prepares its Academic Calendar as per the University Calendar which includes teaching dates, unit test dates, University exam dates, Semester end dates and Theory/Practical examination dates.
- Time table is prepared in consideration with guest lecturers /workshops /industry interaction for students.
- Infrastructures is checked or set up if needed. Quotations for instruments, software, and hardware are submitted if needed.
- Book requirement is given to the Central Library
- Faculty prepares the Teaching Plan as per the Time Table
- In case of Project Allocation for BE students, a standard process is followed. Projects are allocated to faculty as per their area of interest, experience. Project progress is timely monitored in project work books. Individual and Team efforts are taken into consideration. Marks are given based on multiple parameters of individual and team.
- In case of seminar allocation for TE students, faculty is assigned as a guide as per area of interest. Marks are given based on standard format which is known to the students.
- Industrial visits are planned and executed depending on the need of the curriculum.

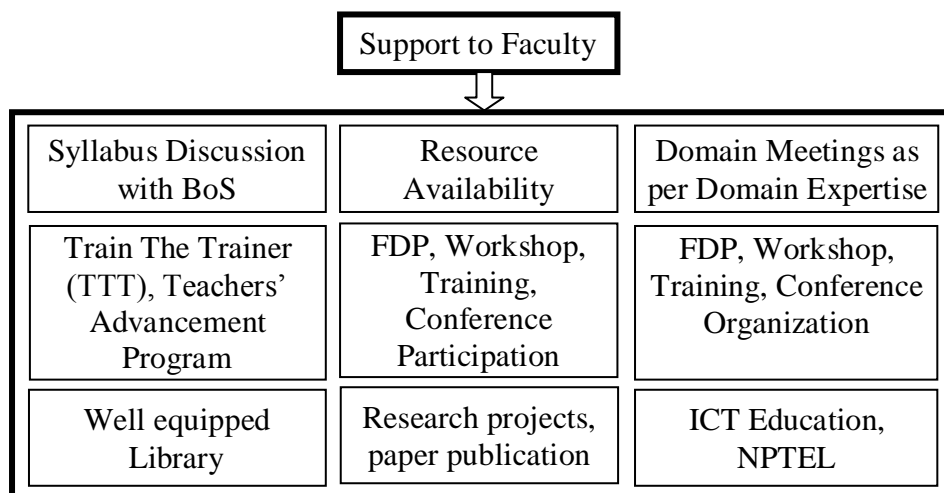
During the Semester:



- The Principal, Vice Principal and HODs address students and staff specifying the goals for the Semester.

- Strict adherence to the Academic Calendar and Time Table is monitored by HOD.
- Strict adherence to the Teaching Plan is monitored by HOD. Extra sessions are arranged if required.
- Daily attendance is recorded by the subject in-charge for lecture and lab sessions. The Teacher Guardian (TG) makes sure that the attendance of his/her students is good. The class teacher monitors overall attendance of class.
- Feedback is taken from the students. Academic Monitoring Committee (AMC) monitors this feedback and corrective actions are taken by HODs.
- Unit tests and Prelim is conducted before the University examination in the same format as that of University. Marks are communicated to the students immediately after the examination.
- Assignments are given for better understanding of the subject.
- Mock oral/practical exams are conducted before the University oral/practical examination.

1.1.3. What type of support (procedural and practical) do the teachers receive (from the University and/or institution) for effectively translating the curriculum and improving teaching practices?



Support to faculty from University:

- Faculty receives grants from SPPU for research projects.
- Faculty attends Quality Improvement programs.
- University organizes Faculty Development Programs (FDPs), conferences, Workshops and also provides funding to organize events at our institutes.
- University conducts syllabus discussions and revision meetings conducted by Board of Studies (BOS) for the faculty.

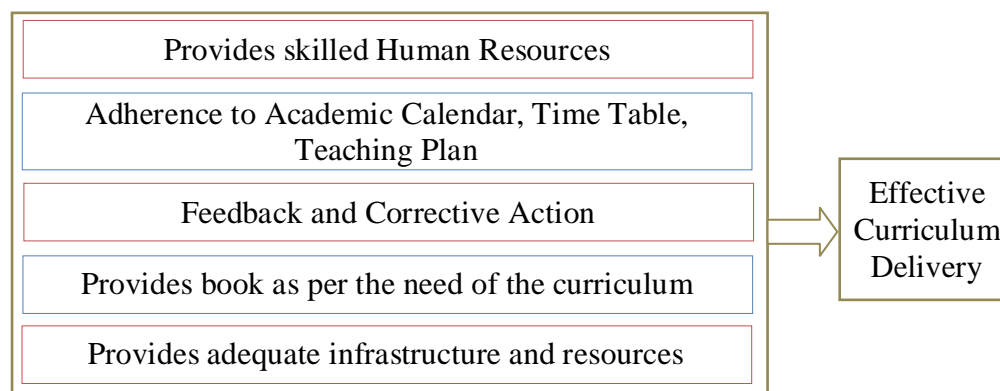
Support to faculty from Institution:

- Faculty is encouraged to participate in syllabus discussions and revision meetings conducted by Board of Studies (BOS).
- Faculty is encouraged to participate in Faculty Development Programs (FDPs), conference and Workshops carried out in other institutes / industries. Support is given to the faculty in form of financial support and on duty leave.
- The institute also conducts FDPs/workshops/expert lectures for faculty
- The institute organizes Train The Trainer (TTT) program. In this faculties teaching the same subject from all engineering colleges under STES come together to discuss various aspects of the subject.
- The institute organizes Teachers Advancement Program (TAP). It is a holistic development program for all teachers.
- Faculty have full access to the Central library which has collection of reference as well as text books needed for curriculum delivery
- Faculty has uninterrupted access to Internet in their cabins, laboratories and class rooms. This facilitates them to prepare study material; study from PPTs / videos from Internet; study research papers, etc
- Faculty of same subject are encouraged to conduct meetings to discuss course objectives, outcomes, course delivery method, question paper setting, etc
- Every classroom is equipped with a projector, intranet and Internet connection and a PC; facilitating smooth and effective lecture delivery. Other resources needed for ICT education are readily available for lecture/practical delivery.
- Faculty is encouraged and supported to do research projects; acquire higher qualifications; publish research papers in reputed journals and conferences.
- Faculty have encouraged to file patents.

Table presents number of FDPs/Workshops/ Conferences **attended & organized** by Faculty:

Year	2015-16	2014-15	2013-14	2012-13	2011-12
Attended	67	225	259	93	96
Organized	2	7	7	5	5

1.1.4. Specify the initiatives taken up or contribution made by the institution for effective curriculum delivery and transaction on the Curriculum provided by the affiliating University or other statutory agency.



- The Institute has skilled human resources.
- The faculty adheres to the Academic Calendar, Time Table and Teaching Plan.
- Full syllabus coverage is ensured for all subjects (theory as well as practical).
- Teacher Guardian (TG) scheme is in place. There is a TG for every 20 students. The TG interacts with these students to solve their problems, guide them and motivate them for overall development.
- Feedback is taken from the students on the teaching learning process. Academic Monitoring Committee and concerned HODs monitors this feedback and takes corrective action.
- Central library has rich collection of reference books needed by all departments. Library is open from 8:00am to 8:00pm on all working days of the college.
- Every classroom is equipped with a projector, intranet and Internet connection and a PC; facilitating smooth and effective lecture delivery. Other resources needed for lecture/practical delivery are ready available
- The lecture material is designed and delivered using pedagogical initiatives such as analogy, ICT supported learning.
- Theory and practical performance is monitored on regular basis and is communicated to the students. Corrective actions are taken accordingly.
- Additional assistance is provided to weak students.

1.1.5. How does the institution network and interact with beneficiaries such as industry, research bodies and the university in effective operationalization of the curriculum?

- The Institute conducts the Academic Advisory Body meeting. In this meeting, the experts discuss and analyze the need of the industry. Corrective actions like MOU signing, Enterprenuership Development Cell (EDC) activities, BE sponsored projects various events with Industry Interaction are planned in tune with the curriculum.
- The college has signed up Memorandum of Understanding (MOU) with companies from different domains. Suttati Enterprises Ltd., S M Technologies, B H Emtech, Mobisoft Infotech, DataMato, Opulent Infotech, Sunbeam InfoTech, CADD Centre, Newton Softwares are some of the companies with whom MOU is signed. College organizes guest lectures, training sessions under these MOUs. This helps students to gain a broader view of the subject from industry point of view.

Following table illustrates the inputs taken from various beneficiaries:-

Name of The Beneficiary	Advice	Action Taken
Industry	Students are lagging in aptitude and communication skill.	Employability Test (ET) ET1, ET2, ET3, ET4 & ET5 are taken to improve aptitude test performance. STP1, STP2, STP3 are organized for improving communication skill.
Research Body	Separate resources required for researcher (Students/Staff).	Research Labs are created.
University	Project topic of BE should be verified by industry	Process is established for project topic finalization where Industry people participate for topic suggestion

MOUs signed by the institute:

Sr. No.	Department	Count
1	Mechanical Engineering	10
2	Electronics and Telecommunication Engineering	13
3	Computer Engineering	08
4	Information Technology	09
5	Civil Engineering	07
Total Count		47

- BE projects are sponsored by companies.

Year	2015-16	2014-15	2013-14	2012-13	2011-12
BE Sponsored Projects	24	25	24	18	8

- Institute encourages faculty/students to get in touch with industry via their contacts/friends/alumni and organize events under it
- The institute has a very well established Training and Placement cell. This cell looks after placement as well as industry interaction. It provides feedback from industry.
- The institute has an Entrepreneurship Development Cell (EDC). This cell encourages and support young entrepreneurs. Many industry interaction programs are organized under EDC.
- The institute has a Technology Business Incubation (TBI) unit. It is designed to assist companies in the early stages of development and to the greatest extent possible.

1.1.6. What are the contributions of the institution and/or its staff members to the development of the curriculum by the University?(number of staff members / departments represented on the Board of Studies, student feedback, teacher feedback, stakeholder feedback provided, specific suggestions etc.

- Faculty members attend BOS meetings and FDP for syllabus setting and discussion.
- Faculty also works as paper setter and chairman of course.
- Institute has a strong alumni association which is in constant touch with the alumni. Alumni feedback is taken on curriculum modifications and communicated to the BoS
- Faculty also has written letters to BOS from finding curriculum gap and requested them to add or remove some course or some point from course.
- Institute has a Teacher Guardian (TG) Scheme, in which faculty periodically takes teacher guardian meetings. In these meetings, faculty understands student difficulties, their expectations etc., which is then conveyed to the concerned faculty after due consultation with the HOD. In teacher guardian meetings, students also request for value added courses.
- Our Institute faculty members have attended BOS meeting and FDP for syllabus setting and discussion of new course included by SPPU. Our faculty also worked as paper setter and chairman of course. Faculty has also attended University FDP for new course in curriculum.
- Feedback on curriculum is taken from students, alumni, parents, industry, faculty and efforts are made in implementing those.

- The following table presents the number of faculty is involved in curriculum development.

Role	Number of Faculties involved
BOS Members	02
Subject Chairman	30
Paper Setter	42
University FDP Attendee	68

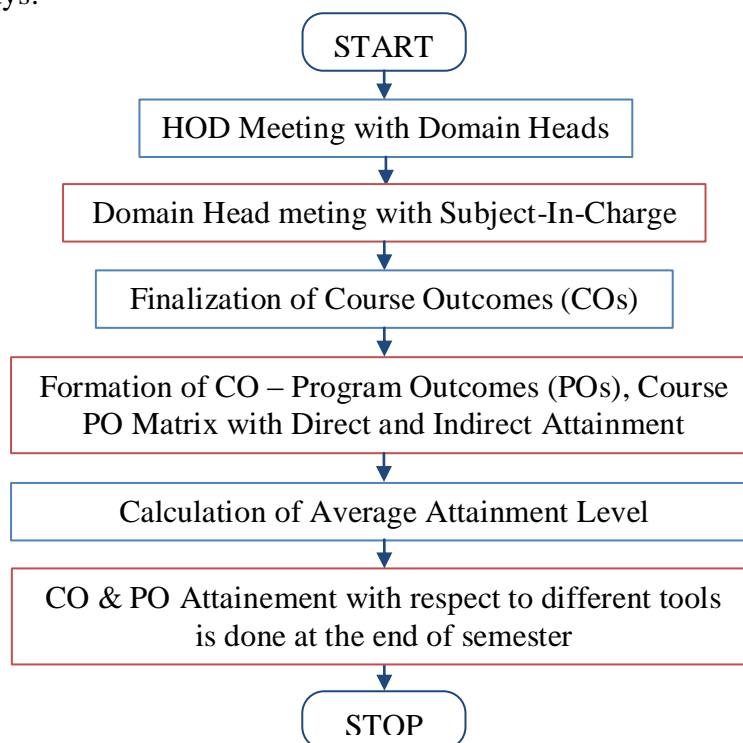
1.1.7. Does the institution develop curriculum for any of the courses offered (other than those under the purview of the affiliating university) by it? If ‘yes’, give details on the process (‘Needs Assessment’, design, development and planning) and the courses for which the curriculum has been developed.

The institute does not provide courses other than the University syllabus courses. But value added programs are conducted. Curriculum was designed for following courses which were conducted for more than 2 month.

Sr. No.	Dept.	Name of faculty	Name of Events & No. of Participants	Date & Duration	Topic Covered
1	Comp	Mr. B. S Thakare	C Programming Language [15]	July to Sep 2015 [2 months]	C programming Language
2	All	Ms. A. S. Shinde	Infosys Campus Connect [27]	June to Oct 2013 [5 months]	Introduction to Computer, OS, DBMS and Project.
3	All	Ms. P. B. Alappanavar	Infosys Campus connect [50]	June to Oct 2012 [5 months]	Introduction to Computer, OS, DBMS and Project.

1.1.8. How does institution analyze/ensure that the stated objectives of curriculum are achieved in the course of implementation?

The Institute ensures the achievement of stated objectives of curriculum in following ways:



- The HOD conducts a meeting with the Domain Heads to start the process of Course Outcome finalization.
- The Domain Heads conduct a meeting with the subject in charge to finalize the Course Outcomes. The Course Outcome mapping with Program Outcome mapping is also done. This consists of Direct as well as Indirect Assessment. The average attainment levels are calculated.
- The Course Outcomes are defined in the following format:

Course Name: CIII Year of Study: YYYY–YY

C202.1	<Statement>
C202.2	<Statement>
C202.3	<Statement>
C202.N	<Statement>

C202 is the second course in second year and '.1' to '.6' are the outcomes of this course.

- The Program Outcomes(PO) are as follows:-

Engineering Graduates will be able to:

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.
10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Course Outcomes (CO) and Program Outcomes (PO) mapping alongwith Course Outcomes attainment is explained in detail in 2.6.6 of Criteria II.

Direct attainment level of a PO is determined by taking average across all courses addressing that PO. Indirect attainment level of a PO is determined based on the student exit surveys and employer surveys.

- Following steps are taken to ensure the CO attainment:-
 - ✓ Strict adherence to the Academic Calendar and Time Table is monitored.
 - ✓ Strict adherence to the Teaching Plan is monitored.
 - ✓ Smooth conduction and immediate result declaration of unit test exam or prelim exam is ensured.
 - ✓ Assisting weak students and encouraging bright students.
 - ✓ Continuous evaluation of theory, practical assignments is done and is communicated to the students.
 - ✓ Faculty arranges Guest Lecture for respective course as per need of syllabus
 - ✓ Content beyond syllabus is covered through different activities like guest lectures, events, videos, industrial visits, etc.
 - ✓ CO attainment is done for every course; a tick mark is made in the appropriate cell. [Refer 2.6.6 of Criteria 2]

1.2. Academic Flexibility

1.2.1. Specifying the goals and objectives give details of the certificate/diploma/ skill development courses etc., offered by the institution.

Goals and Objectives

- To bridge the gap between curriculum and industry needs.
- To gain knowledge on recent trends and technologies.

Apart from the courses in program affiliated to SPPU, institute offeres certification courses which basically serve the purpose of value addition. These courses enhance the employability skill of the students.

Below are the courses conducted:-

Sr. No	Name of Events	Date	Topic Covered	No of participants
Electronics & Telecommunication Engineering - Mrs. M.M. Patil				
1	Two days workshop organised by ETSA CYBORAG- The ROBOTICS workshop	9-02-2013 to 10/02/2013	Robotics	102
IT & Computer Engineering - Mr. S. B. Rathod, Mr. J. D. Jadhav, Mr. L. J. Deokate				
2	Linux Booting Workshop	22/8/2015 & 23/8/2015	Booting Commands of Open Source	114
Civil Engineering - Mr. R.R. Sorate				
3	Practical challenges & field exposures in civil engg	3/9/15- 24/9/15	Construction practices	100

1.2.2. Does the institution offer programs that facilitate twinning /dual degree? If 'yes', give details

No.

1.2.3. Give details on the various institutional provisions with reference to academic flexibility and how it has been helpful to students in terms of skills development, academic mobility, progression to higher studies and improved potential for employability.

Issues may cover the following and beyond: Range of Core / Elective options offered by the University and those opted by the college

The academic flexibility that exists at the Institute and offered by the SPPU in the following form:

Institute offers electives as per the University curriculum for all final year students. Students can select the elective of their choice, one of which can be an open elective from other disciplines.

- Institute has flexibility in choosing the experiments from the assigned list of experiments provided by University. In addition to this beyond syllabus experiments are conducted.

Understanding of basic principles of Reliability is necessary in industry for ensuring sustainable product design. For this purpose Reliability Engineering is offered as an elective. This will help students to understand in detail Asset Management, Maintenance, Quality and Productiveness.

Now a day power is most important requirement of mankind. For this purpose understanding the thermodynamics of each component of a turbine engine which include inlets, fans, compressors, burners, turbines, afterburners and nozzles is necessary. This will lead to skill development of students.

For better management of various resources in organization knowledge of various tools of optimization, probability, statistics and simulation, as applicable in particular scenarios is necessary.

Studying operation research fulfils this need.

Since automation is latest requirement of industries, Robotics helps to understand the complete design procedure of the robot, selection of correct mechanism for operation of the robot necessary actuators, sensors, and control for satisfactory performance of the robot.

Electronics & Telecommunication engineering Department has offered the Electronic product design & Digital image processing subjects in the view of to polish students from the edge of software as well as core electronics engineering knowledge. The Digital image processing subject open the field to the students to make the carrier in the domain of computer vision and real time applications in the field of defence , Banking, Medical , Social and corporate sectors. Most of the countries across the world are involved in the field of image retrieval and its analysis. Therefore curriculum can help to the students to pursue their higher education in this domain.

The demand of Electronics & Telecommunication engineers is full fill by making students confident in the domain of Audio & Video engineering and wireless communication with the aspect of Product design & development skills.

Now-a-days large amount of data is generated. This needs to be processed and analyzed. Data Mining is an analytic process designed to explore data in search of consistent patterns and/or systematic relationships between variables, and then to validate the findings by applying the detected patterns to new subsets of data. There is high employability scope in this field.

Pervasive computing (also called ubiquitous computing) is the growing trend towards embedding microprocessors in everyday objects so they can communicate information. Embedded system security is the reduction of

vulnerabilities and protection against threats in software running on embedded devices.

Thus, Computer Engineering Department offers the following electives which intent to increase employability, motivate for higher studies and provide academic flexibility.

Cloud computing is anticipated to continue growing at a robust rate over the course of the next five years. If you are considering investing in a technology-based company, there are certainly many advantages. By owning stock in a company offering cloud-based services, you will not only be able to follow the latest trends but also have the opportunity to make money from the explosive growth of this industry.

Business intelligence tools analyze massive amounts of information to provide important insights into patterns that indicate the desires and attitudes of clients. Marketing teams can capitalize on this information, organizing campaigns that more precisely target the right audience, and gain a better understanding of which initiatives generate the greatest revenue.

Thus, Information Technology Department offers the following electives which intent to increase employability, motivate for higher studies and provide academic flexibility.

Earthquake engineering is one of the most recent additions to the civil engineering specialties. The main objective of offered elective subject is to illustrate to civil engineering students the problems and solutions in attaining efficient earthquake-resistant structures and facilities. This creates opportunities for the students to work in various areas like research, industry and higher studies.

Total Quality Management (TQM) and Management Information Systems (MIS) in Civil Engineering, covers the Quality management aspects in engineering firms. It is extremely important for engineers when they are working in any organization and in various departments like execution, accounts, billing, tenders and contracts etc. This also helps to civil engineers to get acquainted with MIS and ERP as all the processes in any organizations are included under ERP modules. So civil engineering students will be ready to work efficiently in corporate and EPC organizations.

To illustrate electives are furnished as:

Sr. No	Core / Elective offered by University	Offered by College
Mechanical Engineering Department		
1	Elective I 1. Energy Audit Management 2. Tribology 3. Reliability Engineering 4. Machine Tool Design	Reliability Engineering

Sr. No	Core / Elective offered by University	Offered by College
2	Elective II 1. Gas Turbine Propulsion 2. Product Design & Development 3. Operational Research 4. Advanced Manufacturing Processes	1. Gas Turbine Propulsion 2. Operation Research
3	Elective III 1. Ref. and Air Cond Equipment Design 2. Robotics 3. Industrial Engineering 4. Open Elective	Robotics
4	Elective IV 1. Computational Fluid Dynamics 2. Finite Element Analysis 3. Design of pumps, blowers and Compressors	Finite Element Analysis
Electronics and Telecommunication Engineering Department		
1	Elective I 1. Digital image processing 2. Embedded systems and RTOS 3. Software Defined Radio 4. Industrial Drives and Control	Digital image processing, Embedded Systems and RTOS
2	Elective II 1. Multi-rate and Adaptive signal processing 2. Electronic Product Design 3. PLCs and Automation 4. Artificial intelligence	Electronic Product Design
3	Elective III 1. Speech and Audio signal processing 2. Audio and Video Engineering 3. RF circuit design 4. Soft computing	Audio and Video Engineering
4	Elective IV 1. Biomedical signal processing 2. Nano Electronics and MEMS 3. Detection and Estimation Theory 4. wireless network 5. open elective	1. Biomedical signal processing 2. Detection and Estimation Theory 3. Wireless Network
Computer Engineering Department		
1	Elective – I 1. Image Processing 2. Computer Network Design and Modeling 3. Advanced Computer Programming	Data Mining Techniques and Applications

Sr. No	Core / Elective offered by University	Offered by College
	4. Data Mining Techniques and Applications	
2	Elective – II 1. Problem Solving with Gamification 2. Pervasive Computing 3. Embedded Security 4. Multidisciplinary NLP	1. Pervasive Computing 2. Embedded Security 3. Multidisciplinary NLP
3	Elective – III 1. Mobile Computing 2. Web Technology 3. Cloud Computing 4. Cyber Security	1. Cloud Computing 2. Cyber Security
4	Elective – IV 1. Business Analytic and Intelligence 2. Operations Research for Algorithms in Scientific Applications 3. Mobile Applications 4. Open Elective	1. Business Analytic and Intelligence 2. Operations Research for Algorithms in Scientific Applications
Information Technology Department		
1	Elective-I 1. Adv. Database Managaement 2. Artificial Intelligence 3. Compiler Design 4. Adv. Operating Systems	Artificial Intelligence
2	Elective-II 1. Embedded Systems 2. Mobile Computing 3. Multimedia Systems	Mobile Computing
3	Elective-III 1. Real Time Systems 2. Software Architecture 3. Adv. Graphics 4. Adv. Computer Networks	Software Architecture
4	Elective-IV 1. Bio Informatics 2. Neural Network & Expert Systems 3. Geo Informatic Systems 4. Open Elective	Open Elective Cloud Computing
Civil Engineering Department		
1	Elective – I 1. Structural Design of Bridges 2. Systems approach in Civil Engineering 3. Advanced Concrete Technology 4. Architecture & Town Planning	Architecture & Town Planning, Systems approach in Civil Engineering, Advanced Concrete

Sr. No	Core / Elective offered by University	Offered by College
		Technology
2	Elective – II 1. Matrix Method of Structural analysis 2. TQM & MIS in Civil engineering 3. Earthquake Engineering	TQM & MIS in Civil engineering Earthquake Engineering
3	Elective – III 1. Advanced Structural Design 2. Advanced Foundation Engineering 3. Hydro power Engineering 4. Air Pollution Control 5. Finite Element method in Civil Engineering	Hydro power Engineering
4	Elective – IV 1. Construction Management 2. Advanced Transportation Engineering 3. Statistical Analysis & Computational methods in Civil Engineering 4. Green Building Technology	Construction Management, Statistical Analysis & Computational methods in Civil Engineering

- **Credit Based System and range of subject options**

Credit Based System (CBS) is implemented in UG from Academic Year 2015-16 and in PG from academic year 2012-13.

- **Courses offered in modular form**

Each department divides the core course in program specific modules as per the norms of SPPU and AICTE. Each program specific module has a combination of courses. In that process all core courses for each department have been included in the curriculum.

Modularizing of subjects in Mechanical Engineering Department help in achieving the Program Outcomes of,

- Student will understand the fundamentals of mechanical system design and will be able to manufacture the system for real life applications.
- Student will recognize and understand the need of renewable energy principles and its real life applications
- Student will understand instrumentation and measurements in mechanical systems and will develop interdisciplinary systems

To illustrate **Mechanical Engineering department** modules are furnished as:

Sr. No.	Course Components	Name of the Subjects	Year & Semester
Mechanical Engineering Department			
1	Engineering	1. Engineering Mathematics-I	FE- Sem-I

Sr. No.	Course Components	Name of the Subjects	Year & Semester
	Mathematics	2. Engineering Mathematics-II	FE-Sem-II
		3. Engineering Mathematics-III	SE-Sem-III
2	Humanities	1. Soft Skill	SE-Sem-III
		2. Skill Development	TE-Sem-I
3	Management Sciences	1. Seminar	TE-Sem-VI
		2. Product Design & Development	BE-Sem-VII
4	Engineering Core	1. Engineering Graphics-I	FE SEM I
		2. Basic Mechanical Engineering	FE SEM II
		3. Thermodynamics	SE SEM I
		4. Fluid Mechanics	SE SEM I
		5. Computer Aided Machine Drawing	SE SEM I
		6. Manufacturing Process-I	SE SEM I
		7. Material Science	SE SEM I
		8. Workshop Practice II	SE SEM I
		9. Applied Thermodynamics	SE SEM II
		10. Theory of Machines-I	SE SEM II
		11. Strength of Materials	SE SEM II
		12. Electronics and Electrical Engineering	SE SEM II
		13. Engineering Metallurgy	SE SEM II
		14. Machine Shop-I	SE SEM II
		15. Design of Machine Elements – I	TE SEM I
		16. Theory of Machines-II	TE SEM I
		17. Numerical Methods and Optimization	TE SEM I
		18. Heat Transfer	TE SEM I
		19. Hydraulics and Pneumatics	TE SEM I
		20. Metrology and Quality Control	TE SEM II
		21. Turbo Machines	TE SEM II
		22. Design of Machine Elements –II	TE SEM II
		23. Mechatronics	TE SEM II
		24. Seminar	TE SEM II
		25. Manufacturing Process-II	TE SEM II
		26. Machine Shop -II	TE SEM II
		27. Gas turbine Propulsion	BE SEM I
		28. Dynamics of Machinery	BE SEM I
		29. CAD/ CAM Automation	BE SEM I

Sr. No.	Course Components	Name of the Subjects	Year & Semester
		30. Reliability Engineering	BE SEM I
		31. Operation Research	BE SEM I
		32. Refrigeration and Air Conditioning	BE SEM I
		33. Project Work	BE SEM II
		34. Power Plant Engineering	BE SEM II
		35. Finite Element Analysis	BE SEM II
		36. Robotics	BE SEM II
		37. Mechanical System Design	BE SEM II

Modularizing of subjects in Computer Engineering Department help in achieving the Program Outcomes of,

- **Project Development:** Successfully complete hardware and/or software related system or application projects, using the phases of project development life cycle to meet the requirements of service and product industries; government projects; and automate other engineering stream projects.
- **Domain Expertise:** Demonstrate effective application of knowledge gained from different computer domains like, data structures, data bases, operating systems, computer networks, security, parallel programming, in project development, research and higher education

To illustrate **Computer engineering department** modules are furnished as:

Sr. No	Domain, Domain Head	Name of the Subjects	Year & Semester
Computer Department			
1	Programming Language & Data Structure, Mrs.L.J.Sankpal	Data Structures & Problem Solving	SE-Sem-III
		Object Oriented & Multicore Programming	SE-Sem-IV
		Computer Graphics and Gaming	SE-Sem-IV
		Design & Analysis of Algorithms	BE-Sem-VII
2	Operating Systems, Mr.S.N.Shelke	Operating System and Administration,	SE-Sem-III
		Operating Systems Design,	TE-Sem-V
		Embedded Operating Systems	TE-Sem-VI

Sr. No	Domain, Domain Head	Name of the Subjects	Year & Semester
		Principles of Concurrent and Distributed Programming	TE-Sem-VI
3	Computer Networks & Security, Mr.S.B.Rathod	Computer Networks	TE-Sem-VI
		Data Communication and Wireless Sensor Networks	TE-Sem-V
		Computer Forensic and Cyber Applications	TE-Sem-V
4	Electronics, Mrs.S.S. Vanjire	Digital Electronics and Logic Design,	SE-Sem-III
		Microprocessor Architecture	SE-Sem-III
		Microprocessors and Interfacing Techniques	SE-Sem-IV
		Digital Signal Processing Applications	TE-Sem-VI
5	Software Engineering, Mr.S.P.Godse	Software Engineering,	TE-Sem-VI
		Principles of Modern Compiler Design	TE-Sem-VI
		Software Design Methodologies & Testing	BE-Sem-VIII
		Smart System Design and Applications	BE-Sem-VII
6	Databases, Mr.K.S.Avhad	Database Management Systems Applications	TE-Sem-V
7	Theory Of Computer Science, Mr.M.A.R.Shabad	Discrete Structures	SE-Sem-III
		Theory of Computation	TE-Sem-V
		High Performance Computing	BE-Sem-VIII

- **Credit transfer and accumulation facility**
Not Applicable (N. A)
- **Lateral and vertical mobility within and across programs and courses**

Lateral entry for direct second year is availed by the students as per the DTE and University guidelines.

Table represents Summary of direct second year admitted students (lateral entry)

Mech	E&TC	Comp	IT	Civil
2015-16				
68	83	56	20	26
2014-15				
76	82	68	28	48
2013-14				
51	51	62	12	44
2012-13				
53	54	41	25	21
2011-12				
36	49	12	12	21

Enrichment courses

Certificate course are organized by various our eminent faculties. All programs are meant for students to gain skill during their academics ongoing. The programs have been benefitting the students .The outcome of the programs is that large number of students is getting placed in reputed companies

Sr No	Name of Events	Date	Durati on	Topic Covered	No of particip ant
Dr. S.P. Deshmukh and Y.U. Chapke (Dept of Mechanical Engineering)					
1	Advanced Training Programme On FEA-ANSYS14.0	28/02/14 To 15/04/14	Six weeks	Hands on practice on Ansys 14.0	11
Mrs.S.H.Rajput, Mrs.C.C.Athwale, Mrs. M.M.Patil (Electronics & Telecommunication Engineering)					

Sr No	Name of Events	Date	Durati on	Topic Covered	No of particip ant
2	Analog and Digital CMOS Design (One week STTP)	15-19 Sept 2014	1 week	Analog and Digital Design	25
Mrs. S.H. Rajput, Mrs. K.N. Jagtap (Electronics & Telecommunication Engineering)					
3	Routing and switching fundamentals(Five days VAP)	4-8 Aug 2014	5days	Introduction about all Networking devices, spanning tree protocol. VLAN & INTERVLAN Routing, Security using std access list	24
Bhushan Thakare (Computer Engineering)					
4	Value added program on C Programming	20/7/15 to 20/9/15	2 months	C programming	15
Prof. R. R. Sorate (Civil Engineering)					
5	Practical challenges & field exposures in civil engg	3/9/15- 24/9/15	21 days	Construction practices	100

1.2.4. Does the institution offer self-financed programmes? If ‘yes’, list them and indicate how they differ from other programmes, with reference to admission, curriculum, fee structure, teacher qualification, salary etc.

No

1.2.5. Does the college provide additional skill oriented programmes, relevant to regional and global employment markets? If ‘yes’ provide details of such programme and the beneficiaries.

Yes, the institute provides additional skill oriented programs, which are relevant to regional and global employment markets. Details of such programs and its beneficiaries are as follows.

At STES, a need was identified to start an innovative “STUDENT TRAINING PROGRAM” (STP) that would help the students to build a personality equipped with exquisite technical and non technical skills.

The Objectives of the STP program are to:

- Enhance the employability opportunity
- Prepare students for entrepreneurship
- Prepare students for higher education in INDIA as well as abroad.

Details of the STP program are as follows:

It is divided throughout 5 semesters from second year to final year of engineering.

STP	Modules
STP 1	SWOT analysis, Goal setting, Personality and stress management, Behavioral Skills, Listening, Reading (Technical & Non Technical), Writing (Letter, Resume, CV, Report), Speaking (Public Speaking, Group Discussion)
STP 2	Listening, Reading, Writing, Speaking skills
STP 3	Technical re-acquaint yourself with of second year subjects in third year
STP 4	Interview Preparation
STP 5 (Value Added Program)	Technical courses training by Industry people

AMCAT (ASPIRING MINDS COMPUTER ADAPTIVE TEST) is a test which is used to assess the need for training in soft skills. Every semester AMCAT test is conducted by the AMCAT Company.

QA/LR (Quantitative Aptitude / Logical Reasoning) test is conducted by the STES to assess aptitude and logical skills.

FACE (Focus Academy of Career Enhancement) training:-

FACE is one of India's Largest Higher Education focused skill development company, catering to students pursuing higher education in colleges/universities as well as entry level recruits in organizations across various industry sectors.

APART (Academy of Professionals for Aptitude, Research and Training) Training:-

APART - Academy of Professionals For Aptitude, Research and Training is an organization in the field of Aptitude, Technical and Behavioral training which has created an exemplar of success in the field of Training.

APART bridges the gap between corporate and educational institutions through its campus connect services. The campus connect feature facilitates effective hiring by end-to-end assessments and evaluations. This provides top-notch services satisfy corporate staffing needs and requirements with ease, thus enabling a collaborative approach and strengthening the industry-academic relationship.

Sr. No.	Year	Name of the Program	Target Students
1	SE	STP –I	SE Students (All Branches)- Sem-III
2	SE	STP-II	SE Students (All Branches)- Sem-IV
3	TE	STP –III	TE Students (All Branches)Sem-V
4	TE	STP-IV	TE Students (All Branches)- Sem-VI
5	BE	STP –V	BE Students (All Branches)- Sem-VII
6	BE	Pre-Placement Training	BE Students (All Branches)- Sem-VII
7	SE, TE, BE	AMCAT Test	SE, TE, BE Students (All Branches)- Both Semester
8	FE, SE, TE, BE	QA/LR Test	FE, SE, TE, BE Students (All Branches) Both Semester
9	BE	FACE Training	All Branches
10	BE	APART	All Branches

1.3. Curriculum Enrichment

1.3.1. Describe the efforts made by the institution to supplement the University's Curriculum to ensure that the academic programmes and Institution's goals and objectives

To supplement the university curriculum college has taken different activities which also support institutions goals & objectives.

- Institute have conducted various industry and domain expert guest lecturers as Nano Composite Materials, Cloud Computing etc, this helps in qualitative technical education as per need of the industry along with co-curricular.
- Institute have organized different workshops and real time site visits at various locations such as Central Water Power and Research Station, Pune, National Level Network Security Championship Organized by Network Bulls in Association with E-cell IIT Bombay, SUPRA'15,BAJA'15, This establishes healthy atmosphere for students

and teachers by encouraging exchange of thoughts and discussion leading to their holistic development.

- Institute facilitates the students to take internship in different industries.
- Institution has arranged different guest lecturer's seminars, Workshops, FDP, Industrial Visits to achieve Practical exposure and challenges in society.
- Institute has research labs, this will craft research centre by means of innovative and unique idea to serve a vivacious society.
- To enhance Employability Skill Development activities like CMC Aptitude Test, Zensar Employability Skills Development training, Practical Exposure through internship are conducted. This provides opportunities for students to work with reputed industries through collaborative activities.
- Institute encourages faculty to include content beyond syllabus topics along with the university curriculum during teaching.

Following Table represents total count of supplementary events conducted at the institute:

Year	2015-16	2014-15	2013-14	2012-13	2011-12
Supplementary events conducted	47	85	71	25	28

1.3.2. What are the efforts made by the institution to enrich and organize the curriculum to enhance the experiences of the students so as to cope with the needs of the dynamic employment market?

While delivering curriculum given by university, our institution has also made efforts to enrich the employability skills of student to make them able to stand in this competitive world. The Training and Placement(T&P) cell of institution is constantly in contact with different companies, they forward the skills required by companies to Head of the department, according to that , activities are arranged for students. Students undergo internship Programs and Company training.

Following Table represents total count of internship & Industrial Visits programs:

Year	2015-16	2014-15	2013-14	2012-13	2011-12
Internship Programs and Company training	20	33	30	8	5
Industrial Visits	14	19	21	14	12

1.3.3. Enumerate the efforts made by the institution to integrate the cross cutting issues such as Gender, Climate Change, Environmental Education, Human Rights, ICT etc., into the curriculum?

- To integrate the cross cutting issues various awareness programmes are arranged for staff and students in the institute.
- Medical checkup was arranged for hostel girls to improve their health awareness.
- Some street plays were also arranged regarding social issues to increase social awareness. Civil department organized a street play on “Woman Empowerment”
- Anti ragging committee, Student grievance cell are present in the institute to sensitize students about gender equality and to solve their problems. These committees consist of Principal, HODs, senior lady faculty member and students.
- There is a Teacher Guardian (TG) scheme into place. The TG looks after the overall progress of the student. TG also counsels, motivates and solves problems of the students.
- The institute’s National Service Scheme (NSS) team regularly visits surrounding areas and villages where people are provided awareness on various social, moral, ethical principles and ways of life. Activities are conducted under NSS, so that the students acquire moral and ethical values in them.
- Recently Institute’s NSS team had organized government of India’s mission “**Swachha Bharat Abhiyan**”.
- The institute has implemented various projects which help in Climate Change and Environment Education like E-Waste management, Tree plantation, solar water heater etc.

1.3.4. What are the various value-added courses/enrichment programmes offered to ensure holistic development of students?

- Different cultural events are arranged in the institute during “Sinhgad Karandak”. Sinhgad Karandak is the most awaited event of the year. Students can show their technical as well as non technical talents through this. It consists of many technical events like paper writing, workshops, quizzes, etc. Along with it there is Group dance, solo dance, street play,

Fashion Show, Fun fair activities. It gives the platform to students to showcase their talents.

- Different sports are arranged in Sinhgad Karandak and otherwise also to improve student's team spirit, their management skills and also to improve their health.
- Institute organizes the "TECHTONIC", this includes all the technical events to storm student's brains beyond threshold.
- The institute facilitates the students to participate in "FIROIDA KARANDAK" and "PURUSHOTTAM KARANDAK". These plays usually address the current social issues creating awareness about the community.
- College magazine has focuses on several social and technical issues.
- STP is a well organized training program for students which help them in employment.
- Under CSR (Campus Social Responsibility) various activities are conducted like Blood Donation camp, Visit to Orphanages or other such organizations, Funds collection for natural calamity affected areas, etc. This helps the students to understand their responsibilities towards the society.
- Art of Living courses and follow up courses are organized time to time.

1.3.5. Citing a few examples enumerate on the extent of use of the feedback from stakeholders in enriching the curriculum?

Feedback on curriculum is taken from students, alumni, parents, industry, faculty and efforts are made in implementing those.

Some of the feedbacks and action taken as shown in following table:

Sr. No.	Stake Holders	Feedback	Action Taken
1	Student	Arrange C programming classes	Arranged
2	Students	Value Addition Courses to be increased	Arranged
3	Alumni	Difficulty in clearing aptitude tests	Arranged aptitude tests

4	Alumni	Knowledge of curriculum is useful. Arrange more industry interaction for practical knowledge	More focus is given on practical knowledge for this purpose arranging visits to service station, industrial visits etc.
5	Parent	Results of students should be given to parents directly	Making phone calls to parents regarding progress of ward
6	Parent	SAE should initiate collaboration with Pune based Companies	Research Lab established, MOU's signed with companies
7	Industry	Take value added courses beyond University syllabus	Arranged
8	Industry	Include subjects in syllabus on which industry is working	Subjects included as BE Electives
9	Faculty	New syllabus explanation	Train the trainer program arranged
10	Faculty	Practical explanation	FDP program arranged

1.3.6. How does the institution monitor and evaluate the quality of its enrichment programmes?

Feedback by students after the value added program both formally and informally certifies the quality of a programme. The institution has a very clear and transparent way to monitor and evaluate the quality of various enrichment Programs initiated by it. The feedback in the form of feedback forms/interactions/discussions and suggestions are collected and submitted to the Head of the department. The feedback is analyzed and suggestions are incorporated in the future programs. The Institution makes sure that these programs contribute to National development, fostering global competencies among students, inculcating a value system among students, promoting the use of technology and quest for excellence.

1.4. Feedback System

1.4.1. What are the contributions of the institution in the design and development of the curriculum prepared by the University?

Faculty members are actively involved in the syllabus revision workshops and discussions. Apart from this, the teachers also participate in 'Syllabus-revision' workshops organized by various colleges/ institutes. Teachers had also worked as Resource persons in workshops organized for syllabus restructuring.

Following table illustrates the same.

Role	Number of Faculties involved
BOS Member	02
University Syllabus Revision Workshop	31

1.4.2. Is there a formal mechanism to obtain feedback from students and stakeholders on Curriculum? If 'yes', how is it communicated to the University and made use internally for curriculum enrichment and introducing changes/new programmes?

Yes. There is a formal mechanism to obtain feedback from the students and stakeholders. The process is as follows:-

1. The Institute takes feedback on curriculum from the different stakeholders like students, parents, alumni, industry in a pre defined feedback format.
2. These feedbacks are gathered and analyzed by the Domain Heads and concerned subject in charge.
3. These are discussed by the Domain Heads with the HOD.
4. Letters to the Board of Studies (BOS) are drafted by the subject in charge and Domain Heads. These letters are forwarded to the HOD and Principal and in turn sent to the BOS.
5. Till the changes are incorporated in the syllabus, Institute organizes various guest lectures, events, content beyond syllabus bits to enrich the curriculum.

Sr. No.	Target	Feedback Comments	Corrective actions
1	Alumni	Knowledge of curriculum is useful. Arrange more industry interaction for practical knowledge	More focus is given on practical knowledge for this purpose arranging visits to service station, industrial visits etc.
2	Student	Arrange C programming classes	Arranged
3	Alumni	Difficulty in clearing aptitude tests	Arranged practice test ET1, ET2, STP
4	Parent	Give more practical knowledge	Arranged visits/events /industry interaction/guest lecture
5	Industry	Take value added courses beyond University syllabus	Arranged

1.4.3. How many new programmes/courses were introduced by the institution during the last four years? What was the rationale for introducing new courses/programmes?

There is a big demand in the market for good technical programmes. Feedback from different stake holders like parents, alumni, industry, students suggested that as we have good academic processes and performance, we should introduce new programmes in the institute.

This feedback was communicated by the LMC to the Governing Body of the institute. This resulted in increase of new courses/ programmes. The details are as follows:

In 2010-2011, Bachelor in Civil Engineering was introduced with an intake of 60. In the same year, Master of Engineering in Mechanical Engineering (Automotive) was introduced with an intake of 18. In 2011-2012 Masters of Engineering and Telecommuniacion with the specialization of VLSI and Embedded Systems was introduced with the intake of 18. In 2012-2013 Master of Engineering in Electronics with Digital Systems specialization was introduced with the intake of 18. In 2012-2013, Master of Engineering in Mechanical Engineering (Design) and Computer Engineering was introduced with an intake of 24.

In 2015, PhD research centre was established in Mechanical Engineering department.

The list of new programmes added during the last four years is as follows:

	Mechanical Engineering	Electronics & Telecommunication Engineering	Computer Engineering
2011-12	-	18 [M.E. (VLSI & Embedded Systems)]	-
2012-13	24 M.E. (Design)	18 [M.E. (Digital System)]	24 [M.E (Computer)]



2.1 Student Enrollment and Profile

2.1.1 How does the college ensure publicity and transparency in the admission process?

Publicity:

- Admission notifications are given by the DTE, Maharashtra on their website
(<http://www.dtemaharashtra.gov.in/fe2015/StaticPages/frmImportantDates.aspx>).
- The institute continuously gives the advertisements in leading State and National level news papers at the time of admission process.
- Institute provides all the relevant information to the student through separate admission cell. The admission cell also gives the guidance for parents as well as students about the scope of engineering courses and its importance in future.

Transparency:

- Sinhgad Academy of Engineering is the part of Centralized Admission Process (CAP) which is run by Directorate of Technical Education (DTE), Government of Maharashtra. This ensures that there is a total transparency in admission process of students.
- Out of total intake, 80% admissions are done through a Centralized Admission Process (CAP), which is online admission process by D.T.E, Government of Maharashtra. This process is fully transparent for students as well as Institute.
- Student can fill up the online registration form on D.T.E. website in specified time. Student can also fill up option form using online portal.
- The remaining 20% Institute quota seats are filled at the Institute level as per the admission rules of DTE. First advertisement is given in leading news paper for Institute level quota. All the applications are collected for Institute level quota. Then according to merit admission procedure is completed. It is shown in **Fig..2.1**.

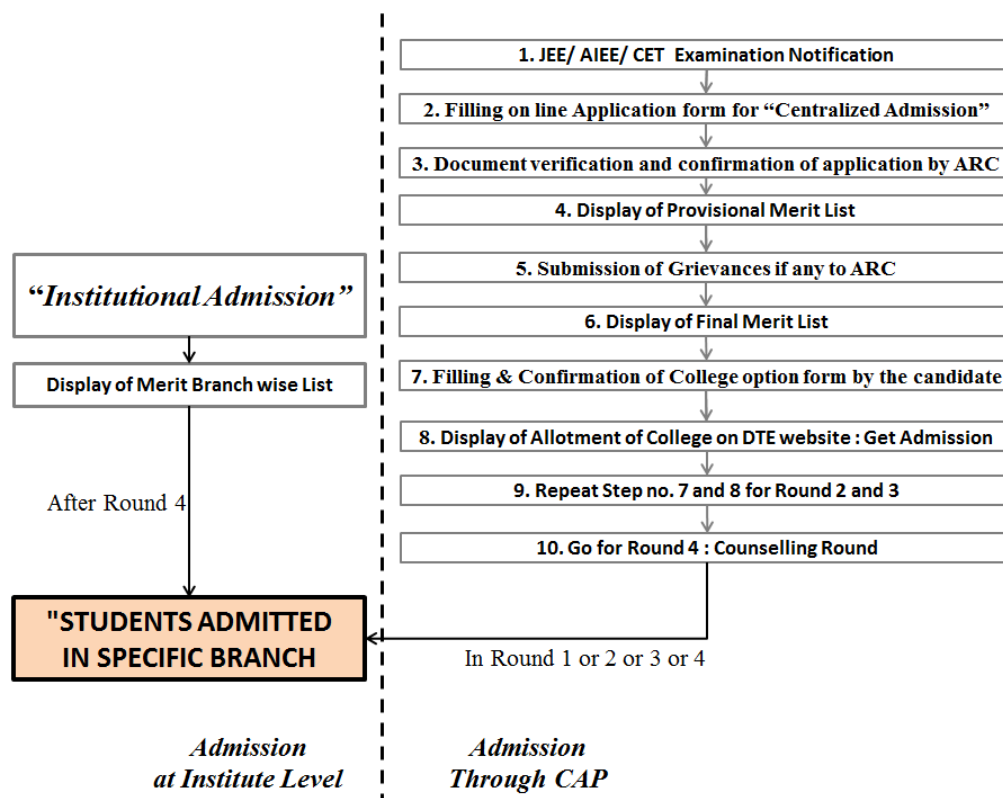


Fig.2.1 Admission Process for Centralized and Institute Level Admission

2.1.2 Explain in detail the criteria adopted and process of admission (Ex. (i) merit (ii) common admission test conducted by state agencies and national agencies (iii) combination of merit and entrance test or merit, entrance test and interview (iv) any other) to various programs of the Institution.

- The Institute participates in centralized admission process of DTE, Maharashtra State Government. It follows all admission rules, regulations and guidelines set up by the state government.
- The eligibility criteria for the selection of students for admission in different level of courses are as under:

1) UG –

- **65%** Students are admitted through Maharashtra State Common Entrance Examination (MSCET) as per the guideline of DTE, Maharashtra.
- **15%** Students are admitted through All India Engineering Entrance Examination (AIEEE) as per the guideline of DTE, Maharashtra.
- **20%** Students are admitted under Institute quota subject to having valid score in MSCET of current year.

- **20%** Students of approved intake are admitted through Central Admission Process Conducted by DTE, Maharashtra for Lateral Entry in 2nd year.

2) PG - The Selection Process for admission is based on the score in the national level Graduate Aptitude Test for Engineering (GATE) conducted by IITs.

(<http://www.dtemaharashtra.gov.in/fe2015/StaticPages/frmImportantDates.aspx>)

2.1.3 Give the minimum and maximum percentage of marks for admission at entry level for each of the Programmes offered by the college and provide a comparison with other colleges of the affiliating University within the city/district.

The following table shows the minimum and maximum marks of admitted students in CET/ AIEEE score for AY 2014-15. The minimum and maximum CET marks of admitted students are shown in **Fig.2.2** and **Fig.2.3**.

Programme	Minimum CET Marks of Admitted Students		
	SAE	SIT	AISSMS- IOIT
Mechanical	45	38	-
E&TC	29	10	28.12
Computer	27	21	39.32
Info. Tech	61.67	21	28.11
Civil	45.12	-	-

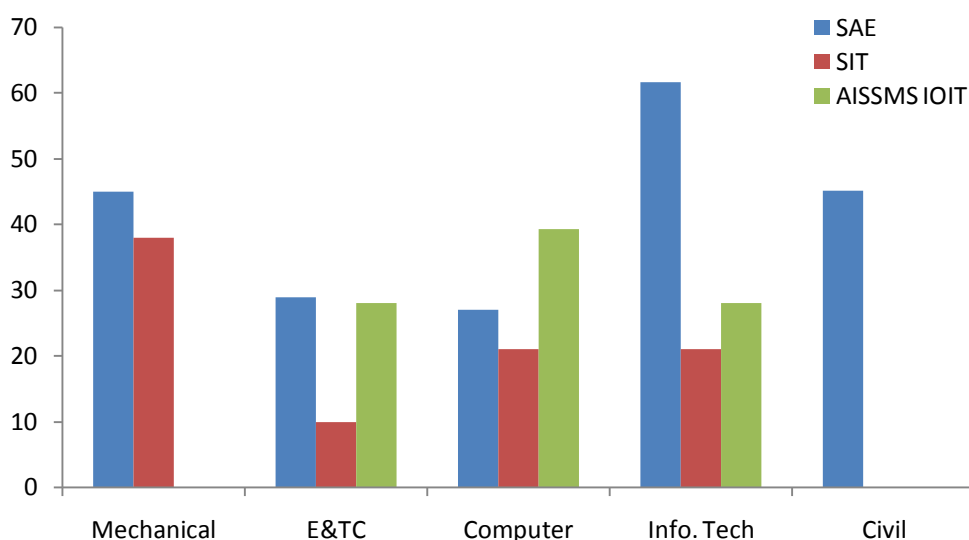


Fig.2.2. Minimum CET marks of admitted students

Programme	Maximum CET Marks of Admitted Students		
	SAE	SIT	AISSMS-IOIT
Mechanical	104	89	-
E&TC	127	84	78.49
Computer	121.44	88	81.89
Info. Tech	188.20	85	73.29
Civil	78.60	-	-

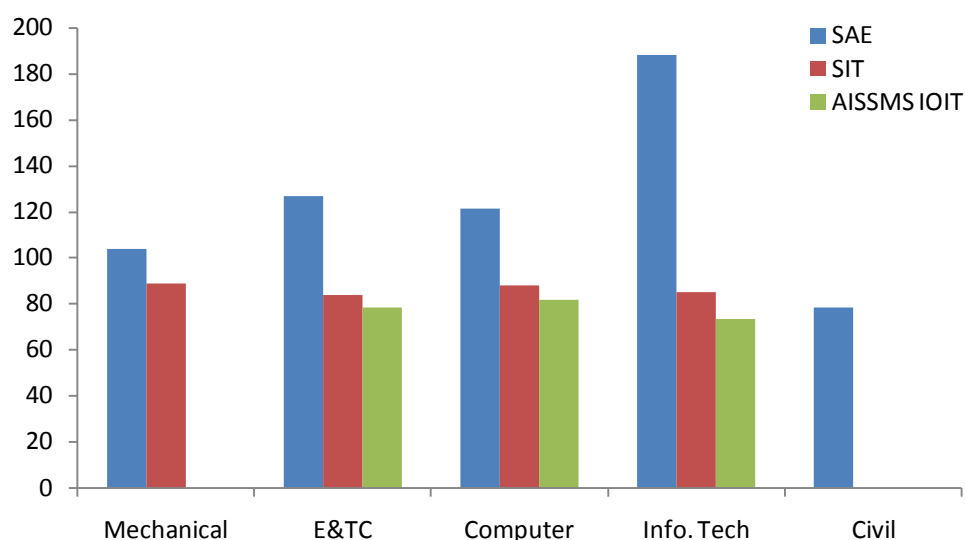


Fig.2.3. Maximum CET marks of admitted students

2.1.4 Is there a mechanism in the institution to review the admission process and student profiles annually? If ‘yes’ what is the outcome of such an effort and how has it contributed to the improvement of the process?

YES

- The institute follows all the guidelines, rules and regulations of Director of Technical Education (DTE) and Government of Maharashtra for admission of the student.
- The institute is having admission cell headed by Registrar and senior professor which takes care of smooth functioning of admission process.
- The institute reviews the admission process and the admitted students
- The student admitted are analyzed from the maximum and minimum marks of CET and AIEEE which gives idea about the merit of the student

- The students are also analyzed based on the Academic background, Category, Contact Details, Economic status, Gender and Representation which gives idea about the background of the student.

Outcome:

This help in understanding the students need and their background.

Contribution to improvement of process:

Based on the understanding of the student, institute plans for various programs to develop the students in all the respect. This also helps institute to decide the advertisement policy.

2.1.5 Reflecting on the strategies adopted to increase/improve access for following categories of students, enumerate on how the admission policy of the institution and its student profiles demonstrate / reflect the National commitment to diversity and inclusion SC/ST/OBC, Women, Differently abled, economically weaker sections, Minority community, any other?

- A) Sinhgad Academy of Engineering follows all rules, regulations and guidelines set up by state government body and DTE. It admits students of categories like, SC, ST, and OBC, women, economically weaker sections as per the government norms, rules and regulations.
- B) Institute offers the admissions under the Tuition Fee Waiver Scheme which is mainly developed for Economically Weaker Section of the society as allotted by the central admissions committee.
- C) Institutes Provides the assistance to get free ship and scholarship to category students.
- D) Institute also assists for E.B.C. Scholarship from govt. for economically weaker student as per norms of DTE.
- E) The Earn and Learn scheme with association of SPPU is also in practice for the economically weaker students.
- F) There is special reservation for the candidate of J&K and GOI (Mizoram student) as per the norms.

(A) Reservation as per the DTE and Maharashtra Govt. is as follows.

- | | |
|---|----------|
| 1. Scheduled Castes and Schedule caste converts to Buddhism (SC) | : 13.0 % |
| 2. Schedule Tribes (ST) | : 7.0 % |
| 3. VimuktaJati (VJ)/De notified Tribes(DT) (NT-A) | : 3.0 % |
| 4. Nomadic Tribes 1 (NT-B) | : 2.5 % |
| 5. Nomadic Tribes 2 (NT-C) | : 3.5 % |
| 6. Nomadic Tribes 3 (NT-D) | : 2.0 % |
| 7. Other Backward Classes (OBC) | : 19.0 % |

Total 50 % reserved.

(B) Jammu & Kashmir Migrant Seats:

One seat over and above the sanctioned intake capacity in each institute is available under the CAP.

(C) TFWS Seats:

Maximum 5% seats of sanctioned intake per course are available for admissions. These seats shall be supernumerary in nature and to be filled through centralized admission process conducted by Competent Authority only.

(D) Reservation for sons/daughters of Defence service personnel:

Five (5) % seats of the total sanctioned intake for an institute, subject to a maximum of five (5) seats in each institute coming under CAP shall be reserved

(E) Reservation for Persons with Disability Candidates:

As per the provisions in Clause 39 of Equal Opportunities, Protection of Rights and Full Participation Act 1995, three percent (3%) seats of total sanctioned intake capacity of all the institutions coming under CAP shall be reserved for Persons with Disability candidates.

(F) Reservation for Female candidates:

30% seats available for Maharashtra State CAP shall be reserved for female candidates in all the courses of the institutions coming under CAP.

The table below shows details for AY 2015-16

Program	SC/ST	OBC	SBC	Women	PH	J&K	TFWS	Any other
Mechanical	26	70	6	25	-	1	9	148
E&TC	15	26	4	50	-	2	6	142
Computer	21	35	3	59		1	6	127
IT	4	20	1	17	-	0	3	38
Civil	14	34	-	19	-	1	6	79

No. of boys and girls admitted for year 2015-16

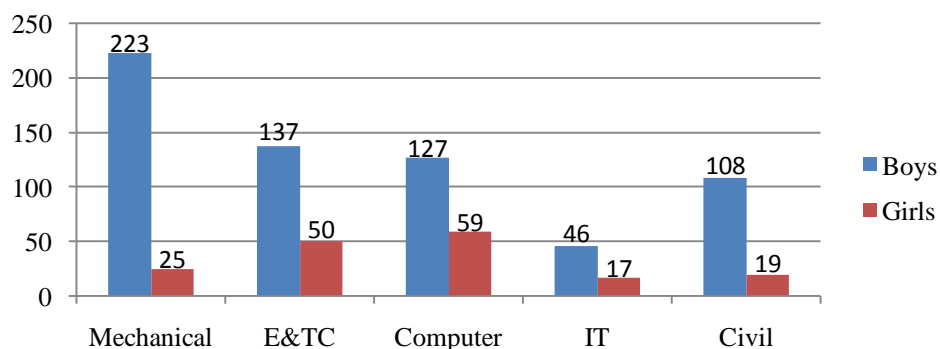


Fig.2.4. Admission for year 2015-16 1

2.1.6 Provide the following details for various programs offered by the institution during the last four years and comment on the trends. i.e. reasons for increase/decrease and actions initiated for improvement

The admission process is governed and managed by the centralized admission process (CAP), Gov. of Maharashtra on-line counseling process and the whole process is very much transparent from the very bottom-line, i.e., students to the College authority. Students can fill up both the choice of Stream and College by on-line counseling process followed by online registration. Hence demand ratio is calculated from intake capacity and number of admitted students.

Under Graduate

Sr. No.	Name of Programs	Year	No. of Applications	No. Of Students Admitted	Demand Ratio
1	Mechanical Engineering	2010-11	The admission process is governed by Directorate of Technical Education Therefore this data is not available	182	1.0111
		2011-12		191	1.0610
		2012-13		249	1.0375
		2013-14		241	1.0040
		2014-15		240	1.0000
		2015-16		248	1.0333
2	Electronics & Telecommunication Engineering	2010-11		169	0.9388
		2011-12		183	1.0166
		2012-13		178	0.9889
		2013-14		163	0.9056
		2014-15		161	0.8944
		2015-16		187	1.0389
3	Computer Engineering	2010-11		61	1.0100
		2011-12		127	1.0580
		2012-13		186	1.0330
		2013-14		173	0.9611
		2014-15		181	1.0055
		2015-16		186	1.0333
4	Information Technology Engineering	2010-11		62	1.0300
		2011-12		63	1.0500
		2012-13		61	1.0100
		2013-14		58	0.9600
		2014-15		61	1.0166
		2015-16		63	1.0500
5	Civil Engineering	2010-11		59	0.9800
		2011-12		65	1.0830
		2012-13		127	1.0583
		2013-14		125	1.0400

Sr. No.	Name of Programs	Year	No. of Applications	No. Of Students Admitted	Demand Ratio
		2014-15		123	1.0200
		2015-16		127	1.0583

Post Graduate

Sr. No.	Name of Programs	Year	No. of Applications	No. Of Students Admitted	Demand Ratio
1	Mechanical Engineering (Automotive)	2010-11	The admission process is governed by Directorate of Technical Education Therefore this data is not available	NA	NA
		2011-12		18	1.0000
		2012-13		18	1.0000
		2013-14		18	1.0000
		2014-15		15	0.8330
		2015-16		08	0.5550
2	Mechanical Engineering (Design)	2010-11		NA	NA
		2011-12		NA	NA
		2012-13		24	1.0000
		2013-14		24	1.0000
		2014-15		11	0.4580
		2015-16		24	1.0000
3	Electronics & Telecommunication Engineering (Digital System)	2010-11		NA	NA
		2011-12		18	1.0000
		2012-13		18	1.0000
		2013-14		18	1.0000
		2014-15		14	0.7770
		2015-16		10	0.5560
4	Electronics & Telecommunication Engineering (VLSI & Embedded System)	2010-11		NA	NA
		2011-12		18	1.0000
		2012-13		18	1.0000
		2013-14		18	1.0000
		2014-15		9	0.5000
		2015-16		15	0.8330
5	Computer Engineering	2010-11		NA	NA
		2011-12		NA	NA
		2012-13		24	1.0000

Sr. No.	Name of Programs	Year	No. of Applications	No. Of Students Admitted	Demand Ratio
		2013-14		24	1.0000
		2014-15		19	1.0000
		2015-16		12	1.0000

The reasons for the increase or decrease in admissions are as follows:

- Global and national employment scenarios are mostly responsible for admissions.
- The students mostly select the colleges based on the surrounding locality and placement trend of particular institute.
- Every year new colleges are establishing as well as there is increase of intake in existing colleges for various programmes in the state of Maharashtra.
- State-of-the-art technology in the area and trends of students opting post graduate courses in India and abroad matters a lot during PG admissions.

Action initiated for improvement placement and as a result admissions:

- Providing effective training and placement activities.
- Conducting value added courses in consultation with Industry.
- Organizing awareness programmes.
- Counseling before and during admission.

2.2 Catering to Student Diversity**2.2.1 How does the institution cater to the needs of differently-abled students and ensure adherence to government policies in this regard?**

- Ramp ways are provided at appropriate places, for easy movement.
- Wheel chair is available if required and demanded by the student.
- Preferential treatment is given in the central library and office.
- Special arrangements are made at the time of examination.

2.2.2 Does the institution assess the student's needs in terms of knowledge and skills before the commencement of the Program? If 'yes', give details on the process.

Yes.

- The qualifying marks and the ranking of students admitted are analyzed for understanding the need and background of the student.
- The orientation programs at institute level and department level are organized at the very first day and second day of commencement of the program, where students are guided by the eminent personality in the

field. The students are also get introduced with the institute and department and also made aware about the different facilities and training programs available.

- The students need in terms of knowledge and skills are assessed continuously by conducting the three AMCAT test in SE, TE respectively.
- Based on the analysis of the AMCAT test the contents of student training program (STP) get finalized. The STP is made the part of the timetable. STP is divided in five modules
- The institute organizes series of lectures for final year and ME students to guide them on the issues like selection of project work, literature survey, finding the gap from literature survey, defining the research problem, developing the methodology and writing the paper and project report/ dissertation/ thesis.
- At the beginning of the semester, the first lecture of each course is devoted to motivate the students to develop the proactive attitude towards the subject.
- Orientation about MI (Multiple Intelligence) is given.

No. of students given AMCAT Test

Sr. No.	Academic Year	Department	Program	No of Students
1.	2013-2014	Mechanical	S.E.	254
			T.E.	214
		E&TC	S.E.	154
			T.E.	139
		Computer	S.E.	177
			T.E.	93
		IT	SE	80
			TE	73
		Civil	S.E.	72
			T.E.	142
2.	2014-2015	Mechanical	S.E.	282
			T.E.	281
		E&TC	S.E.	193
			T.E.	201
		Computer	S.E.	205
			T.E.	183
		IT	S.E.	73
			T.E.	64
		Civil	S.E.	150
			T.E.	86
3.	2015-2016	Mechanical	S.E.	294
			T.E.	291

Sr. No.	Academic Year	Department	Program	No of Students
		E&TC	S.E.	208
			T.E.	204
		Computer	S.E.	190
			T.E.	209
		IT	S.E.	72
			T.E.	80
		Civil	S.E.	170
			T.E.	162

STP Details

Sr. No.	Program Particular	Contents	Target Audience
1.	STP1	Personal and Career Goal Setting, SWOT Analysis, Behavioral Skills, Public Speaking, Presentation Skills, Resume Writing, Listening Skills, Group Discussions, Report Writing, Letter/ Application Writing	S.E.
2.	STP2	Listening Skills Session 1 & 2 Reading Skills Session 1 & 2 Writing Skills Session 1 & 2 Speaking Skills Session 1, 2,& 3	S.E.
3.	STP3	Signal Processing 1, Communication Programming Language -1, Digital Design Programming Language –I, Electronic Design 1 & 2, Embedded System, Advance Communication	T.E.
4.	STP4	Group Discussion (3 sessions) Personal Interview (4 Sessions)	T.E.
5.	STP5	Value added Program	B.E.

VAP Details

Sr. No.	Topic	No. of Students Attended
Mechanical Department		
1.	Process Planning & Tolerance Analysis	116
2.	Automation Studio	58
3.	Piping Design	93
E&TC Department		
1.	Android & Real World Interfacing	85
2.	JAVA Programming	60
3.	PLC & SCADA	62
Computer Department		
1.	C Programming Language	15
IT Department		
1.	Cloud Computing Fundamentals	60
2.	BigData Analytics and Hadoop	48
Civil Department		
1.	Workshop on Basic Concrete Mix Design	40
2.	Practical challenges and Field Exposure	100
3.	AutoCAD workshop	46
4.	Hit office	35

2.2.3 What are the strategies adopted by the institution to bridge the knowledge gap of the enrolled students (Bridge/Remedial/Add-on/Enrichment Courses, etc.) to enable them to cope with the Program of their choice?

- The institute conducts two orientation programs on 1st and 2nd day of college at institute level and department level respectively.
- In institute level programs they are made aware about the recent trends in market and informing about the engineering branch opportunities etc. by eminent personalities. Then they get introduced with the college and different facilities in college.
- In department level programs they get introduced with the respective department and guided by the eminent personality in the field followed by ice-breaking sessions.
- The project based learning scheme is part of first year teaching learning process.
- The department has different domain committee's who review the curriculum and find the gap between curriculum to meet the targeted program outcomes.
- Content beyond syllabi is decided by the said committee.

- The inputs are also taken by industry person and academicians and pass out students.
- Teaching plan is prepared accordingly.
- The Guest lectures and events are planned to bridge the gap and made part of the teaching plan
- Make up classes are made part of the teaching plan.
- Institute has MOU with reputed companies, knowledge sharing through projects, industrial visit, etc. helps student updated.
- AMCAT test is conducted in SE and TE to understand the student and his skill, knowledge.
- Special training is given to the students on the recent trends of the industries through Student Training Programme (STP-I to STP-V).

The Institute takes efforts for enabling the students to cope up with the fast developments in syllabi of various subjects as well as takes efforts in improvement of their general academic quality by organizing the different programs.

The detailed summary of Orientation Programme, Soft Skill Development Courses, Enrichment Courses, Add-On Learning and Industrial Visits are given below.

Particular	2011 -12	2012 -13	2013 -14	2014 -15	2015 -16
Mechanical Engineering					
Orientation Program	-	-	1	1	1
Soft Skill Development Program	-	-	2	2	2
Enrichment Course	2	3	4	2	5
Add-On Learning	-	-	-	-	-
Industrial Visits	7	5	7	5	3
E&TC Engineering					
Orientation Program	-	-	1	1	1
Soft Skill Development Program	-	1	2	2	2
Enrichment Course	5	2	1	3	3
Add-On Learning	-	-	-	1	1
Industrial Visits	1	2	3	4	-
Computer Engineering					
Orientation Program	-	-	1	2	3
Soft Skill Development Program	-	-	2	3	2
Enrichment Course	5	-	5	20	11

Particular	2011 -12	2012 -13	2013 -14	2014 -15	2015 -16
Add-On Learning	1	-	9	14	-
Industrial Visits	-	1	1	1	1
IT					
Orientation Program	-	-	-	-	-
Soft Skill Development Program	-	-	2	4	5
Enrichment Course	1	1	1	1	1
Add-On Learning	-	-	-	-	-
Industrial Visits	2	2	-	2	1
Civil Engineering					
Orientation Program	1	1	1	1	1
Soft Skill Development Program	-	-	2	2	2
Enrichment Course	1	1	1	4	5
Add-On Learning	-	-	-	-	-
Industrial Visits	2	3	8	5	9
Engineering Sciences					
Orientation Program	1	1	1	1	1
Soft Skill Development Program	-	-	-	-	-
Enrichment Course	-	-	4	1	2
Add-On Learning	-	-	2	2	-
Industrial Visits	-	-	-	-	-

2.2.4 How does the college sensitize its staff and students on issues such as gender, inclusion, environment etc.?

To sensitize its staff and students on issues such as gender, inclusion, environment:

- Institute provides equal opportunity for all to participate in various activities and processes which include administrative activities, co – curricular and extracurricular activities, sports, deputation to the courses, and higher studies, appointments, committees, placements etc. without any discrimination (gender, caste, religion).
- Institute has set up Women Grievances Redressal Cell that functions separately for the benefit of the women employees and girl students.
- The various activities like lectures on women's empowerment hemoglobin checking camp for girls is organized.
- Institute organizes special training programs on ethics - moral values and the special social activities to maintain good social environment.

- Street play on women empowerment was organized on 14/09/2015 in campus.
- Environment awareness programs are organized at department and institute level.
- We appealed Parents to gift plants to college to make college more campus green and programs on tree plantation are organized.
- NSS had organized Swachhata Abhiyan at Yeolewadi and tree plantation in college on the eve of Gandhi Jayanti on 2nd October 2015

2.2.5 How does the institution identify and respond to special educational/ learning needs of advanced learners?

The advanced learners are identified from their participation in classroom discussion, performance in the assessment tests, performance during the oral examination, participation in classroom seminars and questioning ability, University result analysis, etc.

The advanced learners are encouraged to participate in symposia, workshops and seminars to gain knowledge on the latest developments.

- The students are encouraged to take up industry based projects and mini projects in the advanced topics under the guidance of the faculty members.
- They are provided with the guidance about patents, project management and prototype building.
- They are provided with the extra exposure by organizing competitions on paper presentations, projects, games, software development etc.
- Advanced learners are encouraged to lead the students' association team which organizes various activities viz. paper presentation, poster presentation, lecture series etc.
- Advanced learners are identified based on their passing percentage, classroom performance, regularity in submission of class works and assignments, punctuality and personal interactions.
- The college offers opportunities for bright students to augment their talent and meet their learning needs.
- Students are encouraged to undertake industry-sponsored projects and mini projects on advanced topics.
- Students are motivated to participate in different project competitions like AVISHKAR, Society of Automotive Engineer (SAE) BAJA etc.
- Advanced learners are facilitated with a well-equipped library provided with latest edition of books, e-Books, online and printed journals and modern labs.
- Enrichment courses are conducted to fulfill the knowledge thirst of advanced learners.
- Advanced learners are advised to undertake GATE, GRE examinations and are guided for higher studies.
- Meritorious student's names are displayed on Institute notice board.

- Assignments are designed separately for advanced learners.
- ROBCON is an interdisciplinary activity in which students from Mechanical Engineering work along with students from Computer and Electronics Engineering to complete the task of mechanical design along with electronics design and programming.

2.2.6 How does the Institute collect, analyze and use the data and information on the academic performance (through the Programme duration) of the students at risk of drop out (students from the disadvantaged sections of society, physically challenged, slow learners, economically weaker sections etc. who may discontinue their studies if some sort of support is not provided)?

- Internal evaluation tests of Institute, University result analysis and regular interaction between teacher mentor and student help to get the information about students from the disadvantaged sections of society, physically challenged, slow learners, economically weaker students.
- Teacher mentor interacts regularly with the students assigned to them and find out the academic performance of student and probable reasons for the same. He/she co-relates the result with the categories of the student viz. section of society, physically challenged, slow learners and economically weaker students.

The Institute uses the data as follows.

Physically Challenged

Teacher makes special arrangements to teach the syllabus contents as per the convenience of the respective students.

Slow learner

- The Institute arranges remedial lecturers for slow learners for subjects like BEE Mathematics and APM before and after college hours.
- Teacher repeatedly teaches the content as per requirement of slow Learners.
- Teacher informs the parents regarding improvement in the Performance of their ward on regular basis.
- Teacher uploads notes on MOODLE to understand the content easily
- Attempts are made by the teachers to give personal attention to these students.
- Specially developed question banks and assignments are given.
- Participative and progressive slow learners are given chance to improve term work to motivate and appreciate their efforts.

Economically Weaker Section

- Tuition Fee Weavers Scheme (TFWS) is provided.

- Deferred fee payments are permitted for needy students.
- Institute offers book – bank facility.
- The Earn and learn scheme is implemented in association with SPPU. This is in the ratio of 70:30.

Disadvantaged sections of society

- SC/ST/OBC/minority students are given benefits of reservations in admission and scholarship as per government norms.
- Institute provides information about free ships, EBC scholarship, different government schemes and education loan facilities to the students and their parents.
- Free book bank facility is provided to SC/ST students.

2.3 Teaching-Learning Process

2.3.1. How does the college plan and organize the teaching, learning and evaluation schedules?

Savitribai Phule Pune University (SPPU) has laid down the number of days that would be available for teaching and evaluation. The subject teacher and the departments take utmost care to complete teaching and evaluation within the stipulated time by following strategies semester-wise.

- The Academic year starts in accordance with the schedule given in the Academic Calendar of University
- The college prepares the Academic Calendar mapping to the Academic Calendar of University.
- The Academic Calendar of Department takes into consideration and the deadlines are specified both in Academic Calendar of University as well as Academic Calendar of college.
- Before start of Semester load distribution takes place according to subject choice offered by faculty. Load distribution guidelines of Academic Monitoring Committee (AMC) are taken into consideration while distributing the load. The timetable is prepared by timetable committee in consultation with other departments.
- Every subject teacher identifies the requirements in terms of practical's for his/her subject and ensures set up of laboratory. The new/current syllabus is taken from faculty and the purchase procedure is carried out. Conditions of the existing instruments/equipments are inspected before the commencement of each semester and maintenance work is undertaken.
- Books needed for the current curriculum are updated in the library with the co-operation of library co-coordinator of each department.

- Every faculty prepares Course File before commencement of teaching and gets it validated by HOD. The Course File consists of teaching plan, content analysis, subject history, results analysis of subjects, previous years question papers, continuous evaluation sheets and notes.
- The Timetable is displayed on notice boards and the Institute website in advance. The Class teachers for each class and Guardian teachers for each batch are appointed and contact details are displayed on notice board and website.
- The attendance of students is monitored at the end of each day and respective Teacher Guardians make phone calls to absent students and their parents. Letters are sent to parents of students who continually remain absent. There is a defaulter list displayed at the end of each month and parents of such students are called to college to meet the authorities and give explanation about their wards poor attendance.
- The Teaching plan is regularly monitored by HOD after regular intervals (at the end of each unit) in order to ensure that teaching learning is going as per planned schedule. The records of lectures delivered as per the time table are maintained and verified by the class teacher and academic monitoring committee.
- Student's performances are continuously evaluated by tutorials, midsem tests and remedial actions are undertaken. Mid-sem tests results, online results are analyzed and weak students are counseled and provided the necessary help
- Extra lectures are allocated in the timetable to cover the curriculum in more elaborated way as per the subject requirement.
- List of students with poor attendance is prepared at the end of each month and displayed on the notice board.
- Guardian Teachers counsels the students having poor attendance and performance. They also conduct meetings with their parents periodically. Thus, parents are kept informed about their ward regularly.
- Revision and remedial classes are conducted towards the end of the course. Open house sessions are conducted for students having poor attendance and suitable assignments are given to them.
- Submission is done in the allotted time and term work marks are allotted based on continuous assessment.
- Co-curricular and extra-curricular activities are organized to supplement the curriculum.
- The Head of respective departments conduct weekly meetings of faculties to discuss the lacunae/ shortcomings/ problems and possible solutions to overcome them.
- There is a mock in semester examination conducted at the end of 50% completion of syllabus for TE and BE and mock online examination for SE. There are retest examinations to improve student performance.

- There is a midterm submission at the middle of the semester in order to monitor the completion of practical.
- At the end of class room teaching there are turns for repetition of practical.
- Prelim examination is conducted at the end of semester to evaluate student performance.
- Savitribai Phule Pune University examination schedule is displayed on notice board and examinations are conducted as per University rules and regulations.
- Result analysis is carried out after declaration of the University result its record is kept and is used for further improvements.

2.3.2. How does IQAC contribute to improve the teaching – learning process?

The institute established an Internal Quality Assurance Cell (IQAC) which comprises of internal as well as external peer members

- All the academic and administration process are governed by IQAC
- IQAC keenly monitors the academic process and execution of teaching plan takes corrective measures
- IQAC formerly called AMC collects the online students' feedback and takes the required corrective measures.
- IQAC provides the support in implementation in all the academic policies
- IQAC acts as an interactive platform between faculty, management and stake holder to improve the process of institute.

2.3.3. How learning is made more student-centric? Give details on the support structures and systems available for teachers to develop skills like interactive learning, collaborative learning and independent learning among the students?

Students are the most important stake holders of the Institute. The efforts are being made to groom them as social engineers.

1. Interactive Learning:

To make learning interactive many Pedagogical skills are used in teaching. Few of which can be listed as

- Role Play
- Quiz
- Crossword
- Model Making
- Project based Learning

2. Collaborative Learning:

- The institute has signed MOU with 40+ industries. Students and staff work on the real time problem of industry.
- Mini project and project is part of curriculum.

- Students are also encouraged to carryout different project through ED cell and TBI center.
- Industrial visits are organized to get the exposure.

3. Independent Learning:

The independent learning occurs through

- Design assignments
- Participation in different competitions.

Details of support structure and systems available:

Infrastructure Support:

- Class rooms and tutorial room with LCD projector, computer system and internet connection
- Studio for recording the lectures
- K-point server for uploading the lectures on internet
- Stationary and support required for preparing innovative learning material

Training Support:

- Organization of Train the trainer program where all the subject content and teaching methodology is discussed in each semester
- Organization of Teacher Advancement Program and many events like STTP/ FDP/ Seminars/Workshop/ Conference for faculty enrichment
- Supporting faculty to attend STTP/ FDP/ Seminars/Workshop/ Conference for faculty enrichment

2.3.4. How does the institution nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators?

- The institute organizes different activities through student association to nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators. Few of which are listed below
- TECHTONIC is a technical event organized by Institute every year. Every year students and faculty participate in University Research Competition AVISHKAR.
- Faculty encourages the students to participate in different technical paper writing and poster competitions organized across University region.
- Students are encouraged and guided to undertake industry sponsored projects.

- Entrepreneur skill development activities are organized in the college to encourage promising entrepreneurs. College supports and motivates students through ED CELL.
- Students are encouraged and financially supported to participate into the competitions like Robocon, BAJA, Supra, GOKART.
- Different project competitions and model making competitions are organized to nurture and support critical thinking and creativity. Workshops on cutting edge technology are organized to help the students to understand the fast changes in Technology.
- Industrial visits are organized to get the exposure to real time working
- National Conference and workshop are organized to give the platform to the students.
- Department Newsletter and Wall magazine are published on regular basis.
- K-point software is used for students' independent learning.

2.3.5. What are the technologies and facilities available and used by the faculty for effective teaching? e. g. Virtual laboratories, e-learning -resources from National Programme on Technology Enhanced Learning(NPTEL) and National Mission on Education through Information and Communication Technology (NME-ICT), open educational resources, mobile education, etc.

The following resources are made available for effective teaching and evaluation processes.

- The Institute has Enterprise resource planning software called GEMS. Every faculty member and students have access to it via user accounts. The entire faculty related operations from course file updation, leave management, appraisals and resource sharing is done via GEMS. The students can access this and refer the e-contents uploaded by respective faculties.
- There are regular on line examination conducted at the department using MOODLE software. Various software's are available to each department
- Faculty members make use of softwares like SCIELAB, Lab-view, eSIM, Proteus, Keil, NS3, Rational Rose, CATIA, ANSYS, OPENFOAM
- Reference books of reputed authors and publications.
- Multimedia teaching aids like projectors.
- Transactions and Journals (e-copy) like IEEE, ASME etc.
- Wi-Fi facility for staff and students.

- Staff and students make use of NPTEL lecture videos for clarity of concepts and thorough understanding of subject contents.
- Studio for recording the video lectures and the k-point software and server for uploading the recorded lectures

Sr. No.	Course/ Programme	E- learning resources
1	MECH	MATLAB, NPTEL Lecture Videos, Pro-E, CAD Tools,, CNC, MASTERCAM Software
2	E&TC	Video Recordings, k-point software video lectures, NPTEL videos
3	COMP	Video, Quiz, Crossword Puzzles, NPTEL Video Lectures
4	IT	PPTs, NPTEL & YouTube videos, Video Lectures
5	CIVIL	PPTs, NPTEL Video, YouTube videos
6	FE	PPTs, Video Lectures

2.3.6. How are the students and faculty exposed to advanced level of knowledge and skills (blended learning, expert lectures, seminars, workshops etc.)?

Faculty:

- The Institute promotes the faculty to participate in different technical programs
- The Institute provides faculty the latest available technical information through memberships of reputed journals like Science Direct and IEEE.

The Institute organizes different faculty development Programmes at institute, National and International Level in collaboration with well-known personalities and organizations, like STTP, FDP, TTT, TAP as shown in **Fig.2.5.**

Students:

- The Institute organizes various technical competitions such as paper presentations, project competitions, Quiz and poster competitions.
- The faculty encourages students to undertake projects on advanced technologies, industry sponsored projects and Research & Development projects.

- The Institute promotes students to participate in National/International competitions like SAE- BAJA and events by providing all technical and financial support.
- Eminent speakers are invited from the industry to deliver lectures so as to expose the students to developments in the field of their study.

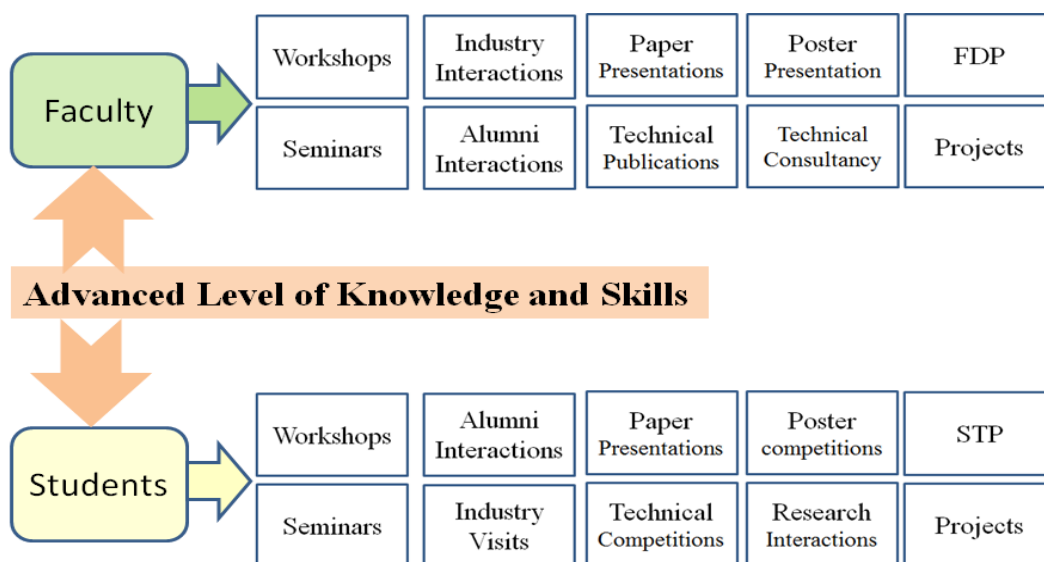


Fig.2.5. Advanced Level of Knowledge and Skills by Faculty and Students

2.3.7. Detail (process and the number of students benefitted) on the academic, personal and psycho-social support and guidance services (professional counseling/mentoring/academic advise) provided to students?

Academic and Personal Guidance and Support:

- The Teacher Guardian is appointed for a batch of 20-25 students, who take care of these students for all the support and guidance required. Teacher guardian conducts the meeting of the students allotted to him/her on regular basis and tries to understand their academic as well as personal problems. TG try to get sort the problem, if required forwarded to Head of Dept, Vice Principal and Principal. The attendance is monitored by TG on daily basis and the closely monitored the performance as well. TG takes the necessary action according to the need of students.
- Students are supported and counselled by teacher guardian in regards of their homesickness,

- Class Teacher and Head of department interact with the students regularly to understand the need of students in terms of infrastructure, teaching and personal.
- All the students are covered under the teacher guardian scheme and get the continuous support and guidance from the Teacher Guardian. If required the students are taken to Urban Hospital near to campus to council them by a professional.

Students Benefited:

Sr. No.	Particular	Year	No of students benefited
01	Academic and Personal Support (Teacher Guardian Scheme)	Every semester	All the students
02	Psycho-Social support	2011-2012	04
		2012-2013	05
		2013-2014	03
		2014-2015	07

2.3.8. Provide details of innovative teaching approaches/methods adopted by the faculty during the last four years? What are the efforts made by the institution to encourage the faculty to adopt new and innovative approaches and the impact of such innovative practices on student learning? (Project based learning, model making, cross word, working with industries, extract from table, case study, video)

The Institute always gives full support to the faculty in adopting various innovative teaching practices. Faculties have full freedom with regards to the methods of curriculum delivery. The following practices are followed:

- The Institute encourages the faculty to use proactive teaching methodologies such as role-play; quiz, brain storming, group discussion.
- Faculty members make question banks to improve the success rate, mock practical's which helps students to prepare for their examinations.
- Faculty members are deputed for participating in innovative teaching learning Programs like WIPRO Mission10X.
- Senior faculty mentors junior faculty by sharing their knowledge about effective teaching through TTT and FDP.
- Faculty uses techniques like project based learning and model making to make the conceptual understanding easy.

- Quiz, puzzles and crosswords are used to assess the understanding of the students.

Kpoint capsules for seven subjects of Engineering Sciences Semester-I and 9 modules of STP III are already developed and available to all the students and faculty on <https://my.kpoint.com>.

Impact:

The student attendance in the class improved because of student centric pedagogical methodology used in teaching-learning. The participation of the students and interest in getting the concept understanding is increased. This reflects in their project, academic result, participation in co-curricular activity etc. Results and placement also shows positive impact of these methods used in teaching.

2.3.9. How are library resources used to augment the teaching-learning process?

- Collection of rare reference books, handbooks on different subject help the student to get thorough knowledge.
- Online journals, hardbound journals and magazines keep the student updated with the current state of art knowledge base.
- Project report and thesis available in library help students to design and develop the problem statement for their project work.
- Facilities like Wifi and internet keep students connected to huge knowledge database available online.
- The library catalogue is available.
- The photocopy facility is made available for the students.

- **Central Library**

Sr. No	Academic Year	No of Titles	No of Volumes	No of Journals	No of e-Journals
1.	2015-16	155	267	125	275
2.	2014-15	130	319	5	275
3.	2013-14	200	537	118	9175
4	2012-13	403	1455	98	8520
5	2011-12	261	2173	5	6790

- **Departmental Library**

Sr. No.	Course / Program	No of Volumes	No of Titles
1	Mech	322	140
2	E&TC	656	473
3	Comp	512	220
4	IT	166	147
5	Civil	9	9

2.3.10. Does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If yes, elaborate on the challenges encountered and the institutional approaches to overcome these.

Yes, the Institute faces some minor challenges in completing the curriculum within the planned time frame and calendar. These are elaborated as follows:

Challenges:

- Although lesson plans are prepared by faculty as per teaching scheme mentioned in SPPU syllabus, some subjects require more time depending upon the difficulty level of the subject.
- Correlation of theory and practical.
- Laterally admitted students join late.

To overcome the Challenges:

- Extra lectures are allocated in regular timetable and on weekends.
- For direct second year students' extra lectures are conducted on Sunday and holidays.

2.3.11. How does the Institute monitor and evaluate the quality of teaching learning?

The Institute monitors and evaluates the quality of teaching-learning in the following ways:

- The Institute takes care of academic monitoring through Academic (departmental academic) Monitoring Committee. Regular meetings are conducted along with the committee members, Heads of Departments and the Principal to undertake necessary action for smooth conduction.
- The Institute takes online feedback once in a semester from students pertaining to each faculty. This feedback is handed over to the concerned faculty for analysis.

- The faculties analyze their feedback and discuss it with the Head of Department and accordingly corrective and preventive measures are carried out if necessary.
- Class teachers along with the help of subject teachers ensure that instruction delivery is carried out regularly and uniformly.
- Surprise test and quiz are arranged to evaluate the student performance.
- TG meetings are conducted regularly to understand academic and personal problems of students.
- Internal examinations are conducted as per predefined schedule to evaluate the students understanding.
- The teaching learning in classroom is monitored by higher authorities with the help of CCTV camera.
- MOC practicals are conducted to evaluate the student's practical performance.

2.4. Teacher Quality

2.4.1. Provide the following details and elaborate on the strategies adopted by the college in planning and management (recruitment and retention) of its human resource (qualified and competent teachers) to meet the changing requirements of the curriculum (write on changing requirements of the curriculum, visiting faculty, industry person)

The Institute appoints teachers based on student strength and workload calculated as and when required. The institution follows the SPP University and AICTE/DTE guidelines in selection of faculty members and through the local selection committee in order to ensure that qualified and competent persons are selected by a well defined procedure.

UGC Selection Committee

- The roster is verified by the Assistant Commissioner, Reservation Cell, Pune and Government of Maharashtra State
- After approval from the Reservation Cell and Savitribai Phule Pune University advertisements are published in leading Newspapers
- AICTE qualification norms are followed while scrutinizing the applications
- Applications for recruitment are screened as per the norms
- Technical and personal interviews of the candidates are carried out by the selection committee appointed by SPP University
- Qualified candidates are selected and appointment letters are issued for the same
- List of selected candidates is submitted to the University for approval

Local selection committee

- The candidates are scrutinized on the basis of change in curriculum and the relevant experience in industry/research work.
- The screened candidates are called for an interview and Demo Lecture
- The Staff selection Committee comprises of the principal, two subject expert and Head of department interviews the short listed candidates.
- Based on the performance in the interview, a list of selected candidates is prepared
- The selected candidate is appointed initially on probation for one year

Visiting and industry expert faculty

- The expert faculty from industry related to a particular subject is invited as visiting faculty.

The college has more than sufficient number of qualified and competent teachers to handle the courses offered. [Refer Title No. 20 of College Profile]

Strategies adopted by the institute for retention of its human resource:

Institute has good retention ratio of faculty and staff.

Retention of faculty and staff at SAE because of:

- Ideal working environment while in the campus with great respect and value to teachers and staff.
- Salary, DA and other allowances paid as per the state government policies with immediate effect.
- Cognizance of performance appraisal and qualification improvement of the employees by the respective head of the department & head of the institution for annual increment and higher post.
- Teachers are encouraged to write and publish articles, books as well as research papers based on research experimentation which is very well supported by the institute.
- Financial help to faculty for participating in FDPs, workshops, seminars and conferences.
- Faculty development programmes organized to enable the teachers to adapt to changing needs of society.
- Guest lectures by experts from various sectors to motivate faculty and staff.
- Encouragement and appreciation of participation of international conferences and training programmes.
- Allocation theory and practical subjects as per their area of specialization and preference.
- A sort of freedom and transparency in every department because of which ownership feeling in every faculty and staff.
- Flexibility is provided for higher education.

- Financial support for higher education [Complete sponsorship for Ph D to Alborg University, Denmark].
- The medical treatment of Faculty and their family members are done at free of cost at Smt. Kashibai Navale Medical College & General Hospital, Narhe, Pune, one of the Institute of Sinhgad Group.
- Admissions to the eligible wards of employee are given to schools and colleges on vacant seats if any on priority basis.
- Leaves and vacation given as per government rules and regulations particularly maternity leave for lady faculty and staff.
- Staff welfare through group insurance of all faculty and staff, provident fund, gratuity, service book maintenance etc.
- Transparent policies and decisions of the management are always in favor of staff and always follow certain rational.
- Innovative ideas given by any faculty or staff are very well appreciated by the management.

2.4.2. How does the institution cope with the growing demand/ scarcity of qualified senior faculty to teach new Programmes/ modern areas (emerging areas) of study being introduced (IT, Robotics) Provide details on the efforts made by the institution in this direction and the outcome during the last three years.

The institute has taken following steps to cope with growing demand/ scarcity of qualified senior faculty to teach new programs.

- Deputed/encouraged the faculty members for higher education by considering the need of growing demand in a particular field. Few examples are discussed and shown below in **Fig.2.6**.
 - Dr. K. P. Patil deputed to Alborg University, Denmark and Prof. S. H. Rajput to Nagpur University for their doctoral studies in cognitive radio taking into consideration of emerging technology and need of cognitive radio in future.
 - Dr. J. P. Shinde and Dr. P. N. Shinde supported with study leave for pursuing Ph. D. in microwave engineering.
 - Dr. R. P. Borse sponsored for his Ph.D. at IIT Bombay.

Faculty completed Ph. D. while working

Sr. No.	Branch	No. of faculty
1	Mech	2
2	E&TC	4
3	FE	2

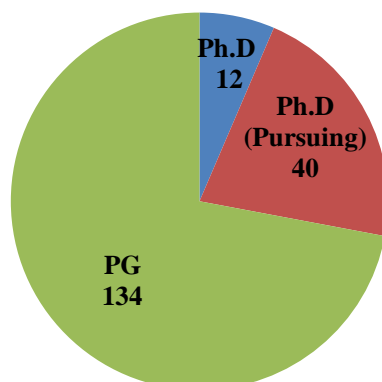


Fig.2.6. Faculty Qualification

Faculty Pursuing Ph. D. while working

Sr. No.	Branch	No. of faculty	Sr. No.	Branch	No. of faculty
1	Mechanical	17	4	IT	4
2	E&TC	08	5	Civil	2
3	Computer	5	6	FE	4

In addition the college invites experts to deliver guest lecturers in selected areas of interest. Courses like bio-medical Engineering and bio-informatics are offered by our institution. Guest faculty members are invited on regular basis to update the knowledge of faculty and students on special subjects such as Cloud Computing, Automation, robotics, VLSI design etc. During the last 3 years about 80 such different programs were delivered at this institution.

Faculties are encouraged for attending the national and international seminars, conference workshop, training programs by partially sponsoring the registration fees.

The outcome of all these efforts reflects in

- 1) Higher faculty retention
- 2) Improvement in the faculty qualification
- 3) Increasing number of research project, patents filed, publication in reputed conference and journal
- 4) Increased student publication and awards

Sr. No.	Particular	Number
01	Faculties working in SAE for five or more than five years	66
02	No of Faculties completed Ph.D. while working in SAE	8

Sr. No.	Particular	Number
03	No. of faculties pursuing Ph.D.	40
04	Research Project	26
05	Patents Filed	32

2.4.3. Provide details on staff development Programmes during the last four years elaborate on the strategies adopted by the institution in enhancing the teacher quality.

The institute and management has keen interest in the overall development of the faculty. This is encouraged by the institute by following ways

- 1) Encouraging faculty for pursuing higher studies by giving study leave and sponsorship
- 2) Organization of various workshop, short term training programs national and international conference
- 3) Providing opportunity for research through active Research and Development cell and Incubation center
- 4) Providing Opportunity to work on industrial project through signed MOU
- 5) Organizing teachers advancement programs and train the trainer programs in each semester

a) Nomination to staff development Programmes

The Management has a positive attitude for the professional development of the faculty in acquiring the knowledge of recent developments and engaging them in the research activities. The following are some of the highlights.

Academic Staff Development Programs	Number of faculty Nominated			
	2011-12	2012-13	2013-14	2014-15
Refresher Courses (TTT*)	0	2	47	48
Orientation Programs	1	1	1	1
Staff Training conducted by the University	10	7	16	43
Staff Training conducted by other institute	25	18	43	23
Summer/winter schools, workshops, TAP [#] etc. (InHouse)	57	33	76	55

b) Faculty Training Programmes organized by the institution to empower and enable the use of various tools and technology for improved teaching-learning

Sr. No.	Department	Title of Training program	Coordinators	Date
Faculty training organized (2014-2015)				
1	E&TC	Wavelet and its applications in signal and image processing(State level one week STTP)	Dr. R. P.Borse Mr. A. B. Ingole	4-8 Feb 2015
2	E&TC	Teacher Training Program SE E&TC(one week FDP)	Dr. K. P. Patil	2-7 Jun 2014
3	E&TC	Teacher Training Program SE E&TC(one week FDP)	Dr. R. P. Borse	4-6 Dec 2014
4	CIVIL	Teacher Training Program TE CIVIL (One Week FDP)	Mrs. S. P. Kitture	11-13 Dec 2014
5	Mech	A workshop on Methodology of Dissertation work	Dr. D. N. Kamble	06 Jul 2014
Faculty training organized (2013-2014)				
5	Mech	Advanced Heat Transfer Augmentation Techniques	Dr. S. S. Kore	18-19 Oct 2013
	E&TC	“Embedded System Design & its application based on ARM processor” sponsored by University of Pune	Mr.D.K.Kamat	14-25 Oct, 2013
	E&TC	Teacher Training Program(TE E&TC)	Dr.K.P.Patil	09-14 Dec,2013
	Comp	Question bank preparation and paper setting methodology for SE	G.S. Gurjar S.P.Godse	2 Apr 2014
	FE	Teachers Advancement Program	D Kaur	6 Nov-4 Dec2013

Sr. No.	Department	Title of Training program	Coordinators	Date
	All DEPT	Teacher Advancement Program(TAP-II)	SAE	Apr-May2014
	All DEPT	Teacher advancement Program(TAP-I)	SAE	Oct 2013
Faculty training organized (2012-2013)				
	E&TC	Teacher Training Program(TEE&TC)Two days workshop	Dr.K.P.Patil	17-26 Jun 2013
	E&TC	STTP on Image Processing, Pattern recognition and computer vision	Mr. R.U. Yawale Mr. V.K. Bairagi Mr. S.D. Ruikar	1-5 Mar 2013
	IT	FDP on Network Simulation using NS2 and Omnet++ for Wireless Networks	Mrs.P.Y.Pawar Mrs.A.S. Shinde	08-12 Oct 2012
Faculty training organized (2011-2012)				
	Mech	State Level Workshop on 'Robosys' 12 – Advanced Robotics & Image Processing	Dr.S.P.Deshmukh	27-29 Jan 2012
	E&TC	STTP on Futuristic Image processing- Research opportunities and challenges	Mr. C.G. Patil Mr. M.M. Sardeshmukh	12-16 Mar 2012
	All Departments	Mission 10x	Dr. Daljeet Kaur	17-21 Oct.2011

c) Percentage of faculty

- Invited as resource persons in Workshops/Seminars/Conferences organized by external professional agencies.
- Participated in external Workshops / Seminars / Conferences recognized by national/international professional bodies.
- Presented papers in Workshops/Seminars/Conferences conducted or recognized by professional agencies.

Sr No	Dept	Invited as Resource Person in Workshops/seminar/conferences/journal				Participated in Workshops/seminar / conferences				Presented paper in Workshops / seminar/conferences/journal			
		11-12	12-13	13-14	14-15	11-12	12-13	13-14	14-15	11-12	12-13	13-14	14-15
1	Mech. Engg	3	4	-	1	20	13	11	12	20	53	77	35
2	E&TC	6	8	19	4	66	45	65	68	71	58	84	78
3	Comp Engg	0	0	7	9	17	7	49	57	11	24	31	48
4	Info Tech	3	1	2	3	14	11	27	37	0	0	4	3
5	Civil Engg	0	0	3	3	3	6	17	17	7	12	15	31
6	FE	0	1	0	0	4	5	5	4	6	5	2	5
Total		12	14	31	20	124	87	174	195	115	152	213	200

2.4.4. What policies/systems are in place to recharge teachers? (e.g.: providing research grants, study leave, support for research and academic publications teaching experience in other national institutions and specialized Programmes industrial engagement etc.)

The Management has a positive attitude for the professional development of the faculty in acquiring the knowledge of recent developments and engaging them in the research activities. The following are some of the highlights:

- 1) Research grants: The Institution provides the support and help required along with infrastructural help to take the research projects from the external funding agencies like BCUD Savitribai Phule Pune University, Department of Science and Technology, ISRO- UOP projects.
- 2) Study leave: The Institution Provides the study leave for pursuing higher education to faculty and staff
- 3) Deputation to National/International Conference / Seminars: The Institution provides partial sponsorship to the faculty for attending the conference and seminars

- 4) In-service training: Faculty are encouraged for industrial training and projects through the MOUs
- 5) Holding of national/international conferences: The Institution provides seed money for organizing national and international conferences.
- 6) The institution is in collaboration with more than fifty companies to train faculty members and students in all fields of engineering.

Sr. No.	Activity	No. of faculties benefited from the institute
1	Study leave for Ph.D	4
2	Sponsorship for national/inter-national conference/seminar/Workshop	189
3	Grants for conducting conferences/workshop	4

2.4.5. Give the number of faculty who received awards/recognition at the state, national and international level for excellence in teaching during the last four years. Enunciate how the institutional culture and environment contributed to such performance/achievement of the faculty.

The faculty of the institute is awarded with awards like best innovative teacher, young scientist etc. and recognized in university and outside university for research work.

The list is given below:

Name of Faculty	Awards and Recognition Received
Dr. V.M. Wadhai	Indira Gandhi Gold Medal Award by “Global Economic Progress and Research Association”, November 2015.
Dr. Suhas P. Deshmukh	Recognised as Young Scientist through Fast Track Research Project of Department of Science & Technology, Govt of India, for his Research project “Sensor less XY Flexural Mechanism for Precision Application” in the year 2012
Dr. Suhas P. Deshmukh	Awarded Best Research Project in Vaigyaniki, Radiance, IIT, Bombay for the work “Design and Development of 3D Microfabrication System” in the year 2008.
Dr. Suhas P. Deshmukh	Received International Award at Bangalore Nano Conference for the project “A Novel Optomechatronic Focused Laser Spot Submicron Scanning System for Microstereolithography”, in the year 2007.
Dr. Suhas P. Deshmukh	Appreciated by Director of IIT Bombay, for “Development of Laser Scanner for 3D Micro-fabrication”, 2007

Name of Faculty	Awards and Recognition Received
Dr. S. S .Kore	Reviewer of journal, Resource person for conference, Expert lecture
Dr. S. P. Deshmukh	Reviewer of journal, Resource person for conference, Expert lecture
Dr. D. N. Kamble	Reviewer of journal, Resource person for conference, Expert lecture
Mr.B.B.Gite	Reviewer of journal, IJCTE Vol 4,No 1, February 2012.
Ms.S.R.Pawara	Resource Person for Expert Lecture on Keyboard & Display Controller, at SCOE Vadgaon, 25/2/2015.
	Resource Person for Expert Lecture on Programming with 8279 ,at SCOE Vadgaon, 26/2/2015.
Ms.P.V.Pate	Reviewer of conference, ICET-15
Dr. Daljeet Kaur	Best Faculty Award by STES and Cognizant Technologies from Kondhwa Campus in 2009.
Prof. R. R. Sorate	Awarded “Acharya Award” by MSBTE, Mumbai in the event “Guru Quest”, 2012.
Dr.N. P. Dharmadhikari	Awarded Best Innovative Teacher by University of Pune on 10.02.2014
Dr. K.P. Patil	Reviewer of journal, Resource person for conference, Expert lecture
Dr. J. P. Shinde	Reviewer of journal, Resource person for conference, Expert lecture
Dr. P. N. Shinde	Reviewer of journal, Resource person for conference, Expert lecture
Dr. R. P. Borse	Reviewer of journal, Resource person for conference, Expert lecture
Prof. M. M. Sardeshmukh	Reviewer of journal, Resource person for conference, Expert lecture
Prof. S. H. Rajput	Reviewer of journal, Resource person for conference, Expert lecture
Prof. C. G. Patil	Reviewer of journal, Resource person for conference, Expert lecture

2.4.6. Has the institution introduced evaluation of teachers by the students and external Peers? If yes, how is the evaluation used for improving the quality of the teaching-learning process

Yes.

Evaluation of teacher's performance is done every semester.

Evaluation of teachers by students:

The institution has a feedback system to evaluate the teachers by students. A complete transparent online feedback of teacher is taken based on different parameters related to teaching after one month of starting the semester. The feedback is analyzed and teachers are given the necessary guidelines by Academic Monitoring Committee.

Appreciation letters are given to the faculties and staff based on their performance.

Self appraisal of Faculty Members: All the faculty members are required to submit self appraisal report every year in the prescribed format.

Review of faculty self-appraisal: SAE has evolved a standard method of evaluating the teaching research and administrative activities of the faculty. The information furnished by the faculty member will be analyzed by the HOD, Principal.

The self appraisal report is accessed by IQAC formerly AMC and the necessary guidelines for the improvement are given to teacher. E.g. related to suggestions based on student feedback, research and development activity, publication and improvement in education. Self appraisal report is access by alternating report manager (HOD for all the faculty) and the report is submitted to reporting manager (to Principal). Finally it is submitted to the management for the review.

Appreciation in terms of appreciation letter, additional increment is given to faculty and staff, based on their performance.

2.5 Evaluation Process and Reforms

2.5.1. How does the institution ensure that the stakeholders of the institution especially students and faculty are aware of the evaluation processes?

The Institute is accountable to the stakeholders - students, faculty, parents, alumni and the society. The evaluation processes are brought to the notice of the students and faculty through the followings:

- The Institute makes aware to the admitted students and parent about the evaluation process through the induction program conducted at start of college at institute and department level.
- The Institute notifies the students regarding schedule and structure of internal and SPPU's evaluation system through the college notice board.
- At the commencement of the term students are notified about the criteria for evaluation of term work.
- The term work marks are given on different parameters like (i) attendance of student (ii) internal examination performance (iii) continuous assessment and (iv) mock practical oral examination.

- Students' performance is assessed by midterm submission and internal examination. Institute conducts two unit tests and prelim examination.
- All this information is given to the parents through parent-teacher meeting. The letters are sent to the parents after each unit examination and the marks and attendance is conveyed to the parents.
- The evaluation parameters and methodology is finalized in the faculty meeting. Suggestions from the faculty are incorporated in finalizing the policies.
- The suggestions of alumina taken in alumni meeting are also considered while deciding the strategies.
- The policies are revised in every semester in general meeting.

2.5.2. What are the major evaluation reforms of the University that the institution has adopted and what are the reforms initiated by the institution on its own?

The institution implements all the evaluation reforms as prescribed by the SPPU. In addition, the Institute has introduced measures on its own. Following are the major evaluation reforms introduced by the University-

- **Appointment of CEO-** As per SPPU directives, the Institute has appointed a senior and experienced faculty member as College Examination Officer (CEO). The Examination Committee is a structured with the Principal as the Chairman assisted by CEO who is the member Secretary and senior faculty members from each department.
- **In-sem Examination-** SPPU has introduced concept of in-sem examination for Third year Engineering (TE) and Master of Engineering (ME). The Institute has smoothly adopted all the rules, and procedures laid down by University.
- **Computerization-** SPPU has introduced online examination for evaluation of first and second year engineering students. The Institute conducts online examinations of the SPPU during every semester. The marks of term work, practical/oral examination and those for in-semester (for PG and TE) are submitted online to the University.
- **Appointment of Internal Examiners-** The Institute appoints internal examiners for the practical/oral examinations as per the guidelines of the University.
- **Credit system-** As per the SPPU guidelines credit system has been introduced for the PG Programmes.

The reforms initiated by the Institute are –

- The institute conducts the following internal examination as part of evaluation of student continuously.

- For FE and SE two online examinations as per the university norms are taken. The results are displayed on the same day on the notice board and also conveyed to the parents.
- For TE and BE internal in semester examination of 30 mark is conducted as per the format of university
- Students' performance is assessed continuously in practical slots for regular completion and understanding. The mid semester submission is part of the academic calendar where the submission of assignments is assessed at mid of every semester. Students are also assessed by different competitions and events organized.
- The institute conducts AMCAT, QALR, ET tests for SE ,TE and BE students
- The institute organizes the central assessment of papers (CAP) for TE and BE in semester examination as per the guidelines by S P P University. The CAP director arranges for assessment of papers and online filling the marks on university portal
- **Research Component:** Research Component the form of writing of a review paper, has been to be added to the STP IV in TE Semester II. It has been decided by the institute to inculcate research culture in every student. The seminar / mini-project activity of semester II as per university syllabus can be coupled with this activity.

2.5.3. How does the institution ensure effective implementation of the evaluation reforms of the University and those initiated by the institution on its own?

University evaluation reforms:

The Institute conducts all SPPU examination as per its schedule. To conduct online examination, the Institute has well equipped infrastructure. The examination conduction is effectively monitored as guided by University.

The Institute has taken following measures for the effective implementation of the evaluation reforms introduced by the University

- The Institute has exam coordinators from each department for smooth conduction of the examination.
- The examination committee meets periodically to discuss all the examination related matters.
- At Institute level, effective implementation of tutorial and mid-sem test takes place and results are declared within eight days. The students can see their evaluated answer sheets and discuss the same with concerned faculty.
- Final year term work is jointly evaluated by internal and external examiners.
- For smooth conduction of University theory examination, an internal squad comprising of senior faculty members is appointed.

- SPPU delivers the Question Papers Online
- CCTV cameras are used for monitoring the online examinations.

The Principal, CEO, HOD and examination coordinator of departments make sure that;

- Completion of term work
- Conduction of mock practical and theory examinations
- Submission of term work marks based on continuous evaluation scheme
- Assessment of in semester examination answer sheets
- Conduction of online and theory examinations
- SPPU exam supervision duties
- Assessment of answer sheets at CAP centers

2.5.4. Provide details on the formative and summative evaluation approaches adapted to measure student achievement. Cite a few examples which have positively impacted the system. Formative Evaluation Process

The formative assessment help to monitor the students learning which gives ongoing feedback that can be used by teacher to make teaching effective and by students to improve learning. Formative assessment of student is carried out by following parameters and methods.

- 1) Continuous assessment of student during practical
- 2) Formal and informal feedback of students
- 3) Mid semester submission
- 4) Assessment through Assignment
- 5) Mini project, project, seminar work
- 6) Professional society activities
- 7) Attendance to theory and practical session
- 8) Attendance to STP session
- 9) Value added program
- 10) Overall impression of TG

Summative assessment is carried out in semester and also at end of semester at institute and university level.

Institute Level Summative Assessment

- Online Unit Test 1 and 2 for FE, SE
- In semester examination for TE, BE
- Seminar given by students
- Project Demonstration
- Prelim examination
- Mock on-line and practical/oral examinations
- QALR, ET for self development

University Level Assessment:

- Written theory examination
- Practical/Oral examination

- Project work
- Online Examinations and In-Semester examination

The names of meritorious students of every year are displayed on the notice board and these students are felicitated during the annual gathering that motivates all students to improve their performance.

2.5.5. Details on the significant improvements made in ensuring rigor and transparency in the internal assessment during the last four years and weightages assigned for the overall development of students (weightage for behavioral aspects, independent learning, communication skills etc.)

The weightage are decided in the faculty meeting for internal assessment. The parameters for assessment are (A) Behavioral Aspect, (B) Independent Learning, (C) Communication Skills.

(A) Behavioral Aspect:-

- 1) Attendance (25%) : reflects the consistency of the student
- 2) Overall impression of Teacher Guardian.

(B) Independent Learning

- 1) Internal examination performance (25%) : Consistency in the performance
- 2) Continuous assessment (25%)- behavioral aspect and independent learning capability and communication skill is assessed continuously

(C) Communication Skills

- 1) Mock examination performance (25%)
- 2) The evaluation in STP-I and STP-II.

Due to rigorous implementation and transparency kept in the internal assessment the improvement in the following areas is noticed.

- 1) Less complaints of students
- 2) Improvement in the results
- 3) Improvement in quality of results
- 4) Improvement in practical knowledge

2.5.6. What are the graduates attributes specified by the college/affiliating University? How does the college ensure attainment of these by students?

Graduates Attributes (GAs) form a set of individually assessable outcomes that are the components indicative of the graduate's potential to acquire competence to practice at the appropriate level. The following are the graduate attributes specified by SPPU:-

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization for the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, research literature, and analyses complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** The problems that cannot be solved by straightforward application of knowledge, theories and techniques applicable to the engineering discipline.* that may not have a unique solution. **For example,** a design problem can be solved in many ways and lead to multiple possible solutions. that require consideration of appropriate constraints/requirements not explicitly given in the problem statement. (like: cost, power requirement, durability, product life, etc.).which need to be defined (modeled) within appropriate mathematical framework. that often require use of modern computational concepts and tools.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities, with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with t h e society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Graduate attributes specified by the institute are as follows,

- i. Performance in AMCAT
- ii. Performance QALR
- iii. Qualifying in ET
- iv. Communication skills in GDPI
- v. Ability to work in team

Attainment of Graduate Attributes specified by SPPU:-

- The learning outcomes are defined from the graduate attributes.
- A process is developed to calculate the attainment of learning outcomes.

Attainment of Graduate Attributes specified by Institute:-

- The college ensures the attainment of these attributes by conducting AMCAT and QALR in each semester from SE to BE semester I.
- The institute also uses ET to scrutinize the registered students in CPC for specific industry placement.
- The mock GDPI are also conducted in every department to build confidence amongst the students and enhance their communication skills before they appear for placement drives arranged by CPC. The institute also organizes professional training programmes for placement activities of CPC.
- QALR and ET are also responsible for preparing students for cracking aptitude tests conducted by different industries while short listing students in CPC

2.5.7. What are the mechanisms for redressal of grievances with reference to evaluation both at the college and University level?

(A) Redressal of grievances at institute level:

- **Level 1 - Departmental Level:** The continuous evaluation of students is carried out by faculty in terms of theory lectures, labs, assignments etc. The term work is allotted based on defined strategies and displayed on notice board. Query if any is discussed with faculty and head of department.
- **Level 2 – College Level:** The institute appoints a Senior Supervisor who controls all the online/ theory examinations, displays schedules, instructs to the students for smooth conduction of examinations of University. If students are facing any problems, they are solved by Senior Supervisor

in coordination with Chief Examination Officer (CEO) appointed by the University. The grievances during the conduction of online/theory examinations are considered and discussed in consultation with the Principal and if necessary forwarded to the SPPU by examination section.

(B) Redressal of grievances at University level:

- Examination online form filling, exam seats allotments, results, photocopy, revaluations etc. are coordinated by office superintendent to University. The result queries, printing mistakes of mark sheets, corrections if any are handled at University examination section after forwarding such queries through the college examination section. Any queries of students during online examinations are communicated to the SPPU immediately and get clarified to satisfy the student who is appearing for online examinations. The same policy is also adopted for SPPU theory examination. The queries related with errors in mark sheets, evaluation, photocopy are totally handled by SPPU in which the role of institute is to take the follow – up with SPPU till the student satisfies.

2.6 Student Performance and Learning Outcomes

2.6.1. Does the college have clearly stated learning outcomes? If ‘yes’ give details on how the students and staff are made aware of these?

The Institute has well defined learning outcomes. The vision and mission of the institution emphasizes on promoting value education through motivated trained faculty to prepare the students to accept the challenges of globalization.

The program/learning outcomes are:

- a. Graduates will exhibit knowledge of basic engineering and sciences, design engineering, telecommunication and electronics sciences.
- b. Graduates will exhibit ability to identify, formulate, solve and implement solutions for engineering, managerial and societal problems.
- c. Graduates will exhibit to design and conduct experiments, analyze and interpret data through simulated industrial environment.
- d. Graduates will exhibit ability to design products, processes and systems to meet the economic, environment, social, ethical and technological norms for sustenance.
- e. Graduates will exhibit ability to comprehend and solve multidisciplinary engineering problems through systematic approach.
- f. Graduates will familiarize with modern engineering methods and analysis using software and state of art equipment to analyze problems.
- g. Graduates will demonstrate knowledge of values and professional ethics in their activities.
- h. Graduates will be effective in verbal and non verbal communication.

- i. Graduates will show the ability to appreciate contemporary issues and develop solution for societal betterment at micro and macro levels.
 - j. Graduates will develop an attitude of continuous learning.
 - k. Graduates will develop confidence to face challenges in their career.
- Graduates will develop ability to do research.

The process of defining the learning outcomes is as given in **Fig.2.7:-**

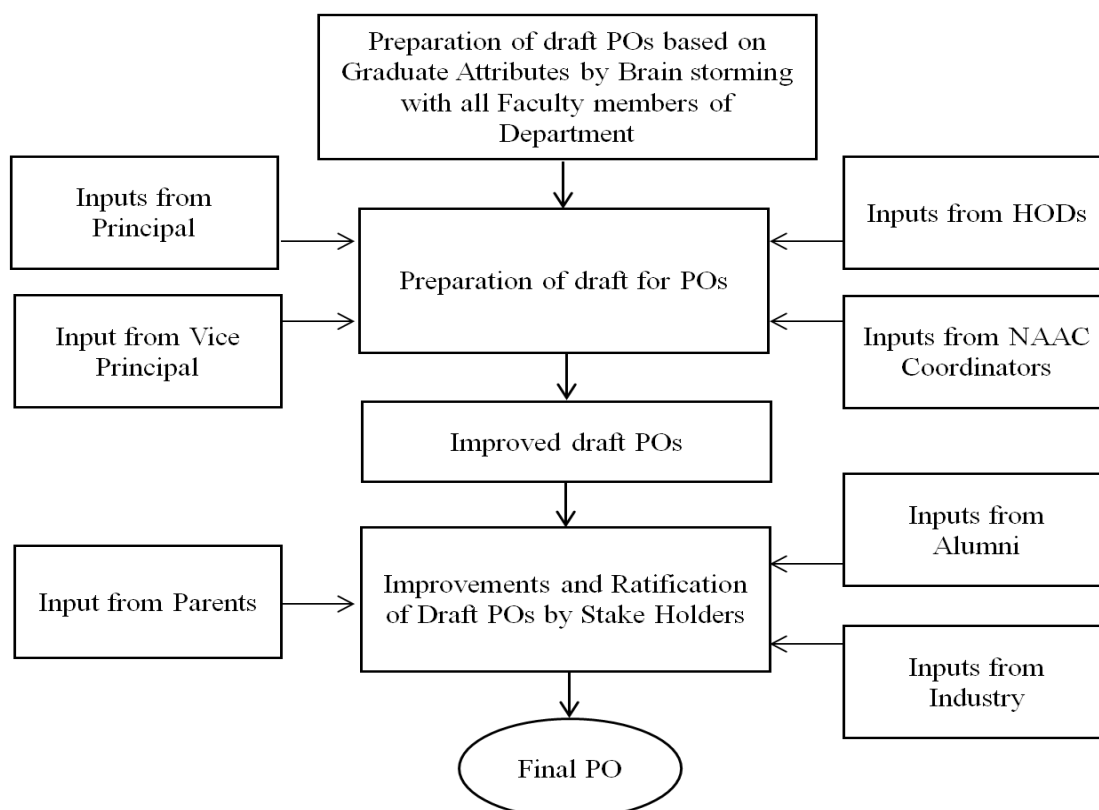


Fig.2.7 Process of Defining Learning Outcomes

Students and staff are made aware about the learning outcomes by following ways:

1. The vision and mission statements are displayed on the college website and at various key positions in the college building.
2. Programme Educational Objectives (PEO), Programme outcomes (PO) and course outcomes (CO) have been defined by every department. Programme Educational Objectives (PEO) and Programme outcomes (PO) are printed in journals and course outcomes (CO) are discussed by faculty in the classrooms.
3. Programme Educational Objectives (PEO), Programme Outcomes (PO) are published on the college website.

4. At the end of every semester, all the departments evaluate POs and Cos by using tools like tutorial and mid-term results, on-line exam results, course end survey and yearly alumni feedback etc.

2.6.2. Enumerate on how the institute monitors and communicates the progress and performance of students through the duration of the course/Program? Provide an analysis of the students' results/achievements (Program/course wise for last four years) and explain the differences if any and patterns of achievement across the programs/courses offered.

To monitor the students' progress, the Institute has a continuous internal evaluation system which consists of tutorials, mid-term tests, mock practical, mock online exam and oral examination. These tools are used to find out the progress of the students and as a feedback to improve academic performance.

- The marks of internal examination (online test 1,2 and prelim) are displayed on the notice board in one week from the end of examination.
- The Institute regularly communicates the marks obtained in the internal examination to the parents by mail.
- The marks of university online examination are also displayed on the notice board for the student reference.
- The teacher guardian prepares the cumulative history card and file of every student about his/her performance in examination, co-curricular and extracurricular activity.
- After the declaration of University results, a result analysis report is prepared by every department. This report is compared with the reports of previous years to monitor the progress of department and take corrective actions whenever necessary.
- The result analysis and list of toppers is also displayed on the notice board.

F.E. Result Analysis: Passing Percentage (%)

	2011-12	2012-13	2013-14	2014-15
FE	71.61	60.52	59.12	58.13

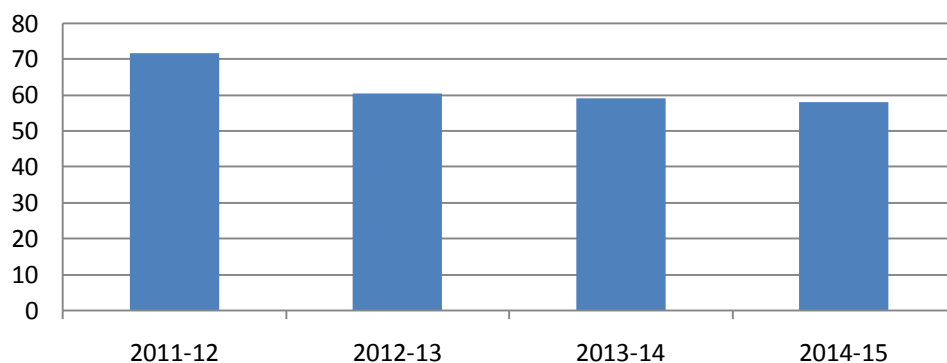


Fig.2.8 FE Result Analysis

S.E. Result Analysis: Passing Percentage (%)

	2011-12	2012-13	2013-14	2014-15
Mech Engg	56.63	54.25	61.66	65.41
E&TC Engg	38.00	50.00	69.00	78.00
Comp Engg	57.32	38.26	57.73	66.82
Info Tech	52.00	38.71	52.05	75.71
Civil Engg	47	40	55.19	57.50



Fig.2.9 SE Result Analysis

T.E. Result Analysis: Passing Percentage (%)

	2011-12	2012-13	2013-14	2014-15
Mech Engg	48.67	59.89	54.66	67.23
E&TC Engg	76.00	74.00	53.00	77.00
Comp Engg	57.33	64.47	48.30	78.89
Info Tech	57.53	67.12	63.77	83.05
Civil Engg	-	64.81	43.75	32.86

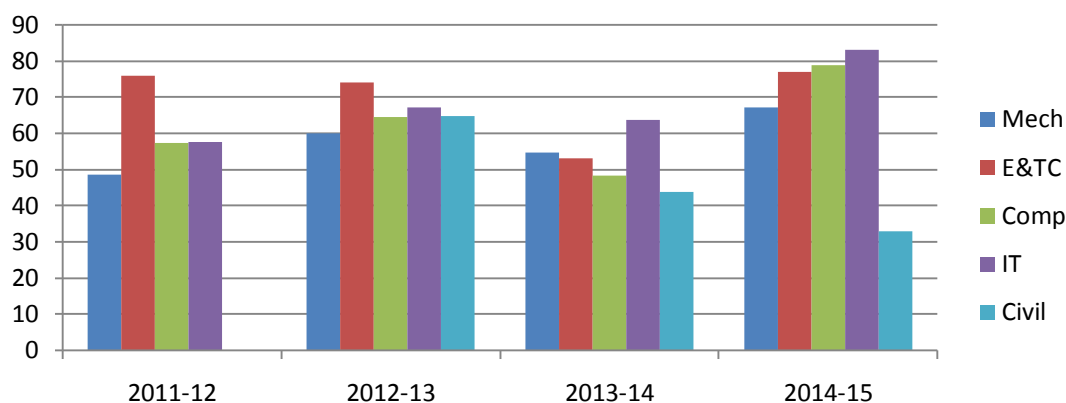


Fig.2.10 TE Result Analysis

B.E. Result Analysis: Passing Percentage (%)

	2011-12	2012-13	2013-14	2014-15
Mech Engg	83.33	97.14	90.00	90.25
E&TC Engg	91.00	97.00	97.00	94.00
Comp Engg	83.10	94.12	83.75	93.70
Info Tech	84.13	89.33	90.00	96.67
Civil Engg	-	-	100	97.37

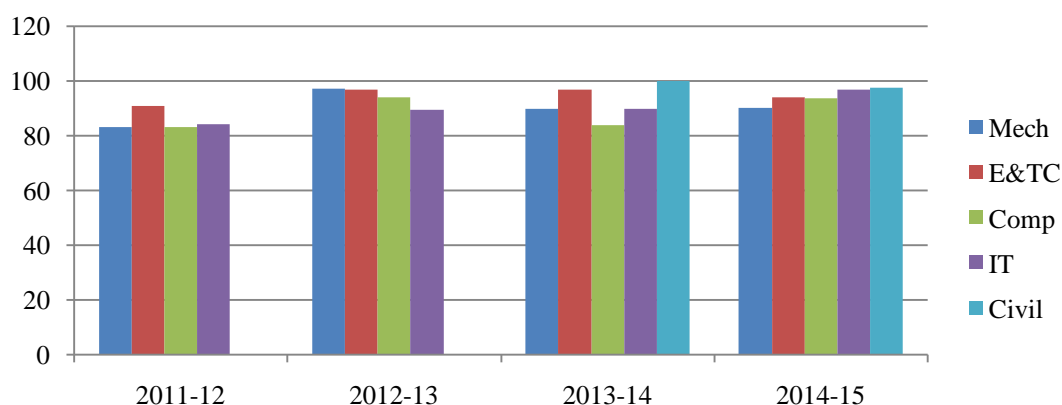


Fig.2.11 BE Result Analysis

2.6.3. How are the teaching, learning and assessment strategies of the institution structured to facilitate the achievement of the intended learning outcomes?

The institute has well defined process for assessment of learning outcomes:

- The institute had the well defined and published learning outcomes
- The methodology to achieve these learning outcome is decided in the meeting of different domain heads faculty members and the Head of Department
- The subject in charge then prepares the teaching plan by considering these learning outcomes. Learning outcomes are mapped with the course outcomes
- The domain committee decide the tools for assessment of course outcome
- Course file and innovative study material is prepared by the subject in charge
- Planning of extra lectures and makeup classes is also part of teaching plan
- The execution of the teaching plan is keenly monitored by Head of Department necessary steps are taken if any deviations in teaching plan

- The co's are assessed based on the parameters decided and from co assessment po assessment is carried out. Inputs are used for planning of the next semester

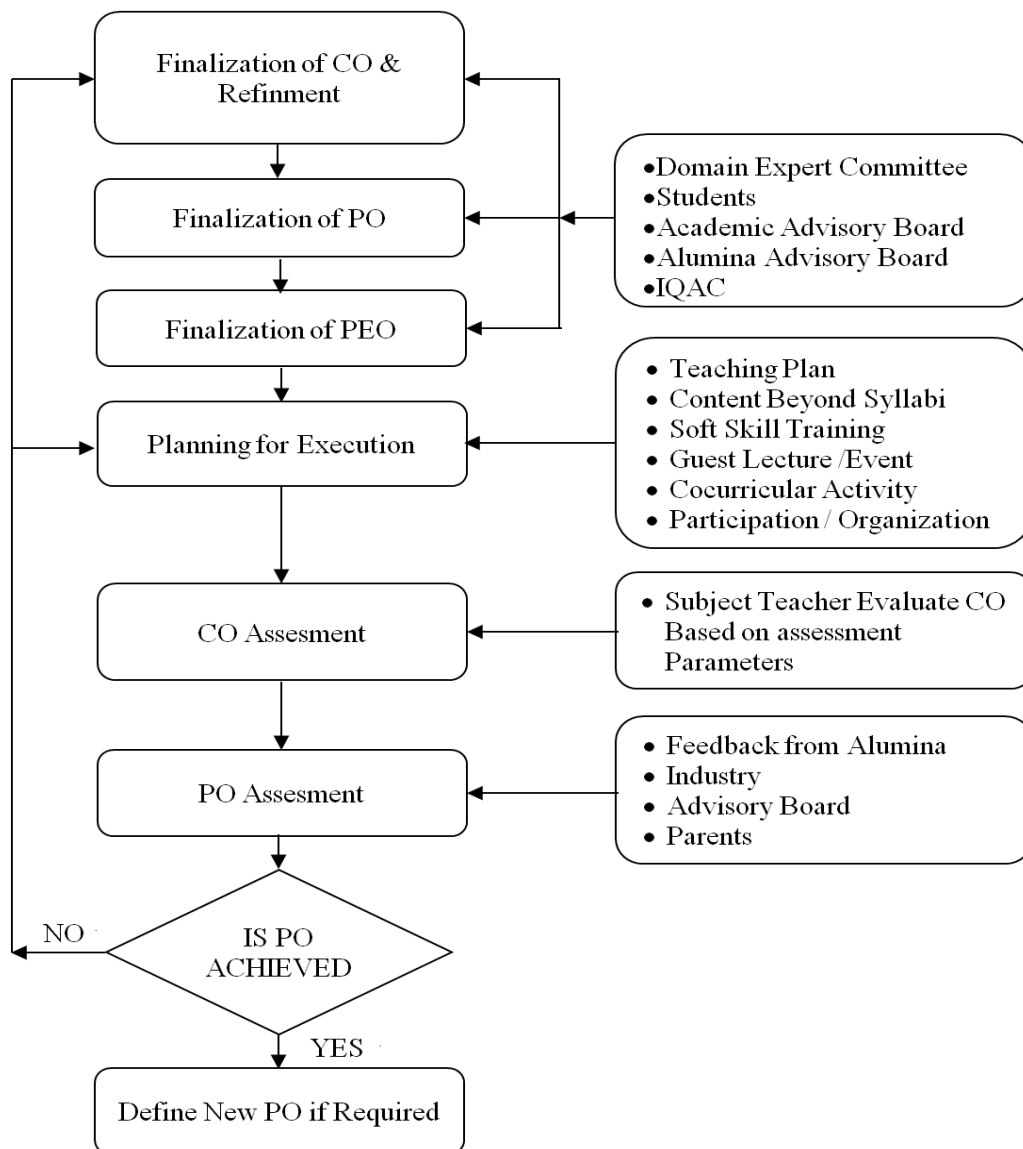


Fig.2.12 Teaching Learning Process

Assessment Strategies:

Direct Assessment:

- Internal and external examinations in theory and practical sessions
- Online examinations
- Oral Examinations, seminars, tutorials and assignments

Indirect Assessment:

- Alumni Feedback
- Exit Survey
- Employer Feedback

2.6.4. What are the measures/initiatives taken up by the institution to enhance the social and economic relevance (quality Jobs, entrepreneurship, innovation and research aptitude) of the courses offered?

- The state of art Research and Development Laboratories are available in each department to support the research activity of faculty and students
- MOU are signed with 40+ companies to strengthen the R and D activity
- Students are encouraged to work on the live problems of the industry as well as funded research projects of the faculty by various organization like DST, ISRO-UOP and BCUD Savitribai Phule Pune University Pune
- Students are encouraged to attend University level competitions like AVISHKAR and other National and State level project competitions.
- Students are encouraged and financially supported to participate in competitions like BAJA, SUPRA Go-Kart, Robocon etc.
- Organization of various social activities by NSS like Blood Donation Camp, Tree Plantation, Swachh Abhiyan etc.
- STP –IV has been designed to cultivate Research Attitude of the student.
- CPC conduct expert lecture, preplacement talk and guidance for higher studies.

Sr. No.	Name of competition	Date	No of student participated
Mechanical			
1	Supra 2015	16 to 19/07/2015	TeamVamos Autocross 25
2	Quad Torc	01/08/2015	Team Arihant 25
3	Purushottam Karandak 2015	20/08/2015	Team of 9
4	SUMMIT 2015	10 To 14/09/2015	Team of 12
5	Kabaddi Competition	18 - 19/09/2015	Team of 12
6	Student Formula 2014	18 - 20/07/2014	Team formula 25
7	BAJA-Virtuals	01 - 02/08/2014	Team of 25
8	National Cart Racing	20/9/2014	Team of 25
9	Vacational Training	17 Nov – 7 Dec 2014	1
10	Summer Project	19/11/2014	1

Criteria 2 – Teaching-Learning and Evaluation

Sr. No.	Name of competition	Date	No of student participated
11	Contraption	30/12/2014	Team of 5
12	Virtual Supra 2014	8 - 10/01/2015	Team of 25
13	Formula Student India 2015	19 - 25/01/2015	Team of 25
14	Contraption	18/02/2015	Team of 5
15	Gokart (ISK)	09 - 12/03/2015	Team of 25
16	Purushottam Karandak	16/08/2014	
17	Industrial training	22/10/2014	1
18	Sinhgad Fashion show	2015	1
19	Robo-race	2015	1
20	I-Mech It	22/02/2015	1
21	Opportunities in indian army	19/03/2015	1
22	CAD Solidmodz	20/03/2015	1
23	Hands on minitab	2015	1
24	Auto IQ	2015	1
25	Contraption	2015	Team of 5
26	Kruttika Award	23/03/2015	1
27	Internship (Case study)	13/07/2013	1
28	Virtual baja	26 - 28/07/2013	Team of 25
29	National Gokart	15 - 20/10/2013	Team of 25
30	Lathe War	2013	1
31	Vollyball	2013	1
32	Firodia'14	03/01/2014	2
33	Robowar	22/02/2014	1
34	BAJA-SAE India	21 - 23/01/2014	Team of 25
35	Robowar	21/03/2014	1
36	Gokart Championship	21 - 24/03/2014	Team of 25
37	Firodiya	2014	Team of 7
38	PQC Quiz Credenz'14	2014	1
39	Cyborg-The Robotics Workshop	09 - 10/02/2013	2
40	CyberCure	25 - 26/12/2012	1
41	Poster Presentation	15/09/2012	1
42	Alacrity	12 - 15/02/2013	2
43	Sinhgad Karandak Vollyball	2013	1
44	Innofest Carrom	2013	1
E&TC			
1	Robocon Competition	2015-16	20
2	Robocon Competition	2014-15	20
IT			
1	Avishkar 2015	23/09/2015	4
2	Pariyojana Pratiyogita	6th April 2013	23

Sr. No.	Name of competition	Date	No of student participated
3	Pariyojana Pratiyogita	4th April 2015	38

- The Institute has PG Programmes to support the research activity.

The details of student publication are given below

Sr.No.	Year	NC	NJ	IC	IJ
Mechanical					
1	2011-2012	3	0	0	3
2	2012-2013	0	1	0	9
3	2013-2014	0	0	0	18
4	2014-2015	45	0	2	8
E&TC					
5	2011-2012	1	0	0	10
6	2012-2013	2	0	6	7
7	2013-2014	0	0	9	6
8	2014-2015	0	0	7	6
Computer					
9	2013-14	--	--	--	18
10	2014-15	1	--	4	26

- The Institute has signed MoUs with esteemed companies.

Sr. No.	Name of company	Name of Contact Person
Mechanical		
1	Suttati Enterprises Ltd.	Mr. Vijay Suttati
2	SCS Renewable Energy Pvt Ltd	Mr.Kedar Gokhale
3	Sumax Enterprises	Mr.Rajendra Suttati
4	Shivam Pressing	Mrs.Ashwini Shinde
5	Machine Reconditioners Pvt Ltd, Pune	Mr.Bhaktiyar P.G.
6	Everest Electromagnetics	Mr.Dilip Dhopavkar
7	Venus Technology	Mr.Prashant Jadhav
8	Neeshionics	Mr.Shivaji Jadhav
9	Embryyo Technology Private Ltd	Mr.Pratik Jain
10	The Deputy Director of Health Services (Transport), National Cold Chain Training centre (NCCTC), Pune	Mr.Tilakraj Duthade
E&TC		
1	S M Techonologies	Dr.S.M.Moghe
2	B H Emtech	Mr.Vinay Dongare
3	Aspire Knowlwdge skills	Mr.Sanjay Gandhi

Sr. No.	Name of company	Name of Contact Person
4	CISCOM Pvt Ltd Pune	Mr.Sameer Joshi
5	Core Technologies, Kolhapur	Mr.Syrakant dodmise
6	MEIS Pvt Ltd Pune	Mr.Ranjeet Joshi
7	HYC technologies, Pune	Mr.Narayan Pawar
8	Microembedded System	Mr.Deepak ghule
9	Dolphin Labs	Mr.R C Mahajan
10	Teach Beam Pvt Ltd	Mr.Vijay Sanap
11	Open Air Training Solution Pvt Ltd	Mr.Nitin S
12	R S Component	Mr.Vaibhav Dixit
13	ETA	Mr.Nitin Lokhande
Computer		
1	Opulent InfoTech	Mr. Rohan Kulkarni
2	Mobisoft Infotech	Mr. Nitin Lahoti
3	DataMato	Mr. Sachin Londhe
4	Parallel Minds, Pune	Mr. Ajjiyanka Dhole
5	Switch Idea	Mr. Niranjan D Yadav
6	Bitwise InfoSystems	Mr. Bipin Kulkarni
7	Chaitanya Software Technologies	Mr. Sanjay Deshpande
8	Exy Empower Pvt. Ltd Pune	Mr. Sudheer Veer
IT		
1	Opulent Infotech, Pune	Mr. Tanul Mohod
2	SunBeam Infotech, Pune	Mr. Nitin Kudale
3	Techflosys Technologies Pvt. Ltd.Pune	Mr. Nitin Kale
4	PeakSoft Technologies Pvt. Ltd.Pune	Mr. Ravindra Potdar
5	KasturiNovasoft, Pune	Mr. Sachin Jain
6	BitWise Infosystems, Pune	Mr. Bipin Kulkarni
7	Geekslab Technologies Pvt Ltd. Delhi	Ms. Nishtha Rughwani
8	Cyber Cure Solutions Ltd., New Delhi	Mr. Sangeet Chopra
9	CPAG Nashik	Mr. Tanmay Dixit
Civil		
1	CADD Centre	Mr. kaustubh Panse
2	Society For Advancement Of Dowsing	Mr. V. M. Kulkarni
3	Newton Softwares	Mrs. NeelimaNegi
4	HIT Office	Mr. Anant Uplechwar
5	Venus Technology	Mr. Madhav Meshram
6	Equicom Structural Consultancy	Mr. Pravin Bhukan
7	Cube9 Academy of Adv. Animatics	Mr. Prashant Bhosale

Criteria 2 – Teaching-Learning and Evaluation

Few students enhance their technical skills through course conducted by BSNL under the BSNL-AICTE Employability Enhancement Training Programme (EETP).

Sr. No.	Name of Activity	No of student
Mechanical		
1	Unique Circle,Talwade,Pune	4
	John Deer India Ltd	4
	Thermax Limited	4
2	Greaves Coton LtdAkurdi	3
	Innovation Filter system Pvt. Ltd Pirangut	4
	ISRO	4
	Arsan Technolgy, Pune	4
3	OSRO-UOP-DST	4
	TAL Manufacturing Solution	4
	Vishwdeep Press Parts Pvt. Ltd	4
	Enpro Industries Pvt Ltd.	4
	JCB India Pvt Ltd	4
	Arsan Technology	4
	VANAZ Engineers Ltd.	4
	SKF Pvt.Ltd	2
	Atlas Capco	2
4	ARAI, Pune	4
	Fleet Guard Filters Pvt.Ltd, Pune	4
	KendrionLinnig	4
	Tamboli Engineers Pvt. Ltd Pune	4
	Climber Engineers Pune	4
	Whirlpool	2
5	Forbes Marshall Ltd. Pune	4
	Thermax	3
6	Mahindra Vehicles, Pune.	4
	BEHR India	5
	Precision Automation & Robotics India Ltd. (PARI), Pune.	4
E&TC		
1	The BSNL-AICTE Employability Enhancement Training Programme (EETP).	18
2	VLSI Technology/ Development Communication Based Programm on SDR Platform	03
IT		
1	LATEX	70
2	Perl and Python	45

Sr. No.	Name of Activity	No of student
3	Big Data and Hadoop programming	67
4	Workshop on ETHICAL HACKING	129
5	Workshop on ETHICAL HACKING	144
6	Workshop on Introduction to LaTeX	64

T&P Cell conducts expert lectures, pre-placement talks and guidance for higher studies.

Sr. No.	Year	Name of activity conducted
1	2010-11	National Level Workshop on “Expectations & Opportunities for Student Graduates of Mechanical Engineering in Industries”
		Aptitude Test Competition
2	2011-12	Guest Lecture on Opportunities of higher studies in US
		Guest Lecture on Opportunities in Marine Engg.
3	2012-13	Aptitude Test
4	2013-14	<ul style="list-style-type: none"> • FACE Training programme (27/07/2013) • Cognizant Certified Software Professional pre placement Exam (31/08/2013) • Placement induction programme (13/02/2014) • Zensar Employability Skill Development (ESD) pre-placement training programme (9th to 23rd June 2014)
5	2014-15	<ul style="list-style-type: none"> • Attendance for National Conference on “Game Changers” by HR Club Mumbai 07/02/2015 • Mock interview sessions by HR club Mumbai 09th and 10th Jan 2015 • Campus2Corporate(C2C) is a National Contest for students 09th and 10th Jan 2015 • Employability Tests (ET1 to ET5) for enhancing aptitude skills

Students are encouraged to present and publish research papers in conferences.

Sr. No.	Year	NC	NJ	IC	IJ
E&TC					
1	2011-2012	23	-	17	31
2	2012-2013	06	-	21	31
3	2013-2014	-	-	37	47
4	2014-2015	-	-	30	48

Sr. No.	Year	NC	NJ	IC	IJ
Civil					
1	2013-14	-	-	-	2
2	2014-15	-	-	-	14
Computer					
1	2011-2012	--	--	--	03
2	2012-2013	--	--	--	10
3	2013-2014	--	--	--	17
4	2014-2015	--	--	--	28
IT					
1	2011-2012	03	--	01	12
2	2012-2013	--	--	--	19
3	2013-14	--	--	--	17
4	2014-15	--	--	01	19
Mechanical					
1	2011-2012	0	0	1	1
2	2012-2013	2	3	3	25
3	2013-2014	0	0	1	57
4	2014-2015	23	0	5	23

2.6.5. How does the institution collect and analyze data on student learning outcomes and use it for planning and overcoming barriers of learning?

- The Institute has a well defined process for collecting and analyzing the students learning outcomes
- The assessment parameters are defined in terms of different summative and formative assessment forms
- The assessment of the course outcome is done by using defined assessment parameters.
- The assessment parameter includes
 - 1) Unit Test and Prelim examination,
 - 2) Assignments,
 - 3) Quiz,
 - 4) Mock Orals,
 - 5) Feedback on guest lecturers / events / workshop,
 - 6) Online Examination etc.
- The Program outcomes (Learning outcomes) are mapped with subject outcome as well as course outcomes of each subject.
- The CO assessment is carried out at the predefined time interval

- The Program Outcome (Learning Outcome) is carried out based on
 - 1) Direct assessment -- from co assessment
 - 2) Indirect assessment –form feedback of stake holders
- This is used for planning in the domain expert meeting of next semester
- The corrective measures are decided for planning in the next semester.

2.6.6. How does the institution monitor and ensure the achievement of learning outcomes?

- The Institute has predefined process for monitoring and measuring the achievement of the program outcome (Learning Outcome).
- The Program outcome (Learning outcome) achievement is measured by
 - a) Direct Method,
 - b) Indirect Method

The process is described as below

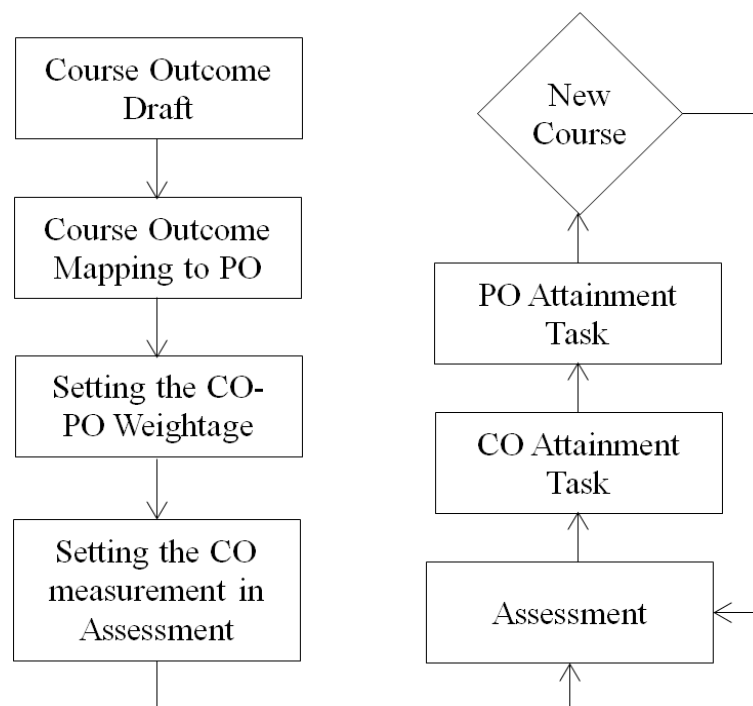


Fig.2.13 Program Outcomes Assessment 1

Parameters for CO assessment

Course Outcome	Assessment	Percentage Total
CO1	Test 1, Assignment	a
CO2	Test 1, Assignment	b
CO3	Test 2, Assignment	c

Course Outcome Attainment for CO1

Sr. No.	Name of Student	Assesment Parameter 1 (Assignment Weightage 50)	Assesment Parameter 2 (UT-1 Weightage 25)	Assesment Parameter 3 (Quiz Weightage 25)	Total (100)
1	Aakriti Nanda	36	15	20	71
2	Aayush Agarwal	37	10	22	69
3	Agrawal Saloni	32	15	18	65
4	Ambep Pranali	43	15	16	74
5	Ankit Sharma	41	14	13	68

CO1 Attainment = Total Marks obtained by all students / No. of students
 $= 347/5 = 69.4$

If CO Attainment > Decided Threshold
 then CO1 = Y
 else CO1 = N.

PO Attainment

CO	CO Result	PO											
		1	2	3	4	5	6	7	8	9	10	11	12
CO1	Y	2				3		1					
CO2	N	2				3		1					
CO3	Y	2				3		2					
CO4	Y	2				3		1					
CO5	N	2				3		1					
PO Attainment		X				Y		Z					

1 = Slightly 2 = Moderate 3 = Substantially

In this case for PO1, PO5 & PO7 is calculated as follows

PO1 Attainment $= (2+2+2)/\text{Sum PO1_Weight age} \times 100$
 $= 6/10 \times 100$
 $= 60 \%$

$$\begin{aligned}\text{PO5 Attainment} &= (3+3+3)/\text{Sum PO1_ Weight age} \times 100 \\ &= 9/15 \times 100 \\ &= 60 \%\end{aligned}$$

$$\begin{aligned}\text{PO7 Attainment} &= (1+2+1)/\text{Sum PO1_ Weight age} \times 100 \\ &= 4/6 \times 100 \\ &= 66 \%\end{aligned}$$

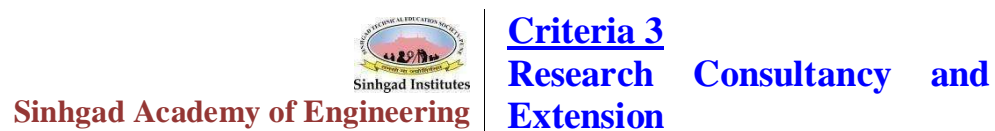
The PO attainment is also measured with the help of indirect assessment

2.6.7. Does the institution and individual teachers use assessment/evaluation as an indicator for evaluating student performance, achievement of learning objectives and planning? If ‘yes’ provide details on the process and cite a few examples.

Yes.

Individual teachers use assessment/evaluation as an indicator for evaluating student performance. Different evaluation methods are used as per the need of the course.

- Every course teacher defines course objectives and course outcomes and designs lesson plan and lecture plan in conformation with the course objectives and adopts innovative teaching methods to achieve the same.
- Students participate in different academic activities viz. tutorial, mini projects, solution of numerical problems, quiz, seminar, oral etc. These activities help to assess proficiency of students in application of mathematical and engineering concepts, effective communication skills. This process helps in achievement of learning outcomes.
- Teacher monitors the laboratory skill developed by students during practical sessions.



3.1. Promotion of Research**3.1.1. Does the institution have recognized research center/s of the affiliating University or any other agency/organization?**

Yes, the Institute is recognized as a research centre in the disciplines of Electronics Engineering and Mechanical Engineering by the Affiliating University, Savitribai Phule Pune University (SPPU). The institute also has established Research and Development Cell in collaboration with various industries. The faculty members are actively involved in research projects, sponsored and funded by various national level funding agencies such as DST, ISRO-SPPU, BCUD etc.

3.1.2. Does the Institution have a research committee to monitor and address the issues of research? If so, what is its composition? Mention a few recommendations made by the committee for implementation and their impact.

Yes, the institute has a research committee to monitor the research activities scheduled in the institute. The institute promotes the research work in all engineering disciplines and supports interdisciplinary research activities. Research Committee mentioned below encourages and motivates the faculty to undertake research/consultancy projects in collaboration with industries and institutes.

Sr. No.	Name	Position
1.	Dr. Vijay M. Wadhai	Chairman
2.	Dr. Kishor P. Patil	Member Secretary
3.	Dr. Suhas P. Deshmukh	Member
4.	Dr.Dinesh N. Kamble	Member
5.	Dr. Sandeep S. Kore	Member
6.	Dr. Pratap N. Shinde	Member
7.	Dr.Jayashree P. Shinde	Member
8.	Dr.Rushikesh P.Borse	Member
9.	Dr.Nandkumar P. Dharmadhikari	Member
10.	Dr. Daljeet K. Kaur	Member
11.	Mr.Somshekar C.Shilwant	Member
12.	Mr. Abhay Adapannawar	Member
13.	Mr.Mhalsakant M. Sardeshmukh	Member
14.	Mr. Balasaheb B. Gite	Member
15.	Mr. Raviraj R. Sorate	Member

Aims and Objectives of Research and Development Cell:

- To motivate students and faculty members towards research and innovation
- To promote research culture in various departments of the institute
- To create centers of Excellence in the area of research and Innovation in all the departments
- Collaboration with industries for mutual benefits
- Identify R&D projects by collaborating with other universities, public and private sector companies
- To work closely with industries to develop products and to improve process/systems or services that will help industry
- To encourage and support student and faculty members to publish research papers in journals of index
- To ensure functioning of R&D cell at the institute through effective monitoring process
- To promote students and faculty members for filing patents and commercialize the product

Roles, Recommendations and Implementation:

- The committee recommends and gives all support to seek research projects sponsored by various Government, non-Government organizations and research funding agencies such as UGC, DST, AICTE, ISRO, BCUD- SPPU etc.
- Administrate specialized workshops/ conferences/ seminars sponsored by UGC, AICTE, etc.
- Promote joint collaborative Inter-Disciplinary Research activities
- It recommends forming four research laboratories for carrying out research work in the Institute for the benefit of Institute and society.
- Arrange In-Campus workshops for motivating and aiming to trigger creativity and innovativeness among the students and faculty members particularly in patenting, which results in potential growth
- Administrate joint collaborative programmes by identifying scope for signing MOUs with national as well as multinational industries and academic/research institutions to strengthen the collaborative research efforts
- Administrate the promotion of institute-industry interactions by providing a helping hand in establishing collaborative research
- Partnerships for conducting creative and advanced research in emerging areas of interest to the industry
- Administrate to establish registered Institute Research Centre for eligible departments from the affiliating University (SPPU)
- To assist in matters related to collaborative research with other agencies.

- Implementation, follow-up, progress and monitoring of on-going projects

Impact of the recommendations of research committee:

- Several faculty members have applied for research grants from various agencies like DST, BCUD, ISRO etc., out of which grants of Rs. 85 lakhs have been received.
- Faculties have published about 848 research papers in journals and conferences. 40 faculty members are pursuing their doctoral programs.
- Four R&D labs have been established in the college which has additional research facilities.
- The student projects for UG and PG courses are being pursued in the R&D labs.

3.1.3. What are the measures taken by the institution to facilitate smooth progress and implementation of research schemes/projects?

- Institutional support is provided to faculty who undertake funded projects.
- Faculty members have free access to institutional facilities to carry out research work.
- The college funds seed money for students R&D projects.
- As and when required the existing laboratories are upgraded in terms of latest technologies.
- Teachers are allowed to pursue Ph.D programs and their teaching load is adjusted accordingly.
- Through the R&D cell the auditing and submission of utilization certificate to the funding authorities are done smoothly.
- Faculties are encouraged to participate as resource persons in various workshops, seminars and conferences.
- For the purpose of R&D four separate labs have been setup with High end systems, internet facility, hardware and software, along with conference room.
- Research journals in both print and online version are available in the central library.

3.1.4. What are the efforts made by the institution in developing scientific temper and research culture and aptitude among students?

The institute has established four R&D laboratories. These labs are working based on Tech-Shop concept, where the students, faculty members or industry persons work to develop new technology/product/process. Further, we encourage all the students to participate/collaborate with Entrepreneurship

Cell activities. This is assisted by TBI (Technology Business and Incubation Cell).

The students are also encouraged to attend and participate in Technical competitions, Seminars, National/International Conferences, etc., under the guidance of faculty members. Most of the projects taken by our students are oriented with direct applications to industry/social causes.

Research interest in the students is promoted by:

- Tech-Shop and R&D labs motivates and encourages the students to develop the new technology/products/process and has direct applications in industries and social sector
- The institute supports to the students for publishing research papers in journals/conferences
- Reputed journals, reference books and previous thesis are made available to the students for reference
- Poster and project exhibitions are organized by the institute every year
- The Institute motivates the students for higher education; the faculty members encourages the students to pursue higher education and research

3.1.5. Give details of the faculty involvement in active research (Guiding student research, leading Research Projects, engaged in individual/collaborative research activity etc.)

Faculties guide UG, PG and Ph.D. student's research projects. They are actively involved in research work funded by various agencies. They devote themselves in supporting and guiding student's research projects. A good number of research scholars are being successfully guided by our senior faculty members and the details are tabulated below:

Faculty guiding Ph.D. research scholars:

Sr. No.	Name of Faculty	Department	No. of Research Scholars
1	Dr. V. M. Wadhai	Electronic & Telecommunication	08
2	Dr. D. N. Kamble	Mechanical Engineering	03
3	Dr. S. P. Deshmukh	Mechanical Engineering	06
4	Dr. S. S. Kore	Mechanical Engineering	03
Total			20

Leading research projects:

Sr. No.	Name of the Research Project & Year	Name of PI/ CO-PI	Funding Agency
Department of Mechanical Engineering			
1	Experimental investigation of jet impingement using Dimples and pin fins (2015-17)	Dr. S. S. Kore Mr. S.A. Ladkat	BCUD, SPPU, Pune

Sr. No.	Name of the Research Project & Year	Name of PI/ CO-PI	Funding Agency
2	Investigations on damping performance of segmented passive constrained layer damping treatment. (2015-17)	Mr. P. P. Hujare	BCUD, SPPU, Pune
3	Development of energy base model and experimental benchmarking of HEX(2015-17)	Mr. N. P.Jadhav, Dr. S.P. Deshmukh	BCUD, SPPU, Pune
4	Experimental Analysis on Reduction of Diesel Engine Particulate Matter using Centrifugal fluidization Technique. (2015-17)	Mr. S. C. Shamkuwar	BCUD, SPPU, Pune
5	Development of low power consumption linear compressor (2013-15)	Dr. S. P. Deshmukh	BCUD, SPPU, Pune
6	Design & development of vibration energy harvesting device. (2013-15)	Mr. A.V. Bhosale, Dr. D.N. Kamble	BCUD, SPPU, Pune
7	Experimental analysis of linear compressor for refrigeration application. (2013-15)	Mr. A. V. Jomde, Dr. S. P. Deshmukh	BCUD, SPPU, Pune
8	Investigation of effect of magnetic field on IC engines & vapour compression cycle (2013-15)	Mr. P. J. Tipole	BCUD, SPPU, Pune
9	Sensor less XY - flexural mechanism for precision application (2012-14)	Dr. S. P. Deshmukh	DST
Department of Electronics and Telecommunication Engineering			
10	Space Radiation from the Optically Transparent Planar Microstrip Antenna Integrated with the Solar Panels of Small Satellites” (2015-16)	Dr. J. P. Shinde, Dr. P.N. Shinde	ISRO-UoP Space Technology Cell joint research program
11	Security issues in Cognitive Radio. (2014-15)	Mrs.S.H.Rajput, Mrs.V.V. Joshi	BCUD, SPPU, Pune
12	Human Activity recognition for Airport Security (2014-15)	Mr. M. M. Sardeshmukh, Mr. C.G. Patil	BCUD, SPPU, Pune

Sr. No.	Name of the Research Project & Year	Name of PI/ CO-PI	Funding Agency
13	Low cost Ultra-wideband (UWB) antennas on paper based substrate using Inkjet Printing Technology (2014-15)	Mrs. A.K. Patel	BCUD, SPPU, Pune
14	Spectrum Sensing, Measurement, Access and Co-existence Test bed using USRP for Cognitive Radio Research (2014-15)	Mr. M.H. Naikwadi, Dr. K.P. Patil	BCUD, SPPU, Pune
15	Leakage Detection on building facade using thermal image (2014-15)	Mrs. J.A.Bagban, Mrs. R.B. Kakkeri	BCUD, SPPU, Pune

Faculty pursuing Ph.D.:

Our faculty members are active in performing research activities. Forty faculty members are involved in various research projects while pursuing their Ph.D. from various universities. Following table summarizes departmentwise area of specialization of research of faculties.

Sr. No.	Branch	No. of faculty	Area of specialization
1	Mech	17	Investigation of concrete solar collector, Estimation of Fatigue Crack Growth Rate of High Strength Mettalic Materials, Thermal Cyclic Treatment, centrifugal fluidization technique, I C engines & vapour compression cycle, diesel engine
2	E&TC	08	Cognitive radio,communications,Signal and Image processing,Microwave and anetenna, VLSI, Bio-medical engineering,DSP,computer vision
3	COMP	05	Image processing, Natural Language Processing, Adhoc network,cloud computing
4	IT	04	Machine Learning, Image Processing, software engineering, wirelss communication
5	CIVIL	02	Geopathic Stress
6	FE	04	Separation and Characterization of Aflatoxins from Selective Dry Fruits Using HPLC, Transient and Steady State Analysis of PWM Inverter Fed Cage Induction Motor Drive, Molecular Study of Indian Herbals At Microwave Region and Their Application As Nan medicines, Use of LASER Light Beam and Proton Magnetometer to Study Nature and Detection of Geoelectromagnetic Fields.

Faculty guiding P.G. students:

Following table shows the list of post graduate students guided by faculty members.

Sr. No.	Name of Faculty	P.G. Student guided		Sr. No.	Name of Faculty	P.G. Student guided
Department of Mechanical Engineering						
1	Mr. S.C. Shilwant	12		12	Mr. S.S. Ghorpade	02
2	Dr. D. N. Kamble	13		13	Mr. N.P. Jadhav	03
3	Dr. S. P. Deshmukh	17		14	Mr. V. K. Dhummansure	04
4	Dr. S. S. Kore	09		15	Mr. T. R. Shinde	02
5	Mr. A.P.Kalmegh	04		16	Mr. R. J. Gawande	02
6	Mr. P.M.Sonawane	06		17	Mr. Ramanathan.V	01
7	Mr. S. R. Patil	09		18	Mr. S. B. Sollapur	04
8	Mr. A.V. Bhosale	11		19	Mr. A. J. Rajguru	02
9	Mr. M. K. Wasekar	06		20	Mr. Y. U. Chapke	01
10	Mr. P.P.Hujare	15		21	Mr. S. M. Sanap	01
11	Mr. P.G. Ranaware	03				
Department of Electronics & Telecommunication Engineering						
1	Dr. K. P. Patil	14		8	Mr. D. K. Kamat	13
2	Dr. J. P. Shinde	05		9	Mr. R. U. Yawale	08
3	Dr. P. N. Shinde	07		10	Mr. M. M. Patil	14
4	Mr. S. H. Rajput	07		11	Mr. A. B. Ingole	07
5	Dr. R. P. Borse	08		12	Mrs. C. C. Athawale	03
6	Mr. V. D. Bharate	01		13	Mr. M. M. Sardeshmukh	10
7	Mr. C. G. Patil	06				
Department of Computer Engineering						
1	Mrs. L.J. Sankpal	14		5	Mr. B. B. Gite	16
2	Mr. S. P. Godse	12		6	Mr. S. N. Shelke	10
3	Mr. S. B. Rathod	09		7	Mrs. D. K. Joshi	02
4	Mr. S. S. Kulkarni	03				
Grand Total						296

3.1.6. Give details of workshops/ training Programmes / sensitization Programmes conducted/organized by the institution with focus on capacity building in terms of research and imbibing research culture among the staff and students.

Various workshops and training programs are arranged for the benefit of students and faculty members. These programmes exposes the students and staff members to the recent advancements in latest technologies like heat transfer, design engineering, communication, VLSI and embedded system, cloud computing and structural engineering. This helps them to nurture and foster a research environment in the institute. The following list provides the detail of conferences/seminars, FDPs and allied activities organized by the institution for imbibing research culture.

A total of 187 activities were organized like National conferences/ FDPs/ Workshops/ Seminars and other relevant activities for capacity building in terms of research.

Detail Events	Numbers	Detail Events	Numbers
National Conference	06	Social Events	06
FDP/Workshop/ Training	50	Project Based Learning	07
Competitions	32	STTP	03
Paper presentation and Value Added courses	05	Other Event	05

3.1.7. Provide details of prioritized research areas and the expertise available with the institution.

Our faculty members and students are working on many research projects which are funded by agencies like DST, ISRO, and SSPU-BCUD. By constantly working on these projects they have expertise in the areas mentioned in the table. Also students receive guidance of staff in research activities like Aviskar, BAJA, SUPRA, Robocon, UG and PG projects.

Following are the details of prioritized research areas and the expertise available with the institution for teaching, learning, research and innovation.

S. N.	Prioritized research area	Name of Expert	Qualification	No of papers	Citations, H-index	Funded projects (No)	Amount (Rs)
Department of Mechanical Engineering							
1	Design, Optimizati	Dr. D. N. Kamble	PhD	13	3, H-3	-	-

Criteria 3 – Research Consultancy and Extension

S. N.	Prioritized research area	Name of Expert	Quali fication	No of pape rs	Citatio ns, H- index	Fund ed proje cts (No)	Amo unt (Rs)
	on/ NVH/ Tribology	Dr. S. P. Deshmukh	PhD	41	53, H-4	2	29 Lakhs
		Mr. P.P.Hujare	PhD	06	3	1	2.1 Lakhs
		Mr. A.V. Bhosale	ME	03	-	1	2.2 Lakhs
2	Heat Transfer/Fluid Mechanics/ RAC, Cryogenic/ NON conventional energy	Dr. S. S. Kore	PhD	06	8, H-01	1	1.7 Lakhs
		Mr. A.V. Jomde	ME	04	-	1	1.4 Lakhs
		Mr. S.C. Shamkuwar	ME	-	-	1	2.4 Lakhs
Department of E&TC							
1	Cognitive radio and dynamic spectrum access networks.	Dr. K P Patil	PhD	23	99, H-04	01	1.5 Lakhs
2	Wireless Communication and Antenna Design	Dr. Mrs. J. P. Shinde,	PhD	08	36, H-05	02	12.65 Lakhs
3		Dr. P. N. Shinde	PhD	14	17, H-03	-	-
4	Signal and Image Processing , Computer Vision and VLSI Design.	Dr. R P Borase	PhD	03	19, H-02	-	-
5	Software Defined Radio	Mrs. S H Rajput	MTech PhD Thesis Submitted	07	-	01	1.8 Lakhs
6	Image	Prof M M	MTech	12	1, H-	01	1.7

Criteria 3 – Research Consultancy and Extension

S. N.	Prioritized research area	Name of Expert	Qualification	No of papers	Citations, H-index	Funded projects (No)	Amount (Rs)
	Processing, Computer Vision.	Sardeshmukh	PhD Thesis Submitted		01		Lakhs
7		Prof C G Patil	MTech PhD Thesis Submitted	08	13	-	-
Department of Computer Engineering							
1	Database Base Management & Information Security	Mr.B.B.Gite	ME (PhD Pursuing)	11	-	-	-
		Mrs.D.K.Joshi	ME	9	-	-	-
2	Cloud Computing	Mr. Suresh B.Rathod	ME (PhD Pursuing)	5	-	-	-
		Mrs.L.J.Sankpal	ME (PhD Pursuing)	19	-	1	2 Lakhs
3	Computer Network	Mrs. Seema Vanjire	ME	7	0.57	-	-
		Mrs. Shalini Wankhade	ME	8	0.87	-	-
		Mr. B S Thakare	ME	14	0.28	-	-
4	Wireless Sensor network	Mr.SantoshShelke	ME	8	-	-	-
		Mr.S.P. Godse	ME (PhD Pursuing)	12	-	-	-
Department of IT							
1	Wireless Communication	A. N. Adapanawar	PhD Pursuing, ME (Computer)	6	5	-	-
2	Wireless	S. S.	PhD	12	0	-	-

S. N.	Prioritized research area	Name of Expert	Qualification	No of papers	Citations, H-index	Funded projects (No)	Amount (Rs)
	Communication	Kulkarni	Pursuing, ME (E&TC)				
Department of Civil Engineering							
1	Geopathic Stress	R.R. Sorate	PhD (Pursuing) M.Tech(Civil)	15	03	-	-
Department of FE							
2	Physics, Geopathic Stress, Environmental Science	Dr.N.P. Dharmadhikari	M.Sc. M.Phil.Ph.D.	14	-	02	2.85 Lakhs

3.1.8. Enumerate the efforts of the institution in attracting researchers of eminence to visit the campus and interact with teachers and students?

The institute takes following efforts for attracting researchers of eminence to visit the campus and interact with teachers and students by:

- Organizing Faculty Development Programs by involving industry personalities
- Inviting experienced professional from the industry for sharing their views by organizing conferences and workshops
- Establishing the existing institutes R & D labs in the institutes as center of excellence
- Initiating and promoting MOU's with industries and R & D organizations
- The institute has ED cell under this cell various eminent personalities visits at institute for interaction with faculty members and students

Our constant effort to attract eminent personalities have resulted in visits of great personalities like Mr. Arun Kumar Sinha (former senior scientist, ISRO), Prof. Ramjee Prasad (Director, CTIF- HQ Aalborg University, Denmark), Dr. Nicola Marchetti (Assistant Professor, CTIF-HQ, Aalborg

University, Denmark), Dr.Suvra Sekhar Das (Assistant Professor, IIT, Kharagpur), Mr. Tomio Isogai (CEO Kalyani Sharp) etc.

3.1.9. What percentage of the faculty has utilized Sabbatical Leave for research activities? How has the provision contributed to improve the quality of research and imbibe research culture on the campus?

The Institute does not have the provision of sabbatical leave. But the Institute strongly believes in promoting a research culture by granting study leave for faculties pursuing their Ph.D. and related research work. Dr. K. P. Patil of E&TC Department was given three months paid leave per year for three years Ph.D. work at Aalborg University, Denmark. Also Dr. R. P. Borse of E&TC Department was given six months paid leave for attending course work for Ph.D. work at IIT, Bombay.

3.1.10. Provide details of the initiatives taken up by the institution in creating awareness/advocating/transfer of relative findings of research of the institution and elsewhere to students and community (lab to land)

For creating awareness and propagation of research temperament in the student's community following initiatives are taken up by the institution:

- Exhibitions of Final year projects
- Inculcate the students to participate in inter and intra college technical events
- Baja, Supra, Robocon competitions.
- Conducting National & International level conferences
- Encouraging the faculty and students to participate in the National & International level conferences held in other institutions
- Funding the research activities of the faculty and reimbursing the registration fee and TA/DA expenses incurred in attending such technical conferences
- Providing access to National & International journals thereby encouraging the faculty to keep themselves updated with the recent developments in their respective areas of research
- Faculty and students have published about 848 research papers in journals and conferences

3.2. Resource Mobilization for Research

3.2.1. What percentage of the total budget is earmarked for research? Give details of major heads of expenditure, financial allocation and actual utilization.

Following tables depict the amount allocated & actual utilization on research and development activities:

Details of budget for Research and Development:

Year	Alloted Total Budget (Rs.)*	Alloted Research Budget (Rs.)	Percentage of Budget
2014-15	9,12,49,361	25,00,000	2.73
2013-14	22,84,02,409	1,50,000	0.22
2012-13	7,13,27,607	12,00,000	1.68
2011-12	5,25,34,692	6,00,000	1.14

*Allocated Budget excluding salary

3.2.2. Is there a provision in the institution to provide seed money to the faculty for research? If so, specify the amount disbursed and the percentage of the faculty that has availed the facility in the last four years?

Research proposals from faculty and students which are approved by R&D cell are shortlisted for funding (seed money). The institute has allotted Rs. 25 lakhs for the purpose of research.

Seed money is also provided for staff to attend conferences, seminars, workshops and to publish papers in conferences etc. Following table shows details of seed money used by faculty.

S.N.	Year	Percentage of the faculty availed seed money	Amount disbursed (Rs.)
1	2014-15	35.64	94,492
2	2013-14	33.33	84,220
3	2012-13	47.79	96,639
4	2011-12	51.46	107,790

3.2.3. What are the financial provisions made available to support student research projects by students?

To support student research projects, critical components, softwares etc. are procured as and when required. Students are allowed to use funds received from the agencies such as BCUD SPPU, DST and UGC.

Following table shows the financial provisions made by Institute to support different research activities by students:

Sr. No.	Name of the Project	Name of PI/ CO-PI	Amount in Rs.
2015-16			
1	Formula student India	Mr.A.P. Kalmegh	6,76,000
2014-15			
2	SUPRA	Mr.A.P. Kalmegh	3,00,000
2012-13			
3	SUPRA	Col. O P Misra	3,26,000
4	BAJA	Col. O P Misra	4,00,000
5	EFFI- CYCLE 2012	Col. O P Misra	1,57,023
6	BAJA & SUPRA	Col. O P Misra	1,78,000
2011-12			
7	Expectations and Opportunities of Students of Mechanical Engineering in Industries	Col. O P Misra	65,740
8	BAJA & SUPRA	Col. O P Misra	2,00,000
Total			23,02,763

3.2.4. How does the various departments/units/staff of the Institute interact in undertaking inter-disciplinary research? Cite examples of successful endeavors and challenges faced in organizing inter-disciplinary research.

The college has a Research Cell which comprises of Research heads and subject experts from various departments. Every department of the college has its own final year project coordinator. Various departments/faculty members of the Institute interact with the cell in undertaking inter-disciplinary research work. Presently many UG students are involved in inter-disciplinary projects.

In the institute 18 interdisciplinary research projects are ongoing in various departments. For example the XY flexural mechanism developed under DST for precision mechanism involves mechanical and electronics knowledge.

Likewise Race car monitoring and control using Telemetry involves concepts from both mechanical and electronics engineering.

Following challenges were faced in organizing inter-disciplinary research:

1. Knowledge of inter-disciplinary subjects
2. Coding for control systems and understanding its behaviour
3. Understanding working of devices and equipments of interdisciplinary branches

Challenges faced in implementing interdisciplinary projects were successfully faced in consultation with industry experts with whom the institute has MOU's to endeavor such research projects.

The details are as follows:

Sr. No.	Name of the Research Project	Guide
Department of Mechanical Engineering		
1	Sensor less XY - flexural mechanism for precision application	Dr. S. P. Deshmukh
2	Development of low power consumption linear compressor	Dr. S. P. Deshmukh
3	Design & development of vibration energy harvesting device	Mr. A.V. Bhosale
4	Experimental analysis of linear compressor for refrigeration application	Mr. A.V. Jomde
Department of Electronics and Telecommunication Engineering		
1	Race car monitoring and control using Telemetry	Mr. V.V. Joshi
2	Sleep APNEA monitoring	Mrs. M. M. Patil
3	Zigbee based industrial Automation	Mrs. M. M. Patil
4	Wireless billing system for malls	Mrs. M. M. Patil
5	Fault detection in high speed machinery using stroboscopic effect	Mrs. M. M. Patil
6	Robotic ARM –Haptics Technology	Mrs.R.B. Kakkeri
Department of Computer Engineering		
1	Communication in VANETs	Mrs.S.H. Rajput
2	Trust Based Secure Routing in MANET using EAASR	Mrs.S.H. Rajput
3	Real Time Intrusion Detection with Fuzzy, Genetic Apriority Algorithm	Mr. A. N. Adapanvar
4	Security in VANET against Sybil Attack Using New SRAN Routing Protocol	Dr. P.N. Shinde
5	HandwrittenBarakhadi Recognition and Data Mining	Mr. A. N. Adapanvar

Sr. No.	Name of the Research Project	Guide
Department of Information Technology		
1	Hand Gesture Recognition for Hands Free Control of Robot Movements	Mr. P. B. Alappanavar
2	Drunk and Drive Indicator System	Mr. A.M. Magar
3	Superior Monitoring System for an organization	Mr. S.S. Kulkarni

3.2.5. How does the institution ensure optimal use of various equipment and research facilities of the institution by its staff and students?

College has four R&D research labs with advanced research equipments and facilities. The labs are open 24X7. Inter-disciplinary projects related to BAJA, SUPRA, Robocon etc., need various R&D labs and these are utilized 24X7.

Optimal use of various equipment and research facilities are ensured by:

- Maintaining Log books for usage of equipment
- Laboratories are also utilized for technical add-on courses for students such as ANSYS, PRO-E to name a few
- The college central library maintains records of usage of Reference Book, National/International Journals

3.2.6. Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facility? If “yes” give details.

Yes. The Institute has signed MoUs with industries and other agencies for promoting training, research and extension activities in technical education.

The Institute has received research grants from Department of Science and Technology (DST), Board of College and University Development (BCUD) of Savitribai Phule Pune University (SPPU), Indian Space Research Organisation (ISRO) for conduction of research and for the development of department laboratories.

3.2.7. Enumerate the support provided to the faculty in securing research funds from various funding agencies, industry and other organizations. Provide details of ongoing and completed projects and grants received during the last four years.

The Institute has several senior faculty members with good experiences in research activities. These senior faculty members guide other faculty members in preparing research proposals and advise them about current trends in research in their area of expertise. Subsequently the research proposals are sent to various funding agencies for their considerations. Following tables

show details of ongoing projects and completed projects funded by various agencies.

Ongoing Research Projects

Sr. No.	Name of the Research Project & Year	Name of PI/ CO-PI	Funding Agency	Grant Received
Department of Mechanical Engineering				
1	Experimental investigation of jet impingement using Dimples and pin fins (2015-17)	Dr. S. S. Kore, Mr. S.A. Ladkat	BCUD, SPPU, Pune	1.7 Lakhs
2	Investigations on damping performance of segmented passive constrained layer damping treatment.(2015-17)	Mr. P. P. Hujare	BCUD, SPPU, Pune	2.1 Lakhs
3	Development of energy base model and experimental benchmarking of HEX (2015-17)	Mr. N. P.Jadhav, Dr. S. P. Deshmukh	BCUD, SPPU, Pune	1.0 Lakhs
4	Experimental Analysis on Reduction of Diesel Engine Particulate Matter using Centrifugal fluidization Technique. (2015-17)	Mr. S. C. Shamkuwar	BCUD, SPPU, Pune	2.4 Lakhs
5	Development of low power consumption linear compressor (2013-15)	Dr. S. P. Deshmukh	BCUD, SPPU, Pune	15 Lakhs
6	Design & development of vibration energy harvesting device (2013-15)	Mr. A.V. Bhosale, Dr. D.N. Kamble	BCUD, SPPU, Pune	2.2 Lakhs
7	Experimental analysis of linear compressor for refrigeration application (2013-15)	Mr. A. V. Jomde, Dr. S. P. Deshmukh	BCUD, SPPU, Pune	1.4 Lakhs
8	Investigation of effect of magnetic field on IC engines & vapour compression cycle (2013-15)	Mr. P. J. Tipole	BCUD, SPPU, Pune	1.9 Lakhs
9	Sensor less XY - flexural mechanism for precision application (2012-14)	Dr. S. P. Deshmukh	DST	14 Lakhs
Department of Electronics and Telecommunication Engineering				
10	Space Radiation from the Optically Transparent Planar	Dr. J. P. Shinde,	ISRO-UoP Space	11.75 Lakhs

Sr. No.	Name of the Research Project & Year	Name of PI/ CO-PI	Funding Agency	Grant Received
	Microstrip Antenna Integrated with the Solar Panels of Small Satellites” (2015-16)	Dr. P.N. Shinde	Technology Cell joint research program	
11	Security issues in Cognitive Radio (2014-15)	Mrs. S. H. Rajput, Mrs. V.V. Joshi	BCUD, SPPU, Pune	1.8 Lakhs
12	Human Activity recognition for Airport Security (2014-15)	Mr. M. M. Sardeshmukh, Mr. C.G. Patil	BCUD, SPPU, Pune	1.5Lakhs
13	Low cost Ultra-wideband (UWB) antennas on paper based substrate using Inkjet Printing Technology (2014-15)	Mrs. A.K. Patel	BCUD, SPPU, Pune	1.7 Lakhs
14	Spectrum Sensing, Measurement, Access and Co-existence Test bed using USRP for Cognitive Radio Research (2014-15)	Mr. M.H. Naikwadi, Dr. K.P. Patil	BCUD, SPPU, Pune	1.7 Lakhs
15	Leakage Detection on building facade using thermal image (2014-15)	Mrs. J.A.Bagban, Mrs. R.B. Kakkeri	BCUD, SPPU, Pune	2 Lakhs
Department of Information and Technology Engineering				
16	Extraction of Binary and Ternary elements using Unsupervised approach for data extraction (2014-16)	Mrs.D. R. Anekar Mr. P. B. Alappanavar	BCUD, SPPU, Pune	0.5 Lakhs
Department of Engineering Sciences				
17	Use of Proton Magnetometer to Study the nature of Geopathic Stress (2014-16)	Dr. N. P. Dharmadhikari	BCUD, SPPU, Pune	1.4 Lakhs
TOTAL				64.05

Completed Research Projects

Sr. No.	Name of the Research Project & Year	Name of PI/ CO-PI	Funding Agency	Amount In Lakhs
Department of Mechanical Engineering				
1	Experimental & CFD analysis of Heat Transfer	Dr. S. S. Kore	BCUD, SPPU, Pune	2 Lakhs

Criteria 3 – Research Consultancy and Extension

Sr. No.	Name of the Research Project & Year	Name of PI/ CO-PI	Funding Agency	Amount In Lakhs
	Augmentation from dimpled surface (2008-12)			
2	Design & development of portable high yield regenerative solar still with PCM (2012-14)	Mr. V. Ramanathan, Dr. S.P. Deshmukh	BCUD, SPPU, Pune	2 Lakhs
Department of Electronics and Communication Engineering				
3	Medical Image Compression for Telemedicine in Rural Area	Mr V K Bairagi	BCUD, SPPU, Pune	1.5 Lac
4	Study of Circular Polarized Micro Strip Antenna for Wireless Application	Mrs J P Shinde, Dr. P.N. Shinde	BCUD, SPPU, Pune	2.5 Lac
5	Design and Development of Secure Crypto-Processor Using FPGA and Handle C	Mr D K Kamat	BCUD, SPPU, Pune	2.0 Lac
6	Design and Implementation of Orthogonal Frequency Division Multiplexing Signalling	Mr K P Patil., Mr. M.H. Naikwadi	BCUD, SPPU, Pune	1.5 Lac
7	Data Transmission over GSM Voice Channel for Wireless Advertise Panels.	Mrs S J Desarda	BCUD, SPPU, Pune	1.0 Lac
8	Text to speech Synthesis for marathi using syllable concatenation	Mrs M.M.Patil	BCUD, SPPU, Pune	3.0 Lac
Department of Computer Engineering				
9	A meaning Based Bilingual Search Engine(2012-14)	Mrs. L.J.Sankpal	BCUD, SPPU, Pune	2 Lakhs
Department of Engineering Sciences				
10	Studies on Effect of Geopathic stress on human body	Dr.N. P. Dharmadhikari	BCUD, SPPU, Pune	1.45 Lakhs (2012-14)
TOTAL				18.95 Lakhs

3.3. Research Facilities**3.3.1. What are the research facilities available to the students and research scholars within the campus?**

The Institute provides facilities like central library and internet with various information resources and access to digital libraries on 24x7 basis. Apart from computer systems, sophisticated instruments, modeling tools, data processing software and modern equipments are provided to create infrastructural facilities to meet the needs of new and emerging areas of research.

The various departments in the institute have developed research facilities to support research work.

Detail Events	Research Equipments	Research Lab
Mechanical	18	01
Electronics and Telecommunication	17	01
Computer	01	01
Information Technology	01	01
Civil	10	01

3.3.2. What are the institutional strategies for planning, upgrading and creating infrastructural facilities to meet the needs of researchers especially in the new and emerging areas of research?

The Institute is continuously striving to improve its infrastructural requirements in order to facilitate research in new and emerging areas. This is taken care with the help of following points.

- By encouraging faculty and students to attend research programmes, workshops, seminars and conferences conducted in the Institute and at other organizations. The Institute bears the cost of registration fee, conveyance and sanctions duty leave for the same.
- By encouraging faculty members to organize research workshop, seminars, conferences, with funding provided by Institute and from AICTE/UGC /DST/SPPU
- By making available and upgrading the library of the Institute with wide range of books and various national and international journals. Online journals of IEEE and Science Direct are also accessible to the researchers.
- By providing uninterrupted facilities like high bandwidth Internet facility along with Wi-Fi connectivity in campus for faculty members and students for carrying out research work.
- With R&D Cell the research groups of faculties and students are formed by the Institute for identifying planning and carrying out research.
- The Institute sanctions budget for procuring latest software and equipments to carry out research work across all departments.

3.3.3. Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facilities? If “yes”, what are the instruments / facilities created during the last four years?

Yes, a number of agencies have supported establishment of state-of-the-art training and research & development facilities in the college. The support has been provided in the form of making available equipment and training set-ups at no cost or at subsidized affordable cost to the college. Following table shows the facilities created with support from various agencies:

Instruments/Facility created by external funding

Sr. No.	Industry or Other Beneficiary Agency	Instruments/ Facilities Created	Year	Grants Or Finances Received in Rs.
Department of Mechanical Engineering				
1	DST	dSPACE, DS1104 PPC microprocessor	2013	5,01,125
2	DST	BEI Kinco Voice coil Actuator small	2013	64,877
3	ISRO-UOP	BEI Kinco Voice coil Actuator Large	2013	1,22,630
4	DST	Optical Encoder	2013	76,397
5	ISRO-UOP	Computer System	2013	59,000
6	DST	Optical Bread Board	2013	1,36,864
7	DST	Programmable variable AC Power Supply, 6910	2014	24,7438
8	DST	APLAB 20 MHz Dual Trace Oscilloscope	2014	23,596
9	DST	Aplab Multi output Power Supply	2013	18,961
10	BCUD, Pune	Anemometer	2014	5,650
11	BCUD, Pune	Gauss Meter	2014	11,000
12	BCUD, Pune	Sound Level Meter	2014	5,950
13	BCUD, Pune	Temperature Gun (Infrared)	2014	7,920
14	ISRO-UOP	High speed voltage current measuring device	2014	25,000
15	ISRO-UOP	LVDT	2013	75,583
16	ISRO-UOP	BEI Kinco Voice coil Actuator Large	2013	1,22,630
17	ISRO-UOP	Computer System	2013	59,000
Department of Electronic & Telecommunication Engineering				
18	UoP-ISRO Joint	CST Antenna simulation	2015-	5,90,000

Sr. No.	Industry or Other Beneficiary Agency	Instruments/ Facilities Created	Year	Grants Or Finances Received in Rs.
	research	S/W	16	
19	Pune University (BCUD)	USB B210 kit with cable	2014-15	70,100
20	Pune University (BCUD)	DSP Starter Kit TMS320C6713 with Code Composer Studio	2010-11	35,438
21	Pune University (BCUD)	Spartan 6 FPGA USB UART, FPGAconfiguration over USB	2013-14	90,100
22	Pune University (BCUD)	Microsoft kinect sensor	2014-15	12,810
23	Pune University (BCUD)	AOR DA 5000	2010-11	24,528
24	Pune University (BCUD)	CAD FEKo 5.4/5.5 (Antenna Design software)	2010-11	1,98,900
Total				26,32,489

3.3.4. What are the research facilities made available to the students and research scholars outside the campus / other research laboratories

- Students are encouraged to use facilities of various agencies like ARAI, ISRO IITs, Government College of engineering Pune (COEP) and industries
- Through UG and PG sponsored projects students avail facilities from the industries like TATA, TCS, etc.,
- Students visits various organizations like Gaurav Enterprises, Prompt laboratory, Central Water Power and Research Station Pune etc. for calibration of instruments and testing
- Institute arranges visits to leading industries/oraganisations for the students.

These visits enrich the knowledge of students and make them familiar with the recent happening/research in industry.

Sr. No.	Name of the industry/ Organisation	Location
1	Katraj Dairy	Katraj, Pune
2	ACE KudaleMaruti Service Station	Hadapsar, Pune
3	Kanher Hydro Power Station	Satara
4	Katraj Dairy	Katraj, Pune
5	AdlabsImagica	Khopoli

Sr. No.	Name of the industry/ Organisation	Location
6	Tria Global Engineering Solution	Pirangut
8	Doordarshan Kendra	Pune
9	Radio Astronomy Centre	Ooty
10	Mapro Industry	Mahabaleshwar
11	BSNL	Pune
12	Wonder Systems, Automation Industry	Chandigarh
13	Sonal Plastic fabrication Industry PVT. Ltd.	Alibag
14	Brahaspati infotech	Chandigarh
15	Chips software systems	Kochin
16	Paper-Square	Banglore
17	Central Water Power and Research Station	Pune

3.3.5. Provide details of the library / information resource center or anyother facilities available specifically for the researchers?

- A central library and departmental library for each department is available.
- WI-FI network is available in campus.
- Membership of online Journals such as IEEE, ASME, Elsevier, DOAJ, NPTEL and e-books.
- Magazines like Refrigeration and Air Conditioning, World pumps India, Indian Foundry Journal and, Cutting tools etc.
- Reference books and thesis on various research topics and project.
- Membership of library of Automotive Research association of India (ARAI) and British Council library.
- A separate facility s made available for referring research book/ international journal etc.,
- Library has 20598 books, 4063 titles, 121 printed journals and online subscription for 275 journals.

3.3.6. What are the collaborative research facilities developed/ created by the research Institutes in the college. For example Laboratories, library, instruments, computers, new technology etc.

Different departments have created some specified research laboratories and procured specified equipment/software/hardware in the respective departments to augment the research facilities. With the ongoing and completed research projects of nearly 85 lakhs various research outcomes have been achieved in the four R&D labs of the college. Some of the research lab equipments are developed in collaborative efforts with agencies/Industries like Suttati, DST, ISRO, etc.

Details are as under:

Sr. No.	Research Area	Name of Collaborative Research Facility	Collaboration With
Department of Mechanical Engineering			
1	Mechatronics	dSPACE, DS1104 PPC microprocessor	DST
2	Mechatronics, Vibration	BEI Kinco Voice coil Actuator (small +Large)	DST
3	Mechatronics, Vibration	Optical Encoder	DST
4	Mechatronics, Vibration	Optical Bread Board	DST
5	Design, Mechatronics, Vibration, RAC	Programmable variable AC Power Supply, 6910	DST
6	Signal Processing	APLAB 20 MHz Dual Trace Oscilloscope	DST
7	Design, Mechatronics, Vibration, RAC	Aplab Multi output Power Supply	DST
8	Mechatronics, Vibration, RAC	Quanser Equipment LCAM current amplifier	DST
9	Mechatronics, Design, Vibration	LVDT	ISRO-UOP
10	Refrigeration & Air Conditioning	Anemometer	BCUD, Pune
11	Refrigeration & Air Conditioning	Gauss Meter	BCUD, Pune
12	Refrigeration & Air Conditioning	Sound Level Meter	BCUD, Pune
13	Refrigeration & Air Conditioning, Heat Transfer	Temperature Gun (Infrared)	BCUD, Pune
14	Design, Mechatronics, Vibration, RAC	High speed voltage current measuring device	ISRO-UOP
15	Refrigeration & Air Conditioning, Heat Transfer	Multipoint Temperature Indicator (8 channel)	BCUD, Pune
Department of Electronic & Telecommunication Engineering			
16	Communication	[1] USB B210 kit with cable. [2] CAD FEKo 5.4/5.5 (Antenna Design software).	BCUD, Pune University
17	VLSI & Embedded	Spartan 6 FPGA USB UART FPGA configuration	BCUD

Sr. No.	Research Area	Name of Collaborative Research Facility	Collaboration With
		over USB	
18	Signal Processing	Microsoft kinect sensor	BCUD
Department of Civil Engineering			
19	Software	HIT Office ERP software	EDSS Pvt Ltd. Pune
20	Software	Auto CADD Drawing software	CADD Centre Pune

3.4. Research Publications and Awards

3.4.1. Highlight the major research achievements of the staff and students in terms of Patents obtained and filed (process and product):

The faculty members at our institute are actively involved in research in various fields of engineering and technology. The faculty also safeguards their authentic research outcomes by obtaining/filing the patents.

The following table represents the detail of patents published/filed by faculty members at the institute.

Sr. No.	Title of Patents	Name of Faculty	Status
Department of Mechanical Engineering			
1	A Method and scanner for three dimensional focus laser spot	Dr. S.P. Deshmukh	Granted
2	Flexural Spring	Dr. S.P. Deshmukh Mr. A. V. Jomde	Published
3	A linear Compressor	Dr. S.P. Deshmukh Mr. A. V. Jomde	Published
4	A Mounting Structure for Magnet	Dr. S.P. Deshmukh Mr. P.J. Tipole	Patent filed
5	A system and method for centrifugal air blast shot peening	Mr. P.G.Ranaware	Patent filed
Department of Electronics & Telecommunication Engineering			
6	Dynamic spectrum management techniques using cognitive radio	Dr. V. M. Wadhai	Published
7	Method and apparatus for wireless sensor network based intelligent framework for mobile	Dr. V. M. Wadhai	Published

Sr. No.	Title of Patents	Name of Faculty	Status
	real time health care system		
8	Method and apparatus for outlier detection in high dimensional categorical data sets.	Dr. V. M. Wadhai	Published
9	Hybrid cryptography and phonetic based method for digital watermarking	Dr. V. M. Wadhai	Published
10	A standalone RFID and NFC based healthcare system	Dr. V. M. Wadhai	Published
11	Optimization of Hand of Latency using efficient spectrum sensing for cognitive radio in 4G wireless networks	Dr. V. M. Wadhai	Published
12	Phonetic based digital watermarking in text data repository	Dr. V. M. Wadhai	Published
13	Indoor localization system for mobile device with integration of wireless and RFID technology	Dr. V. M. Wadhai	Published
14	Security of Cognitive Radio using smart radio channel change protocol	Dr. V. M. Wadhai Mrs. S. H. Rajput	Published
15	Real Time Interface Technique for Embedded Systems	Mr. C. P. Mahajan	Published
16	An Instrument for measurement of Geopathic stress and searching underground water	Mr. C. P. Mahajan	Published
17	Port Dog/ Peripheral dog to monitor ports/on chip peripherals present on microcontroller	Mr. C. P. Mahajan	Published
18	NaavMeter: An instrument to measure geopathic stress.	Mr. C. P. Mahajan	Published
19	Educational kit for training and development of Embedded and VLSI Systems	Mr. C. P. Mahajan	Published
20	Process for 3D Human Activity Recognition	Mr. M. M. Sardeshmukh Mr. C. G. Patil Mrs. V. V. Joshi	Patent filed
21	NFC based library automation using smart phones	Dr. V. M. Wadhai	Patent filed
22	NFC based loyalty management	Dr. V. M. Wadhai	Patent filed

Sr. No.	Title of Patents	Name of Faculty	Status
	system		
23	Method and apparatus for secure healthcare system based on Near Field Communication	Dr. V. M. Wadhai	Patent filed
24	Real time depression detection and analysis using multiparametric fusion approach	Dr. V. M. Wadhai	Patent filed
25	Method for music based computing of human emotions and evaluating Raaga of Indian Classical Music for stress release and emotion control.	Dr. V. M. Wadhai	Patent filed
26	Fabrication and design of ECG electrode for long term health monitoring applications.	Dr. V. M. Wadhai	Patent filed
Department of Civil Engineering			
27	Naavraj Attenuation System and Method For The Attenuation Of Geopathic Stress	Mr. R. R. Sorate	Published
28	'Karmanaav" an instrument for detection of geoelectro magnetic field above ground water vein	Mr. R. R. Sorate	Published
Department of F.E. Engineering			
29	An Instrument for Measurement of Geopathic Stress and searching underground water	Dr.N.P. Dharmadhikari	Published
30	NaaV Meter : An Instrument To Measure Geopathic Stress	Dr.N.P. Dharmadhikari	Published
31	'Naavraj' Attenuation System and Method for the Attenuation of Geopathic Stress.	Dr.N.P. Dharmadhikari	Published
32	'Karmanaav" an instrument for detection of geoelectro magnetic field above ground water vein	Dr.N.P. Dharmadhikari	Published
Total			32

Product commercialization

The faculty at our institute is actively involved in current area of research in their respective fields of engineering and technology. The faculty members are also focused on commercialization of research outcomes after obtaining the patents.

The following products are planned for commercialization,

Sr. No.	Name of Product	Name of Faculty
1	A Method and scanner for three dimensional focus laser spot	Dr. S.P. Deshmukh
2	Flexural Spring	Dr. S.P. Deshmukh Mr. A V Jomde
3	A linear Compressor	Dr. S.P. Deshmukh Mr. A V Jomde
4	NaavMeter: An instrument to measure geopathic stress.	Mr. C. P. Mahajan, Dr.N.P.Dharmadhikari
5	Optimization of Hand of Latency using efficient spectrum sensing for cognitive radio in 4G wireless networks	Dr. V. M. Wadhai
6	Phonetic based digital watermarking in text data repository	Dr. V. M. Wadhai
7	Educational kit for training and development of Embedded and VLSI Systems	Mr. C. P. Mahajan

Research studies or surveys benefiting the community or improving the services:

The institute has recently entered into MOU with NCCTC (National Cold Chain-Training Center) to conduct research for decreasing the infant mortality rate in our country. This project is of national importance and is also supported by UNICEF.

Research inputs contributing to new initiatives and social Development:

Some faculty in our institute are involved in ‘Geopathic Stress’ study which have some ill effects like cancer, accident etc. After attenuation of geopathic stress substaincial reduction in accidents, improvement in environmental conditions such as safe homes can be achived.

3.4.2. Does the Institute publish or partner in publication of research journal(s)? If yes, indicate the composition of the editorial board, publication policies and whether such publication is listed in any international database?

The institute organizes conferences and publishes the research papers in the proceedings of the conference. The research papers are recommended by the reviewer committee which comprises of eminent personalities from esteemed institutes like IIT, Government College of Engineering Pune (COEP), etc.,

The following table enlists the conferences arranged by the institute.

Sr	Name of Conference	Date of Conference
Department of Mechanical Engineering		
1	ATIME-Advanced Technology and Innovations in Mechanical Engineering	22 nd to 24 th January 2015
Department Electronics & Telecommunication Engineering		
2	National Conference on nanotechnology, communication and pattern recognition.	16 th to 18 th March 2012

3.4.3. Give details of publications by the faculty and students:

The faculty members of the institute are actively involved in research. The research outcomes are shared with outside world through publication in reputed national/international journals and conferences.

A total of 848 papers have been published by our faculty members in various national/international conferences and journals. Also their publications have received good citations from the research community.

The details of the papers published by faculty members are enlisted below department wise.

Sr. No.	Department	Papers published in			
		National Journal	International Journal	National Conference	International Conference
1	Mechanical Engineering	1	106	25	11
2	Electronics and Telecommunication	0	201	53	126
3	Computer Engineering	0	96	07	28
4	Information Technology	0	89	0	21
5	Civil Engineering	0	49	09	07
6	First Year Engg.	0	10	04	03
Total		1	551	98	196

Citation of Publications

The research publications of the faculty members are cited by various authors. The following table enlists the citations of the faculty members

Sr. No.	Name of Faculty	Citations / H-Index	Sr. No.	Name of Faculty	Citations / H-Index
1	Dr.V.M.Wadhai	113, H-06	15	Mr.S.P.Godse	04
2	Dr. K. P. Patil	99, H-04	16	Mrs.S.S.Vanjire	17
3	Mr. S.C. Shilwant	H-01	17	Mrs.A.S. Chanchlani	02
4	Dr.D.N.Kamble	3, H-03	18	Mr.B.S. Thakre	04
5	Dr. S. P. Deshmukh	53, H-4	19	Mrs.S.V. Wankhade	06
6	Dr. S. S. Kore	8, H-01	20	Mrs.M.E.Sanap	02
7	Mr.P.P. Hujare	H-03	21	Mr.A.M. Magar	01
8	Mr. M.M. Sardeshmukh	1, H-01	22	Mr. A. N. Adapanawar	05
9	Dr. R. P. Borse	19, H-02	23	Mr.D.R.Anekar	03
10	Dr. Mrs. J. P. Shinde	36, H-05	24	Mr. M. H. Naikwadi	2, H-01
11	Dr.P. N. Shinde	17, H-03	25	Mr.A. S. Shinde	21
12	Mr. P. Y. Pawar	06	26	Mrs.P.S.Bangre	18
13	Mrs.S.M.Potdar	7, H-01	27	Mr. C. G. Patil	13
14	Mr. N.S.Sharma	03	28	Dr.N.P. Dharmadhilari	H-09

Books Published

The faculty members enriched with a vast experience and technical knowledge have contributed to the academia by publishing books this benefits the student community at large.

Our faculty members have contributed to the academia by publishing 53 books for the benefit of student community to enrich their knowledge

The following table enlists the books published by the faculty members of this institute.

Department wise number of Books Published					
Mechanical Engg	Electronics and Telecommunication Engg	Computer Engg	Information technology	Civil Engg	First Year Engg.
21	03	04	08	13	04

3.4.4. Research awards and recognition received from reputed Professional bodies and agencies

The faculty members at the institute has been recognized and awarded with various awards and recognitions by the reputed professional bodies and agencies at both state level and national level.

The following table enlists the details of such awards and recognition.

Sr. No.	Name of Faculty	Award
1.	Dr. Vijay M. Wadhai	Indira Gandhi Gold Medal Award by “Global Economic Progress and Research Association”, November 2015.
2.	Dr. Suhas P. Deshmukh	Recognised as Young Scientist through Fast Track Research Project of Department of Science & Technology, Govt of India, for his Research project “Sensor less XY Flexural Mechanism for Precision Application” in the year 2012
3.	Dr. Suhas P. Deshmukh	Awarded Best Research Project in Vaigyaniki, Radiance, IIT, Bombay for the work “Design and Development of 3D Microfabrication System” in the year 2008.
4.	Dr. Suhas P. Deshmukh	Received International Award at Bangalore Nano Conference for the project “A Novel Optomechatronic Focused Laser Spot Submicron Scanning System for Microstereolithography”, in the year 2007.
5.	Dr. Suhas P. Deshmukh	Appreciated by Director of IIT Bombay, for “Development of Laser Scanner for 3D Micro-fabrication”, 2007
6.	Dr.N. P. Dharmadhikari	Awarded Best Innovative Teacher by University of Pune on 10.02.2014
7.	Mr.Raviraj R. Sorate	Awarded by “ACHARYA AWARD” BY M.S.B.T.E. in the event named GURUQUEST organized by Government Polytechnic college, Miraj in the year 2012

Sr. No.	Name of Faculty	Award
8.	Dr. Daljeet Kaur	Best Faculty Award by STES & Cognizant Technologies from Kondhwa Campus, 2009-10.

3.5. Consultancy

3.5.1. Give details of the systems and strategies for establishing Institute industry interface?

The Institute has a strong belief that establishing a bond with the industry will lead to inclusive growth of the students.

System:-

The Institute has always encouraged the signing of Memorandum of Understanding with a number of leading industries to ensure that any technology gap between industry and the institute will be bridged.

The intent of MOU's are listed below

- To invite experts from the industry to guide the academia on the basis of their experiences on industrial trends and practices.
- To offer consultancy services to the industry.
- To produce Engineers with a passion for attaining Entrepreneurship skills.

Strategies:-

- To foster Entrepreneurship skill in collaboration with industry
- Offering Industry oriented Certification Programmes to address the growing need of engineering professionals.
- Validating research activities so as to develop sustainable long-term interactions with industry
- Enhancing research engagements with industry and public sector
- To develop the designs for latest technologies through R&D cell

3.5.2. What is the stated policy of the institution to promote consultancy? How is the available expertise advocated and publicized?

The Institute promotes consultancy works to be carried out for outside agencies/industries so as to provide solution to industrial problems through its Research & Development cell and Industry-Institute Interaction cell.

Policy:

- **IP Protection:** To ensure transparency, Issues of ownership, confidentiality and fairness of the IP policy for encouraging the compliances
- **Commercialization:** To safeguard the interest of intellectual property of inventor and provide fair distribution of returns gained from the commercialization of IPR
- **Technology Transfer:** To provide screening mechanism for invention disclosure, revenue sharing, technology evaluation.
- To provide compatible environment for acquiring knowledge through innovation and research
- To motivate student and faculty members file and publish patents
- Training and Placement cell interacts with various industries and explores the possibility of collaboration with them.

The expertise with the institute is published by advertising in college website, college research handbook, college magazines and newsletters.

3.5.3. How does the institution encourage the staff to utilize their expertise and available facilities for consultancy services?

The faculty members are encouraged by Institute to utilize their technological expertise through available facilities of institute for consultancy services in the following ways:

- Latest updated state of art equipments are procured and made available for use for all faculty members
- Faculty members who are expert in specific fields are encouraged by reducing their academic and administrative work load while executing consultancy works with the industries
- Faculty members are encouraged to obtain consultancy work on their personal levels and by visiting industries
- All the latest software are made available for the faculty and suitable environment is nurtured

The college motivates the professionally qualified staff to utilize their expertise for consultancy services with the permission of institute. The organization has framed a policy in this regard. The policy is as follows

1. All the expenses involved in consultancy projects like equipments, consumable, electricity charges and water charges are met through the funds generated by means of consultancy charges.
2. The remaining amount generated through consultancy is shared by the institution and staff as per institute policy.

3.5.4. List the broad areas and major consultancy services provided by the institution and the revenue generated during the last four years.

The college has signed number of MoUs with different industries for technology transfer. The details of revenue generated by the department are enlisted in the table below.

The funds generated are used for upgradation of laboratories.

Revenue Generating Activities	Amount Received in Rs	Year
Department of Mechanical Engineering		
Advanced Training Programme on FEA ANSYS 14.0	37,807/-	2013-14
Two days training workshop “Robo-Sys 2012”	15,334/-	2012-13
Department of Electronic & Telecommunication Engineering		
CST software training	1200.00	2014-15
Testing of RF & Antenna circuits	1000.00	2013-14
Testing of RF & Antenna circuits	1000.00	2013-14
Department of Civil Engineering		
Workshop on Practical exposure and challenges	10000/-	2015-16
Workshop on AutoCAD	36,960/-	2014-15
HIT Office Construction Management ERP Student Nature Program	13,125/-	2013-14
Total Revenue Generated	1,16,426	

3.5.5 What is the policy of Institution in sharing the income generated through consultancy (Staff involved: Institution) and its use for institutional development:

The organization has framed a policy for sharing the income generated through consultancy. The policy is as follows:

1. All the expenses involved in consultancy projects like equipments, consumable, electricity charges and water charges are met through the funds generated by means of consultancy charges.
2. The remaining amount generated through consultancy is shared by the institution and staff.

3.6. Extension Activities and Institutional Social Responsibility (ISR)

3.6.1. How does the institution promote institution-neighborhood community network and student engagement, contributing to good citizenship, service orientation and holistic development of students?

The Institute has social activity cells to develop a strong sense of moral and social responsibility among students. A number of social activities are regularly organized by the Institute for contributing to society.

- The college has a very active and enthusiastic team, “*The Life Editors*”, “*Burning Minds*”, Students associations at department level and various clubs at college level. These teams are involved in many social, ethical and environmental activities such as donation of clothes to the needy people, visit and help to orphanages, tree plantations, women empowerment, cleanliness missions, etc.
- Due to the present draught conditions the number of farmers attempting suicide has grown. The team of **The Life Editors** realised the situation of farmers and have raised the funds for farmers of Rs.57,000/- and donated to **NAAM Foundation by Nana Patekar**.
- The Mechanical Engineering Students Association **MESA** has visited many orphanages like **Mamta Foundations, Sukhsagarnagar, Pune** and **Maharashtra Deaf and Dumb Society, Mohammedwadi, Pune**. The students arranged various programmes and donated clothes, food, fruits, sweets, books, colours, toys, etc. to the children.
- The students of ITSA (Information Technology Students Association) have visited the orphanage **Apalaghar, Pune** a NGO managed by Late Vaibhav Phalnikar Memorial Foundation, and donated clothes to the children.
- Our students of **The Life Editors** were also involved in Clean-up march in the city to contribute towards Swach Bharat Abhiyan.
- The students of Civil Engineering Students Association **CESA** have arranged many social activities like fund raising for the orphanages, blood donation camp in association with **Dhariwal Enterprises** and distribution of stationary to deaf and dumb students.
- To create Women Empowerment in the society, the team of **CESA** (Civil Engineering Students Association) had arranged street play in the city under **Women Empowerment Committee**.
- The institute has also formed NSS club to conduct social activities. The club had arranged a motivating lecture by **Mr. Sanjay Kumar Dalvi** who is a member of the **BSW** (Board of Students’ Welfare). Also **Swachhata Abhiyan Mohim** was carried out in the **Yewalewadi** village.

- The students of **ETSA**, Electronics and Tele-communication Association had arranged a **Plastic Free Campus March** in college to contribute in the balance of environment.
- The institute has separate **Women Empowerment Cell**. All of its programs are aimed at achieving the dictum of Embodiment, Empowerment and Enhancement of Women. The club had arranged a Seminar on **My Life my Choice** by **Ms. Sneha Sathe**, Asst. Prof. Karve Institutes of Social Service.
- The institute **NSS** team had arranged **Health Checkup Camp** in association with **HEALTHSPRING** by Dr. Angela Kaul and Dr. Shweta who is general physician.
- For the safety of girl students **NSS** had also arranged an event on “Girls be Safe on Your own”, in association with the police team of **Kodhwa Police Station**
- To help in keeping the environment clean the active team of **NSS** had a “**Swachha Bharat Abhiyan**” in **Yewalewadi village**.

3.6.2. What is the Institutional mechanism to track student’s involvement in various social movements / activities which promote citizenship roles?

All of the above activities mentioned in 3.6.1 are conducted by the different social clubs that are formed at institute level. These clubs are headed by faculty members and monitored under the guidance of **Dr. Vijay Wadhai**. The clubs are mentioned below.

- | | |
|---------------------------------|------------------------------|
| 1. Sports Club | 8. Social Club |
| 2. Cultural Club | 9. Technical Innovation Club |
| 3. Robotics Club | 10. Student Welfare Club |
| 4. Yoga Club | 11. Women Empowerment Cell |
| 5. Environmental Club | 12. NSS |
| 6. Health Club | 13. Rotract Club |
| 7. Personality Development Club | 14. Gender Equality |

A student record file is maintained for all the students at the department level. This includes all the necessary details of students, including their personal details, performance in technical and cultural events. This ensures a proper tracking mechanism for the students involved in various activities. The students are also involved in activities which promote citizenship roles such as:

- The students are motivated to participate in various social events like **NSS**, Blood donation camps, Visits to Orphanages and Clean up march for the social, ethical and environmental responsibility (March for road safety)
- The students association of the institute has also conducted an event for plastic free campus.

- The institute has formed a Women empowerment committee which looks after the challenges faced by girl students staying in hostel or staying away from native place. The committee comprises of female faculty from each department. From Information Technology Department Mrs. P. S. Bangare is a governing member of the committee.
- The institute has also formed a Women Grievances Committee under University of Pune. This committee is intended to solve problems of all girl students in the institute as well as the female faculties of the institute. The members of the committee have attended a seminar in university regarding the same. From Computer Department Mr. L.J.Sankpal and Dr. J.P.Shinde are the members of the committee.
- The institute has formed gender equality club under University of Pune.

3.6.3. How does the institution solicit stakeholder perception on the overall performance and quality of the institution?

To sustain in a competitive environment and for continuous development of institute, it is indispensable to take the suggestions and feedback from the major stakeholders. The stakeholders will decide the overall performance and quality of the institute. The major stakeholders of this institute are students, parents, alumni, faculty members, recruiting companies and the society.

To collect the feedback from each stakeholder certain forms and formats have been designed. It is addressed using following steps:

- Regular course feedback from students is conducted during every semester.
- Parents Meet is arranged at the beginning of every academic year in which the progress of candidate, problems and suggestions are discussed with the faculty member.
- Alumni are considered to be important stakeholders in the institute. During Alumni Meet feedback form and suggestions are collected from alumni.
- Also the shortcomings are collected from the recruiting companies during the campus placements. These are discussed by the Training and Placement cell and necessary steps are taken for improvement. In this manner the feedback from employers is obtained.
- In the institute we have the process of taking feedback from final year students who are eligible for placement. The feedback parameters allow the institute to identify the dream company of students, their satisfaction towards the support offered by Central Placement Cell (CPC) in getting dream job, and guidance and counseling. It also checks if the students are satisfied with the companies in which they are placed. The feedback also analyses the number of students who are interested in higher studies, Entrepreneurship or Family Business.
- The performance of institute depends on the performance of students. To monitor the performance and assure continuous improvement in the

performance of students we at Sinhgad Academy of engineering have a process to analyze the result of every student for each examination including both the university and internal examinations.

- Other assessments are carried out from result analysis, University rankings and admission status.

3.6.4. How does the institution plan and organize its extension and outreach Programmes? Providing the budgetary details for last four years, list the major extension and outreach Programmes and their impact on the overall development of students.

For the overall development of students various technical, co-curricular, extra-curricular and social events are conducted throughout the year. The events organized include:

- Cultural and sports activities
- Guest Lectures
- Workshops
- Technical and non-technical competitions
- Tree plantations and cleanliness march
- Visit to orphanage, donation of clothes, food, books, etc. to the needy
- Blood donation camps
- Street plays
- Celebration of Teacher's day, Engineer's day, Independence day

The details of all these activities are tabulated as below.

Details of Cultural Activity

Sr. No.	Name of Event & Date	Venue	Students participated
1	KJ's college Dance Competition AISSMS 2014, Akhil Atharv Mitra Mandal 2015 (Feb 2014-15)	Trinity college of Engineering,AISSM S, Shivajinagar	20
2	Jallosh 2014 Rajgad Karandak 2014 Gandhar 2014(Feb 2014)	Rajgad Education Society,Bhor	20
3	FirodiyaKarandak 2013- Play Name: Jatra(Feb 2013)	Yashwantrao Chavan Natyagruha, Kothrud	20
4	Sinhgad Karandak (Jan–Feb 2012)	SCOE,Vadgaon	5

Details of Sports Activity

Academic Year	Name of sports	Rank /Prizes won (if any)	Name of student	
2015-16	Lawn Tennis	Inter-Collegiate	Shivam Bapat	
2014-15	Basketball	Zonal Level	H. Sankrit	
	Hockey	Zonal Level	Manjusha Ahirrao	
	Fencing	Zonal Level	Navin Mutha	
	Cricket	Winner	Nikhil Kulkarni Swapnil Mahanoor Ambatkar Snehal Thakur Salman Birajdar Tushar Tambe Choudhari Deepak Patil Aditya Rajput Meet Bhavsar	Mayank Tomar Kaushil Nitesh Binawat Rahul Jadhav Suraj Ninad Kachore Amol Bhadale
2013-14	Chess	Zonal Winner	Sudhir Indalkar	Ajinkya Naik
2012-13	Chess	Runners Up	Naik Ajinkya Deepak Jana	Joshi Sayali Yadav Abhijeet

Extra Curricular Activities:-

The overall development of students is ensured by making them involve in various activities apart from curriculum. The events include technical, co-curricular, extra-curricular and sports activities.

Detail Events	2015-16	2014-15	2013-14	2012-13
Mechanical	06	09	14	08
E&TC	08	15	04	05
Computer	06	27	29	05
IT	06	04	04	02
Civil	01	03	03	01

Impact on overall development of student:

Such events help in enriching overall personality, qualitative teaching education, interpersonal skills and team building. Also the activities like visits to orphanage, blood donation camps, cleanliness march, etc., are organized this helps in developing social awareness among students.

3.6.5. How does the institution promote the participation of students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International agencies?

The institute has numerous associations, clubs and cells to conduct various extension activities. These associations promote the role and importance of all such activities during induction programmes and motivate the students to participate voluntarily. The coordinators discuss the benefits and scope of activities with the students. The proposed activities are promoted through academic calendar, displaying on college notice board, circulars and web notifications.

The academic calendar for NSS activities is followed accordingly as tabulated below.

Sr.No.	Name of Programme	Date
01	Inauguration Function NSS	02/10/2015
02	Swachata Abhiyan	02/10/2015
03	Guest Lecture:-Girls be safe on your own.	17/10/2015
04	One Day Camp:- Health Checkup Camp	27/10/2015
05	Aids Day	01/12/2015
06	Makarsankranti	14/01/2016
07	Yuva Din	15/01/2016
08	Republic Day	26/01/2016
09	One Day Camp:- Dental Check up camp	02/02/2016
10	Traffic Control One day	25/02/2016
11	Special One week Camp	Jan to March 2016

- Blood Donation to victims of Thalassemia was organised in the college in association with Smt. Kashibai Navale Medical College and General Hospital, Pune.
- Rasta Suraksha Abhiyaan was held by National Service Scheme (NSS). The purpose of the Rally was for the safety of citizens.
- One week NSS camp was organised at Hivare Gaon (Taluka Purandhar, Pune)

NSS and other social cells strive to imbibe qualities like self-discipline, self-motivation, and strengthen the sentiment of nationhood.

3.6.6. Give details on social surveys, research or extension work (if any) undertaken by the college to ensure social justice and empower students from under-privileged and vulnerable sections of society?

The college social groups have conducted number of social activities as listed below

- Visit to orphanages like *Mamta Foundation, Bibwewadi, Pune* in 2013-14 and **Maharashtra fellowship for Deaf and Dumb, Mohammedwadi** in 2014-15 wherein students distributed clothes, food, books, etc. to the children and also arranged entertainment events for the underprivileged.
- The team Burning-Minds have donated clothes and food to the needy people. Also the students of social committee have distributed books and food to the underprivileged children.
- The team had gone to the **Malin village** to participate in the resume operations along with many other organizations.
- *The Life Editors* team has conducted the Cleanliness March for supporting Swach Bharat Abhiyan. Also this team has supported “**NAAM Foundation**” in raising the funds for farmers which are impacted by the drought.
- In association with **Dhariwal Enterprise** the institute had organized a blood donation camp in which students and faculty members from all departments participated and donated blood.
- Visit to Dharmveer Shambhuraje Anathalay, Pune was organised to give donation to install water purifier.

3.6.7. Reflecting on objectives and expected outcomes of the extension activities organized by the institution, comment on how they complement students’ academic learning experience and specify the values and skills inculcated.

The practice of engineering has an inherent impact on society. Engineering is based upon the relationship with society. An engineer's conduct towards fellow engineers, employers, clients and towards the public is an essential part of the life of a professional engineer. Thus it is necessary to make them aware of their roles to be played in society. The objective of extension activities is to make the students realize their responsibility towards society. With these activities students deal with the issues of society such as poverty, pollution, gender bias, social injustice and issues due to natural calamities. Also these activities help in grooming their personality, interpersonal skills and enable them to take part in Nation building.

Such activities are performed under the groups of students association of every department to develop their interpersonal skills and team building. These

associations are led by students for the students which boost their leadership skills and self-confidence. The institute imbibes the moral and social values among the students by motivating them to participate in all such activities.

3.6.8. How does the institution ensure the involvement of the community in its reach out activities and contribute to the community development? Detail on the initiatives of the institution that encourage community participation in its activities?

It is necessary to network with the community to provide our share and ensure their involvement. The interactions of the institute with the community are through the social networking site and have their own blog www.thelifeeditors.blogspot.in.

The institute surveys the need and extends the helping hand to the underprivileged community by organizing various activities like Blood Donation Camps, Cleanliness Drives, Tree Plantations and visits to orphanage and donate them food, clothes, books etc and share happiness by arranging entertainment programmes

Thus the active participation of students and positive response from the community helps build a strong bond between the institute and community. The NSS is established in our college on 2nd October 2015 under SPPU, Pune. Total 100 students are registered under NSS activity. Under NSS, Swachata Abhiyan, women empowerment and health check up and blood donation camps, visit to orphanage were carried out.

3.6.9. Give details on the constructive relationships forged (if any) with other institutions of the locality for working on various outreach and extension activities.

Constructive relationship with other institutions has been developed through various activities like blood donation camps, inter-collegiate cultural programs, MOU's with various companies. The institute also forges relation with the society through its campus social responsibility (CSR) activities for the under privileged community in association with various organizations. The eminent organizations to which we are actively related are listed in the table below.

Sr. No.	Name of Organization	Purpose
1	NAAM Foundation	Funds raised for farmers affected by drought conditions
2	Mamta Foundation, Bibwewadi, Pune	Orphanage visits and donations
3	Dharmveer Shambhuraje	Orphanage visits and donations

Sr. No.	Name of Organization	Purpose
	Anathalay, Pune	
4	Maharashtra fellowship for Deaf and Dumb, Mohammedwadi, Pune	Orphanage visits and donations
5	Apalaghar, Pune	Orphanage visits and donations
6	Dhariwal Enterprises, Pune	Blood donation activity
7	HEALTHSPRING, Pune	Health check-up camp
8	Kondhwa Police Station	Women Empowerment

3.6.10. Give details of awards received by the institution for extension activities and/contributions to the social/community development during the last four years.

The institute has received many awards for its contribution in technology and social awareness towards society. The college has secured award of “**College of Substance**” by an independent agency **Natarajan Education Society** in 2014. The institute is also a recipient of prestigious “**Centre of Excellence for Corporate Employability**” award from **HR Club, Mumbai** in 2015.

The institute has dedicated student committees guided by faculties for college magazine **MOSAIC**, design and fabrication of All Terrain Vehicles participating at national level events like **BAJA, SUPRA, GO-KART** and **QUAD-TORC** arranged by **SAE INDIA** and **ISNEE**. These teams have brought laurels to the institute by consistently winning awards since last five years.

MOSAIC

The institute has a college magazine “MOSAIC” that not only serves a platform for students to express their creativity and talents but also creates awareness among students with recent affairs. “MOSAIC” has been a constant award winner in the past five years at the University level competition. The awards bagged by “MOSAIC” are

- **1st prize** in 2010 at Pune district level and **3rd prize** in 2011 at Pune district level
- **4th prize** in 2012 at University level
- **2nd prize** in 2013 at Pune district level and
- **2nd prize** in 2014 at Pune district level.

SUPRA-SAE

- **SUPRA STUDENTS’ FORMULA 2012** held at the Buddh International Circuit, Greater Noida (NCR), team secured **3rd overall** position in 65 participating teams and bagged a cash-prize of Rs.50,000/-

- National Event- STUDENTS' FORMULA – 2014 team bagged **first prize** in AUTOCROSS Event of Rs. 30,000/- with a trophy and second prize in ACCELERATION Event of Rs. 20,000/- with a trophy.
- National Event-Virtual SUPRA SAE-INDIA- 2015 Five members of SUPRA team took part in National competition at Vel Tech University, Chennai from 8 to 10 Jan 2015 and stood **1st among 167 teams** from all over India.
- Also the team VAMOS won **1st award** in CAE worth Rs.30,000/- **2nd in acceleration** award worth Rs.20,000/- in National Level Event SUPRA arranged by SAE INDIA on 15th July 15 to 20th July 15 at Madras Motorsports Race Track, Chennai.

BAJA-SAE

- Our student Mr. Yusuf Hakim participated International Event - SASOL BAJA SAE CHALLENGE SOUTH AFRICA 2012, PUNE UNIVERSITY comprising students from COEP and Modern College of Engineering, Pune. National Event - SAE BAJA 2013 team among 120 participating teams bagged **2nd position** in 'RAFTAAR' event, awarded a cash-prize of Rs.50,000/-.
- National Event – SAE BAJA 2014 team bagged **2nd position** in TECHNOLOGY AWARD 'GO GREEN' category with a cash-prize of Rs.1,00,000/- held at Indore (Pithampur) from 20 Feb to 23 Feb 2014.
- National Event - BAJA Students India (BSI) -2015 team took part in all India level competition at Jamshedpur (Jharkhand) from 7 to 11 Jan 2015 and team stood at **9th overall position**.

GO-KART

- National Event -GO KART 2013 (SPARTANS) team participated in the event at Kolhapur (Maharashtra) in Oct 2013 and its performance was excellent and placed at **8th position**.
- International Event - GO KART 2014 AUTO MACHEN team participated at Jalandhar (Punjab) from 21 to 24 Mar bagged **Best Innovation Award** and overall First Runners up with trophies and prize money of Rs. 35,000/-.
- National Event- GO-KART team NEXUS RACING 2015 participated in National Event at Bhopal (MP) from 20 to 25 January 2015 and won the various prizes like **Overall- 2nd Position, first in Acceleration, first in Skid Pad** with a Trophy and Prize Money of Rs. 15,000/-, **2nd** with a Trophy and Prize Money of Rs.10,000/- in Design Presentation, **First Runners up** with a Trophy and Prize Money of Rs. 40,000/- in Autocross Endurance.

- International Event- GO-KART team NEXUS RACING 2015 participated in International Event at Bangaluru from 09 to 12 March 2015 and won the **best Acceleration prize** with a Trophy and Cash prize of Rs. 11,000/- and got selected as a BEST KART by INDIAN OIL.
- National event on National Kart-racing Championship organized by **Virtualis, RPM, Bhopal**, team Nexus racing secured **3rd** position overall **1st** in Skid Pad, **1st** in Design presentation, **1st** in CAE.
- The team Nexus racing also achieved overall **3rd** prize, **1st** in acceleration and **2nd** in design presentation in the national event on Student Karting Championship 2015 organised by **Atelier Motors, FMSCI** at Lahorie Resort, Hydrebad

QUAD-TORQ

- Team Arihant Won the **Championship Award** worth Rs.1,50,000/-
- **1st** in Endurance Award worth Rs. 40,000/- in QUADTORC'15 a National Event arranged by ISNEE at Dhauj, Haryana on 1st Aug'15 to 5th Aug'15.

3.7. Collaborations

3.7.1. How does the institution collaborate and interact with research laboratories, Institutes and industry for research activities. Cite examples and benefits accrued of the initiatives -collaborative research, staff exchange, sharing facilities and equipment, research scholarships etc.

Institute collaborates and interacts with research laboratories, Institutes and industries for research activities. Students and staff identify the research areas through interaction with industries, corporates, research labs, other Institutes/Universities and draft research proposals. These research proposals are further put up before Research and Development Cell which consists of Principal as chairman, R&D Head and other members. R&D Cell approves the proposals, interact with industries, corporates, research labs, other Institutes/Universities and finally sign MOUs with the stake holders. These MOUs result into number of beneficial outcomes for the institute in terms of funds for research projects, lab developments, new technology developments etc. Below in **Fig.3.1** flow chart shows how the R&D cell functions to collaborate and interact with research laboratories, Institutes and industries for research activities.

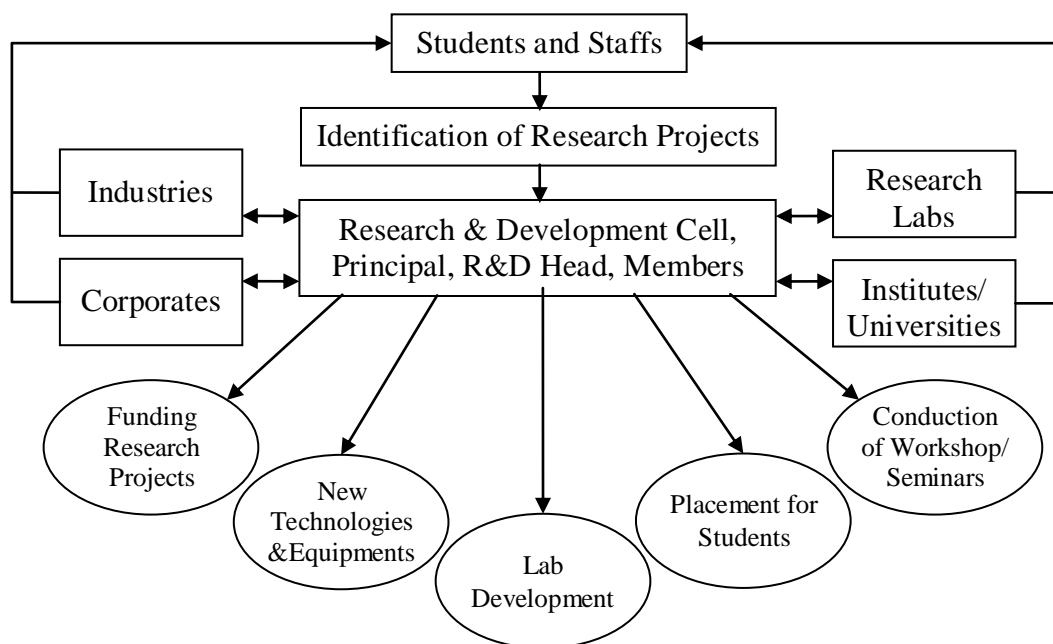


Fig.3.1 Functioning of R&D Cell

The Institute has following collaborations for collaborative research, sharing facilities and equipments

Sr. No.	Name of Staff	Research Institute	Facility Used
Department of Mechanical Engineering			
1	Mr. T. R. Shinde	COEP, Pune. Dept of Mechanical Engineering	Heat Treatment furnace, Micro-hardness Tester, Optical Microscope, UTM, SEM.
2	Mr. P.G.Ranaware	COEP, Pune. Dept of Mechanical Engineering	Fatigue Test Machine, Wear Testing machine, Cryo-processor testing machine, SEM.
3	Mr. S.C.Shamkuwar	SCOE, Pune.	IC Engine, Compressor, Siene Analysis, Smoke Meter.
4	Mr. A.V.Jomde	Sathybama University Chennai.	LVDT, SPACE.
5	Mr. S.B.Sollapur	VTU, GIT College, Belgaon.	Programming Setup.
6	Mr. A.V.Bhosale	Sathybama University Chennai.	LVDT,SPACE.
7	Mr.	Sathybama University	Pyranometer, Datalogger,

Sr. No.	Name of Staff	Research Institute	Facility Used
	V.Ramanathan	Chennai.	Solar-still, Anemometer.
8	Mr. P. J. Tipole	Sathyabama University Chennai.	LVDT,SPACE.
9	Mr. P.M.Sonawane.	COEP,Pune	Phenodisc, SEM, UTS, Microhardness Tester.
10	Dr. P.P.Hujare	COEP,Pune	FFT Analyser, Vibration Tester.
Department of E&TC Engineering			
11	Dr. K.P. Patil	AALBORG University, Denmark	Research Lab
12	Dr. K.P. Patil	International Wireless Monitoring Station, Borivali, Mumbai	Research Lab
13	Dr. J.P. Shinde	DIAT, Pune	Research Lab
11	Mr. M.M. Sardeshmukh	SGB Amravati University, Amravati.	Research Lab
12	Mr. C.G. Patil	SGB Amravati University, Amravati.	Research Lab
13	Mrs. S.H. Rajput	Nagpur University.	Research Lab
14	Mr. D.K. Kamat	University of Pune	Research Lab
15	Mr. K.M. Gaikwad	Shivaji University, Kolhapur.	Research Lab
16	Mr. S. M. Kasar	K L University Vijaywada Andhra Pradesh	Research Lab
17	Mr. V. D. Bharte	SGB Amravati University, Amravati.	Research Lab
18	Mrs. R. K. Patil	R. T. M. Nagpur University	Research Lab
Department of Computer Engineering			
19	Prof.B.B.Gite	JJTU,Rajasthan University	Internet,E-journals
20	Prof.L.J.Sankpal	Bharati Vidyapeeth, Pune	Internet,E-journals
21	Prof.S.P. Godse	SKNCOE,Pune University	Internet,E-journals
22	Prof.B.S.Thakare	Sant Gadge Baba Amravati University	Internet,E-journals
23	Prof.S.B.Rathod	K.L.University	Internet,library

Sr. No.	Name of Staff	Research Institute	Facility Used
Department of Information Technology			
24	Mr. A. N. Adapanawar	VIIT, Pune	Research Lab
25	Mr. S. S. Kulkarni	SCOE, Pune	Research Lab
26	Mr. S L Bangare	K.L.University, A.P.	Research Lab
27	Mr. Nakul Sharma	K.L.University, A.P.	Research Lab
28	Mr. M K Nivangune	Bharati Vidyapeeth College of Engineering, Pune	Turnitin Software
Department of Civil Engineering Department			
29	Mr. R. R. Sorate	Sinhgad College of Engg, Vadgaon, Pune	Geotechnical Lab
Department of Engineering Sciences			
30	Mr. S.P.Saptale	VIT Pune	Chemistry lab

3.7.2. Provide details on the MoUs /collaborative arrangements (if any) with institutions of national importance/other universities/ industries/ Corporate (Corporate entities) etc. and how they have contributed to the development of the institution.

The Institute has signed MoUs with external organizations to conduct activities like Training, Placement, Development of training facilities for students, Guest Lectures, Participation in technical events and Advanced Learning. The Institute has signed 47 MOUs with various industries/ Organisations to promote various collaborative activities with mutual benefit.

3.7.3. Give details (if any) on the industry-institution-community interactions that have contributed to the establishment / creation/ upgradation of academic facilities, student and staff support, infrastructure facilities of the institution viz. laboratories / library/ new technology/ placement services etc.

Interaction with eminent personalities from various reputed Universities and industries are very useful for establishing better academic facilities for staff and students. The Institute often interacts with industry people through industrial visits, seminars/Guest Lectures, workshops, conferences and placement. The Institute has signed MoUs with different industries. Many reputed industries visit the institution for placements.

Acknowledging our efforts, both industry and government agencies have made strategic tie-ups with our educational Institution. A partnership with government and industry enhances our Institute's research, education, and outreach mission. Such partnerships enable the Institute to investigate new trends and technologies, and to launch new initiatives. Partners provide valuable funding,

access to enhanced educational opportunities through visiting lecturers, workshops, industrial visits and special courses.

Through the MOUs/Industrial interaction new products are developed which are useful as research infrastructure for future development of institute R&D labs. Industry-Institution/University interaction resulted into development of new products and it also generated placements for students. Following table shows details of new product developed and placements for students:

New Product Developed:

Sr No	Name of Company/Institute	New Product /Technology Developed	Year
1	Sathyabama University	Vibration Exciter	2014-15
3	Sathyabama University	Linear Compressor	2014-15
4	Sathyabama University	Fuel Conditioner	2014-15
5	Sathyabama University	Vibration Energy Extraction System	2014-15
6	College of Engineering Pune	Air Blast Shot Peener	2014-15
7	NMIMS University	Defected Ground UWB Antenna	2013-14
8	NMIMS University	UWB slot antenna	2012-13
9	NMIMS University	Planner UWB mono pole antenna	2012-13
10	Shivaji University	C P in hexagonal MSA	2012-13
11	Shivaji University	MSA with EBG structure	2011-12
12	Shivaji University	Circular annular ring MSA	2011-12
13	Pune University	Slotted square MSA	2011-12

Placements:

S.N.	Name of Company	Students Placed
Department of Mechanical Engineering		
2015-16		
1	Atlas Copco, Musigma, Cognizant, Accenture, Infosys, Inautix, Tech-Mahindra, Capgemini	35
2014-15		
2	Atlas Copco, Mahindra Vehicles, Cognizant Saint Gobain, Accenture, Capgemini, Infy, Eaton Corp, Tech Mahindra, Opulent Infotech, ITC Infotech, FHA Ecomac, Lear Corp	29

S.N.	Name of Company	Students Placed
2013-14		
2	Atlas Copco, Accenture, Suprabha, NeelSoft, Opulent Infotech, Cognizant, Tata Technology, Tech Mahindra, Flextronics, SMC, Joshi Jhapala, Boxco India	34
2012-13		
3	JSW Steel, Atlas Copco, Capgemini, Johnson Controls, Divgi Warner, Cognizant, Whirlpool, Eaton, Bosch, Mahindra & Mahindra	23
2011-12		
4	Atlas Copco, Videocon, Damlier Benz, RSB Global, GKN Sintered, Alfa Laval, Amra Raja, Deepak Fertilizer, TATA Steel, 3D PLM, Advik, Burkhardt Compression	17
Department of E&TC Engineering		
2015-16		
1	Cognizant Accenture iGate, Amdocs, Softlink, Infosys, Lobo Staffing Solution, Convergys	19
2014-15		
2	L&T, NVY, Inautix, Mu Sigma, Accenture Cognizant, Tech Mahindra, Capgemini, Persistent, Softlink, PerkinElmer, IBM, Infosys, TNS, Syntel, Quess Corp. Ltd., Barclays, Huawei Telecomm, Omantel, Focus Academy for Carred Enhancement	46
2013-14		
3	Cognizant Accenture iGate, Amdocs, Softlink, Infosys, Lobo Staffing Solution, Convergys, Adecco	29
2012-13		
4	Accenture, Cognizant, Inautix	29
2011-12		
5	Atos, Cognizant, HSBC, Accenture, Styria, Zycus, Inautix, Synechron, MindTree, Goderej Infotech, Infosys, L&T	53
Department of Computer Engineering		
2015-16		
1	MuSigma, Cognizant, Accenture, Infosys, TechMahindra, Persistent, LnT Infotech, Xoriant, Capgemini, MindTree, iNautix, Oracle(OFSS), Infostrech	79
2014-15		
2	eQ Technologies, MuSigma, Persistent, Cognizant, Infosys, Accenture, Zensar, L&T, Inautix, Tech Mahindra, Persistent, Nihilant Technologies, Capgemini, Newgen, Bitwise, ITC	44

S.N.	Name of Company	Students Placed
2013-14		
3	Cognizant, Accenture, Persistent, eQ Technologies, TATA AIA Life Insurance Company, Inautix, iGATE Global Solution Ltd, ATOS Origin, Mphasis, Technology, Zensar	35
2012-13		
4	Accenture, Nihelant, Pspl, Nvidia, tata tech, Cognizant, Infosys, Igate patni	23
2011-12		
5	Mindtree, Accenture, Cognizant, I-Gate Patni, Nihilent, Webonise, Persistent, Infosys, NVIDIA Godrej Infotech, Finlogic Technologies India Pvt. Ltd Capgemini, Tata Technologies Ltd	32
Department of IT Engineering		
2015-16		
1	Accenture, Cognizant, Tech Mahindra, Persistent Mu Sigma, InfoStretch, Capgemini	28
2014-15		
2	QED Enabled Services Pvt. Ltd., Accenture, Infosys, Cognizant, TechMahindra, L & T, Persistent, NTT Data, Xoriant Solutions Pvt Ltd, Zensar, Mindtree Capgemini, YagnaIQ, Mu Sigma	26
2013-14		
3	WNS, Harbinger, Ditap-V Automation Pvt Ltd Cognizant, MPHASIS, IGATE, Softlink, Mu Sigma, INAUTIX, Persistent, Allerin, Fiserv inc., Accenture, Vodafone, Wild Cat, ACI WORLD WIDE, HSBC, EQ TECHNOLOGIC, Nihilent, Magna Infotech Ltd.	39
2012-13		
4	Convonix, Accenture, ATOS, Cognizant, Synechron, Persistent	18
2011-12		
5	Mindtree, Accenture, Cognizant, I-Gate Patni, Nihilent, Webonise, Persistent, Infosys, NVIDIA Godrej Infotech, Finlogic Technologies India Pvt. Ltd Capgemini, Tata Technologies Ltd.	34

S.N.	Name of Company	Students Placed
Department of Civil Engineering		
2013-14		
1	Rohan Builders Pvt Ltd, ICICI Securities Pvt Ltd, Cognizent India Pvt Ltd	6

3.7.4. Highlighting the names of eminent scientists/participants who contributed to the events, provide details of national and international conferences organized by the college during the last four years.

Following table highlights the names of eminent scientists who contributed to the various events (Guest Lectures, Seminars, Workshops, and Conferences etc.)

Sr. No.	Eminent professors/ Persons	Workshops and conferences organized by the Institute
Department of Mechanical Engineering		
1	Mr.Sunil Chore	Workshop on Automation Studio-2015
2	Mr.PramodDeshmukh	Workshop on Piping Design-2015
3	Mr. AnandBhise	Workshop on Process planning and Tolerance Analysis.-2015
Department of Electronics and Telecommunication Engineering		
1	Prof. Ramjee Prasad	One week Faculty Development Program
2	Prof. Fleming Bjerger Frederiksen	One week Faculty Development Program
3	Dr. Nicola Marchetti	One week Faculty Development Program
4	Mr. Tomio Isogai	Research Lab Inauguration and MOU Signing
5	Dr. Abhay Jere	Hackathon Event
6	Dr. Aditya S Abhayankar	One week Faculty Development Program
7	Dr. M.B. Kokare	One week Faculty Development Program
8	Dr. Munir Sayyad	Guest Lecture
9	Dr. Sanjay Moghe	ED Cell and TBI Inauguration
Department of Computer Engineering		
1	Ms. Shreya Bhattacharya	Google Adclass Organized in Association with ACES
2	Mr. Vishwaeet Rathod	National Level Workshop Network Security Championship Organized by Network Bulls in Association with E-cell IIT Bombay.(Jan 2015)
3	Mr. Bjarne Stroustrup	Modern C++ Style through Skype for all

Sr. No.	Eminent professors/ Persons	Workshops and conferences organized by the Institute
		students
4	Mr. Mangesh Phadke	SAP Awareness
5	Mr. Ankit Saxena	Microsoft IT Academy for all students
6	Mr. Sujit Wagh	Microprocessor Interfacing Techniques
7	Prof. Parikshit Mahalle	Mathematical model, NP-hard & NP-Complete problems
8	Prof. Jayanand Gawande	Digital Filter Design
9	Mr. Dheeraj Shokeen	Higher Studies: Scope & Importance
10	Mr. Mangesh Lod	Career in Technical communication for Engineers
11	Prof. Sandip Shinde	Networking & Optical for All students
Department of Information Technology		
1	Mr.Jitendar Sigh Gahlot	Workshop on Big data & Hadoop
2	Mr. Sumit Kumar Shingavi	Workshop arranged on "Cloud Computing
3	Mr.Rahul Gupta Cyber cure solution	Workshop on Ethical Hacking
4	Mr.Anirudha Rumale	Workshop on Introduction to LaTeX
Department of Civil Engineering		
1	Mr. Ashok Kataria	Chief Guest for Inauguration of Research Lab
2	Prof.Veena Gore	Guest Lecture on Structural Design
3	Dr. A. D. Thube	Guest Lecture on Hydrology and Water Resources
4	Dr. S. T. Mali	Guest Lecture on Environmental Engineering
5	Prof. S. S. Kulkarni	Guest Lecture on Structural Design I
6	Dr. S. R. Parekar	Guest Lecture on Design of flexural Members
7	Dr. N. J. Sathe	Guest Lecture on Historical Geology
8	Dr. R. K. Lad	Guest Lecture on Opportunities in Civil Engg
9	Mr. M. R. Wakchaure	Guest Lecture on Awareness on methodology of B.E project

3.7.5. How many of the linkages/collaborations have actually resulted in formal MoUs and agreements? List out the activities and beneficiaries and cite examples (if any) of the established linkages that enhanced and/or facilitated.

[A]. The Institute has signed MoUs with various industries. Departmentwise list is as under:

Department wise MOU					
Mech	E&TC	Comp	IT	Civil	Total.
10	13	08	09	07	47

The Institute has signed 47 MOUs with various industries/ Organisations to promote various collaborative activities with mutual benefit.

Apart from above MOUs, a number of linkages are developed for internship/on job training, research projects, research publications, placement and extension activities.

Following data reflects the activities and beneficiaries because of the linkages and collaboration with industries.

[B1]. Internship/ On-the-job training:

Number MOUs and other collaboration with industries results into internship/on-the-job training to students. Following tables shows details of internship and on-the-job training undertaken by students:

S.N.	Name of Company	Year	Number of students
Department of Mechanical Engineering			
1	Tarapur Atomic Power Station, Atlas Copco, Armstrong Machine Builders, Cummins India, Precision Camshaft Ltd, Volkswagen Pune Piaggio Vehicles, Mahindra & Mahindra, Ghatgepatil Industries, RCF Ltd., L&T, KBL, TATA Steel, TAL, GNB, Rajan Fabrication, Jaws Manufacturing, Kirloskar Epora Pumps	2014-15	23
Department of E&TC Engineering			
1	N.I. Logic, Pune, Akademiks Lab Solution	2015-16	3
2	BSNL (EETP)	2014-15	9
3	BSNL (EETP)	2013-14	9
Department of Computer Engineering			
1	Tagrem Info Systems, HCL, Persistent, C-DAC PUNE, C4learn, Automotive Navigation Data, Opulent, Novus Logic, Incraft Technologies	2015-16	45
2	Columbia Infosys, Persistent System Ltd., HCL Infosystems Ltd, Shaurya Technosoft Pvt.Ltd	2014-15	23

S.N.	Name of Company	Year	Number of students
3	Hash Code Solutions,TCS, Persistent Systems Pvt Ltd., MAX Net Technologies	2013-14	23
4	Persistant, Renulex Ip Group, Gov.of INDIA, Ministry of Defence, Incraft Solutions	2012-13	22
5	Persistent, Business Logics	2011-12	7
Department of IT Engineering			
1	Kirloskar Ebara Pumps Ltd	2013-14	01
2	Bharat Petroleum Corporation Lt. (BPCL)	2014-15	01
Department of Civil Engineering			
1	Marvel Ezara Pvt. Ltd., Narangpura Affordable Hsg. Aurangabad,L&T Pvt. Ltd., V M Mhatre Constructions, Kirloskar Ebara Pumps Ltd	2014-15	04
2	Nashik Thermal Power Plant, Sadguru Constructions	2015-16	06

[B2]. Research:

The collaboration with industries and MOUs generated number of research projects. Following list shows details of the same

S.N.	Name of Company	Project Title
Department of Mechanical Engineering		
2015-16		
1	Unique Circle	Pull Rod & Puch Rod Actuated Suspension System
2	John Deer India Ltd	Design & Devolopement of Lown Mower Blade
3	Thermax Limited	Cycle Time Reduction of Goratu CNC Machine
4	JCB	Emission Reduction & Millage using H20Kit
2014-15		
1	Kirloskar Pnuematic	Design and devolopement of Motor Mounting Fixture for Effective Motor- Compressor
2	Greaves	Design & Fabrication of Cam Profile Measurement System
3	Innovation Filter system Pvt.Ltd	Designing,manufacturing & collecting data of Hydrocyclone for oil-water separation

S.N.	Name of Company	Project Title
		application
4.	ISRO	Development of Opposed Piston Cylinder
5	Arsan Technolgy	Car door assembly by using Heat stack
6	ISRO	System identification and Control System Design for Linear Compressor
7	FIAT	Reducing Knocking noice of Gear Boc in Shield
8	Atlas Copco	Design and Optimization of Skid Frame for Compressor Mounting
2013-14		
1	OSRO-UOP-DST	Design ,Manufacturing & expermentation on Single Stage Flexural Mechanisum
2	TAL,Manufacturing Solution	Core Handling Unit
3	Vishwdeep Press Parts Pvt. Ltd	Design,Development of manufacturing process of MFUT of Piaggio Ape
4	Enpro Industries Pvt Ltd	Design & Fabrication of Humidity control system for paint booth.
5	JCB India Pvt Ltd.	Train Wheel oprated door operating System
6	OSRO-UOP	Development of Linear Compressor
7	Arsan Technology	Design & Manufacturing of Fixture for assembly of Tractor Front Axle.
8	VANAZ Engineers Ltd.	Improvement in productivity & Quality by Automated Grit Remover
9	SKF Pvt.Ltd	Vibration analysis of Deep groove ball Bearing & reduce Scrap
10	Atlas Capco	Design & Fabrication of test rig for estimating life of packing ring.
11	SKF Pvt. Ltd.	Productivity Improvement of wrapping
2012-13		
1	Whirlpool	Measurement of Dry Mass of Cloths in washing M/C
2	ARAI, Pune	Design,Manufacturing & Calibratin of Automobile lighting Measuring
3	Fleet Guard Filters	Relief Valve Performance Test Rig
4	Kendrion Linnig	Test Rig of Electromagnetic Clutch Fan
5	Climber Engineers	Barraquer Eye Speculum
Department of E&TC Engineering		
2015-16		
1	R& DE DRDO, Dighi	Simultaneous Localization and mapping
2	Procom Systems	Intelligent SPY Robot
3	ASICOT Pvt, Ltd,	Vehicle radiation detection and monitoring for

S.N.	Name of Company	Project Title
	Pune	security and safety in nuclear plant
4	Micro embedded technology , Pune	Li-Fi based data transmission system
5	Opulent Pvt, Ltd , Pune	Boiler automation using HTTP server
6	Integrated Power corporation India , Pune	Smart elevator using ARM
7	Electronet Process Automation Pvt, Ltd , Pune	Automatic rationing system
8	HEMRL, DRDO, Pashan Pune	Wireless based programmable electronics delay module for defense application
2014-15		
1	HYC Technologies Pune	Video conferencing without PC
2	Indian Silicon Technologies Pune	Auto guided vehicle
3	Indian Railway Institute of Civil Engineering Pune	Image Processing based automatic track detection and transmission system for railway track
4	HV Desai Eye Hospital Pune	Cataract Detection
2013-14		
1	Dolphin Labs , Pune	Real time Unit implementation o FPGA
2	Analogic Automation Pvt. Ltd. Pune	Cleaning in place in short CIP process based on PLC Automation
2012-13		
1	Symtronics Automation Pvt.Ltd, Bhosri-Pune	TEST-JIG Card for Signal Conditioning
Department of IT Engineering		
2015-16		
1	Persistent Systems Ltd.	Sentiment Analysis using Machine Learning
2	Persistent Systems Ltd.	Stock market prediction using sentiment analysis
2014-15		
1	Opulent Infotech	Race Track Application
2	HashTrix	Opening Application Using Hand Gesture
3	Persistent Systems Ltd.	Intelligent Voice Assistant based on android platform

S.N.	Name of Company	Project Title
4	ClavemInfotech	Android Application for automated E-Blood Bank System
5	Persistent Systems Ltd.	Plug -ins for G-Edit
2013-14		
7	HCL	Anno Search
8	HCL	Distributed Co-operative Caching in Social Wireless n/w
9	TCS	Unsupervised relational Extraction
10	Infobridge Solution	Scanwiz Application
11	Miracle Infotainment	Virtual Guide
12	Persistent Systems Ltd.	Privacy preserving Multiple Keyword Search for Encrypted International journal
2012-13		
13	HardCastle GIS solutions	daMessenger
14	Persistent Systems Ltd.	Web based normalization tool
15	Hardcastle GIS solutions	Emergency response and log based reporting system
16	QIK Organization	Online Mayer and Corporator for pune corporation
2011-12		
17	Persistent Systems Ltd.	MDA driven xUML plugin for Java
18	SoftKoash Solution Pvt Ltd	Universal Mailing Solution
19	Columbia Infosys	Automated API Testing tool
20	Cybage	BBM Application for tracking
Department of Civil Engineering		
2013-14		
1	Imperial Build Tech, walchand Institute Of Technology, Gurumaharaj Developers	Effectiveness Of Mechanical Splicing In Flexure With Economic Feasibility
2014-15		
2	Gopal Jee	Use Of Thermoset In Manufacturing Of Fly Ash Bricks

[B3]. Extension:

Our staff and student are engaged in extension activities like decreasing the infant mortality rate in the country. We have a MOU with National Cold Chain Training Centre (NCCTC), Pune and are working on various innovative methods to enhance their products and processes involved.

[B4]. Publication:

Number of staff as well as UG/PG students working on sponsored projects publishes papers on their work in national/international journals and conferences.

S.N.	Name of Company	Name of Paper
Department of Mechanical Engineering (Year 2014-15)		
1	Ethika Engineering Solution Pvt Ltd.Pune	Mathematical Modeling for Alternatives of Geometry for the Intake Side of the Sump to Enhance Performance of Centrifugal Pump
2	Mahle Behr India Pvt.Ltd,Pune.	Stress Analysis and Optimization of Exhaust Gas Recirculation (EGR) Cooler For Diesel Engine Of Truck
3	Tata Motors,Pune.	Solution of Roller Hemming Process to corelate the design Parameters.
Department of E&TC Engineering (Year 2014-15)		
4	H.V.Desai Eye Hospital, Pune	Cataract Detection
Department of E&TC Engineering (Year 2013-14)		
5	Symtronics Automation Pvt. Ltd Bhosari , Pune	TEST-JIG Card for signal Conditioning Using DSPIC Microcontroller
Department of Computer Engineering (2014-15)		
6	COLUMBIA Infosys	Implementation of augmented reality Using hand gesture recognition
7	COLUMBIA Infosys	Augmented Reality using Hand Gesture Recognition System and its use in Virtual Dressing Room
8	Persistent System Ltd	DIVA - Data Integration, Visualization & Analysis
9	Persistent System Ltd	Data Integration,Visualization and Analysis :Combined in single tool
10	Persistent System Ltd	Literature Review on Web Portal for Engineering Admission Process
11	Shaurya Technosoft Pvt. Ltd	E-Agro Android Application
Department of Computer Engineering (2013-14)		
12	Maxnet Technologies	Different Techniques for the implementation of Electronics Shopping Cart

S.N.	Name of Company	Name of Paper
13	Hash Code Solution	Resource Planning System for Petrol Outlets
14	TCS	Unsupervised Relation Extractor
15	Persistent Systems Pvt Ltd.	Location Based Services for Smart Phone through Android Application
Department of Computer Engineering (2012-13)		
16	Persistant	Chords- A Social Collaboration platform for schools
17	Augadh Solutions	Krishi Connect
18	RENULEX IP GROUP	Cloud Cluster Nexus (CCN)
Department of Computer Engineering (2011-12)		
19	Persistent	RFID Enabled Automated Library
Department of IT Engineering (2014-15)		
20	Opulent Infotech	Vehicle-Race-Tracking System
21	HashTrix	Opening Application Using Hand Gesture
22	Persistent Systems Ltd.	Intelligent Voice Assistant based on android platform
23	ClavemInfotech	A Survey Paper on E-Blood Bank and an Idea to use on Smartphone
24	Persistent Systems Ltd.	A Review On the Development of GEDIT 3, Plug-In: Go-To Definition for C Using Exuberant-Ctags
Department of IT Engineering (2013-14)		
25	HCL	Image Searching Using utoAnnotation
26	TCS	Crime Analysis Using Self Learning
27	TCS	Unsupervised relational Extraction
28	Infobridge Solution	Scanwiz, An IOS App to increase productivity in the retail sector
Department of IT Engineering (2012-13)		
29	HardCastle GIS solutions	Android text messaging application for visually impaired people
30	Persistent Systems Ltd.	Automating the Normalization Process For Relational Database model
31	Hardcastle GIS solutions	Incident Reporting System Using GIS
32	QIK Organization	The Real Social Networking Website
Department of IT Engineering (2011-12)		
33	Persistent Systems Ltd.	MDA driven xUML plugin for Java
34	SoftKoash Solution PvtLtd	Universal Mailing Solution
35	Columbia Infosys	Automated API Testing Approch

S.N.	Name of Company	Name of Paper
Department of Civil Engineering (2014-15)		
36	GOPAL JEE	Use of Thermoset in Manufacturing of flyash Bricks with Economic Feasibility ISSN (ONLINE): 2250-0758, ISSN (PRINT): 2394-6962 Volume-5, Issue-2, April-2015 Page Number: 49-52

[B5]. Student Placement:

Number of companies gave campus placements to our student as a result of MOUs signed with them. Following table shows placement details:

More than 100 companies have recruited about 700 students from our campus.

Department wise Placement					
	2015-16	2014-15	2013-14	2012-13	2011-12
Mechanical Engg	35	29	34	23	17
Electronics and Telecommunication Engg	19	46	29	29	53
Computer Engg	79	44	35	23	32
Information technology	28	26	39	18	34
Civil Engg	-	-	06	-	-

3.7.6. Detail on the systemic efforts of the institution in planning, establishing and implementing the initiatives of the linkages/collaborations.

Efforts of the institution in planning, establishing and implementing the initiatives of the linkages/collaborations:

1. Planned and established linkages/collaborations related to academic and research activities for students and faculty members in various specializations.
2. Signing of MoUs with leading industries.
3. Inviting expertise from various industries for delivering Guest Lectures, key note address in Conferences, speaker in workshops and symposiums.
4. Conducting joint technical Programmes and events with other organizations.
5. Organizing industrial visits with the help of various collaborating agencies.
6. It is proposed to establish Industry Institute Interaction cell in the Institute



4.1. Physical Facilities

4.1.1. What is the policy of the institution for creation and enhancement of infrastructure that facilitate effective teaching and learning?

The institution strictly follows all rules and regulations laid down by AICTE/DTE/University relating to the creation and enhancement of infrastructure and other facilities. The institute has given its highest priority to effective teaching learning process. The institution believes that for effective teaching learning process good infrastructure facilities are required. The institute reviews all the infrastructure facilities like human resources, IT resources, purchase and maintenance of laboratory equipments, library resources, internet facilities, sports facility, hostel facility, canteen and sanitation facility and power backup facility before the academic session begins. The institute always believes in an optimistic approach to enhance and improve the infrastructure in tune with the growing needs of the learners and the revised syllabus by the university or in view of additional courses.

The management committee meets twice a year to plan the academic and administrative activities of the institute, Besides this, as and when the need arises, budget for enhancement of infrastructure is proposed and passed through resolutions in the Governing body meeting. The policy of the institute for the creation and enhancement of the infrastructure focuses on

- Preparation and allocation of the required budget for all departments
- To provide well equipped laboratories and classrooms with proper ventilation, LCD projectors, seminar halls, conference room for effective teaching and learning.
- To provide tutorial rooms for conducting remedial classes and discussion among small groups.
- To provide new research laboratories to promote research and development activities

4.1.2. Detail the facilities available for

(a) **Curricular and co –curricular activities in terms of classrooms, technology enabled learning spaces, seminar halls, tutorial spaces, laboratories, botanical garden, animal house, specialized facilities and equipments for teaching, learning, and research.**

- **Curricular and Co-curricular activities:** The institute has spacious well ventilated classrooms with LCD projector, computer system and with CCTV surveillance. The institute has tutorial rooms, well equipped laboratories with the state of art facility for students to do their practical and projects. The institute has a modern, air conditioned seminar hall with audio visual equipment and power backup for conducting workshops, conferences, seminars and various college functions. The institute has a

conference hall for conducting group discussions and workshops. The institute has a well maintained lawn , botanical garden, CCTV surveillance in all classrooms and at all strategic locations, generator, UPS, canteens, mess, bank, ATM, general stores.

- The institute has separate common room for girls and boys. The institute has a well-furnished library with reading room, digital library, and with a large number of text books, reference books, journals and e-journals. Apart from the central library every department has its departmental library with a large number of reference books.

Specialized facilities and equipments for teaching, learning and research.

To facilitate teaching, learning and research in the institute, the central library has a separate text book and reference section and reading room. For self-learning, digital library with e journals and e content is available in the institute. To promote teaching and learning, the institute has a language laboratory equipped with multimedia systems. The institute has signed MOU's with many industries to promote co-operative ventures with industry for research and development activities and training programs. In this regard, the institute has research laboratories, excellent facilities and a conducive working environment that encourage healthy teaching learning activities.

The area details of classrooms, laboratories, seminar hall and other infrastructure details are as follows:

Sr No	Particular	Total area required as per AICTE Norms (in Sq. mtr)	Total Nos of Rooms available	Total actual Area in Sq. mtr
1	Class rooms Engg /Management	2640	40	2682
2	Class rooms for P.G. Courses	132	3	201.5
3	Tutorial Rooms PG	693	22	737.44
4	Laboratories(Engg/Tech)	3960	65	4358.2
5	Research Lab	330	5	335.25
6	Workshops	600	3	640.26
7	Computer Centre	300	2	344.92
8	Drawing Hall(Engg)	132	1	134.1
9	Library & Reading Room (Engg)	850	1	970.98
10	Seminar halls for others	660	9	1206.9
11	Principal Office	30	1	35
12	Board Room	20	1	22.05
13	Admin Office	300	1	300.71
14	Department Offices	140	7	156.45

Sr No	Particular	Total area required as per AICTE Norms (in Sq. mtr)	Total Nos of Rooms available	Total actual Area in Sq. mtr
15	Cabin for HOD	80	8	89.36
16	Faculty Rooms	810	221	1138.15
17	Central Stores	30	1	38.36
18	Maintance Office	10	1	13.41
19	Security Office	10	1	13.41
20	Housekeeping room	10	1	13.41
21	Pantry for staff	10	1	13.41
22	Examination control office	30	1	33.52
23	Placement Office	30	1	33.52
24	Toilets	350	16	4907.1
25	Boy's Common room	100	1	100.57
26	Girl's Common room	100	1	100.57
27	Cafeteria	150	1	170.28
28	Stationary Store & Reprography	10	1	13.41
29	First Aid & Sick room	10	1	13.41
30	Sport- Club	200		250
31	Hostel (Boys, Girls), Principal quarter, Guest House and other	5250	150	5854
32	Reprography	10	1	13.41

Infrastructure Details

The major equipments of the departments which are used for students laboratory work as well as for research are shown in the following tables.

Major Equipments with costs		
Mechanical Engineering		
1	Experimental set up of Two Stage Air Compressor Test Rig	53805
2	Experimental set up of Gas Calorimeter	56015
3	Pelton Wheel Turbine Test Rig 5 HP (Closed circuit Test Rig)	195300
4	Francis Turbine Test Rig 5 HP (Closed Circuit Test Rig)	199206
5	Centrifugal Pump Test Rig	52731
6	(a) Computerized experimental set up for finding Thermal conductivity of insulating powder (without computer) (b) Computerized experimental set up for finding temperature distribution along the length of fin & fin effectiveness (Without Computer)	222328

Major Equipments with costs		
7	Experimental set up for heat transfer augmentation from dimpled surfaces	61,650
8	Basic Pneumatic Trainer	1,05,838
9	Hydraulic Trainer(Transparent)	1,80,000
10	Linear conveyor control system	58,500
11	Tool makers microscope	73,755
12	Profile projector	57,420
13	Floating carriage micrometer with all accessories	55440
14	Auto collimeter	54945
15	Dial calibration tester	67545
16	SJ-210 IN 4 MN (Standard Drive Unit)	115500
17	Experimental set up of Vapor Compression Test Rig	61,875
18	Experimental set up of Ice Plant Test Rig	73,125
19	Experimental set up of Air Conditioning Test Rig	67,500
20	Experimental set up of Vapor Absorption Test Rig	69,907
21	Universal Testing Machine	1,99,809
22	Deflection Of Beams Apparatus And Strain Measurement	62,219
23	Trinocular Microscope With CCTV Attachment	95,529
24	Magnetic Particle Crack Detector	68,850
25	Vickers cum Brinell Hardness Tester	1,21,492
26	Impact Testing Machine	78,317
27	Set up measurement of torque transmitting capacity by using single Plate clutch.	40,500
Electronics and Telecommunication		
1	Antenna Analyser	8,76,750.00
2	Optical Domain Reflect meter	1,15,600.00
3	Superpro 3000v universal programmer	124320.49
4	HDTV Trainer Kit	84375
5	National instrument Lab View DSP bundle with Speedy 33	83980
6	Spectrum Analyzer	273279
7	Line Impedance Stabilization Network	105114
8	Advanced Micro strip Trainer Kit.	170000
9	2 Channel Digital Storage Oscilloscope(DSO)	156000
10	2+16 Channel Digital Storage oscilloscope(MSO)	214656
11	1 GHz Synthesized Signal Generator 2131	296582
12	6 ½ Digit Digital Multimeter M3500ASC	81281

Major Equipments with costs		
13	3GHz Spectrum Analyzer with Tracking Generator	246750
14	RODHE & SCHWARZ Make Handheld Spectrum Analyzer	438770
15	Arbitrary function generator	99821
16	Mobile Telephone Trainer	52637
17	Digital storage oscilloscope	105706
18	Antenna system analyzer	645714
19	Transmission Line Analyzer	69001
20	3G Mobile Trainer	61875
21	Optical Time Domain Reflectometer	292000
22	PLC with ladder diagram	85555
23	PID controller	96187
24	Mechatronics case study of robotic operation.	148500
25	DSO	120120
Computer Engineering		
1	Switches	153910
2	Printer (dot matrix)	170386
3	Digital trainer kits	105000
4	Microprocessor 8086 kit	165600
5	SVWTP 40K Smart 40KVA Online UPS (Qty.02)	1093541
6	Router for 10 Mbps Internet Leased Line	165900
7	Server HP ML 150G3 Xeon 1.60 Ghz	109950
Information Technology		
1	Online UPS	556324
2	Server HP ML 150G3 Intel Xeon 1.60 Ghz	109950
3	I 110 Dell Poweredge Tower Server 4 GB RAM, 1 TB HDD, Monitor, Keyboard, Mouse	64118
4	Firewall	654370
Civil Engineering		
1	Electronic Universal Testing Machine(100 Tonnes)	961,031
2	AIM 302E-AN 3000KN Compression Testing Machine Electrically Operated Single Gauge.	339,044
3	Total Station STS 752R	253,406
4	Triaxial Outfit Motorized with AIM-064,AIM-072 ,AIM-075-38,AIM-077,AIM-081-1 and AIM-265	213,145
5	Analogue Torsion Testing Machine (1E-TT-10)	156,938
6	AIM-9891 Laboratory Concrete Mixer, Pan type Capacity 40Litres.	127,004

Major Equipments with costs		
7	U-V Spectrophotometer Single Beam Elico Model SI-150	117,065
8	AIMIL, C.B.R. Test apparatus, Motorised, three speed, with Proving ring and dial gauge IS:9669-1980, IS:2720 (Pt. XV), with mould, perforated base plate collar are of Gun metal, AIM: 120	113,316
9	AIMIL Marshall apparatus, Single Speed, with dial gauge & 50 kN capacity Proving ring AIM: 550-1.	105,228
10	AIM-104 Direct Shear Apparatus 2kN with Dial Gauge 2 Nos and Compression Tension Proving Ring 2kN Shipment No-E12757	102,651
11	AIM-458 Los Angeles Abrasion Testing Machine with Abrasive Charge & Revolutionary Counter	99,129
12	High Volume Sampler	98,086
13	Popular Theodolite 10"Sec	76,500
14	AIMIL Ductility Testing machine, electrically operated, IS 1208, with Digital temp controller.	73,662
15	AIM-074-1 Unconfined Compression Tester With AIM-264 Proving Ring 2 KN AIM-072 Dial Gauge 0.01 X25mm with AIM-07401 Plain Platen with adaptor, AIM-03105 and AIM-07506, New Model	71,785
16	Laser Level JPG Range 30M (SETL Make)	65,813
17	AIM-355-2 Curing Tank For 12/24 Mould of 150mm/70.6mm size	65,782
18	Bod Incubator 6 cuff 170 LTR 50X50X70CM BTI	63,264
19	Bosch Level GOL26D	63,113
20	AIM-132 Swell Test Apparatus with AIM-265 Proving Ring 2.5kN and AIM-072 Dial Gauge 0.01 X 25mm	60,075
21	AIMIL Film Stripping Device. AIM-581	59,517
22	Water Quality Analyze Elico Model PE-138	59,073
23	AIM-418-2 Vibrating Machine With built-in Digital Timer NABL Calibrated	54,556
24	AIM-460 Tile Flexure Strength Testing Machine 200 kg Capacity with lead shots	54,068
25	AIM-365-1 Vibrating table for 4 Nos of 150mm cube mould Crushing value Apparatus	53,066
Engineering Sciences		
1	CRO- Aplab 20 MHz Dual Trace model no-33059	59134
2	Divergence of Laser Beam Set up	64070
3	Ultrasonic Interferometer set up	77908
4	P ^H Meter (with Magnetic Stirrer)	57356

Extra-Curricular Activities: Sports outdoor and indoor games, gymnasium, auditorium, NSS, NCC, cultural activities, public speaking, communication skills development, yoga, health and hygiene.

For the all-round development of the students, the institute encourages the students to participate in various sports/ tournaments at the university and state level, cultural activities, NSS etc.

Sports: To nurture the talents of students in different fields and for their all round development, a large number of sports activities are conducted to shape their personality and health and fitness. The institute provides facilities for both indoor and outdoor games to the students. A spacious playground is available for outdoor games like cricket, football, volleyball, basketball, badminton, lawn tennis etc. The institute also has an indoor area for playing chess, table tennis, and carom.

Seminar hall: The institute has a modern, well equipped air conditioned seminar hall with audio visual equipment with power backup for conducting workshops, conferences, seminars, Alumni meet and various college events and functions.

NSS: The College has a NSS unit of 100 students. The unit is started with an objective to cultivate an attitude of social service in the minds of students and to make them responsible citizens. Various socially relevant activities are being carried out by NSS students like tree plantation, Swachhata Abhiyan camps, social awareness camps, blood donation camps, medical checkup camps.

Cultural activities: To bring out the hidden talents of the students and for getting tremendous exposure in interpersonal skills, team spirit, time management and delegating, the students are encouraged to participate and arrange various cultural activities. Every year an annual event Sinhgad Karandak is conducted where the students participate actively and enthusiastically in various competitions like singing, dancing, fashion show etc. Besides these, the students are also encouraged to participate and have won several prizes in state level cultural events like Purshottam Karandak, Firodiya Karandak. Besides these events the students celebrate Teachers day, Engineers day, Navratri and many other festivals.

Technical skill enhancement: An annual technical event Techtonic is conducted every year for the students to promote innovative ideas, share and apply their technical knowledge. The students are encouraged to participate in various university levels, state level and international level events like Baja and Supra to improve their technical knowledge and public speaking.

Communication Skills: The institute conducts Student Training programs to help students to improve their communication skills, public speaking and practice of group discussions and interview. It also provides training on soft skills like Goal setting (Personal and Career), Personality and Stress management, behavioral skills, listening, reading (technical/ non technical),

writing resume, letter, report etc. The institute publishes college magazine “MOSAIC” through which students learn to express themselves through technical/non-technical articles, poems etc.

Health and Hygiene: The College maintains a medical center with a doctor to treat the students and staff for any minor problem. In-house team of housekeeping staff is appointed for day to day cleanliness and maintenance of the premises. The Yoga club has been formed for students to maintain good health, possess mental and emotional stability, and integrate moral values and to attain a higher level of consciousness.

4.1.3. How does the institution plan and ensure that the available infrastructure is in line with its academic growth and is optimally utilized. Give specific examples of the facilities developed/augmented and the amount spent during the last four years.(Enclose the master plan of the institution/ campus and indicate the existing physical infrastructure and the future planned expansions, if any)

The institute has developed the infrastructure and facilities as per the AICTE norms. The institution is utilizing the entire available infrastructure like land, buildings, classrooms, laboratories, furniture, teaching aids, and library facilities to the maximum extent possible.

- All classrooms and laboratories are utilized for conducting regular classes and practical.
- All classrooms are utilized for conducting remedial lectures, value added courses and training programs for exams beyond college hours.
- Computer laboratories are utilized for conducting online exams, aptitude tests, AMCAT exams useful for training and placement.
- The playground is utilized for conducting various sports and games.

Apart from the available infrastructure, the institute has provided additional space to promote a good teaching learning environment. The institute has introduced PG courses in Mechanical Engineering, Electronics and Telecommunication, Computer Engineering and Ph.D. courses in Mechanical Engineering and Electronics and Telecommunication. New research laboratories have been provided to promote research and development activities. The Entrepreneurship development cell has been started to promote entrepreneurship activities.

Criteria 4 – Infrastructure and Learning Resources

The investments in last four years in enhancing various infrastructure facilities are as follows.

Item	2014-15		2013-14		2012-13		2011-12	
	Allocated Budget (in lakhs)	Expenses (lakhs)	Allocated Budget (in lakhs)	Expenses (lakhs)	Allocated Budget (in lakhs)	Expenses (lakhs)	Allocated Budget (in lakhs)	Expenses (lakhs)
Acquisition of land & new building and infrastructural built-up	21,750,000	21,490,011	-	-	-	-	75,000	69,670
Library Books, Journals, Magazines, Library Equipment	575,000	551,285	800,000	812,150	4,000,000	3,921,397	1,500,000	1,408,962
Laboratory Equipment	3,500,000	3,294,936	2,800,000	2,720,001	4,500,000	4,489,641	4,800,000	4,747,432

Criteria 4 – Infrastructure and Learning Resources

Item	2014-15		2013-14		2012-13		2011-12	
	Allocated Budget (in lakhs)	Expenses (lakhs)	Allocated Budget (in lakhs)	Expenses (lakhs)	Allocated Budget (in lakhs)	Expenses (lakhs)	Allocated Budget (in lakhs)	Expenses (lakhs)
Computers	3,500,000	3,409,655	1,200,000	1,179,899	3,800,000	3,705,000	40,000	35,500
Software	650,000	641,287		-	1,200,000	1,104,878	965,000	961,694
Games and Sports/ student Activity	100,000	103,371	70,000	66,680	125,000	102,044	125,000	94,729
Furniture	7,900,000	7,800,187	1,600,000	1,556,580	2,000,000	1,955,347	3,500,000	3,494,991
Administrative & other	231,500,000	231,447,588	222,100,000	222,021,934	191,100,000	191,051,966	159,550,000	159,501,980

4.1.4. How does the institution ensure that the infrastructure facilities meet the requirements of students with physical disabilities?

The institute has the policy that the classrooms and examination halls are to be provided on the ground floor for physically disabled students. Provision of wheel chair is made available. Ramp facility is provided.

4.1.5. Give details on the residential facility and various provisions made within them.

Sr. No.	Hostel Name	No of rooms	No of students per room	Total No of students accommodated
1	Boys Hostel 1	96	4	384
2	Boys Hostel 2	35	4	140
3	Girls Hostel 1	88	4	352
4	Girls Hostel 2	40	4	160

** The above table reflects the capacity for complete campus.*

- The institute has well-furnished separate hostels for both boys and girls.
- Hostels have 4-bedded rooms with attached washrooms.
- The basic amenities like bed, table and chair, hot water, ceiling fan, cupboards are provided.
- Rooms are spacious, well ventilated and surrounded with landscape and greenery.
- 24-hrs water supply is available in each hostel and for drinking water coolers with aqua guard for water purification are available on each floor.
- Maintenance and cleaning of water coolers and purifiers is carried out regularly through external agencies.
- The central library is open from 8.00 a.m. to 8.00 p.m and reading hall is open till midnight.
- For safety against fire accidents, adequate numbers of fire extinguisher are available in the hostel.
- Environment friendly Solar Water Systems is provided for these hostels.
- For maintaining healthy environment frequent water testing is done.
- The campus has a central mess facility with seating capacity 300.
- The campus has canteens which are well maintained and provide a wide range of hygienic food.
- The institute has a Guest house for staff members to facilitate any requirement of stay in view of official work or for the stay of the visiting guest.

Recreation facilities

- A playground is available for outdoor games such as throw ball, volley ball, basketball, cricket and lawn tennis.
- An indoor area is provided for games such as carom board, chess and table tennis.

- A common room with TV sets is provided for recreation.
- The Yoga club has been formed with the objective for students to maintain good health, possess mental and emotional stability, and integrate moral values and to attain a higher level of consciousness.

Medical Facility

- A first aid box is available in case of any accident.
 - In case of medical emergency, rectors make arrangement for in campus vehicle or ambulance immediately and such student is referred to STES Urban Health care Center or Smt Kashibai Navale Hospital immediately.
- **Security**
 - Separate rectors are appointed for boys and girls hostel
 - Security guards (24x7) are available in the college campus as well as in hostels.
 - While hostel students leave campus they make entry in the respective registers.
 - For girl students going home, night passes are provided without which they are not allowed to leave the campus.
 - Entry to the hostel is closed after 9.00 p.m for security purpose.

Internet Access:

- The boys and girls hostels are having internet and Wi-fi facility.

Hygiene Facilities

- Daily cleaning of floor, washrooms and passages is done by in housekeeping staff
- Dust bins are kept in the corridors at suitable locations and all the waste material is disposed off daily.
- The institute has a water softener and sewage treatment plant /recycling as well.

4.1.6. What are the provisions made available to students and staff in terms of health care on the campus and off the campus.

The institute offers excellent medical facilities to staff, students and others in the community. The staff and students can avail the facility at the STES's Urban health Centre, Kondhwa which is situated 0.5 Km away from this campus for any minor problem and in case of any major problem the staff and students can avail the facility free of cost at Smt. Kashibai Navale Medical college and General Hospital. A vehicle is made available to meet the medical emergencies. The institute has the Students Safety Insurance Policy. This policy is renewed each year. According to this policy, all students studying in

the institute are insured. Group Insurance scheme is also provided to all employees.

Following medical Facilities are available:

- | | |
|----------------------------------|-----------------------|
| • General Medicine | • IPD |
| • Pediatrics | • Casualty |
| • Pulmonary medicine | • Operation Theatre |
| • Dermatology | • ICU |
| • Psychiatry | • Clinical material |
| • Surgery and Allied Specialties | • Supportive Services |
| • General surgery | • Blood bank |
| • Orthopedics | • Physiotherapy |
| • Ophthalmology | • CSSD |
| • ENT | • Nuclear medicine |
| • Obstetrics and Gynecology | • Nursing facilities |
| • Clinical Services | • Pharmacy |
| • OPD | • CCL |

4.1.7. Give details of the common facilities on the campus spaces- special units like IQAC, Grievance Redressal unit, Women's cell, counseling and Career guidance, placement unit, Health centre, canteen,, recreational spaces for staff and students, safe drinking water facility, auditorium etc.

The institute has constituted various committees for the following special units and space is available for the common facilities.

IQAC:

Yes, institute has established IQAC to insure quality education and holistic development of students. In the institute, it is referred as AMC (Academic monitoring committee). The institute gives utmost importance to assure quality in all processes.

To institutionalize the quality assurance processes IQAC insist on

- Preparation of academic plan and calendar.
- Execution and monitoring of academic plan/activities.
- Conducting internal assessment tests.
- Collecting feedback from students and alumni.
- Mentoring the students.
- Developing infrastructure.
- Effective conduction of student training program (STP).
- Holistic development of the students.
- Training of the staff to cope up with new technologies.

- Developing the faculty through “Train the Trainer (TTT)” program.
- Maintaining “Joy at work” atmosphere for the faculty.

Grievance Redressal Committee:

- Students can submit their complaints to the institute first in the form of written application. These applications are accepted by the institute and a record is maintained. Acknowledgement is given to the student.
- If student’s complaint is related to institute then it is solved at the institute level within 7 to 10 days.
- The committee hears the grievances if any, conducts an enquiry and submits the report to the higher authorities. A final action is taken by the Hon’able President after discussion with the committee.

Anti Ragging Committee:

- This committee has been constituted to deal with the ragging cases of students.

Anti Sexual Harassment Cell

- This committee has been constituted to deal with the women’s problem.

Women’s Empowerment Cell:

The committee has been constituted with the objective to empower girl students and to enhance understanding of issues related to women. It also provides a platform for women to share their experiences and views regarding their status in society and to suggest ways to empower themselves. This cell facilitates women’s empowerment through guest lectures, seminars, awareness programs and welfare activities.

Training and Placement Cell:

The institute has appointed a Training and Placement officer with one faculty from each department as members with the objective that majority of eligible students are placed and coaching the students towards employability.

The Training & Placement Cell prepares budding professionals to be globally effective in their career. The main thrust areas are personality development & proper communication skills. Training is imparted right from the day student enters the institute.

The objectives of training and placement cell are

- To equip the students with proper technical skills & imbibe spirit of professionalism.
- To prepare students for the placement as per requirements & expectations of industry.
- To maintain close liaison with reputed industry & corporate to ensure maximum placements.

- To help in securing the consultancy work & industry sponsored projects for staff & students.
- To enter in the campus connect program with leading industries & corporates.
- To create maximum opportunities for the students by identifying emerging trends & establishing close rapport with leading professionals from industry.
- To prepare the students for the placement by organizing personality development & soft skill programs.
- To conduct the foundation programs offered by various industries to give the professional exposure to students & to make them ready hands at the time of joining.

Alumni Association

Sinhgad Academy of Engineering (SAE) has registered its Alumni Association in the year 2010.

The objectives are

- To have regular interaction with SAE Alumni, for further strengthening the relationships with them and to create good base of alumni for future growth of SAE in terms of creating opportunities for students of SAE.
- It provides a platform for them to share their views and experiences, guide students about placements etc.

Industry Institute Interaction Cell:

The committee has been constituted to enhance industry interaction with students and bridge the gap between theoretical and practical aspects of the curriculum. The objective of this cell is to develop student awareness in job functions in the industry, attitudes to adapt to the industrial environment, proper practical and relevant knowledge, skills and competencies in preparation to becoming self employed. The institute invites entrepreneurs, executive, and policy makers to address students thereby facilitating practical learning.

Entrepreneurship Development Cell:

The committee has been constituted for promoting specialized knowledge in the field of entrepreneurship development and to nurture a passion for self employment. The objective of this cell is to create awareness, inculcate entrepreneurial spirit and culture among the Engineering graduates and to identify and motivate budding entrepreneurs by conducting programs in entrepreneurship enabling skills.

Research and Development Cell:

The committee has been constituted to enhance research and development activities and to motivate faculty and students to carry out research work in areas of their interest and generate project proposals to seek grants from various funding agencies. The R and D cell has been active in registering for

patents, publications in conferences, peer reviewed journals, organizing conferences, seminars and workshops.

Students Career Guidance and Counseling:

Every department takes care of counseling students as when the need arises. Teacher guardians are appointed for a group of 30 students each. The guardian faculty member discusses with the parents of the wards with respect to attendance, academic performance, discipline and reports to the Head of the department for necessary counseling and suitable action.

Health Centre:

The institute has a medical centre 0.5 km from the campus to treat the students and faculty for any minor health problem. College vehicle is available for any emergency cases.

Recreational Spaces for staff and students:

A common recreation room is provided with TV sets. Indoor games are available for staff and students.

Safe Drinking water facility:

Water coolers are present in the campus, all equipped with aqua guard for water purification.

4.2. Library as a Learning Resource.**4.2.1 Does the library have an Advisory Committee? Specify the composition of such a committee. What significant initiatives have been implemented by the committee to render the library, student/user friendly?**

The library has an advisory committee which comprises of Chairman, Professor-in-charge, Secretary and the members from all departments. The duties of the committee include formulation of policies and strategies for the development of the library services and facilities.

Library Advisory Committee:

Sr. No.	Name	Designation
1.	Dr. V. M. Wadhai	Chairman
2.	Mrs. J.P. Shinde	Professor-in-charge
3.	Mr. M. M. Sardeshmukh	Member
4.	Mr. S. C. Shilwant	Member
5.	Mr. B. B. Gite	Member
6.	Mr. A. N. Adapanwar	Member
7.	Mr. R. R. Sorate	Member
8.	Dr. Daljeet Kaur	Member
9.	Mr. S. P. Saptale	Member
10.	Mrs. A. A. Karanjkar	Secretary

Significant Initiatives:

- Subscription of journals as per the norms.
- Weeding out of old and out of syllabus books.
- Collection development of the library.
- Automation of the library.
- Allocation and utilization of funds for procurement of books and journals.
- Provision of Institutional membership.
- Provision of book bank facility.
- Extension of reading hall timings during examination.

4.2.2 Provide details of the following:

- Total area of the library : 970.98 Sq. Mts.
- Total seating capacity : 300

Working hours (on working days, on holidays, before examination days during examination days, during vacation)

Sr. No.	Details	Library Timings	Reading Hall Timings
1.	On working days	8.00 a.m to 8.30 p.m.	8.00 a.m to 12.00 midnight
2.	Before examination days	8.00 a.m to 8.30 p.m.	8.00 a.m to 12.00 midnight
3.	During examination days	8.00 a.m to 8.30 p.m.	Extended up to 24 hours a day
4.	During vacation	8.00 a.m. to 5.15 p.m.	8.00 a.m to 5.15 p.m.

Library Layout:

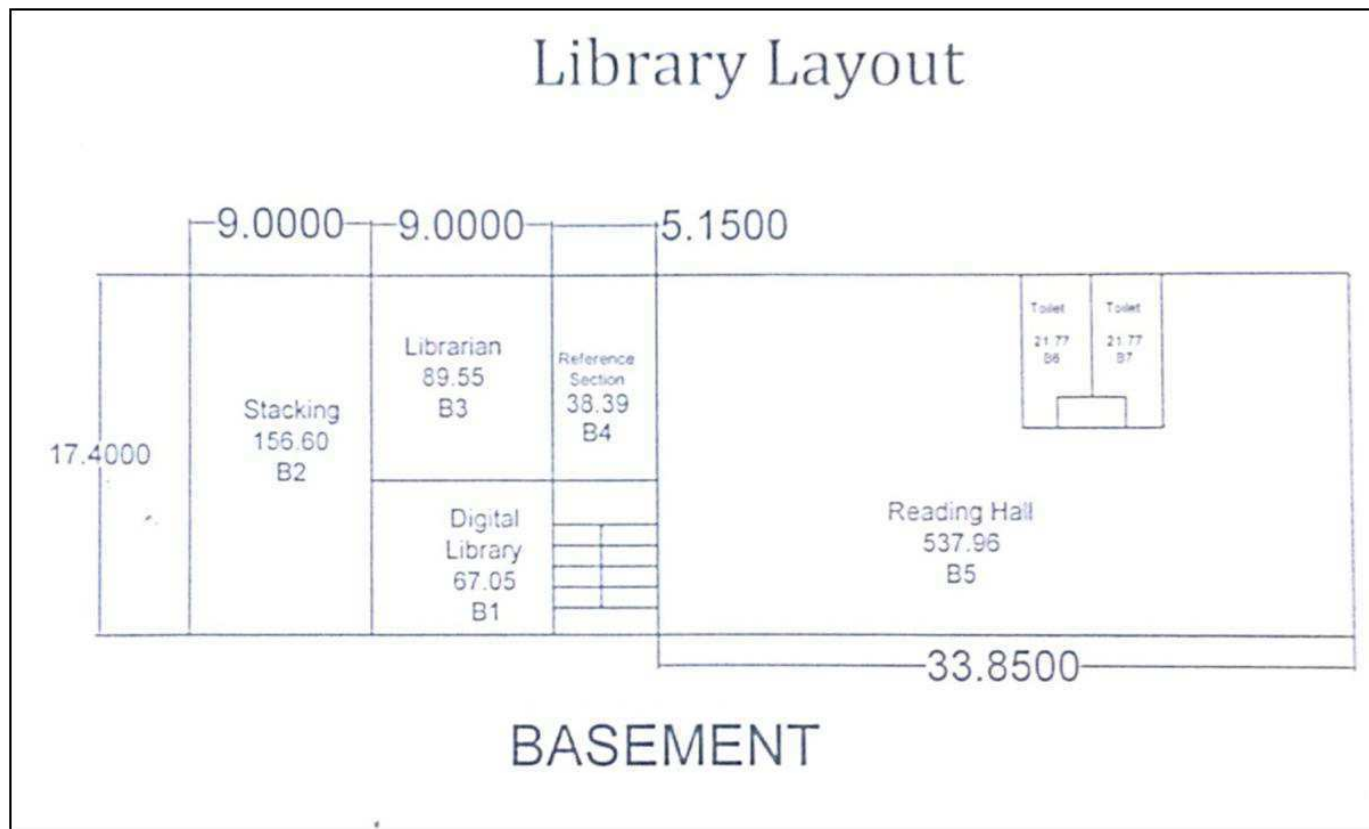


Fig.4.1 Library Layout 1

4.2.3 How does the library ensure purchase and use of current titles, print and e-journals and other reading materials? Specify the amount spent on procuring new books, journals and e-resources during the last four years.

At the beginning of the academic year, librarian sends the circular to the HODs for the book requirement related to their respective discipline. Librarian then compiles the requirement. While preparing purchase order library advisory committee checks the availability of the book, usage of book, change of syllabus and the norms are taken into consideration. After procurement of books new arrivals list is displayed on notice board. Library has a collection of 20,975+ books, 275 e-journals and 121 Print Journals.

To ensure the use of current titles, print and e-journals and other reading materials, time to time notifications are being sent to staff and students about new arrivals in the library. Different log books have been maintained in different sections of the library which shows the usage of books, journals and e-resources by staff and students.

Library Holdings	Year -1(15-16)		Year – 2(14-15)		Year – 3(13-14)		Year – 4(12-13)	
	Number	Total Cost in Rupees	Number	Total Cost In Rupees	Number	Total Cost in Rupees	Number	Total Cost
Text Books	59	31429	122	52164	7	2127	458	164174
Reference Books	208	111929	197	150632	530	385741	997	735927
Journals/ Periodicals	125	416151	5	4449	118	365162	98	265761
e-resources	275	254948	275	254948	9175	1686387	8520	1424786
Any other (specify)								

4.2.4 Provide details on the ICT and other tools deployed to provide maximum access to the library collection?

- OPAC : Available
End users can search the book database through OPAC of EasyLib Software.
- Electronic Resource Management package for e-journals : yes
(Science Direct)

- Federated searching tools to search articles in multiple databases
- Library website : Yes
Incorporated in College Website as a separate page.
- In-house/remote access to e-publications : Yes
Through IP authentication.
- Library automation : Yes
Library is using EasyLib software for library management.
- Total number of computers for public access : 16
- Total numbers of printers for public access : 1
- Internet band width/ speed : 12 mbps
- Institutional Repository : In process
- Content management system for e-learning : In process
- Participation in Resource sharing networks/consortia (like Inflibnet) - Yes, Library is having institutional membership of DELNET.

4.2.5 Provide details on the following items:

- Average number of walk-ins : 200/ day.
- Average number of books issued/returned : 85
- Ratio of library books to students enrolled : 5:1
- Average number of books added during last three years : 770
- Average number of login to OPAC : 5/ day
- Average number of login to e-resources : 20/ day
- Average number of e-resources downloaded/printed : 34/ day
- Number of information literacy trainings organized : 01
- Details of “weeding out” of books and other materials : Total
1444 books are weeded out.

4.2.6 Give details of the specialized services provided by the library

- 1. Reference : Yes**
Library has a separate reference section with rich collection of international editions of reference books, hand books, dictionaries and encyclopedias etc.
- 2. Reprography : Yes**
Library provides reprography service for photocopying Journal articles, reference material and other reading material for benefit of users.
- 3. ILL (Inter Library Loan Service) : Yes**
Library is having institutional membership of the British Council Library, Automotive Research Association of India Library and DELNET. Users can take the benefit of library services of these libraries.
- 4. Information deployment and notification : Yes**

Library notices are displayed on notice board. List of new arrivals is sent to staff and students through e-mail and also displayed on notice board.

- 1. Download : Yes**
Subscribed e-journals can be downloaded from digital library and on intranet.
- 2. Printing : Yes**
Printing facility is provided to take printouts of online journal articles and reference material.
- 3. Reading list/ Bibliography compilation : Yes, available through OPAC**
- 4. In-house/remote access to e-resources : Yes**
Digital library is available for online journal access and internet searching. E-journals are accessible from any college laboratory PC as subscription is IP based.
- 5. User Orientation and awareness : Yes**
Induction programs are conducted at the beginning of academic year for the newly admitted students in the college. Current Awareness Service is provided in which list of new arrivals are sent through email.
- 6. Assistance in searching Databases : Yes**
Assistance is provided to the users for searching information related to their project / research work with various sources.
- 7. INFLIBNET/IUC facilities : Yes**
(DELNET)

4.2.7 Enumerate on the support provided by the Library staff to the students and teachers of the college.

- Helps students and staff in locating the books on the stack.
- Providing guidance to students and staff to find out books and other references related to their project and research work.
- Assistance in searching and downloading papers related to area of research.
- Provides list of new arrivals & Journals.
- Provides newspaper clippings related to engineering topic.
- Provides soft copy of syllabus and previous year question papers
- Circulation of new catalogues to the staff.
- Provides bibliographies of engineering subjects.
- Institutional Membership of the British Council Library, Automotive Research Association of India Library and DELNET has been taken to facilitate the staff and students to borrow books, journals and CDs that are not available in the institution.

4.2.8 What are the special facilities offered by the library to the visually / physically challenged person? Give details.

For visually / physically challenged person ramp facility is provided. Priority is given to physically challenged person in all library services.

4.2.9 Does the library get the feedback from its users? If yes, how is it analysed and used for improving the library services. (What strategies are deployed by the Library to collect feedback from users? How is the feedback analysed and used for further improvement of the library services?)

Yes, feedback for the library has been introduced by the college about the difficulties faced and suggestions to improve the functioning of the library. Feedback form is provided to students and based on the feedback analysis the feedback is done. Suggestion box is also provided where the students can drop down their suggestions, grievances and the difficulty face in the library services. This would help us to improve the functions of the library..

4.3. IT Infrastructure

4.3.1 Give details on the computing facility available (hardware and software) at the institution.

All the departments are provided with hardware and software as per the requirement.

The summary of the facilities are provided below.

Sr. No.	Item	Quantity
1.	Computers	757
2.	LCD projectors	64
3.	Laptops	7
4.	Server	5
5.	Printers	85
6.	Scanners	8
7.	LAN	Star Topology
8.	Antivirus	Admin Console (SEQRITE)
9.	Plotter	01

Department wise details of computers, Printers, Scanners, Projectors

Sr. No.	Department	Computers	Printers	LCD Projectors	Scanners
1.	Mechanical	111	9	9	1
2.	E&TC	126	10	14	2
3.	Computer	214	26	9	1
4.	IT	111	22	7	1
5.	Civil	39	2	5	1

Sr. No.	Department	Computers	Printers	LCD Projectors	Scanners
6.	FE	111	5	14	2
7.	Administrative Office	19	10	6	-
8.	Digital Library	16	-	-	-
9.	Library	4	1	-	-
10.	MBA	4			
11.	Studio	2	-	-	-

The institute has 757 computers with the following configuration.

Sr. No.	Make of computers	Configuration	Quantity
1	IBM	P-4, 256 MB RAM, 80 GB HDD	10
2	HP 220	P-4, 2.40 GHz, 1 GB RAM, 40 GB HDD	23
3	HP 290	P-4, 1 GB RAM, 80 GB HDD	39
4	HP 2080	DualCore 1.60GHz, 1GB RAM, 80GB HD	90
5	HP 2300	DualCore E2140, 512MB RAM, 80GB HDD	97
6	HP 2480	C2D 2.8 GHz, 1GB RAM, 160GB HDD	33
7	ACER	C2Q 2.53GHz, 2GB RAM, 320GB HDD	188
8	Dell 390	Core i3-3.3GHz, 2GB RAM, 500GB HDD	130
9	Dell 3010	Core i3-3.3GHz, 2GB RAM, 500GB HDD	40
10	Dell 3020	Core i5-3.2GHz, 4GB RAM, 500GB HDD	60
11	HP 280G1	Core i5-3GHz, 4GB RAM, 500GB HDD	42
12	HP Server HP ML 150G3	Intel Quad Core Xeon Processor 1.6 GHz, 4GB RAM	05
	Total		757

Computer Student Ratio:

UG: 1:4

PG: 1: 2

Standalone facility: Few systems are stand alone, which are integral part of experimental setups.

LAN facility: All computer laboratories are provided with LAN facility.

Wi-Fi facility is available in the institute as well as in boys and girls hostel with high speed internet connectivity.

Department wise licensed software

Sr. No.	Department	Details of softwares
1	Mechanical	Computer application software/Autodesk Mechanical Solution (Network Version), Abacus software 6.8.1, Pro/Engineering Wild fire 3.0 University Plus Seats, Altair Hyperworks software, Automation Studio Version 5.7, Ansys version 13.0 Academic Teaching Introductory 32,000 Node Limits S/w., CATIA V6(PLM Discover Pack UDK), MastercamX5 perpetual Seat license on Nethasp No. N05380 (6- Milling, 6 - Turning, 6- Design, 6- Router), MSC software university MD FEA + Motion Bundle (50 user License), ADCC Infocad Pvt. LtdSTES/MECH ETC/MATLAB/12-13
2	Electronics and Telecomm	ORCAD PSPICE SOFTWARE, MATLAB-SOFTWARE, Texus's Code Composer Studio 6 x series Platinum version, National Instrument Labview DSP Bundle with Speedy-33, AV QHADMIN Total SEC 3 yr t70 user H09CTS070P PU7, Triton IDE (soft.)Executive edition Triton IDE editor,Compiler /Assembler/Linker,ARM Assembly Language Debugger, C language Debugger, RTOScompilation,RTOS Debugger, RTOS Trace Tool, CAD FEKo 5.4/5.5(Antena design software), Xilinx Make ISE Series +modelsim starter version, DSP Application Soft. System Generator, Microwind Package 3.1, GLCD Interface Card, Keil Microvision, Eclipse, Mplab, Turboc, Linux, Multisim13.
3	Computer	SQL svr standard edition 2005 Win32 English OLP NL AE, SQL CAL 2005 English OLP NL AE Device CAL, SQL Svr Enterprise Edtn 2005 Win32 English OLP NL AE, Visual Studio Pro 2005 English OLP NL AE, Office 2003 Win32 English OLP NL AE, Quick heal admin consol total security 3 years updates, Symantec Anti-Virus Corporate Edtn10.0 for desktop
4	Information Technology	Oracle 10 G, SQL server enterprise Edition , SQL CAL 2005, SQL standard edition 2005, Visual Studio pro 2005, Language Lab Software, Sony sound Forge 9.0 Academic, Adobe CS3 design Premium Adobe CS3 design Premium ,Quick Heal antivirus total Security Rational Rose enterprise UML 2.0, Crystal Reports 2008 Rational software architecture UML 2.0, Quick Heal antivirus End Point Security

Sr. No.	Department	Details of softwares
5	Civil	Effluent treatment plant design software ETPSOFT03, Water treatment plant design software WTOSOFT03, Sewerage system design software SEWERSOFT03, Advanced wastewater treatment software ADTREATSOFT03.
6	First Year Engg.	Autocad, Linux, JAVA,C,C++
7	Administrative Office	Tally, PayWhiz, Zoom, GEMS, SequRite Admin Console, Microsoft

Any other

- Generator backup (320KV)
- Institution website.
- Moodle software for online exams and recording attendance.
- E-Exam portal(my exmo)for providing online practice tests and Online Exams
- L3 manageable switch for servers
- UPS backup to ensure constant power supply
- Antivirus software

4.3.2 Detail on the computer and internet facility made available to the faculty and students on the campus and off the campus.

All the classrooms, laboratories, hostels and library of the institute is provided with internet and intranet facility. Every system is protected with a username and password, individual login identities are provided to students and faculty to access the internet facility. Few faculties are provided with laptops and few faculties are provided with computers in their cabins. The computers have been enabled with firewall for restricted access to the websites. All rooms in the girls and boys hostels are provided with internet and Wi-Fi facility for students to work on their laptops both in the campus and hostels. All the servers are provided with power backup for uninterrupted service. Resources for conducting online exams are available in the institute and the students can practice for online exams after college hours through Exam e portal(my exmo). The information security and network security are ensured through the firewall and to avoid risk in the information, the websites which promote abusing activities are blocked in the firewall.

Internet Service Provider: BSNL (10Mbps) and Tata Docomo (2 Mbps)

Total bandwidth: 12 Mbps.

4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

Deployment/ up gradation of IT infrastructure is through the requirement given by the concerned head of the department.

- To upgrade/replace Computer systems on regular basis as per the requirement of the departments.
- To develop e learning facilities in all classrooms.
- To enhance internet bandwidth from 12 Mbps to 17 Mbps.
- To upgrade with latest version of hardware and software based on the needs of newly introduced programs and courses.
- To upgrade learning resources such as library, digital library, e-journals, internet and Wi-Fi facilities, CCTV for academic surveillance.
- New acquisition for additional servers, switches and UPS are being procured regularly as per the requirement.
- Encourage the faculty and students to use open source softwares.
- To Increase computer-student ratio.

4.3.4 Provide details on the provision made in the annual budget for procurement, up gradation, deployment and maintenance of the computers and their accessories in the institution (Year wise for last four years).

Budget is allocated every year for the up gradation of software and the maintenance of computers. The budget allocated for procurement, up gradation, deployment and maintenance of the computers and their accessories in the institution during last four years is as follows.

Financial Year	Provision in Budget	Utilization	Remark
2014-15	3,500,000	3,409,655	Computer
	200,000	181,525	Computer Consumables
	650,000	641,287	Software
	225,000	213,548	Maintenance and Spares
2013-14	1,200,000	1,179,899	Computer
	35,000	33,200	Computer Consumables
	175,000	166,113	Software
	200,000	158,567	Maintenance and Spares
2012-13	4,000,000	3,705,000	Computer
	40,000	35,689	Computer Consumables

Financial Year	Provision in Budget	Utilization	Remark
2011-12	1,150,000	1,104,878	Software
	1,100,000	1,066,456	Maintenance and Spares
	36,000	35,500	Computer
	125,000	124,208	Computer Consumables
	100,000	961,694	Software
	70,000	65,077	Maintenance and Spares

4.3.5 How does the institution facilitate extensive use of ICT resources including development and use of computer aided teaching/ learning materials by its staff and students?

- LCD projectors and computer systems are provided in each classroom with internet & intranet access.
- Internet facility is provided to faculty of all departments for the preparation of teaching/ learning material.
- The faculty and students can access e resources available on intranet.
- Boys and girls hostels are provided with Wi-Fi facility to access e learning material.
- Students are assigned with projects that require the use of ICT facilities.
- Faculty delivers their lectures using power point presentations. The faculty takes the help of ICT resources to enrich their lecture presentations/course material and knowledge.
- Online aptitude based tests are conducted by the institute as per the requirement of industry for training, placement and recruitment.
- A database of objective questions of all courses is maintained by the institute for conducting online examinations.
- Students can practice for online examination on Exam e portal(my exmo).
- Online feedback system is taken through ERP.
- NPTEL lectures, videos and web resources are made available for faculty and students to enhance the knowledge.
- All lectures are recorded by expert faculty on K-point server which is a LAN based resource to help students to learn and revisit the concepts discussed in class. The institute has QALR servers for conducting aptitude tests.
- Studio facility is provided to generate video lectures.

4.3.6 Elaborate giving suitable examples on how the learning activities and technologies deployed (access to online teaching, ICT enabled classrooms/ learning spaces etc) by the institution place the student at the center of teaching –learning process and render the role of facilitator for the teacher.

- Taking into consideration the changing times and the importance of ICT for growth and development, the institute emphasizes / encourages students to use internet and e resources to gather information for updating their subject knowledge and for preparing seminars, group discussions and project work.
- Students are provided training in collaboration with reputed industries like Microsoft, HIT office, AutoCAD
- The latest teaching learning tools for day to day academic activities is provided to the faculty and ICT enabled facilities are provided in all classrooms.
- Some departments facilitate Video conferencing with senior professionals from industry through WebEx, Webcast.
- The institute has a digital library to access e-journals, e-content and internet.
- The institute has an air conditioned seminar hall provided with a computer system, LCD projector, and with internet connectivity for organizing workshops, seminars, conferences, group discussions.
- The institute has a conference room equipped with a computer system, LCD projector, and with internet connectivity for discussion among small student groups.
- Computers connected through LAN facilitate the conduct of online exams during unit tests.
- An open access language laboratory equipped with audio interactive multimedia is available to hone communication skills
- Access to e resources like ACM, IEEE, Science direct.

4.3.7 Does the institution avail of the National Knowledge Network connectivity directly or through the affiliating university? If so, what are the services availed of?

Yes. The institution has taken the membership of British Council library and ARAI, DELNET which has acquired national and International database.

4.4. Maintenance of Campus facilities**4.4.1 How does the institution ensure optimal allocation and utilization of the available financial resources for maintenance and upkeep of the following facilities? (substantiate your statements by providing details of budget allocated during last four years)**

The institute allocates sufficient funds for regular maintenance of the entire college facilities. The institute reviews the requirements regarding building, furniture, laboratory equipments, computers etc before the academic session begins and budget allocation is done taking into consideration the academic needs.

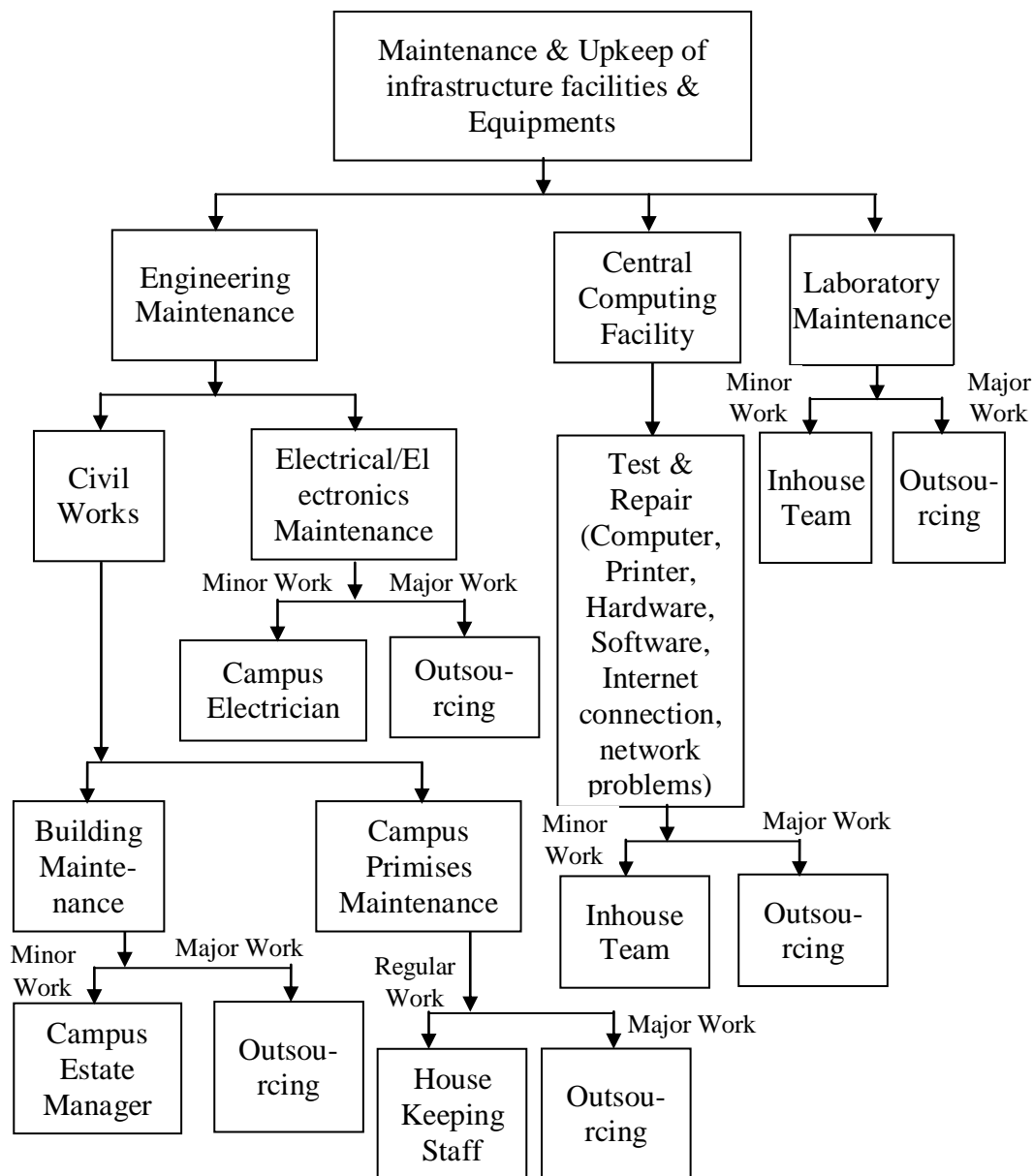
The details of budget allocation during last four years are as follows:

Sr. No.	Amount spent for maintenance	Amount spent(in Rupees)			
		2014-15	2013-14	2012-13	2011-12
1	Building	3,201,011	2,791,235	4,713,912	2,858,665
2	Land	342,227	302,886	246,770	33,769
3	Furniture	39,693	17,166	68,490	13,393
4	Equipment	217,812	461,656	390,123	301,974
5	Computers	213,548	158,567	1,066,456	65,077
6	Vehicle	956,677	980,933	677,960	1,766,896
7	Any other	493,863	225,409	319,399	162,771

4.4.2 What are the institutional mechanisms for maintenance and upkeep of infrastructure, facilities and equipment of the college?

The institute has appointed a team of personnel of all kind of maintenance staff on the payroll of the college which is duly supervised by the Registrar/A.O. The institute has appointed housekeeping staff for day to day cleanliness of corridors, washrooms, classrooms, laboratories, hostels and maintenance of the premises. The maintenance of water coolers is carried out by an annual maintenance contract. The institute has appointed Electrician for repair and maintenance of electrical works. Laboratory equipments are serviced and repaired by the technical assistants of their respective departments for minor repair or by the concerned manufacturers for major repairs. The maintenance of computing facility is carried out by the system administrator and the technical assistants of the respective departments. For the repair and maintenance of civil works, a requisition slip is submitted by the Head of the Department through the Principal to the Campus Estate manager. Finally

periodic checks, reviews and observations by the higher authorities help in upkeep and maintenance of the campus.



Institutional Mechanism for Functional Maintenance

4.4.3 How and with what frequency does the institute take up calibration and other precision measures for the equipments/instruments

The institute has allocated a budget to each department for calibration and precision of laboratory equipment. At the end of the each semester the

physical verification of laboratory equipments is carried out. The instruments which are not working are identified and are repaired by the respective vendors/ service providers so that the instruments are ready before the academic session begins. The day to day maintenance is carried out by the technical staff. The mechanical, electrical, electronics and civil equipments are taken up for the calibration and precision measurement as and when required by the respective departments.

4.4.4 What are the major steps taken for the location, upkeep and maintenance of sensitive equipments (voltage fluctuations, constant supply of water etc)

The major steps taken for location, upkeep and maintenance of sensitive equipments are:

- UPS of 110 KVA is installed in an air conditioned separate room from a dust free environment to ensure constant power supply.
- Generator (320 KVA) is installed in a separate ventilated room and in an organized environment for uninterrupted power supply. The generator set installation room is facilitated with BC and ABC fire extinguisher.
- Transformer – 500KVA, 22KV/433V is installed in the institute.
- Aqua guard water coolers are provided on each floor in the institute and are cleaned periodically.
- The laboratory in charge along with the technical assistant monitor the smooth working of sensitive equipments in their respective laboratories and get them repaired as per the requirement.
- Voltage stabilizers and transformers are installed to control the voltage fluctuations.
- Annual maintenance contracts are executed for the maintenance of UPS and generators.
- Constant water supply is provided in the institute and campus.

Any other relevant information regarding infrastructure and learning resources which the college would like to include.

- An open access language laboratory equipped with audio interactive multimedia is available to hone communication skills.
- A sound proof studio is available to record teaching material.
- Fire extinguishers are installed at prominent locations in the campus and are checked periodically.
- CCTV cameras are in all classrooms, reading room and computer laboratories.
- CCTV monitor is installed in the Principal's cabin for online supervision and monitoring of academic activities.
- Bank with ATM facility.
- Xerox center and General stores.



5.1. Student Mentoring and Support

5.1.1. Does the institution publish its updated prospectus/handbook annually? If 'yes', what is the information provided to students through these documents and how does the institution ensure its commitment and accountability?

'Yes', The Institute publishes every year, the prospectus containing details about departments of the college, which includes the activities conducted, special features, placement statistics, major recruiters, library & infrastructural facilities and achievements. The institute also gives induction kit to every admitted student, which contains CD having Academic Calendar, hostel, library, faculty, campus, GEMS, SOC, Placement, syllabus, important links etc.

Commitment: The institute keeps its commitment of the information by way of performance monitoring and control through various committees such as AMC, LMC and principal's meeting with HODs and other coordinators.

Accountability: The information provided in the prospectus and induction kit is collected from concerned departments and coordinators. This is verified by HODs and finalized/scrutinized by principal before publishing.

5.1.2. Specify the type, number and amount of institutional scholarships/freeships given to the students during the last four years and whether the financial aid was available and disbursed on time?

The needy students who didn't get any financial assistance by government were given concessions by Honorable President of STES Prof. M. N. Navale sir on their individual applications.

Sr. No.	Financial Year	Financial aid Type	No. of students	Finance amount	Date of disbursement
1	2013-14	Freeship	02	1,39,248	30/09/2013
2	2014-15	Freeship	02	1,43,035	30/09/2014

5.1.3. What percentage of students received financial assistance from state government, Central government and other national agencies?

More than 50% students received financial assistance from central and state government. Following table presents the financial assistance given in last four years.

Types of Scholarship	Agency	No. of students those have received Financial Assistance				
		2010-11	2011-12	2012-13	2013-14	2014-15
Scholarship & Freeship	State Govt.	577	764	981	1177	1296
EBC	State Govt.	183	221	310	381	455

Types of Scholarship	Agency	No. of students those have received Financial Assistance				
		2010-11	2011-12	2012-13	2013-14	2014-15
STC	State Govt.	13	21	33	28	37
PTC	State Govt.	6	12	20	17	19
Minority (MCM)	Central Govt.	5	20	28	28	24
Minority (SGS)	State Govt.	16	23	17	26	23
J&K (Regular)	Central Govt.	1	1	1	1	1
J&K (SSS)	Central Govt.	--	--	--	--	1
GATE	Central Govt.	--	--	1	6	14
Central Sector	Central Govt.	25	24	7	6	20
% of students		56	61	62	62	64

5.1.4. What are the specific support services/facilities available?

- **Students from SC/ST, OBC and economically weaker sections**

The institute gives all support to the students to avail the scholarship and freeship provided by government

Types of Scholarship	Agency	No. of students received Financial Assistance				
		2010-11	2011-12	2012-13	2013-14	2014-15
Scholarship & Freeship	State Govt.	577	764	981	1177	1296

The institute gives facility of paying fees in installments, provides documents for getting education loan. Institute offers free Book Bank Facility of social welfare scheme of SPPU to SC/ST students. Also under earn and learn scheme of SPPU social welfare department, the economically weaker section students who couldn't get any financial assistantship under other schemes, are provided financial support. The notice is circulated and applications are invited from needy students. Interviews are conducted and selection is done on the basis of income and merit of previous year. Remuneration is Rs. 30 per hour and they have to work for 90 hours per month. The type of work they do is library stacking, monitoring reading hall, clerical job in office and department library, lab monitoring etc.

Finance provided under Earn and learn scheme

Sr. No.	Academic Year	Students Benefited	Amount paid by University	Amount paid by College	Total amount paid to students
1	2010-11	11	30820/-	7580/-	38400/-
2	2011-12	16	40740/-	11360/-	52100/-
3	2012-13	26	36230/-	9970/-	46200/-
4	2013-14	34	151637-	31938/-	183575/-
5	2014-15	40	228688/-	44518/-	273205/-
6	2015-16	25	In process	In process	In process

- **Students With Physical Disabilities**

Preference is given to the students with physical disabilities in usage & book issues in Library. They can exchange the books on any day & time. For other students the exchange of books is as per the schedule.

Students who are physically disabled are given extra time in SPPU exams as per norms and Special seating arrangement is made at ground floor for such students.

- **Overseas Students:**

There are no overseas students who have taken admission in the institute.

- **Students to participate in various competitions (National and International)**

Students participate in various competitions and prove their technical and other skills such as presentation skill and team work. Information is circulated in classes to students about various paper presentations, seminars, project competitions, model makings etc. and displayed on notice boards as well. Students are guided by faculty members for participation in these competitions. Usage of laboratories & computer facilities, e journals, library, workshop etc. is extended to students. Financial support is also given to students to participate in gokart, Baja, supra competitions; ‘firodiya’ a drama competition and ‘Robocon’ a national level competition.

Sr. No.	Academic Year	Finance provided by Institute
1	2011-12	6,73,039/-
2	2012-13	10,66,667/-
3	2013-14	4,24,496/-
4	2014-15	3,84,050/-

- **Medical assistance to students: health centre, health insurance etc.**

Health centre: Campus has UHTC (Urban Health and Training Center) where all basic and emergency medical services and counseling are provided. STES has medical college at about 8 KM. It is having full fledged 500 bed multi specialty hospital; it is completely free except medicines, which also provides the medical and counseling facilities to our student on regular basis with the help of qualified consulting doctors, nurses.

Arrangement for emergency medical care is

- One Ambulance is available within campus at the UHTC (Urban Health Training Center) with the required facilities.
- First-aid facility is available at specific places in the college.

Health Insurance:

The students are covered under accident Insurance policy by STES.

Sr. No.	Academic Year	Total Students Insured	Fee per student	Total amount
1	2011-12	2103	11	23133
2	2012-13	2534	11	27874
3	2013-14	3104	25	77600
4	2014-15	3423	25	85575
5	2015-16	3826	25	95650

SPPU also has insurance scheme, the details of which are

Sr. No.	Academic Year	Total Students Benefited	Fee per student	Total amount
1	2011-12	2103	10	21030
2	2012-13	2534	10	25340
3	2013-14	3104	10	31040
4	2014-15	3423	10	34230
5	2015-16	3826	10	38260

- **Organizing coaching classes for competitive exams**
To prepare students for competitive examinations, the college organises training under STP-III (Students Training programme); college also provides infrastructural facilities to organize coaching classes for the same. Study material related to GATE and other competitive examinations is available in the college central library.
- **Skill development (spoken English, computer literacy, etc.,)**
The college identified the need of students who have poor communication skill and the college provided the coaching to improve their soft skill. Language laboratory facility is available. College conducts various STPs, workshops and guest lectures by experts to enhance their skills. For example, college has called corporate trainers such as 'APART' and 'FACE' to teach various skills and conducts in house program STP. The

STES has started English language course in collaboration with Cambridge University. 21 FE students have enrolled for this course.

- **Support for “Slow Learners”**

Provisions are made for conducting additional / Remedial lectures for slow learners, poor performers. Retests are conducted for those who need to improve performance in Internal Tests. Question bank & Set of question papers of previous University examinations are provided. Model Answers & solutions are provided on department servers. Mentoring scheme for guidance is also available.

- **Exposures of students to other institution for higher learning/ corporate/business house etc.**

Expert academicians and industrialists are invited regularly for guest lectures. Our students get the benefit of sharing of their invaluable expertise. The college also arranges visits to industries for practical exposure to industry environment. The students are motivated to participate and present research papers in various national and international conferences. Each department has MoU with companies, through which student and staff can interact with industry in various activities like guest lecture, industrial visit, sponsored projects etc. Letter of recommendation is given to students who aspire to go abroad for higher learning. Sinhgad Overseas Cell (SOC) has been setup to assist select students to prepare and guide for admissions in foreign Universities at totally free of cost.

- **Publication of student magazines**

College magazine ‘Mosaic’ is a platform for students to express their creativity, showcase their literary talents and to inspire their fellow students. It also provides recognition to students who have outperformed in various activities like academics, sports and cultural. It is published yearly.

‘Mosaic’ has dedicated student committees guided by faculties. The magazine comprises various sections and each section is headed by a faculty and has dedicated student editor supported by a team of students. A student chief editor heads the complete team under the guidance of a staff co-ordinator.

As a result of this, “MOSAIC” has been a constant award winner in the past five years at the University level competition. The awards bagged by “MOSAIC” are

- **1st prize** in 2010 at Pune district level
- **3rd prize** in 2011 at Pune district level
- **4th prize** in 2012 at University level
- **2nd prize** in 2013 at Pune district level
- **2nd prize** in 2014 at Pune district level.

All departments have wall magazines, in which students can post their arts, latest tech/ nontechnical articles published in media. Institute gives financial support and faculty coordinator to guide them.

5.1.5. Describe the efforts made by the institution to facilitate entrepreneurial skills, among the students and the impact of the efforts.

Efforts made by institute to facilitate ED skill:

- Entrepreneurship awareness program was conducted to promote business skills in students
- The meet of up-coming entrepreneur from different colleges of SPPU like MIT & VIT was arranged.
- The eminent entrepreneurs shared their success stories with the students and motivated them
- Business plan competition was held to inculcate corporate strategies
- Students were also exposed to different industrial personalities during MOU meet to discuss their business plans.

EDC Members

Sr. No.	Committee Members	Designation
1	Dr. V. M. Wadhai	Chairman
2	Mrs. M. S. Joshi	ED Cell In charge
3	Mr. Nakul Sharma	I.T. Dept.Coordinator
4	Mr. Anand Rajguru	Mech. Department Coordinator
5	Mrs. Poonam Pate	Computer Dept.Coordinator
6	Mrs. Roopa Kakkeri	E & TC Dept.Coordinator
7	Mr. Satish Dhote	Civil Dept. Coordinator
8	Shubham Bhuite	Student President
9	Chaitanya Kunkulol	Student Vice President
10	Nilesh Katake	Student Secretary I
11	Shivam Gade	Student Secretary II
12	Ruksar Khan	Treasurer
13	Nidhi Punmiya	Treasurer
14	Shubham Deore	Student Member
15	Sagar Kapadnis	Student Member
16	Shravan Mantri	Student Member
17	Nilesh Chavan	Student Member

Criteria 5 – Student Support and Progression

Sr. No.	Committee Members	Designation
18	Yash Gandhi	Student Member
19	Denny Sam	Student Member
20	Suraj Maskar	Student Member
21	Devashih Shah	Student Member
22	Aishwarya Dhobale	Student Member
23	Pradnya Chacharkar	Student Member
24	Kiran Upase	Student Member
25	Akash Labade	Student Member
26	Mehul Gugale	Student Member
27	Aakash Chhajer	Student Member
28	Abhijit Thombre	Student Member

Details of workshops/guest lecturers conducted

Sr No.	Activity Name	Resource Person, Company/organization	Date
2015-2016			
1	‘Students, be ambitious, be global’, entrepreneurial Activates in association with industries.	Mr. Tomio Isogai , MD, SHARP India Ltd. Mr. Y.H.Gharpure , President, Technology Transfer Associate	01/08/15
2	‘Lakshya Pragtiche’ Path way to be successful entrepreneur	Mr. Avinash Sisode , Chairman, E&G Group	23/07/15
2014-2015			
1	‘Do you Aspire to be an Entrepreneur’ an event to interact with famous business tycoons	Mr. Ashok Kataria , Chairman, CEO, Swipe Telecom Mr. Shripal Gandhi , Ashoka Buildcon	23/03/15
2	‘Awareness of EDC’, Event	Tanul Mohod , Opulent Technologies	18/12/14

- **Impact of Efforts**

Some of the entrepreneurs from our institute are:

Sr. No.	Entrepreneur Student	Company Name
Mechanical Department		
1	Akash Goyel	Teaching Material Developers
2	Harshad Kankriya	Ashok International solapur
3	Bakhtiyar Gandeviya	Machine Reconditioning Units
4	Amey Gole	Shree heat Exchangers
5	Amit Jadhav	SS Tech Buzz
6	Sachine Gajare	Streamline Construction Equipment
E&TC Department		
1	Narayan Pawar	HYC Technologies
Computer Department		
1	Rohan Kulkarni	Opulent infotech
IT department		
1	Tanul Mohod	Opulent infotech
2	Pravin Hinge	Clavem Infotech, Pune
3	Kiran Pawar	FalconSoft, Pune
4	Dhanraj Patil	dreamatic software pvt.ltd

Technology Business Incubation (TBI)

The term incubation refers to the process of support and Technology business incubation is the temporary, facilitative support provided to start-up enterprises. Technology transfer is the process of transferring skills, knowledge, methods of manufacturing and facilities among governments, universities and other institutions to ensure that scientific and technological developments are accessible to wider range of users.

Host Preparedness for TBI

1. R&D and Industrial consultancy track record.
2. Academic Research project
3. No. of Ph.Ds.
4. Entrepreneurship Programs and Activity.
5. Alumni Association.
6. Incubation College wise Interest.
7. No. of MOUs (Active/Passive).
8. Patents Filed/Published.

9. Books Published.
10. Area for Incubation start.
11. Well Equipped Laboratories.
12. Facilities and Domain wise expertise of subjects.
13. Events organized, Conference and Paper published
14. Special Achievements and Awards

STES PORTAL FOR TBI ACTIVITY

1. Innovation/Business idea is to be submitted by individual on secure STES TBI web portal
2. Initial scrutiny for further processing is to be carried out
3. Legal mentor monitors the case & look for completing the required formalities
4. Mentoring involves:
 - A. Sales & service mentor
 - B. Finance mentor
 - C. Business planning mentor
 - D. It mentor
 - E. R&D mentor
5. Submit the proposal to DST/ Government/ Funding agencies

Sr. No.	Faculty	Designation
1	Prof. Seema H. Rajput	Head of TBI
2	Mr.Rade P.S.	Mechanical dept coordinator
3	Mr. Sanket Bankar	E&TC dept coordinator
4	Mr. Muzaffar Shabad	Computer dept coordinator
5	Mr.Nakul Sharma	IT dept coordinator
6	Mr. Dhote Satish	Civil dept coordinator
7	Mr. Sasane Santosh	FE dept coordinator

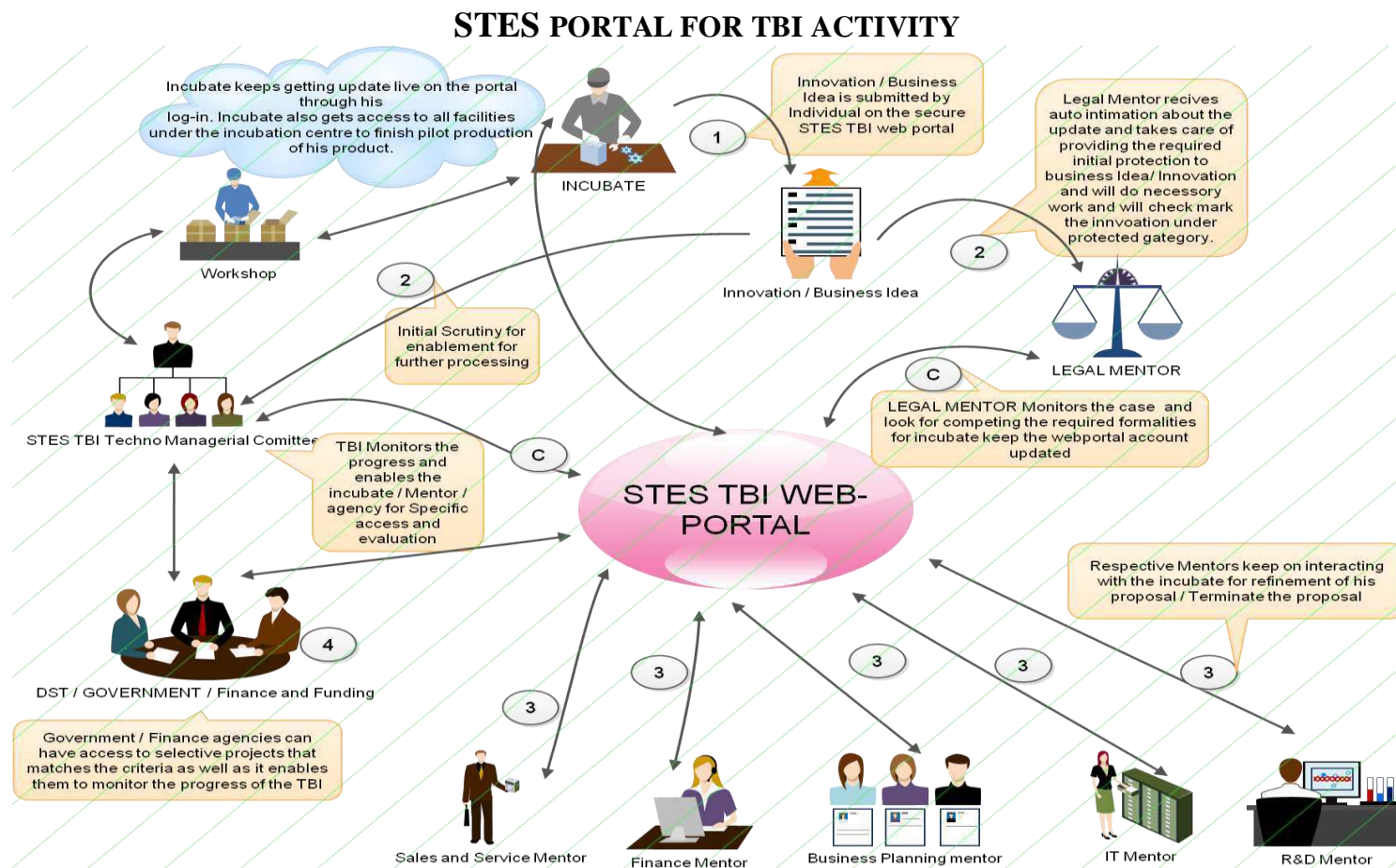


Fig.5.1 Portal for TBI Activity

5.1.6. Enumerate the policies and strategies of the institution which promote Participation of students in extracurricular and co-curricular activities such as sports, games, Quiz competitions, debate and discussions, cultural activities etc.

The policies and strategies are as below:

- To promote selected students in different extracurricular and co-curricular activities.
- To provide financial support for transportation and entry fees payment to participate in various sports and cultural events.
- To provide required facilities in or outside of the campus.
- To grant permission for practice sessions for different competitions.
- To conduct remedial classes and lab sessions for compensation of academic loss of the participating students.
- The STES has two mega events ‘Techtonic and Sinhgad Karandak’ in which hundreds of students of sinhgad institutes and other institutes participate and attend. Techtonic has technical events such as programming, designing contests, workshops and seminars. Sinhgad karandak has cultural events such as dance competition, fashion show street play etc, and sports events such as cricket, football etc.
- The college has given special recognition for students showing remarkable performance in these extra-curricular activities.
- The institute awards best outgoing students from every department during Alumni Meet. The criteria for selecting best students includes not only the academics but participation in other activities is also considered.

5.1.7. Enumerating on the support and guidance provided to the students in preparing for the competitive exams, give details on the number of students appeared and qualified in various competitive exams such as UGC-CSIR- NET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central /State services, Defense, Civil Services, etc.

The Institute motivates its students for higher studies and for research work. Students are allowed to have access to library and reading hall till midnight so that they can prepare for competitive examinations. Students are helped by the teachers in matters of study materials and counseling for the right strategies. Academic flexibility in attendance is provided to students for such examinations. Students can appear in online examinations using internet facilities at our institution. Many students have appeared and qualified in various competitive exams.

Details on the number of students appeared and qualified in various competitive exams like GATE /GRE /TOEFL /CET /NICMAR /IES /XAT /ME

Year	No. of qualified Students	Year	No. of qualified Students
2014-15	26	2012-13	10
2013-14	31	2011-12	10

5.1.8. What type of counseling services are made available to the students? (Academic, personal, career, psycho-social etc.)

The Institute provides various counseling services to the students such as course work, individual needs , career advancement.

Academic Counseling:

The department has a mentoring scheme in which average 20 students are assigned to each faculty member who counsel the students regularly and look after their academic related issues. Students are guided by mentors regarding academic performance in mentor meetings.

Career advancement:

Institute arranges seminars by alumni , industry experts on a range of career opportunities present in various streams. Campus recruitment is provided through central Training & Placement Cell as well as through job fair. Sinhgad Overseas Cell (SOC) provides facility to promote students abroad for Higher Education.

Personal & Psycho-social counseling:

The students during the course of their studies in the Institute come across various issues. They are, at times unable to take the right decisions, and handle different personal problems. To help students in serious situation the campus health center in which professional doctors are made available for the students for consultation. In each mentor meeting, students personal problems are discussed individually by mentor. Also, at Institute level following different Cells work to help the students:

- Student Grievance Redressal Cell
- Anti Sexual Harassment Committee
- Anti Ragging Committee

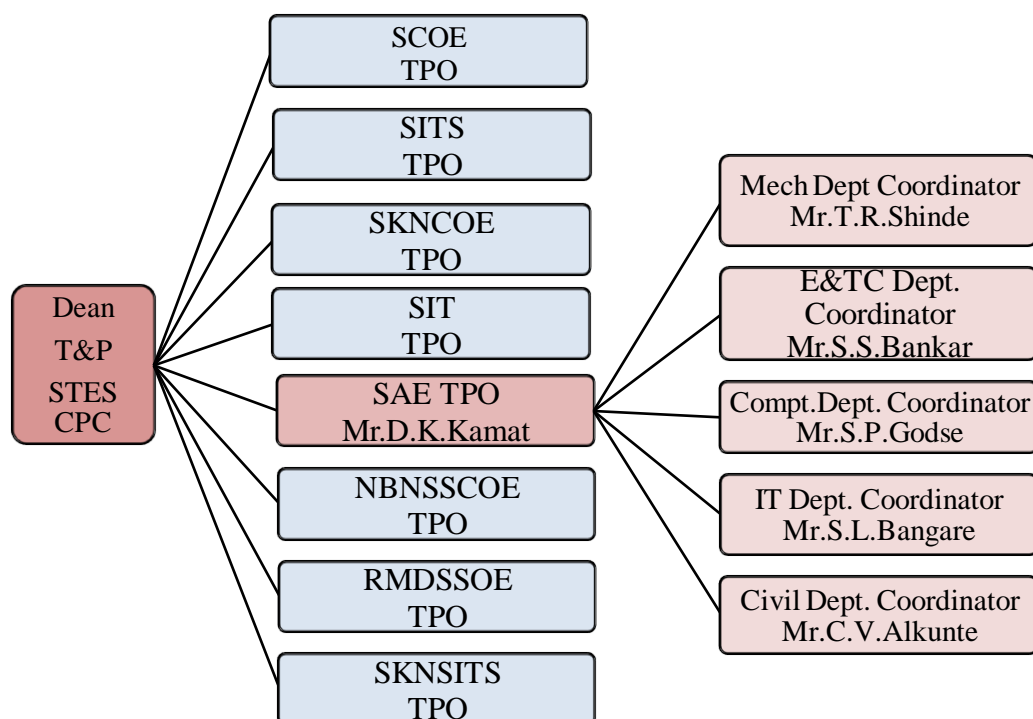
5.1.9. Does the institution have a structured mechanism for career guidance and placement of its students? If ‘yes’, detail on the services provided to help students, identify job opportunities and prepare themselves for interview and the percentage of students selected during campus interviews by different employers (list the employers and the programmes).

The STES group has central placement cell (CPC), which sets various policies for training and placement of all its constituent colleges. It has a

structured mechanism for career guidance for students. Under the guidance of the Principal, the Institutes training and placement officer in coordination with Departmental Training and Placement coordinators carry out different activities related to both training and placement.

These include:

- Collection of data and CV's of each student (student history card)
- Registration of students for placement through website "www.mycampus.info"
- Arranging for training activities to enhance Aptitude and soft skills,
- Arranging group discussions and mock interviews,
- Arranging Expert / guest lecturers of Industry personnel,
- Arranging Industrial training,
- And lastly arranging Campus placement of different industries.



Percentage of students selected during campus interviews:

Sr. No.	Year	No. of Students Selected through campus placement	Campus Selection (%)
1	2011-12	136/230	59.13
2	2012-13	93/296	31.41
3	2013-14	153/394	38.83
4	2014-15	154/466	33.04

List the Employers

Sr. No.	Dept	Names of Employers
1	Mechanical	Eaton Corp, Accenture, Mahindra Vehicles, Tech Mahindra, Musigma, Infosys, Atlas Copco Cognizant, Opulent Tech
2	Electronics and Telecommunication	Cognizant, Accenture, Amdocs, IGATE, Soft Link, Infosys, Convergys, Lobo Staffing Solution, Tech Mahindra, Syntel, L&T, IBM, PerkinElmer, Staff Selection Commission JE, Telecom Network Solutions
3	Computer & IT	Mu Sigma, eQ Technologic, Infosys, Cognizant, Accenture, Tech Mahindra, Nihilent, Harbinger, L&T, Tieto, Mindtree, Zensar, NTT Data, Persistence, HSBC, Mphasis, IGATE, ATOS, Fiserv, Inautix, ACI WORLD WIDE, Xoriant, YagnaIQ, Convonix, Synechron, Newgen, Bitwise
4	Civil	Rohan Builders Pvt. Ltd, Cognizant India Pvt. Ltd, ICICI Securities Pvt. Ltd

5.1.10. Does the institution have a student grievance redressal cell? If yes, list (if any) the grievances reported and redressed during the last four years.

- List of members of student grievance redressal cell:

Sr. No.	Name of member	Post/ Designation
1	Dr. Vijay M. Wadhai,	Principal/ Chairman
2	Dr. K. P. Patil	Vice Principal/ Member
3	Prof. S. C. Shilwant	Member
4	Prof. Mrs. L. J. Sankpal	Member
5	Col. D. D. Daarke	Member Secretary

Grievances reported:

The students participating in various drama competitions felt need of the place for practice. It is now made available to them. The students participating in automobile competitions who too required space, were provided the space . Due to increase in intake and natural growth, the parking space was becoming inadequate, so new parking space was provided.

5.1.11. What are the institutional provisions for resolving issues pertaining to sexual harassment?

College has a anti sexual harassment cell under Indian Penal Code Act 2013 “Prevention Prohibition and Redressal Act” to curb violence against women employees and students. Cell takes necessary steps if the incidents

pertaining to sexual harassment require the intervention of the law. Cell is headed by a senior lady faculty.

Till date no such case of sexual harassment has been reported in the Institute.

List of members of anti sexual harassment cell:

Sr. No.	Name of the Staff	Designation
1	Dr. (Mrs.) J. P. Shinde	Chairman
2	Prof. S. C. Shilwant, Faculty	Member secretary
3	Prof. A. N. Adapanwar, Faculty	Member
4	Mrs. L. J. Sankpal, Faculty	Member
5	Mrs. P. B. Alappanvar, Faculty	Member
6	Mrs. Ankita Bhonde, Faculty	Member
7	Mrs. S. R. Gadekar, Special Counselor	Member
8	Ms. Samiksha Patil, Student	Member
9	Ms. Parul Tambe, Student	Member

5.1.12. Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?

Yes, the college has an Anti-Ragging Committee, as provisioned in UGC / AICTE Regulation 2009. Constitution of the Committee and the progress report sent to the University.

Till date, no incident of ragging of any kind has been reported in the Institute.

List of members of anti-ragging committee.

Sr. No.	Name of the Staff	Designation
1	Dr. V. M. Wadhai, Principal	Chairman
2	Dr. P. N. Shinde, Faculty	Member secretary
3	Prof. S. B. Sasane, Faculty	Member
4	Prof. A.S. Patil, Faculty	Member
5	Mr. S. K. Haldkar , Parent	Member
6	Mr. Vivek Phutane, Parent	Member
7	Ms. Samiksha Patil, Student	Member
8	Mr. Akash Rathod, Student	Member
9	Representative, Kondhwa Police Station.	Member

5.1.13. Enumerate the welfare schemes made available to students by the institution.

The institution is working towards ensuring social justice through the various students' welfare schemes. The following welfare schemes are made available for the students.

- **Scholarships & Free-ships:**
Details about the scholarships, various free-ships are displayed on the notice board of the institution. The class teacher guides the students to be the beneficiaries of the various welfare schemes. Similarly scholarships received from various central, state government and other agencies are made available to the students.
- **Bank Services:**
In collaboration with the Canara bank, the institute assists all the students in opening an account. Bank provides net banking for easy transfers. The bank also provides educational loans.
- **Counseling & Placement Service:**
The placement cell extends its service to the students in career guidance, organizes lectures concerning career planning and invites companies for campus recruitment.
- **Health Services:**
The health centre facility as described in 5.1.4 takes care providing the health services to the students.
- **Student associations**
The institute has student associations at department level such as ITSA, ACES, MESA, SAE , ETSA and CESA. Along with this, there are clubs at college level such as NSS , rotaract ,sports, cultural (art circle), robotics, yoga etc.

These clubs are run by students for specific purposes as evident by the names. The students discuss the needs, the plans and interact with management for arranging the programmes from their associations. These associations facilitate students to develop their administrative, leadership and teamwork talents.

- **Woman Empowerment Committee**
This committee attempts to empower women in today's socially challenging and competitive era by organizing lectures and interactions with successful women in various fields

5.1.14. Does the institution have a registered Alumni Association? If 'yes', what are its Activities and major contributions for institutional, academic and Infrastructure development?

'Yes', The institute has alumni association with Reg No: MH/1551/2010/PUNE Dated 29-7-2010. Alumni meet is conducted yearly where hundreds of alumni are present. Wherein they meet and interact with

each other and faculty. The Association helps alumni to rejuvenate the memories of the Institute, and form a network of Alumni.

The office bearers are

Sr. No.	Name of the member	Post
1	Mrs. Seema Rajput	Alumni College Coordinator
2	Mr. S.A. Ladkat	Mechanical Department Coordinator
3	Mrs. P. Y. Pawar	IT Department Coordinator
4	Mr. A. P. Joglekar	E&TC Department Coordinator
5	Mrs. L. J. Sankpal	Computer Department Coordinator
6	Mrs. Amena Tamboli	Civil Department Coordinator
7	Mrs. Mayuri Poojari	FE Department Coordinator

Activities and major contributions:

Association conducts meets at Institute level and at Department level.

Alumni supports placement activities, Invited as Resource persons on areas of their expertise, Work as Examiners for practical examinations/Project evaluation, Participation in curriculum add on courses, Work as Judge for Contests organized at the Institute and render Industrial Training & arranges visits to their industries. Alumni give their feedback during alumni meet to which different remedial actions are taken. For example, alumni suggested training students on current technologies in demand so workshops on such technologies in demand are conducted for the students.

5.2. Student Progression**5.2.1. Providing the percentage of students progressing to higher education or employment (for the last four batches) highlight the trends observed.**

Following table shows the percentage of students progressing to higher education or employment for the last four batches:

No. of Students	Student progression	No. of Students Progressed	% Progression
2011-12			
359	UG to PG	20	5.57
	Employed		
	• Campus selection	136	37.88
	• Other than campus recruitment	39	10.80
2012-13			
398	UG to PG	41	10.30
	Employed		
	• Campus selection	93	23.30
	• Other than campus recruitment	18	4.52

No. of Students	Student progression	No. of Students Progressed	% Progression
2013-14			
581	UG to PG	45	7.70
	Employed		
	• Campus selection	143	24.60
	• Other than campus recruitment	24	4.10
2014-15			
662	UG to PG	24	3.60
	Employed		
	• Campus selection	142	21.40
	• Other than campus recruitment	22	3.30

The above table is represented in Bar graph to show up the trend.

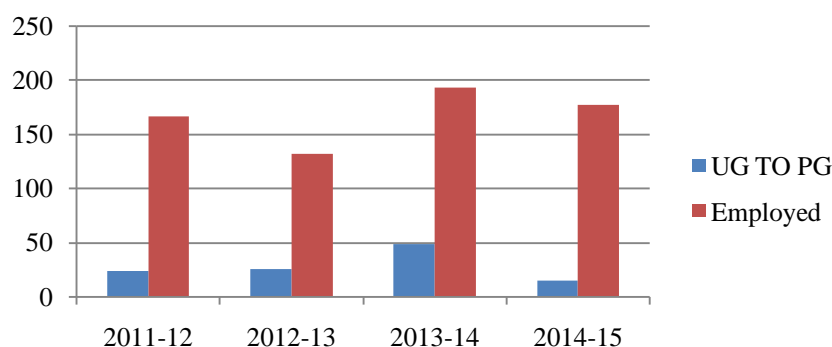


Fig.5.2 Student Progression

5.2.2. Provide details of the programme wise pass percentage and completion rate for the last four years (cohort wise/batch wise as stipulated by the university)? Furnish programme-wise details in comparison with that of the previous performance of the same institution and that of the Colleges of the affiliating university within the city/district.

Completion Rate

Passing year	No. of Admitted students in corresponding First year	Students reached final year	Completion rate (reached final year /admitted)	Completion rate of other college (SCOE, Vadgaon)
Mechanical Department				
2011-12	63	48	76	71
2012-13	109	87	79	63
2013-14	207	162	78	60

Passing year	No. of Admitted students in corresponding First year	Students reached final year	Completion rate (reached final year /admitted)	Completion rate of other college (SCOE, Vadgaon)
2014-15	254	176	69	55
E&TC Department				
2011-12	148	91	61	73
2012-13	150	88	59	70
2013-14	221	143	65	75
2014-15	244	164	67	77
IT Department				
2011-12	81	49	60	66
2012-13	94	56	59	70
2013-14	76	55	72	68
2014-15	89	58	65	72
Computer Department				
2011-12	77	51	66	76
2012-13	79	61	77	75
2013-14	82	47	57	71
2014-15	172	111	64	72
Civil Department				
2013-14	72	47	65	58
2014-15	77	69	90	69

Pass Rate

Passing year	No. of students in final year (including backlog students)	Students passed final year	Pass %= (passed/ /total students))	Pass % of other college (SIT, Lonavala)
Mechanical Department				
2011-12	66	55	83	74
2012-13	105	102	97	89
2013-14	198	177	90	83
2014-15	195	176	90	91
E&TC Department				
2011-12	108	98	91	94
2012-13	116	113	97	98
2013-14	185	179	97	98
2014-15	174	164	94	94
IT Department				
2011-12	63	60	95	96

Passing year	No. of students in final year (including backlog students)	Students passed final year	Pass %= (passed/total students))	Pass % of other college (SIT, Lonavala)
2012-13	75	67	89	100
2013-14	70	63	90	100
2014-15	60	58	96	100
Computer Department				
2011-12	72	60	83	80
2012-13	68	64	94	79
2013-14	80	67	83	95
2014-15	127	119	93	96
Civil Department				
2013-14	47	47	100	95*
2014-15	76	74	97	96*

* These results are of SCOE, Vadgaon, Pune.

5.2.3. How does the institution facilitate student progression to higher level of education and/or towards employment?

Higher level of education:

Sinhgad Overseas Cell (SOC) provides facility to promote students abroad for Higher Education. This cell helps students to find information on where to study, how to apply, entry requirements, getting a student visa, tuition fees and funding, finding study abroad scholarships and other practical information. 15 best students (from TE) will be selected out of 8 engineering institutes. SOC is a free of cost initiative.

Towards employment:

The STES group has central placement cell (CPC), which sets various policies for training and placement of all its constituent colleges. It has a structured mechanism for career guidance for students. Under the guidance of the Principal the Institutes training and placement officer in coordination with Departmental Training and Placement coordinators carry out different activities related to both training and placement.

These include:

- Collection of data and CV's of each student (student history card)
- Registration of students for placement through website "www.mycampus.info"
- Arranging for training activities to enhance Aptitude and soft skills,
- Arranging group discussions and mock interviews,
- Arranging Expert / guest lecturers of Industry personnel,
- Arranging Industrial training,
- And lastly arranging Campus placement of different industries.

The portfolio (job type, pay, eligibility etc.) of company is informed to the students. The interested students are required to do online registration. The selected students after scrutiny of registrations are invited for online test, GD and PI. The final selected students are then informed.

To seek better employment, the institution conducts student training programs in five modules as given

STP1 SE Sem I	Personal and Career Goal Setting, SWOT Analysis, Behavioral Skills, Public Speaking, Presentation Skills, Resume Writing, Listening Skills, Group Discussions, Report Writing, Letter/ Application Writing
STP2 SE Sem II	Listening Skills, Reading Skills, Writing Skills, Speaking Skills
STP3 T.E. Sem I	Branch specific fundamentals of core subjects
STP4 T.E. Sem II	Group Discussion, Personal Interview, Research Methodology
STP5	Workshops by professional companies on technologies which are demanded by students and recommended by employers/alumni.

- Institute provides online application facility to the interested students for giving Transcripts and Staff provides the **Letter of Recommendation** to the students.
- STES has taken initiative to organize the Job Fair for the students in addition to Central placement cell.
- Companies provide the Employment training to the students to increase the employability e.g. Zensar ESDP program.
- STES arranges for AMCAT and employability(QA/LR) tests

In addition to this, lot of Guest Lectures, workshops, seminars and Value added programmes are organized for the knowledge enhancement of the students to make them industry ready.

5.2.4. Enumerate the special support provided to students who are at risk of failure and drop out

Remedial classes / practicals are conducted for students who are at risk of failure. The students who score less mark in Phase I and Phase II examinations have to attend remedial classes. Retests are conducted for the students who fail in internal examination. In case of more failure rate in Pune university examination, additional coaching is given by faculty. Parents are informed about their ward in case of poor attendance and performance. Also, during TG meet such students are counseled.

5.3. Student Participation and Activities

5.3.1. List the range of sports, games, cultural and other extracurricular activities available to students. Provide details of participation and program calendar.

A. Range of sports, games, cultural and other extracurricular activities available to students

Sports: Chess, Volleyball, Badminton, Kabaddi, Lawn Tennis, Basketball, Cricket, Fencing, Hockey, Football, Swimming, Athletics,

Cultural Activities: Drama, Dance, Singing, Fashion

Extracurricular Activities: Teachers Day, Engineers Day, CSR, NSS, Non Technical Competitions.

B. Students have participated in activities at various levels such as intracollege, intercollege, University, national and international level. In sports activity, the students have participated in Chess, Volleyball, Badminton, Kabaddi, Lawn Tennis, Basketball, Cricket, Fencing, Hockey, Football, Karate and Athletics. In cultural category, the students have participated in sinhgad Karandak (Drama, Dance, Singing and Fashion), firodiya Karandak (drama competition), Purushottam Karandak (drama competition) and street plays. In cocurricular category, students have partaken in paper presentation, model making, programming, quiz and project competitions. In extracurricular activities, the students have been involved in various day celebrations, robowar and Campus2Corporate competition.

Sinhgad Karandak – NEON 2016

Day-wise Summary

Sr. No.	Day and Date	Event	Inter Campus	Time	Venue
1	09/01/2016 Saturday	Live In Concert/ Inauguration Ceremony	-----	06:00 PM to 08:30 PM	Residential School Ground / Cultural Center (Vadgaon Campus)
2	10/01/2016 Sunday	Solo Dance	12+12=24	12:30 PM to 02.15 PM	Cultural Center (Vadgaon Campus)
		Group Dance	12+12=24	02:30 PM to 5.00 PM	
		Stage Play	12+12=24	5:15 PM to 9:30 PM	
3	11/01/2016 Monday	Sinhgad Idol Solo Singing	12+12=24	12:30 PM to 03:00 PM	Cultural Center (Vadgaon Campus)
		Sinhgad Idol Duet Singing	12+12=24	03:15 PM to 5.45 PM	
		Aegis of Rock	12	6:00 PM to 9:30 PM	
4	12/01/2016 Tuesday	Mr. and Miss Sinhgad	12+12=24	02:30 PM to 4:00 PM	Cultural Center (Vadgaon Campus)

5.3.2. Furnish the details of major student achievements in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. for the previous four years.

The major student achievements in co- curricular, extracurricular and cultural activities at different levels is listed below

SPORTS

Year	Name of Event	Level	Achievement	College / dept
2015-16	Fencing (Sabre) & Fencing(EPEE)	State	Gold Medal Winner	Computer
2015-16	Tennis(M)	State	5 th	IT
2014-15	Cricket	District	Winner	College
2014-15	Basketball	Interzonal University	Certificate of merit	College
2014-15	Hocky	Interzonal University	Certificate of merit	College
2014-15	4th World Martial Arts	International	1 st	ETC
2013-14	Volleyball	National	1 st	College
2013-14	Cricket	Inter Collegiate	Winner	College
2013-14	Cricket	Inter Collegiate	Man of the series	College
2013-14	Table Tennis	Inter campus	Runner Up	College
2013-14	Basket Ball	Inter campus	Runner Up	College
2013-14	Table Tennis	Inter campus	Winner	College
2013-14	5th National Vovinam Championship	National	Gold Medalist	ETC
2013-14	8th NSKA Karate Championship	International	3 rd	ETC
2012-13	Dyanganga Cricket Karandak	State	Winner	College
2012-13	Table tennis	State	Winner	College
2012-13	Throw ball	State	Winner	College
2012-13	Kurukshetra Cricket	State	Winner	College
2011-12	Football- MPulse	State	1 st	College

Criteria 5 – Student Support and Progression

Year	Name of Event	Level	Achievement	College / dept
2011-12	Kurukshetra Football	State	Winner	College

Cultural

Year	Name of Event	Level	Achievement	College / Dept
2015-16	Ninad Patane	College	Best Actor	Computer
2014-15	Algorythm '15 Street Play	State	2 nd	College
2014-15	KJ's Youth Festival 2015 Street Play	State	1 st	College
2014-15	Melange 2015 Pathnatya	State	2 nd	College
2013-14	Firodiya Karandak	University	2 nd in Folk Dance	College
2013-14	Firodiya Karandak	University	Special skill (1 st) Background score (2 nd)	College
2011-12	Firodiya Karandak	State	Best synthesizer	College
2011-12	Firodiya Karandak	State	Western Dance	College
2011-12	Rock-On (Innofest'12)	State	Dance	College

Cocurricular

Year	Name of Event	Level	Achievement	College / Dept
2015-16	Supra 2015	National	1 st in CAE, 2 nd in Acceleration,	Mechanical
2015-16	Quad Torc15	National	1 st in Endurance, Champions in Quad Torc 2K15	Mechanical
2015-16	Gokart NEXUS	National	2 nd Runner up Best in Skid Pad, 1 st in Design, Best in ANSYS	Mechanical
2015-16	Gokart NEXUS	National	1 st in Acceleration, 2 nd in Design	Mechanical
2015-16	Testimony	All India	Top 300	Computer

Criteria 5 – Student Support and Progression

Year	Name of Event	Level	Achievement	College / Dept
	Competition		All India Rank	
2015-16	Code Vista Competition	All India	Maharashtra level-39 Rank And All India Rank-231	Computer
2015-16	Internshala Student Partner	College	Internshala Student Ambassador	Computer
2015-16	Project Exhibition	College	Winner	Computer
2014-15	Campus2Corporate pro-2014	National	5 th	College
2014-15	Campus2Corporate pro-2014	National	23 rd	College
2014-15	Campus2Corporate pro-2014	National	1 st	College
2014-15	Campus2Corporate pro-2014	National	3 rd	College
2014-15	Campus2Corporate pro-2014	National	9 th	College
2014-15	Paroksha-2014	National	2 nd	ETC
2014-15	Student Formula 2014	National	1 st Position in Autocross & 2 nd position in Acceleration	Mechanical
2014-15	Contraption	National	2 nd	Mechanical
2014-15	Virtual Supra 2014	National	1 st	Mechanical
2014-15	Formula Student India 2015	National	17 th	Mechanical
2014-15	I-Mech It	National	2 nd	Mechanical
2014-15	Auto IQ	National	2 nd	Mechanical
2014-15	Contraption	National	1 st	Mechanical
2014-15	Kruttika Award	-	Award for girls Topper	Mechanical
2014-15	SUPRA	National	17 th	Mechanical
2014-15	Smart Infrastructure for better Tomorrow	National Conference	1 st	Civil
2014-15	Poster Presentation Competition	University	1 st	Civil
2014-15	NNSC Workshop Organized by Network Bulls in	National Workshop	Zonal Winner	Computer

Criteria 5 – Student Support and Progression

Year	Name of Event	Level	Achievement	College / Dept
	Association with eCell IIT Bombay			
2014-15	Community Manager Traffline	National	Ambassador	Computer
2014-15	Google Student Ambassador	International Program	Ambassador	Computer
2014-15	Industrial level summer training Program	National	Zonal Winner	Computer
2014-15	Techno quiz	University	1 st	Civil
2014-15	Smart Infrastructure for better Tomorrow	State	1 st	Civil
2014-15	Poster Presentation Competition	University	1 st	Civil
2014-15	Student Formula 2014	National	1 st Position in Autocross & 2 nd position in Acceleration	Mechanical
2014-15	Contraption	University	2 nd	Mechanical
2014-15	Virtual Supra 2014	National	1 st	Mechanical
2014-15	Formula Student India 2015	National	17 th	Mechanical
2014-15	I-Mech It	University	2 nd	Mechanical
2014-15	Auto IQ	University	2 nd	Mechanical
2014-15	Contraption	University	1 st	Mechanical
2014-15	Kruttika Award	University	Award for girls Topper	Mechanical
2014-15	SUPRA	National	17 th	Mechanical
2014-15	NNSC Workshop Organized by Network Bulls in Association with eCell IIT Bombay	National	Zonal Winner	Computer
2014-15	Community Manager Traffline	National	Ambassador	Computer
2014-15	Google Student Ambassador	International	Ambassador	Computer
2014-15	Industrial level summer training Program	National	Zonal Winner	Computer

Criteria 5 – Student Support and Progression

Year	Name of Event	Level	Achievement	College / Dept
2014-15	Getting and cleaning data (4 week online course)	InterNational	International certification	Computer
2014-15	R Programming (4 week online course)	InterNational	International certification	Computer
2014-15	The Data Scientist's Toolbox (4 week online course)	InterNational	International certification	Computer
2014-15	Techno quiz	University	1 st	Civil
2013-14	Alacrity Code chef	National	2 nd	IT
2013-14	Alacrity Code chef	National	2 nd	IT
2013-14	Perception RoboWar	National	1 st	IT
2013-14	C- Programmin Contest	State	1 st	IT
2013-14	Paroksha-2014	National	2 nd	ETC
2013-14	XCEED -2014	National	Best Innovative Idea	ETC
2013-14	Wizard -2014	National	1 st	ETC
2013-14	BAJA-SAE India	National	2 nd Position Go green award	Mech
2013-14	Robowar	National	2 nd	Mech
2013-14	Gokart Championship	InterNational	Participated	Mech
2012-13	ACCLIVITY 2013	National	2 nd	ETC
2012-13	NIRMAN 2013	National	2 nd	ETC
2012-13	M-pulse 2013	National	3 rd	ETC
2012-13	National Technical Symposium (Elysium.13)	National	2 nd	ETC
2012-13	Techno-Beatz 2013	National	1 st	ETC
2012-13	SPIRITUA 2013	National	1 st	ETC
2012-13	IETE 2013	National	1 st	ETC
2012-13	Innofest 2013	National	2 nd	ETC
2012-13	Carnival de Alacrity-2013	National		Computer
2011-12	Thunderbotz	National	1 st	ETC
2011-12	Melange	National	Finalist	ETC
2011-12	TECHNOWIT	National	Recognition of excellence	ETC

Year	Name of Event	Level	Achievement	College / Dept
2011-12	TECHNOWIT	National	Recognition of excellence	ETC
2011-12	PRANETA-12 National Technical Symposium	National	1 st	Computer
2011-12	Cybernetics and Informatics NCCI-2012	National	2 nd	Computer
2011-12	INNOFEST-2012”Technet Pirates”	National	1 st	Computer
2011-12	INNOFEST-2012 “Lost and Found”	National	1 st	Computer
2011-12	EXCELSIOR 2K12”NETWORK HUNT”	National	1 st	Computer
2011-12	UNIQUE ACADEMY UPSC/MPSC “DOTA”	National	2 nd	Computer
2011-12	insignia-11 “DOTA GAMING”	College	1 st	Computer
2011-12	“CSI ONLINE Competition-2011 ”	College	1 st	Computer
2011-12	INNOFEST-2012 “BLITZ CODING”	National	1 st	Computer
2011-12	“CSI ONLINE Competition-2011 ”	College	3 rd	Computer
2011-12	SEED IT IDOL	College	1 st	Computer

University Rankers:

Sr. No.	Name	Class	Academic Year	SPPU Rank
1	Onkar Jadhav	SE(Mechanical)	2012-13	8 th
2	Zeba Khan	BE(Mechanical)	2013-14	4 th
3	Shedage Tushar	BE (ETC)	2013-14	5 th
4	Arora Pooja	BE(IT)	2011-12	4 th

5.3.3. How does the college seek and use data and feedback from its graduates and employers, to improve the performance and quality of the institutional provisions?

Institute collects feedback from the Employers during Campus Interviews, Meetings. Feedbacks contain information regarding students' performance in interview, industry requirements, Curriculum Improvement etc. Feedback is also taken from Alumni during Alumni Meets, Formal Meetings and when they come to give Lectures. The feedback helps in designing the training modules for the current students. E.g. STP5 has been introduced to improve the overall employability of the student by way of giving training of GD,PI, communication skills, QA,LR and special value added courses were introduced such as Big data,Hadoop etc.

The **AMC (Academic monitoring committee)**, collects feedback from various stakeholders and uses it improve the process and performance.

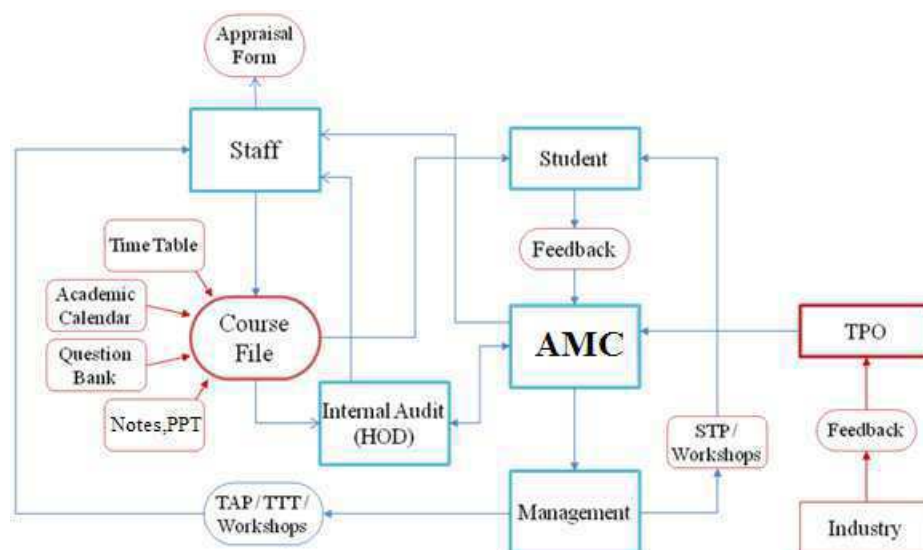


Fig.5.3 Feedback Processing

5.3.4. How does the college involve and encourage students to publish materials like catalogues, wall magazines, college magazine, and other material? List the publications/ materials brought out by the students during the previous four academic sessions.

The Institute publishes a magazine named as “Mosaic”. The College encourages publishing authentic materials in various areas like paintings, poems, photography and articles related to technical as well as societal interest. Apart from this, departments display wall magazine which exhibits the students’ literal skills.

Every Year Institute participates in Savitribai Phule Pune University Magazine

Competition. The students of the Institute have been winning many prizes in various categories.

Awards achieved by college magazine ‘Mosaic’

- **1st prize** in 2010 at Pune district level
- **3rd prize** in 2011 at Pune district level
- **4th prize** in 2012 at University level
- **2nd prize** in 2013 at Pune district level
- **2nd prize** in 2014 at Pune district level

The achievements of students and faculties are published in departmental Newsletter. The Institute also promotes the students to publish technical papers in National/international conferences/journals.

5.3.5. Does the college have a Student Council or any similar body? Give details on its selection, constitution, activities and funding.

Yes, as per the Rules and regulations Under provision of section 40(2)(b) of the Maharashtra Universities act, 1994 and guidelines were provided by Board of Students’ Welfare, Pune University, College has formed the Student Council.

Student council is formed for every new academic year. In which student from each class is nominated as the class representative. From the members, one student is elected as Secretary. The Student welfare officer and sports officer are also the members of this committee.

Objectives:

- 1) To provide opportunities to enhance leadership and management skills of students
- 2) To have a platform for students where they can discuss their concerns.
- 3) To act as medium of communication between students of institute and University.

Activities: The student council helps the student community to discuss issues pertaining to students and University and arrange various programs for them under various associations.

Funding: The institute bears all expenses incurred for the activities conducted under this council.

Following is the Constitution of Students’ Council for Year 2015-16

Sr.No	Name of the Staff	Designation	Position in Council
1	Dr.Vijay M. Wadhai	Principal	Chairman
2	Mr.Hemant Sanjay Badgujar	B.E.(E &TC)	Secretary
3	Prof.S.S.Patil	Asst,Professor (Students’ Welfare)	Member(Faculty)

Criteria 5 – Student Support and Progression

		Officer)	
4	Prof.A.M.Magar	Asst, Professor (Sports Officer)	Member(Faculty)

Sr.No.	Name of the Students	Class	Member(Student)
5	Mr.Nanavati Sujay Chetan	B.E.(Civil)	Representatives (Civil Branch)
6	Mr.Rajat Singh Manhas	T.E.(Civil)	
7	Mr. Sawant Shubham Sudhir	S.E.(Civil)	
8	Ms.Pandya Dwiti Bakul	B.E.(Computer)	Representatives (Computer Branch)
9	Mr. Khalid Ahmed Sayad	T.E.(Computer)	
10	Mr.Huzefa Ali	S.E.(Computer)	
	Mr.Hemant Sanjay Badgujar	B.E.(E &TC)	Representatives (E &TC Branch)
11	Mr. Mane Jitendra Krishnat	T.E.(E &TC)	
12	Mr.Deepak D.Dhormare	S.E.(E &TC)	
13	Ms.Jain Jyoti Dinesh	B.E.(I.T)	Representatives (I.T Branch)
14	Ms.Priyanka Rajendra Sharma	T.E.(I.T)	
15	Mr.Ritesh Adlak	S.E.(I.T)	
16	Mr.Niranjan Kumar	B.E. (Mech)	Representatives (Mechanical Branch)
17	Mr.Raut Jotiram Subhash	T.E. (Mech)	
18	Mr.Alok Kumar Srivastava	S.E. (Mech)	
19	Mr.Pawar Kulbhushan Nanasaheb	FE (I Shift)	Representatives (FE Section)
20	Mr.Shinde Ajay Dilip	FE (II Shift)	
21	Mr.Navin Mutha	T.E.(Computer)	Sports Representative
22	Mr.Pratik Sakhare	T.E. (I.T)	Cultural Representative
23	Ms.Aishwarya Jadhav	B.E. (E & TC)	Ladies' Representative
24	Ms.Almas Shaikh	T.E.(Computer)	Ladies' Representative

5.3.6. Give details of various academic and administrative bodies that have student representatives on them.

- Student Council
- IETE Student Chapter
- ED cell
- Anti Ragging Committee
- Anti sexual harassment committee
- NSS (National Service Scheme)
- Departmental Students Associations: ITSA, ACES, MESA, SAE, ETSA, CESA.

5.3.7. How does the institution network and collaborate with the Alumni and former faculty of the Institution?

Network and collaboration with the Alumni: Networking is done through social media such as facebook page, registration through google forms and through STES website .The interactions between the Alumni and the present students give a chance for both the parties to develop positive synergies to enhance growth. The Alumni Association acts an interface between the eminent alumni and the college, creating a strong network that helps in nurturing executives who can thrive in a challenging corporate environment.

Activities and contributions:

Association conducts meets at Institute level and at Department level.

An alumni supports placement activity, Invited as Resource persons on areas of their expertise for Project evaluation, Participation in curriculum Development, Work as Judge for Contests organized at the Institute & arrange visits to their industries.

Interaction with former faculty is done through keeping contact details and calling these faculties for Guest lectures, as a Judge for competitions and inviting them as External Examiner for UG, PG Exams.



6.1 Institutional Vision and Leadership

6.1.1. State the vision and mission of the Institution and enumerate on how the mission statement defines the institution's distinctive characteristic in terms of addressing the needs of the society, the students it seeks to serve, institution's traditions and value orientations, vision for the future, etc?

“Education is light. Education is the way to a larger purpose. The ambition to build India into an educational leader in the world. We walk on, with faith, with commitment and with grace.”

- Prof. M. N. Navale, Founder President, STES

The Institute has been established by Hon. Prof.M.N.Navale in 2005 as a technical educational hub to meet the requirements of the society. The Vision and Mission statements which follow the national as well as international technical educational policy as stated below.

Vision:

उत्तमपुरुषान् उत्तमाभियंतृन् निर्मातुं कटीबद्धावयम्

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

Mission:

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

The top management of this institute is in education field since last 24 years and The Chairman being the educationalist is focusing on every institute under the umbrella of STES as Center of Excellence in education. In view of this he has framed the policies and strategies to create quality work culture in the institute. In order to cope up with current technical trends and challenges, the institute facilitates students by providing with opportunities in different perspectives like dynamic approach which develops skills required for Entrepreneurship, Competitive environment, brain storming sessions for nurturing the creative thinking, attitude for diverse point of view, personality development and soft skills. The Institute has ensured its objectives and the goals to define the institution's distinctive characteristics in the following manner:

- The Institute has been set up with a mission to impart Quality Education necessary for the holistic development of students thereby making them

capable of being better employable and at par with the highly competitive job market.

- The Institute undertakes the development of student simultaneously on curricular, co-curricular and extracurricular activities. The curriculum is such that it enhances and strengthens the fundamental and conceptual knowledge base of students. The co-curricular activities are mainly focused on bridging the gap between the academic and Industrial expectations.
- The institute equips young learners by inculcating ethics and leadership potential. It also sensitizes learners towards inclusive social concerns, human rights, gender and environmental issues.
- The institute is equipped with the clear perspective plans for future development and strategies to maintain competitive edge in imparting quality education.

6.1.2. What is the role of top management, principal and faculty in design and implementation of its quality policy and plans?

The Sinhgad Technical Education Society, one of the renowned technical educational hub in Pune, has gained its name in the field, by implementing their plans and policies effectively and efficiently through the participative type of the governance. The Top Management comprises of

1. The Founder President/Secretary,
2. The Governing Body and
3. The Local management Committee.

A) Governing Body

Sr. No.	Name	Designation
1	Prof. M. N. Navale, Founder President, S.T.E.S.	Chairman
2	Dr. (Mrs.) Sunanda M. Navale, Founder Secretary, S.T.E.S.	Member
3	Mr. Rohit M. Navale, Vice-president (HR), S.T.E.S.	Member
4	Mrs. Rachana M. Navale -Ashtekar, Vice-president (Admin), S.T.E.S.	Member
5	Dr. A.V. Deshpande, Registrar, S.T.E.S.	Member
6	Chairman, AICTE, New Delhi	Member
7	Western Regional Officer, AICTE, Mumbai.	Member
8	Nominee of Govt. of Maharashtra	Member
9	Director of Technical education, Maharashtra State	Member
10	Nominee of University of Pune	Member
11	Dr. Vijay M. Wadhai, Principal	Member Secretary

B) Local Managing Committee

Sr. No.	Name	Designation
1	Prof. M. N. Navale, Founder President, S.T.E.S.	Chairman
2	Dr.(Mrs.) Sunanda M. Navale, Founder Secretary, S.T.E.S.	Member
3	Mr. Rohit M. Navale, Vice – President (HR), S.T.E.S	Member
4	Mrs. Rachana M. Navale-Ashtekar, Vice-President(Admin), S.T.E.S.	Member
5	Dr. Arvind V. Deshpande, Registrar S.T.E.S.	Member
6	Dr. K. P. Patil	Member Representative Teaching Staff
7	Prof. Abhay Adapanwar	Member Representative Teaching Staff
8	Dr. Daljeet Kaur	Member Representative Teaching Staff
9	Mr. S. N. Kamat	Member Representative Non- Teaching Staff
10	Mr. G. K. Shahani	Special Invitee
11	Dr. Vijay M. Wadhai, Principal	Member Secretary

The management organization chart is shown in **Fig.6.1**.

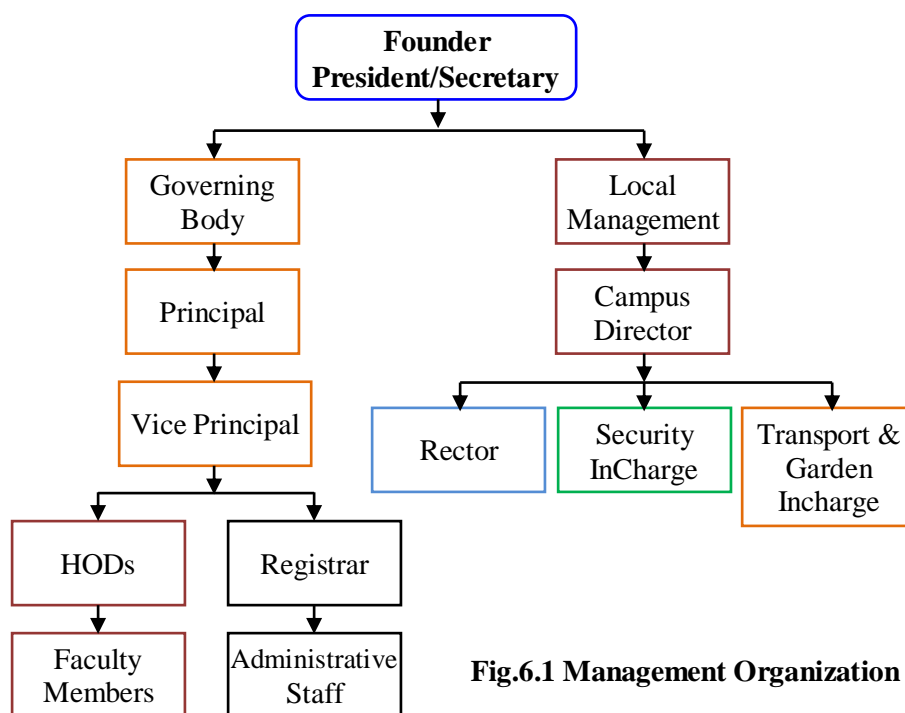


Fig.6.1 Management Organization Chart

Role of Top Management:

- Formulate and issue guidelines on matters related to improvement of academic standards of the institution.
- Deciding policy regarding allocation of the funds to the college, and issuing guidelines for sound financial management.
- Provide the state of the art infrastructure.
- Monitoring of overall academic performance and placement of students.
- Recruitment of faculty and other staff as per the guidelines laid down by AICTE/UGC, Government of Maharashtra and Savitribai Phule Pune University.
- To monitor performance of all faculty members and take appropriate action.
- To organize orientation programs and teacher advancement programs for faculty.
- To encourage periodical organization of various co-curricular and extra-curricular activities
- To encourage the teachers to undergo FDP, STTP and workshops for enhancing quality of faculty.

Role of Principal:

- To ensure the effective and efficient implementation of Vision and Mission policies of the institute.
- To ensure the achievement of all the quality benchmarks set and suggestions of top management, external governing bodies (both government and non-government) and the competitive authorities from state as well as central government by communicating well with the different stake holders
- To validate various academic plans and executes policies designed for holistic development of the students.
- To bridge a strong bond of institute with industries in order to enhance opportunities of interaction with outside world
- To provide the necessary environment that inculcates the research culture in students as well as in faculty.
- To mentor students and faculty for creating conducive work culture.
- To provide the encouragement for professional growth of the entities
- To ensure continuous improvement in performance of the institute. This helps students to acquire quality education
- To encourage students and faculty for proactive involvement in entrepreneurship and establishing them as Intellectual Prospective of the Nation

Role of the faculty:

The Faculty members are committed

- To promote value based Engineering education as per the need and expectation of society.
- To implement the policies and plans finalized by the top management effectively and efficiently.
- To lead the different committees for ground level implementation of the management policies.
- To successful implementation of the academic calendar.
- To anticipate for effective and efficient implementation of different academic, co-curricular and extra-curricular activities.
- To facilitate and guide the students for proactive participation in different bodies like ETSA, CESA, MESA, Student Council etc. These bodies are devised for the root level working and implementation of student centric activities.
- To mentor students in identifying actual problems faced by them while effective and efficient implementation of the policies and to convey these problems timely to the management
- To resolve the issues related to the effective and efficient implementation of the academic calendar in consultation with Head of the Department and the Principal.
- To express their views on academic as well as non-academic issues to the LMC through their representative

6.1.3. What is the involvement of the leadership in ensuring -

- **the policy statements and action plans for fulfillment of the stated mission**
- **formulation of action plans for all operations and incorporation of the same into the institutional strategic plan**
- **Interaction with stakeholders**
- **Proper support for policy and planning through need analysis, research inputs and consultations with the stakeholders**
- **Reinforcing the culture of excellence**
- **Champion organizational change**

The Sinhgad Technical Education Society has proven themselves as leader in the technical and higher education field since 1993. This institute, is been governed by this society, also have established certain milestones in the Engineering education. The Institute has ensured its leadership by

- I. The policy statements and action plans for fulfillment of the stated mission** - The management always believes in democracy and encourages participation of staff in the process of decision making in institutional functioning. In line with the objectives, the management makes budgetary provisions for providing the resources for learning and growth of the

College. The institution admits students almost from all the sectors and background of the society. The mission is to holistically develop the excellent technical and behavioral skills in students and to produce highly competent technocrats. The management proactively supports all the activities that mould students into worthy citizens of the society. The Governing Body ensures that the policy statements and action plans are fulfilled in accordance with stated mission of the institution by planning the training activity for every year.

- II. Formulation of action plans for all operations and incorporation of the same into the institutional strategic plan-** The top management has prepared a 10 year perspective plan for both academic as well as financial growth of institute based on its vision, mission and objectives. The transparency and wide publicity of this plan are the major features of the management. The action plans of the management are clearly communicated to all the employees through transparent procedures and delegation of authority to achieve positive results in improving performance of the institution. Prior planning is made by every department well before the commencement of the academic year and after careful scrutiny, the budget is allocated for improving infrastructure and development of the institute. Based on the objectives, the management advises staff to accomplish strategic plans through various activities. Success is ensured through strict adherence to action plans more over periodic review is done for mid course as well.
- III. Interaction with stakeholders-** The Institute is continuously engaged in taking efforts to maintain communications with its all stakeholders that results in bonding healthy relations. The major stake holder i.e student is considered as center of all the activities undertaken for their holistic development. The students are free to communicate with the management in both direct as well as indirect way. The on-line feedback system, teacher guardian scheme are some of the examples of these type of communications. The periodic meeting is organized by management with other stakeholders such as parents, alumni, and industry. The inputs and feedback about the functioning and various other aspects of the institute are collected through a number of channels. The feedback received from all stakeholders are reviewed, analyzed and remedial actions are initiated. Interaction of the Principal with various stakeholders helps the institution in proper implementation of policies. The participatory role of the management encourages and sustains the involvement of the faculty, which is necessary for efficient and effective achievement of the excellence.
- IV. Proper support for policy and planning through need analysis, research inputs and consultations with the stakeholders-** The institution has adopted the strategy of periodical feedback system, parent-teachers meetings, HOD meeting, Departmental meeting, discussion with

alumni and students for sustainable interaction with the stakeholders. Feedback from industry representatives is taken in a formal manner at the end of every placement activity as well as on the performance of student interns and in sponsored projects. The inputs collected from various stakeholders are taken into cognizance by the management and through various interactive methods the management takes reviews and suggests the critical areas for development and improvement. For example the Student Training Programs (STP) are designed and executed effectively at institute level based on these interactions. As an outcome of it, an improvement in placement has been observed.

- V. Reinforcing the culture of excellence** - Efforts are being taken to maintain work culture in institute by enhancing the research activities at the center. Faculty members are always encouraged to upgrade their academic qualification as well as to undertake different projects sponsored by different government organizations such as ISRO, DST, AICTE, SPPU, etc. in order to motivate the research activities. Organizing and participating in seminars/workshops/conferences is the usual practice of this institute that helps to reinforce a culture of excellence. Various refresher and orientation programs are also regularly being organized. The staff members are encouraged and motivated to actively work in various academic bodies. Appreciation for academic achievement of faculty in terms of the excellent results, encourage the spirit of excellence in the endeavors of faculty. Such practices create an ambience that is most conducive for academic excellence.
- VI. Champion organizational change-** The management is always in favor of instilling flexibility in adoption of the policies to cope up with international expectations. Changes in the existing rules and regulations are brought about after a thorough discussion in Local Management Council meetings, Governing body meetings and Academic Advisory Body, based on inputs from the ground level along with the needs. The changes suggested by the management are smoothly and successfully implemented. Institute follows a structured way for ensuring this transition by aligning the expectations of the stakeholders with proper communication, and employee's efforts for growth of institution. Thus, academic and administrative matters are brought in to notice of the management to meet the changes required by the organization.

By adapting above approach, the institute has set Short term and Long term goals as stated below

Long term goals:

1. To transform the institute into a Center of excellence for innovation, academics and research.
2. To establish the institute as an international center of education and research through tie ups with renowned international universities and research centers.

3. To be a premier institute having strong tie ups with reputed industries for giving more exposure to the faculty members and students through various collaborative activities.
4. Setting up incubation center in each discipline.
5. To establish Technology Commercialization Cell.

Short term goals:

1. To ensure all round development of students by fostering their academic, co-curricular and extracurricular skills.
2. To give the best career opportunities to students by enhancing their employability and entrepreneurship qualities.
3. To cultivate a research culture by guiding and encouraging faculty, developing state-of-art research facilities and through collaboration, consultancy and research funding.
4. To have an impactful existence of institute within the academic & professional fraternity in the estate and country at large.
5. To impart quality education to students in order to prepare them to meet the global challenges.
6. To set up research centre recognized by the affiliating University, SPPU.

6.1.4. What are the procedures adopted by the institution to monitor and evaluate policies and plans of the institution for effective implementation and improvement from time to time?

The Institute monitors and evaluates the plans and policies set by the top management by adopting the following systematic strategy that helps in effective implementation, validation and continuous improvement in the policies to achieve the goals.

- **Department Level Monitoring:** The institute has adopted two level monitoring methods for its day to day activities. The first is at execution level and second is at administrative level. The Heads of various departments conduct weekly meetings with the faculty to review actual execution of academic policies. The review of the past and planning of the future activities is major agenda of such meetings.
- **Head of the Institution level Monitoring:** The administrative meetings of all the Heads are conducted by the Principal. During these weekly meetings, the Principal reviews the processes and plans for each department. The Local Managing Committee, which has representatives from both teaching and non-teaching staff, meets twice in a year. In order to have effective implementation of the policies, monitoring and evaluation of the same, various committees have been formulated.
- **Academic Monitoring by Academic Advisory Board:** Members of this committee monitors the instruction delivery on a regular basis so as to record the progress in theory classes and practical sessions. Student's attendance is monitored and corrective actions are taken if required by

informing the parents. Feedback is taken from the students with regards to conduction of lectures and practical sessions. This feedback is conveyed to faculty for necessary action so as to improve the teaching learning process. Students are encouraged to organize and participate in Seminars, Workshops, Conferences, Competitions, Technical Fests, Science Exhibitions and Cultural Programs.

- **Examination Coordination Committee:** Conduction of unit tests, prelim exam and mock practical Examinations is regular practice of every department that evaluates the conceptual grasping of the students. Based on the performance of the students and after thorough analysis of it, the corrective actions such as remedial classes, extra practice sessions, additional assignments, etc. are planned and executed that empowers the student to achieve success in their carrier.
- **Projects planning and Monitoring Committee:** The students are encouraged to interact with industry so as to get sponsored projects. After selection of the project, continuous monitoring of project at different phases is monitored by internal and external expert committees. The students are encouraged to present their research in National / International conferences, proactive participation in project competition at national / International level, publishing technical article, papers in national / International Journals etc.
- **Training and Placement/Entrepreneurship skills development Committee:** All the departments have undertaken responsibility of holistic development of their students. For nurturing the students in all aspects, a Student Training Program has been developed in five modules. The training for development of different skills such as Linguistic skill, Communication skill, Presentation Skill, Soft Skill, Interview facing skill and Personality development in due consideration with Technical expertise are regularly arranged by the Institute. The experts from various fields are invited for delivering the lectures. The placement records of students from all the departments shows success ratio of this policy. Every year around 100 Industries/Organizations are visiting our Institute for campus drive. Along with development of employable skills in students, they are also encouraged for higher studies, by providing assistance in their competitive examinations such as GATE, TOFFEL, GRE etc.
- **Monitoring of Extra-curricular activities:** The institute is also motivating students for organizing/celebrating social events /days such as Women's day, Engineers day, Teacher's day, Independence & republic day, etc. The different departmental associations such as ETSA, MESA, CESA, etc. are actively and enthusiastically organizing such events along with celebration of annual social gathering and publishing the College magazine. The College magazine-"Mosaic" has been continuously in the top ranks since five years in the SPPU magazine competitions. The students are also shouldering the social responsibilities by organizing Blood Donation Camp, NSS activity, implementing Earn and Learn

scheme for poor and needy students, etc. Every department is publishing a News Letter twice in a academic year. The students are also participating in various sports activities and have recorded considerable achievements.

6.1.5. Give details of the academic leadership provided to the faculty by the top management?

Management always identifies the leadership skills in both faculty and students and accordingly facilitates them by providing the healthy environment. The staff representatives, technical secretary, sport secretary, cultural secretary, open source software secretary, Class coordinators, Teacher guardians, etc. are few of the examples of such leaders. These leaders are shouldering different important responsibilities that leading us towards the success and the excellence. Class coordinators in consultation with the Head of department decide their respective lesson plans, class tests, assignments, projects, industrial visits and guest lectures. This enables more individuals to build their own informal authority and demonstrate leadership behavior. The Institute has formed various committees and responsibility is given to the members. These committees are supported by the top management, to promote academic leadership.

Few of the leaders are shown below as an example.

Sr. No.	Name of the faculty	Department	Responsibility assigned
1	Dr. Vijay Wadhi	E&TC	Principal
2	Dr. K. P. Patil	E&TC	Vice-Principal
3	Dr. D. N. Kamble	Mechanical	Co-ordinator NBA and NAAC
4.	Dr. S. S. Kore	Mechanical	HOD
5.	Prof. M. M. Sardeshmukh	E&TC	HOD
6.	Prof. B. B. Gite	Computer	HOD
7.	Prof A. N. Adapanawar	IT	HOD
8	Prof. R.R.Sorate	Civil	HOD
9	Dr. Daljeet Kaur	FE	HOD
10	Prof.M.M.Patil	E&TC	Robotics
11	Prof.Rajguru Anand	Mechanical	ED cell
12	Prof.Sunil Bangare	IT	Industry Institute Interaction Cell
13	Dr. N.P. Dharmadhikari	FE	ARC cell
14.	Dr.P.N.Shinde	E&TC	PG Coordinator
15	Prof.S.R.Patil	Mechanical	PG Coordinator
16	Prof.S.N.Shelke	Computer	PG Coordinator
17	Dr.R.P.Borse	E&TC	Head, Research Center

Sr. No.	Name of the faculty	Department	Responsibility assigned
18	Dr.Suhas Deshmukh	Mechanical	Head, Research Center
19	Prof.A.P.Kalmegh	Mechanical	Head-Baja, Supra, Gokart
20	Prof.S.S.Patil	FE	Student Council

6.1.6. How does the college groom leadership at various levels?

All the staff members are involved in the institute level activities. The senior staff members are appointed as conveners of various committees and are given full autonomy in decision making and execution powers. Various co-curricular and extracurricular activities are regularly conducted through involvement of faculties and students. The college grooms leadership among the faculty members by giving them opportunities to work as heads of various committees involved in academic curricular and co curricular activities.

6.1.7. How does the college delegate authority and provide operational autonomy to the departments / units of the institution and work towards decentralized governance system?

The decentralization of both academic and administrative powers is the major feature of management. The Institute delegates authority and provides operational autonomy to the departments to work towards decentralized governance system.

The execution of academic issues is resolved at different levels in the administration. All heads of departments are empowered and made responsible for holistic development of the student. The top management has clearly defined a standard procedure for the various academic monitoring processes like the Teacher Guardian Scheme (TGS), On line and off line Feedback system, Examination schedules, Mock examination policies, etc. This helps to specify the role of each individual/department. This ensures smooth running and decision making by each individual / department. As Head of Academics, the Principal is independent to take any decision in conformity with various rules /statutes of Savitribai Phule Pune University.

At the start of every academic year the review of the up gradation, updating of the syllabus is taken by the faculty members. Accordingly the faculty members are initiating the demands of any requirement of hardware, machines, software, consumable items etc. After verification of this requirement, the Purchase committee approves purchasing of required material and in consultation with the top management the purchase process is completed.

Similarly academic responsibilities are also fairly divided among all the faculty members and these responsibilities are mentioned in the academic calendar of every department. Twenty students are assigned to one faculty member who is conducting the Practical and Theory of that class as TG (Teacher Guardian). TG handles all the information of each and every student

from his batch. This information includes the personal information, academic performance information like the attendance in theory and practical, marks obtained in examinations, performance in personality development programs such as soft skills, aptitude test, Logical and reasoning test, employability skill development, Group discussion, etc. The periodic meetings are conducted by the TG. Every class is coordinated by the one of the faculty member teaching to that class. The Head of the department have close monitoring on the continuous progress of each and every student through the Class Coordinator and the TG. The feedback either online from the students or the off line from other stakeholders such as parents, industry personals, experts from other institutes, statutory bodies like University, DTE, AICTE, etc. are collected regularly to remove the lacunas if any.

At the department level various committees are formed for the different curricular, co-curricular and extra-curricular activities that are to be conducted during the academic year. The departments are encouraged and given financial support to arrange various activities for the benefit of students and faculty. The Principal of the Institute in consultation with the Heads of the Departments coordinates the day to day activities concerned with administration of the Institute. The department is fully focused to make the students competent and should inculcate the attitude of achieving an excellence in their carrier.

**6.1.8. Does the college promote a culture of participative management?
If “yes” indicate the levels of participative management.**

Yes.

The teacher has always proved themselves leading towards the success and their opinion in the decision making process has significant weightage. The teachers are the backbone of Sinhgad Technical Education Society. All the Founder-Members of the Society are also the teachers. Therefore without the involvement of faculty members, continuous improvement of the defined policies, the effectiveness and efficiency in the holistic development of student and overall progress of institute could not be possible. The Institute has always been in favor of participative management. The teaching and non-teaching staffs are the major components of this participatory management. The Institute involves and allows the faculty members to participate voluntarily in all the activities. There are various committees constituted to manage different institutional activities which require active participation of faculty.

The list of committees is as follows:

Title of the Committee	In charge Professor	Reporting Authority
Grievance Redressal Committee	Dr.K.P.Patil	Principal
Anti Sexual Harassment Committee	Dr.(Mrs.) J.P.Shinde	Principal
Anti Ragging Committee	Dr.P.N.Shinde	Principal

Title of the Committee	In charge Professor	Reporting Authority
Anti Ragging Squad	Dr.K.P.Patil	Principal
Purchase Committee	Dr.K.P.Patil	Principal
Alumni Committee	Mrs. S.H.Rajput	Principal
Industry Institute Interaction cell	Mr.Sunil Bangare	Principal

6.2 Strategy Development and Deployment

6.2.1. Does the institution have a formally stated quality policy? How is it developed, driven, deployed and reviewed?

Yes, the Institute has set stated formally quality policies.

These quality policies are planed and developed by considering,

1. Feedbacks from different stake holders,
2. Standards and Norms set by different controlling bodies such as AICTE, DTE and Savitribai Phule University of Pune etc.
3. Overall development of students.

The policies are finalized by conducting periodic meetings of the GB and Academic Advisory Body.

The quality policies set by top management through this process of this Institute are

1. To impart excellent technical education
2. To work for holistic development of students
3. To develop an Internationally recognized research and technology center
4. To perpetuate transparent and joy at work culture
5. To provide physical environment conducive to learning, creativity and technology transfer

To deploy these policies, this management is committed to:

- Provide an sufficient and beautiful infrastructure facilities
- Employ highly qualified and experienced faculty.
- Facilitate necessary research and development environment.
- Encourage and motivate faculty members continuously for carrier enhancement
- Promote an Industry – Institute interaction
- Create environment for consultation work, industry sponsored projects and competitive environment.

The Principal along with all Heads of departments and Faculty members are implementing these policies and plans in order to achieve the vision and

mission of the Institute. The Institute conducts various activities to fulfill quality policies. All such activities are monitored by committees that meet periodically to decide and discuss various quality enforcement and implementation issues.

6.2.2. Does the Institute have a perspective plan for development? If so, give the aspects considered for inclusion in the plan.

Yes, the top management has prepared a perspective plan for structured development of Institute for period of ten years (2010-2020), as given below:

Sr. No.	Plan
01	To Start Post Graduate Courses
02	To Accredite Programs by NBA
03	To establish Research Centers
04	To start incubation activity
05	To set up EDP cell
06	To have MOU with industry
07	To file patents of staff and students
08	To Accredite Institute by NAAC
09	To set up a Consultancy center
10	To get Permanent Affiliation with SPPU
11	To reaccredite for NBA
12	To start Technology Commercialization Centre for the eligibility of TEQIP

As per this plan, Institute has set up **Short Term Objectives for 2016-17** as stated below;

- Achieve academic Excellency in teaching-learning environment by having:
 - More than 95% university result in each year,
 - 50% and 80 % students scoring above first class in 3rd and 4th years respectively,
 - One University rank holder in each Departments,
 - 100% faculty with PG degree,
 - 35% Faculty with PhD degree.
- Achieve placement of 50% students in core high-end companies and maintain an overall placement of 90% students.
- Initiate Post-graduate courses and enhance Industry – Institute interaction and R & D activities
- Achieve 10 % placement in Armed Forces, UPSC, MPSC and Engineering services to accommodate maximum engineering disciplines.
- Enhance Entrepreneurship Development Cell.

- Promote students for higher education at overseas.

The **Long Term Objectives for 2019-20** set by Institute are:

- Maintaining excellence in teaching-learning environment to achieve:
 - 100 % university result in each year,
 - 60% and 85 % students scoring above first class in 3rd and 4th years respectively,
 - At least three University rank holders in each Department.
 - 50% faculty with PhD degree.
- Achieve placement of 70 % students in core high-end companies and an overall placement of 100% students.
- Introduce two Post-graduate courses in each department and enhance Industry-Institute interaction and R&D activities.
- Receive consultancies and research grants from AICTE and Savitribai Phule Pune University and UGC.
- File at least one Patent in each Department every year.
- Establish centre of Excellence in all departments.

6.2.3. Describe the internal organization structure and decision making processes.

The Internal organization structure of Institute for making and implementation of the decisions is as shown below:

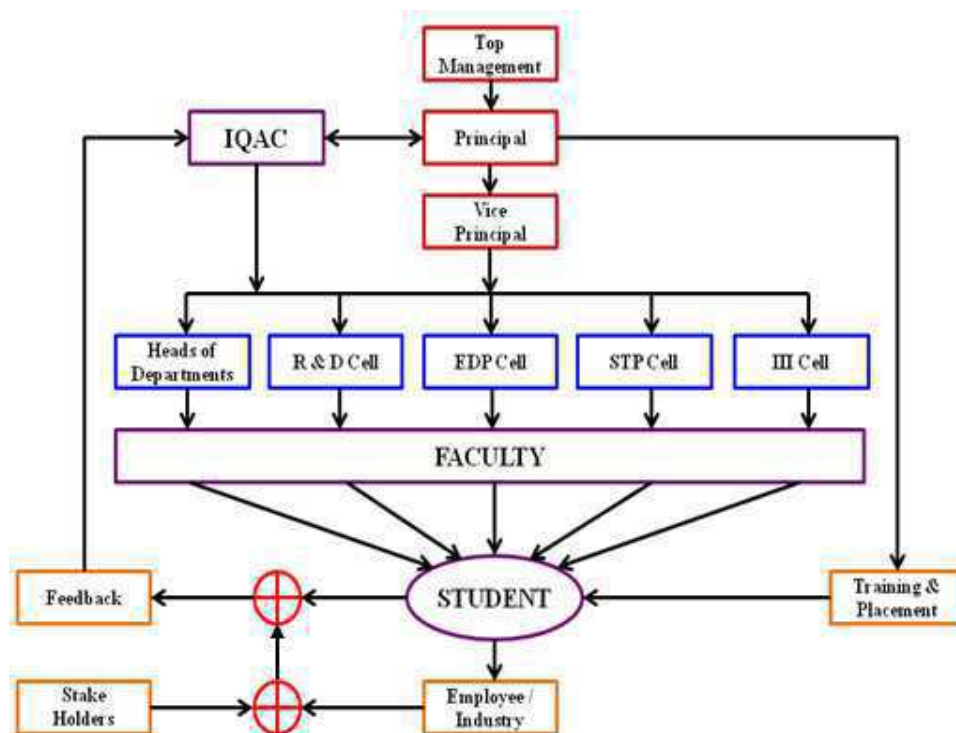


Fig.6.2 Internal Organization

Decision Making process: The periodic interactive meetings at different levels i.e. departmental, intra-departmental, GB, LMC, Parent, Employer, Industry, students, etc., effectively communicates ground reality and facts about execution of plans and policies to all the stake holders. Notifications and feedback forms are also an important tool that keeps the stakeholders informed and get their involvement in monitoring and evaluating action plans. The outcomes of all these efforts help to take proper decisions that lead towards achieving desired goals and objectives. IQAC plays a central role in effective implementation and continuous improvement.

All the departments of this Institute have departmental committees coordinated by faculty members and monitored by Head of the Department to keep a check on academics and effective as well as efficient performance of the department in all aspects.

- A central Academic Monitoring Mechanism evaluates the activities of the departments. A regular review of the departments is taken through this mechanism.
- Several committees are formed at institute level for appropriate coordination of the activities. Due departmental representation is ensured in central committees.
- The Local Managing Committee and Governing Body are the final approving bodies.

The various committees for internal coordination and monitoring are as:

- | | |
|---|---|
| 1. Governing Council | 12. Technical Event (Techtonic) Committee |
| 2. Local Managing Committee | 13. Sports Committee |
| 3. Finance Committee | 14. Cultural Committee |
| 4. Purchase Committee | 15. Dead stock verification Committee |
| 5. Staff Selection Committee | 16. Grievance Redressal Committee |
| 6. Building Committee | 17. Anti Ragging Committee |
| 7. Website Committee | 18. Quality Assurance Cell |
| 8. Research Co-ordination Committee | 19. Entrepreneurship Development Cell |
| 9. Alumni Committee | |
| 10. Information Brochure Committee | |
| 11. Committee for college Magazine 'Mozaic' | |

The Standardization of Operations of few processes may describe as given below.

1. The Local management Committee:

The meeting of LMC is conducted twice a year. The major decisions taken and points discussed in the LMC in last 1 Year are as shown below:-

Recommendation and discussion in Local Management Committee (LMC) during 2014-2015

Sr. No.	Date	Decisions
1.	14-10-2014	1. Confirmation of minutes of last LMC meeting. 2. Approval of compliance report on last LMC decisions. 3. Approval of Staff requirement for A.Y. 2014-15.
2.	15-04-2015	1. Discussion and approval for initiating process of obtaining permanent affiliation with SPPU. 2. Measures for improving attendance / academic performance are discussed and suggested. 3. Approval for Guest Lectures and Industrial Visits is given 4. The activity report of current semester is presented, discussed and approved. 5. Discussed the Placement record of batch 2014-15 till date. 6. Discussed and suggested the Alumni meet related issues.

2. The Governing Body:

The meeting of GB is conducted twice a year. The major decisions taken and points discussed in the GBMs in last 1 Year are as shown below

Resolutions taken by the Governing Body during 2014-2015

Sr. No.	Date	Decisions
1.	20-01-2014	* Discussion for acceptance of Result analysis * Approval of purchases of equipments * Approval of additional space for Civil dept. * Approval of area allocation made by college for various departments, laboratories, library and classrooms as per AICTE and NBA norms.
2.	15-04-2015	* Approval of receipts and expenditures up to 31.03.2015 * Discussion and approval of the additional requirement of equipment, furniture and fixtures, consumables and library books to be purchased for the F.Y. 2015-16 * Discussion and suggestion for faculty contribution in terms of various workshops, seminars, short term training programs, etc. * Planning, discussion and approval of the academic calendar for A.Y. 2015-16

3. Purchase Committee:

The objectives of Purchase committee are:

1. After the approval of the budget and allocation of funds from LMC, Purchase committee has to initiate the purchasing process
2. According to the department wise availability of funds, the purchasing priority is to be decided in consultation with Head of the Department and Principal.
3. Demand of Quotations for the finalized items.
4. Comparison and analysis of all the quotations received in consultation with concerned departmental staff.
5. Arranging the Demonstration of the items to be purchased
6. Conducting negotiation meeting with the supplier.
7. Recommending for placing Purchase Order
8. After receiving of items/goods, initiating payment process.

The entire process of the Procurement of the material is monitored by the Principal at Institute level and the Finance Department at Society level.

4. Grievance and redressal committee:

Every individual either working or studying in this institute is ensured for healthy and secured and transparent physical environment. To achieve this, the Institute has established Grievance and redressal committee. Major objectives of this committee are as stated below:

1. To entertain complaints from individuals
2. To verify and analyze complaint
3. Concealing the complainant and recording his/her say
4. Conduction of meeting of individuals mentioned in complaint and recording their say
5. Rigorous discussion and analysis to find truth
6. If necessary collection and validation of proofs
7. Conduction of face to face meeting of both parties.
8. Recommendation and convey of the decisions taken by the committee to the Principal.

5. Cultural Committee:

For the holistic development of students, it is necessary to encourage them to participate and exhibit their hidden talent. For this the institute arrange various activities every year like Sinhgad Karandak, Tech tonic, Spectrum etc. for efficient and effective implementation of these student centric activities, Cultural committee executes following objectives:

1. Decide different activities according Academic Calendar
2. Give wide publicity of these events and their schedules
3. Arranging auditions for different events.
4. Selection of students
5. Provision of resources for their rehearsals and preparations
6. Arranging experts and judges

7. Planning & execution of the event and Prize distribution

The major decisions taken and points discussed in the LMC and GBMs in last 1 Year are as shown below:-

A) Recommendation and discussion in Local Management Committee (LMC) during 2014-2015

Sr. No.	Date	Decisions
1.	14-10-2014	1. Confirmation of minutes of last LMC meeting. 2. Approval of compliance report on last LMC decisions. 3. Approval of Staff requirement for A.Y. 2014-15.
2.	15-04-2015	1. Discussion and approval for initiating process of obtaining permanent affiliation with SPPU. 2. Measures for improving attendance / academic performance are discussed and suggested. 3. Approval for Guest Lectures and Industrial Visits is given 4. The activity report of current semester is presented, discussed and approved. 5. Discussed the Placement record of batch 2014-15 till date. 6. Discussed and suggested the Alumni meet related issues.

B) Resolutions taken by the Governing Body during 2014-2015

Sr. No.	Date	Decisions
1.	20-01-2014	* Discussion for acceptance of Result analysis * Approval of purchases of equipments * Approval of additional space for Civil dept. * Approval of area allocation made by college for various departments, laboratories, library and classrooms as per AICTE and NBA norms.
2.	15-04-2015	* Approval of receipts and expenditures up to 31.03.2015 * Discussion and approval of the additional requirement of equipment, furniture and fixtures, consumables and library books to be purchased for the F.Y. 2015-16. Discussion and suggestion for faculty contribution in terms of various workshops, seminars, short term training programs, etc. Planning, discussion and approval of the academic calendar for A.Y. 2015-16d

6.2.4. Give a broad description of the quality improvement strategies of the Institution for each of the following -

- Teaching and Learning
- Research and Development
- Community engagement
- Human resource management
- Industry interaction

• Teaching and Learning:

The deployment of well qualified and experienced faculties is one of the major steps taken by the top management to ensure the delivery of quality educational contents.

This is supported by the efforts taken for encouraging faculty members for their carrier advancement such as:

- To undergo refresher courses.
- To publish research papers
- To pursue doctoral Programs.
- To equip themselves for using modern tools.
- To attend and organize National and International Seminars / Workshops/Conferences.
- To encourage faculty members for bridging curricular gap by teaching content beyond syllabus

Besides this, Institute has set up its internal monitoring and validation process to evaluate the continuous improvement in teaching and learning process.

The process may be described as:

1. Continuous and effective monitoring of Academic calendar by taking review through regular staff meeting with Heads of the Departments for smooth functioning of departmental academic activities like attendance, syllabus coverage, class tests, unit tests, Mid-term exams and internal assessments etc.
2. Consistently molding students with good moral through mentoring and counseling.
3. Project based learning is incorporated for practical understanding.
4. Continuous assessment of student's performance through tests, assignments, seminars and projects.
5. Review of the academic results of previous year.
6. Providing E-learning contents.
7. Arranging skill development courses for holistic development of students such as training for Aptitude test skills, Soft Skills, Quiz and Personality development etc. This training helps students to equip themselves with necessary skills to face campus interviews.
8. Arranging guest lectures and visiting faculty sessions, panel discussions, group discussions to enhance the teaching and learning of staff and students.
9. Use of different teaching aids such as maps, charts, pointer, PPTs, interactive discussions, evaluating students by asking questions to know the conceptual, and analytical understanding.

- **Research and Development**

The Institute has created a promising and encouraging working environment for faculty members by involving them in research activities to face challenges of competitive world. The Research and Development Cell, actively promote research aptitude among faculty and students by conducting different activities. All departments have fully equipped research labs that facilitate the research activity in Mechanical, E&TC, Computer, Civil and IT fields. The Entrepreneurship Development Cell has also been set up for promoting students for establishing their own business. The institute has focused on Applied Research & Development activity

- **Community engagement:**

To achieve holistic development of student, it is necessary to make students aware about their social responsibilities. The Institute has set up statutory units like NSS. These units are shouldering social activities such as Blood donation camp, Plantation, NSS camp, Disaster management training camp, Yoga camp, handling of health related issues in consideration with students, faculty and community etc.. These activities are conducted by the students and for the students.

- **Human resource management**

The Institute has a well-defined, effective and merit based selection procedure, systematic performance appraisal system and promotion policies for the faculties. The Institute takes care of its human resources. The institute has a very good mechanism for assessing human power requirements, staff recruitment, monitoring and planning professional development programs and obtaining feedbacks. Employees are given utmost importance and their needs are recognized well. The service rules are made transparent. The staff salary is done as per government rule, in addition to this members are benefited with Provident Fund, Gratuity, Casual Leave, Earned Leave, Medical Leave, Maternity Leave, adequate vacation, accommodation in quarters/hostels, etc. Faculty trainings are conducted periodically to acquire technical skills, teaching skills and soft skills. The Institute also encourages quality improvement programs and deposes faculty on leave for higher education. The Institute has also established tie-up with some foreign Universities, under which the Career Advancement Program for the faculty is available. Few of the faculty members have availed this facility and upgraded their academic qualification by completing the doctoral program in these foreign Universities.

- **Industry interaction :**

The Institute has set up a quality profile among Industrial zone by establishing an effective interaction between the two. This interaction is at three different levels. The first level is at institute level that provides an opportunity to faculty members and students by establishing Memorandum of Understanding (MoU). This helps institute to inculcate research and development attitude among students. At second level Institute motivates and encourages students as well

as faculty members to undertake the industry sponsored projects and consultancy assignments. At third level top management has set up central Placement cell for all institutes governed by them. About 200 industries in and around pune are engaged for this placement drive.

In spite of this, career guidance, counseling cell as well as placement cell of Institute is taking efforts to enhance the employability of student. Experts from industry are also involved in the form of interaction with staff and students to achieve the necessary employability and Entrepreneur skills.

6.2.5. How does the Head of the institution ensure that adequate information (from feedback and personal contacts etc.) is available for the top management and the stakeholders, to review the activities of the institution?

For effective and efficient deployment of the policies and plans defined by the management in order to achieve the goals and objectives, the Principal is continuously ensuring execution process by employing the following tools and measures.

- Regular meetings of Principal with HOD's and staff members to obtain vital information regarding adherence with the academic calendar.
- Review is taken by Academic Monitoring Committee /IQAC twice in a semester and gives the feed back to the Heads of the department as well as the Principal.
- Informal meeting with students.
- Online feedback system is incorporated where by students are able to give their feedback on teaching faculty. It is directly accessible to the top management.
- Feedbacks are collected from parents during Parents meeting at regular intervals. Institutional performance is studied by the apex body governing the institution.
- Feedback from the students is collected and remedial actions are suggested to improve the teaching learning process.

The Academic Advisory Body, Academic Monitoring committee, etc. are conducting the periodic meetings. Based on the facts and figures, the decisions are taken for corrective actions and are implemented. All this information collected by various means is conveyed to the top management.

6.2.6. How does the management encourage and support involvement of the staff in improving the effectiveness and efficiency of the institutional processes?

The management always believes in participatory management and hence encourages faculty to involve themselves in all ongoing institutional activities. The various responsibilities are assigned to the faculty members in order to get their active participation and enhance their professional skills. Some of the

major steps taken for involving the faculty in institutional processes to achieve the effectiveness and efficiency are

- Heading various committees at institute as well as department level
- Empowering individual faculty members through decentralized functioning mechanism
- Conducting faculty training programs
- Involving faculty members in financial decisions like preparation of annual budgets
- Encouraging creative idea generation and implementation through project based learning
- Appreciating the efforts of the faculty members in terms of awards and recognitions to staff
- Organizing sports activities, Organizing cultural programs
- Involving faculty members in publication of the magazine, newsletters etc.

6.2.7. Enumerate the resolutions made by the Management Council in the last year and the status of implementation of such resolutions.

The resolutions made by the management council viz. Governing Body and Local Management committee during the last year i.e. 2014-15 and their corresponding status are as stated below.

A) Local Management Committee: 2014-2015

Sr. No .	Date	Resolutions	Action taken
1.	26-12-2014	<ul style="list-style-type: none">• Approval of budget for purchase of Library books.• Approval for renewal of the subscription of Periodicals, e-Journals and magazines.• Additional space and building requirement /allocation of extra space for the college/departments is approved.	<ul style="list-style-type: none">• The books are purchased• The subscriptions of Periodicals, e-Journals and magazines are renewed.• The new space is allotted to the various departments
2.	15-04-2015	<ul style="list-style-type: none">• Discussion and approval for initiating process of obtaining permanent affiliation with Pune	<ul style="list-style-type: none">• The process has been initiated• The suggestions are implemented• Guest lectures and industrial visits are arranged

Sr. No .	Date	Resolutions	Action taken
		<p>University.</p> <ul style="list-style-type: none"> Measures for improving attendance / academic performance are discussed and suggested. Approval for Guest Lectures and Industrial Visits is given. The activity report of current semester is presented, discussed and approved. Discussed the Placement record of batch 2014-15 till date. Discussed and suggested the issues related to Alumni meet. 	<ul style="list-style-type: none"> The suggestions for alumni meet have been implemented.

B) Governing Body -2014-2015

Sr. No .	Date	Resolutions	Action taken
1.	20-01-2014	<ul style="list-style-type: none"> * Discussion and acceptance of Result analysis * Approval of purchases of equipments * Approval of additional space for civil dept. * Approval of the area allocation made by the college for various departments, laboratories, library and classrooms as per AICTE and NBA norms was presented to the committee. 	<ul style="list-style-type: none"> * the equipment have been purchased * New area is allotted and functioning of the departments in the new space has been started.

Sr. No .	Date	Resolutions	Action taken
2.	15-04-2015	<ul style="list-style-type: none">* Approval of receipts and expenditures up to 31.03.2015* Discussion and approval of the additional requirement of equipment, furniture and fixtures, consumables and library books to be purchased for the F.Y. 2015-16* Approval of the faculty contribution in terms of various workshops, seminars, short term training programs, etc.* Planning discussion and approval of the academic calendar for A.Y. 2015-16	<ul style="list-style-type: none">* The equipments, furniture, consumables have been purchased* Academic calendar for 2015-16 have been published

6.2.8. Does the affiliating university make a provision for according the status of autonomy to an affiliated institution? If ‘yes’, what are the efforts made by the institution in obtaining autonomy?

Yes, the achievement of the Autonomous status is undertaken in institutional perspective plan. This activity is in progress

6.2.9. How does the Institution ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyze the nature of grievances for promoting better stakeholder relationship?

The Institute has set up a Grievance cell for redressal of the students, faculty and staff. Through different mechanism like a Teacher Guardian Meeting, suggestion boxes, direct contact to the top officials etc. anybody may initiate the grievance. The recorded grievance/complaints are taken in to account during the meetings held at different levels based on the seriousness of the complaint. The objectives, composition mechanism and their actions to deal with the grievances are well defined and documented.

6.2.10. During the last four years, had there been any instances of court cases filed by and against the institute? Provide details on the issues and decisions of the courts on these?

There is no court case filed against and by institute.

6.2.11. Does the Institution have a mechanism for analyzing student feedback on Institutional performance? If ‘yes’, what was the outcome and response of the Institution to such an effort?

The institute has clearly set and defined online mechanism for obtaining the feedback from the students to improve the performance and quality of the institute. Issues raised by students in periodic formal/informal feedbacks, Alumni feedback, interaction of students with Principal about teaching learning process and other administrative aspects of Institute functioning are considered for review of the process accordingly. The suggestions obtained from the feedback are deliberated upon in HOD meetings, LMC and GB meetings and solutions are arrived at and implemented. For example, requirement of extra value addition courses, E-learning, improvement in digital library, facilities are a few which have been implemented. The student's feedback is given to IQAC cell for performance improvement.

6.3 Faculty Empowerment Strategies

6.3.1. What are the efforts made by institution to enhance the professional development of teaching and nonteaching staff?

Institute takes many efforts for faculty empowerments such as:

1. Sponsoring teaching and nonteaching staff for attending workshop, seminar and conferences at national and international level.
2. Sponsoring teaching and nonteaching staff for higher educations.
3. Organizing various faculty development programs.
4. Granting on duty (OD) leave for presenting research papers at national and international level.
5. Motivating faculty to take membership of known technical and professional bodies like CSI, IETE, ISTE, SAE
6. Encouraging faculties to do their research through various R&D funding agencies such as BCUD, DST and ISRO etc.
7. Enabling teaching and nonteaching staff to make use of latest equipments through awareness programs and technical trainings.
8. Providing access to Internet, audio-visual aids, software packages for upgrading knowledge and skills.

6.3.2. What are the strategies adopted by the institution for faculty empowerment through training, retraining and motivating the employees for the roles and responsibility they perform?

The strategies adopted by the institution for faculty empowerment are stated below:-

1. Faculty development programs for teachers in specific areas
2. Encouraging teachers to organize and/or participate in workshops, conferences at National and International levels
3. Teacher Advancement Program and Train The Trainer are arranged.
4. Training in new areas whenever the curriculum is revised / upgraded
5. Conducting stress management program
6. Access to e-Journals
7. Salary is given as per government rules and regulations
8. In addition , extra financial support is given for research and innovations

6.3.3. Provide details on the performance appraisal system of the staff to evaluate and ensure that information on multiple activities is appropriately captured and considered for better appraisal.

The Performance Appraisal Report (PAR) includes self appraisal remarked by the reviewing authorities like HODs and Principal which further Include Final Remark by the Accepting Authority.

1. Performance appraisal system of the faculty:

The information includes-

- PART A- Include Personal information of the faculty like designation, qualification, FDP, Industrial training, Participation in seminar, workshops and conferences, Consultancy work, Research publications etc. attended during the academic year.
- PART B- Include Performance Appraisal (Remark of Head of Department)
- PART C- Include Remark of Principal
- PART D- Include Final Remark by the Accepting Authority

2. Performance appraisal system of the non teaching staff:

The information includes-

- PART A- Include Personal information of the employee like designation, qualification
- PART B- Include Performance Appraisal (Remark of Head of Department)
- PART C- Include Remark of Reviewing officer/ Principal
- PART D- Include Final Remark by the Accepting Authority

6.3.4. What is the outcome of the review of the performance appraisal records by the management and major decisions taken? How are they communicated to the appropriate stakeholder? For review of performance appraisal:

The Performance Appraisal Report (PAR) forms are submitted by the staff to the respective HOD at the end of each academic year. Staff is expected to fill the details of academic, administrative and research work. HOD verifies the PAR and forwarded to the Principal remark. It is then submitted to Academic monitoring committee (AMC).

AMC reviews the same and gives recommendation/improvements to be followed by staff.

The strengths and weakness of staff is counseled by HOD/Principal/AMC.

The outcome: The best part of the PAR is that each faculty becomes aware of self weaknesses and tries to improve in their respective area of improvement.

6.3.5. What are the welfare schemes available for teaching and non teaching staff? What percentage of staff have availed the benefit of such schemes in the last four years?

STES provides various schemes and facilities to its employees (teaching and non teaching) which include:

1. Yearly pay increment.
2. Faculty deputation full time for higher education
3. Group insurance Scheme as per the guidelines set by the society
4. Medical leaves.
5. Maternity benefits as per the guidelines of Sixth pay commission.
6. Study leave/ sabbatical leave
7. On-duty leave
8. Staff quarters in the campus
9. Financial support for attending faculty development programs, Workshops, Conferences, presenting research papers and publication of journals.
10. Support for Hosting Seminars & Conferences and Workshops within the campus
11. In campus 24 hours medical facilities

The percentage of beneficiary employees is as shown below:

Sr. No.	Welfare Scheme	% of beneficiary employee
01	Salary	100%
02	Deputation for Higher education	2 faculty members
03	Group Insurance scheme	74%
04	Medical Leave	100%

Sr. No.	Welfare Scheme	% of beneficiary employee
05	Study leave/sabbatical leave	1 faculty members availed 2 yrs (LWP) study leave
06	On duty leave	100%
07	Staff quarter	Yes (8 Staff members residing in staff quarter)
08	Financial support for development programs	15%
09	Financial support for hosting programs	15%
10	In campus 24 hrs Medical facility	Yes

6.3.6. What are the measures taken by the institution for attracting and retaining eminent faculty?

The following measures are taken by the institution for attracting and retaining eminent faculty

1. The pay and allowance of all faculties are as per norms of government of Maharashtra
2. Leaves are provided as per state government norms
3. Implementation of CAS policy as per UGC guidelines.
4. Rewards and recognition measures.
5. Adequate physical environment which includes Good infrastructure facilities like library, internet facility etc. are provided.
6. Adequate budget for staff development, advanced study, research, participation in seminar, conference, workshop etc.
7. Gratuity to staff members.

6.4 Financial Management and Resource Mobilization**6.4.1. What is the institutional mechanism to monitor effective and efficient use of available financial resources?**

The Top Management has a well-defined procedure to monitor effective and efficient utilization of available resources for infrastructure, development and teaching learning process. All the major financial transactions are monitored by the Finance Director and approved by the President and Secretary.

Institute has also a well defined policy for handling the available financial resources. At the start of every financial year the estimated budget from each department is collected. This estimated budget is based on the requirements raised by the individual faculty and staff. The faculty and staff will decide the requirements as per the syllabus in consultation with the Head of the Department. The due consideration is also given while determining this

requirement to Research and Development, Training and Placement, Incubation activity, Consultancy activity, etc.

The Local Management Committee approves this estimated budget after rigorous analysis. The LMC on recommendations of the Principal allocates the projected budget under different heads like -

- Research & Development
- Equipments
- Repair & maintenance
- Consumables
- Printing & stationary
- Software
- Furniture & Fixtures
- Training & Placement
- Internet charges
- Library Books
- Journals

After final approval of budget the Purchasing process is initiated by Purchase Committee. Accordingly the Quotations are called and after the negotiations Purchase order is placed. The payments are released after delivery of the items as per the terms and conditions mentioned in Purchase order. The entire process of the Procurement of the material is monitored by the Principal at Institute level and the Finance Department at Society level.

6.4.2. What is the institutional mechanism for internal and external audit? When was the last audit done and what are the major audit objections?

- The institution has appointed M/s K.S. Mali & Co. Rohan Complex, Mahatma Phule Chowk, At/Po/Tal. Sangola, Dist Solapur- 413307 to carry out external audit. Last audit was done on 20.03.2015.
- In addition to this Quarterly Internal Audit along with the Surprise Inspection of all the Accounts are carried out by Finance Department of Sinhgad Technical Education Society , Pune

Criteria 6 – Governance Leadership and Management

- The objections raised by the Auditors and corresponding compliances are as shown below:

Sr. No.	Period of Audit Report	Para No.	Particulars of objection in brief	Compliance by the Institute	Further Remarks of the Joint Director I.A.D.
1	2	3	4	5	6
PART – I					Remarks of I. A. D. attached .
1	1.4.12 to 31.3.13	2	Excess payment to Prof. R. S. Vaidya due to resignation tender in vacation period.	Permission received from Hon’ble President to write off unrecoverable salary of concerned staff. (Copy attached)	
2	1.4.12 to 31.3.13	3	Notice pay recovery of Prof. Mohammed Ismail.		
3	1.4.12 to 31.3.13	4	Recovery of 5 days salary from Shri. G. N. Alapure for irregular sanction of casual leave.		
4	1.4.12 to 31.3.13	4	Recovery of 2 days salary from Shri. S. B. Sollapur for irregular sanction of casual leave.	Prof. S. B. Sollapur has refunded the amount of Rs. 2584/- as 2 days leave recovery. (paid by cash on 17/01/2014)	

Criteria 6 – Governance Leadership and Management

Sr. No.	Period of Audit Report	Para No.	Particulars of objection in brief	Compliance by the Institute	Further Remarks of the Joint Director I.A.D.
1	2	3	4	5	6
PART – II					
5	1.4.13 to 31.3.14	1	Excess payment to staff members due to irregular grant of yearly increment.	Excess increment given inadvertently. Recovered of whole excess payment from the salary payable to concern staff for the month of April 2015, as per list attached. Necessary care will be taken in future.	
6	1.4.13 to 31.3.14	2	Excess payment of salary to Dr. K. P. Patil, Vice Principal	Excess increment given inadvertently. Recovered of excess payment from the salary payable to Dr. K. P. Patil for the month of April 2015.	
7	1.4.13 to 31.3.14	3	Excess payment of salary to Dr. Y. W. Bhowte, Associate Professor.	Excess increment given inadvertently. Recovered of excess payment from the salary payable to Dr. Y. W. Bhowte for the month of April 2015.	
8	1.4.13 to 31.3.14	4	Payment of Transport Allowance during vacation for more than 30 days.	Transport Allowance Rs. 1,72,530/- & Rs. 2,130/- has been recovered from the salary of March 2015 & April 2015 respectively and balance amount of Rs. 6,390/- will be recovered in the month of May – 2015.	

Criteria 6 – Governance Leadership and Management

Sr. No.	Period of Audit Report	Para No.	Particulars of objection in brief	Compliance by the Institute	Further Remarks of the Joint Director I.A.D.
1	2	3	4	5	6
9	1.4.13 to 31.3.14	5	Outstanding advances with staff.	Outstanding advances are pending due to approval of Principal with SPPU, now approval has received on 21/04/2015 and their R&D proposals in process with SPPU.	
10	1.4.13 to 31.3.14	6	Outstanding Fees	Amount receivable from students is Rs. 26,98,582/-. Some of the students are permitted to pay their fees in installment due to economical problems. Recovery from some of the students who are our SAOE staff is being made through their pay. Continuous follow up is taken for fee recovery from students time to time. Amount receivable from Social Welfare is Rs. 1,24,92,284/- Liaison with Social Welfare is done regularly.	
11	1.4.13 to 31.3.14	7	Dead stock verification not carried out.	Dead stock verification completed. (Copy attached)	

6.4.3. What is the major source of institutional receipts/funding and how is the deficit managed? Provide audited income and expenditure statement of academic and administrative activities of the previous four years and the reserve fund/corpus available with Institutions, if any.

Since this institute is unaided and self- finance type, the fees collected from the students is only the major source of institutional receipts The deficits are taken care by the parent society by sanctioning advances time to time as per the requirement. An authentic audited income and expenditure statement are available for verification with Administration office. There are no major audit objections. The following table shows the summary of accounts for last 4 years.

Details	2014-15	2013-14	2012-13	2011-12
Income	33,55,48,229	31,43,13,601	25,25,77,893	20,27,98,132
Academic Expenses	19,01,29,463	17,65,68,164	15,07,88,945	12,47,11,565
Administrative Expenses	4,14,25,776	4,59,48,723	4,36,69,310	3,55,05,797

6.4.4. Give details on the efforts made by the institution in securing additional funding and the utilization of the same (if any).

The institute is always motivating the faculty members to undertake the research projects funded by the different agencies like DST, SPPU (BCUD), ISRO-UOP cell, DRDO, etc. The efforts taken by the faculty members for achieving this is also appreciated by the top management. Details of grants received from various agencies in the past years are as mentioned below.

Branch wise Summary of Funding

Sr. No.	Course / Branch	Total Cost of programme (in lakhs)
1	Mechanical Engineering	45.70
2	Electronics & Telecommunication Engineering	31.90
3	Computer Engineering	02.00
4	Information Technology	00.50
5	Engineering Science	2.85
	Total	82.95

Criteria 6 – Governance Leadership and Management

Sr. No.	Name of Faculty	Title of Project and Duration	Funding Agency	Amount (Rs. Lakhs)	Present Status
Department: Mechanical Engineering					
1	Dr. S. S. Kore	Experimental & CFD analysis of Heat Transfer Augmentation from dimpled surface (2008-12)	S.P. Pune University	2	Completed
2	Dr. S. P. Deshmukh	Sensor less XY - flexural mechanism for precision application (2012-14)	DST	14	Ongoing
3	Dr. S. P. Deshmukh	Development of low power consumption linear compressor (2013-15)	ISRO / SPPU	15	Ongoing
4	Prof. V. Ramanathan	Design & development of portable high yield regenerative solar still with PCM (2012-14)	S.P. Pune University	2	Completed
5	Prof. A.V. Bhosale	Design & development of vibration energy harvesting device (2013-2015)	S.P. Pune University	2.2	Ongoing
6	Prof. A.V.Jomde	Experimental analysis of linear compressor for refrigeration application(2013-15)	S.P. Pune University	1.4	Ongoing
7	Prof. P.J.Tipole	Investigation of effect of magnetic field on IC engines & vapour compression cycle (2013-15)	S.P. Pune University	1.9	Ongoing
8	Dr S S Kore	Experimental investigation of jet impingement using Dimples and pin fins (15-17)	S.P. Pune University	1.7	Ongoing
9	Prof Pravin P Hujare	Investigations on damping performance of segmented passive constrained layer damping treatment.(2015-17)	S.P. Pune University	2.1	Ongoing
10	Prof N P Jadhav	Development of energy base model and experimental benchmarking of HEX (2015-17)	S.P. Pune University	1.0	Ongoing
11	Prof S C Shamkuwar	Experimental Analysis on Reduction of Diesel Engine Particulate Matter using Centrifugal fluidization Technique. (2015-17)	S.P. Pune University	2.4	Ongoing

Criteria 6 – Governance Leadership and Management

Sr. No.	Name of Faculty	Title of Project and Duration	Funding Agency	Amount (Rs. Lakhs)	Present Status
			Total Rs.	45.70	
Department: Electronics & Telecommunication Engineering					
1	Mrs S.H. Rajput	Security issues in Cognitive Radio	S.P. Pune University	1.8	Ongoing
2	Mr M.M. Sardeshmukh	Human Activity recognition for Airport Security	S.P. Pune University	1.5	Ongoing
3	Mrs A.K. Patel	Low cost Ultra-wideband (UWB) antennas on paper based substrate using Inkjet Printing Technology	S.P. Pune University	1.7	Ongoing
4	Mrs J.A. Bagban	Leakage Detection on building facade using thermal image	S.P. Pune University	2.0	Ongoing
5	Mr. M.H. Naikwadi	Spectrum Sensing, Measurement, Access and Co-existence Test bed using USRP for Cognitive Radio Research	S.P. Pune University	1.7	Ongoing
6	Dr. Mrs J P Shinde Dr. P.N. Shinde	Space Radiation from the Optically Transparent Planar Microstrip Antenna Integrated with the Solar Panels of Small Satellites	S.P. Pune University ISSRO	11.7	Ongoing
7	Mr V K Bairagi	Medical Image Compression for Telemedicine in Rural Area	S.P. Pune University	1.5	Completed
8	Mrs J P Shinde	Study of Circular Polarized Micro Strip Antenna for Wireless Application	S.P. Pune University	2.5	Completed
9	Mr D K Kamat	Design and Development of Secure Crypto-Processor Using FPGA and Handle C	S.P. Pune University	2.0	Completed

Criteria 6 – Governance Leadership and Management

Sr. No.	Name of Faculty	Title of Project and Duration	Funding Agency	Amount (Rs. Lakhs)	Present Status
10	Mr K P Patil	Design and Implementation of Orthogonal Frequency Division Multiplexing Signalling	S.P. Pune University	1.5	Completed
11	Mrs S J Desarda	Data Transmission over GSM Voice Channel for Wireless Advertise Panels.	S.P. Pune University	1.0	Completed
12	Mrs. M.M.Patil	Text to speech Synthesis for Marathi using syllable concatenation	S.P. Pune University	3.0	Completed
Total				31.90	
Department of Computer Engineering					
1	Mrs. L.J. Sankpal	A meaning based bilingual search engine (2009-2011)	BCUD, SPPU	2	Completed
Total				2	
Department: Information Technology					
1	Prof. D. R. Anekar Prof. P. B. Alappanavar	Extraction of Binary and Ternary elements using Unsupervised approach for data extraction	BCUD, SPPU Pune	0.5	ongoing
Total				0.5	
Department: FE					
01	N.P.Dharma dhikari	Studies on Effect of Geopathic Stress Zone on Human Bobby(2012-14)	BCUD, SPPU,Pune	1.45	Completed
02	N.P.Dharma dhikari	Use of Proton Magnetometer to Study Nature of Geopathic Stress (2014-16)	BCUD, SPPU,Pune	1.40	Completed
Total				2.85	

6.5 INTERNAL QUALITY ASSURANCE SYSTEM (IQAS)

6.5.1. Internal Quality Assurance Cell (IQAC)

- a) Has the institution established an Internal Quality Assurance Cell (IQAC)? .If ‘yes’, what is the institutional policy with regard to quality assurance and how has it contributed in institutionalizing the quality assurance processes?
 - b) How many decisions of the IQAC have been approved by the management/ authorities for implementation and how many of them were actually implemented?
 - c) Does the IQAC have external members on its committee? If so, mention any significant contribution made by them.
 - d) How do students and alumni contribute to the effective functioning of the IQAC?
 - e) How does the IQAC communicate and engage staff from different constituents of the institution?
- a. Yes, institute has established IQAC to insure quality education and holistic development of students. In the institute, it is referred as **AMC (Academic monitoring committee)**.

Sr. No.	Name of Committee Member	Designation
1	Dr. V. M. Wadhai	Principal
2	Dr. K. P. Patil	Vice Principal
3	Dr. S. S. Kore	HOD
4	Prof. M. M. Sardeshmukh	HOD
5	Prof. B. B. Gite	HOD
6	Prof. A. N. Adapanawar	HOD
7	Prof. R. R. Sorate	HOD
8	Dr. Daljeet Kaur	HOD
9	Prof. M. G. Bhat	External
10	Prof. S. B. Farakute	External
11	Prof. S. A. Kulkarni	External

The institutional policy with regard to quality assurance: The institute gives utmost importance to assure quality in all processes. The academic and administrative processes are interlinked as shown in the figure in Criteria 6.5.2.

To institutionalize the quality assurance processes IQAC insist on-

- Preparation of academic plan and calendar.
- Execution and monitoring of academic plan/activities.
- Conducting internal assessment tests
- Collecting feedback from students and alumni.

- Mentoring the students.
 - Developing infrastructure
 - Effective conduction of student training program (STP)
 - Holistic development of the students
 - Training of the staff to cope up with new technologies
 - Developing the faculty through “Train The Trainer (TTT)” program
 - Maintaining “Joy at work” atmosphere for the faculty
- b. Following is the list of important decisions taken by IQAC during recent years As IQAC (AMC) is working since from establishment of the institute (2005), it has taken very important decisions to build the institute as a centre of excellence in Engineering education
- Provide adequate infrastructure to the institute
 - Provide computers with latest configuration to the institute
 - Fulfill the lab requirements with good quality equipments and instruments
 - Expand the institute building
 - Re-designate the staff at higher position
 - Grant additional increment to the staff
 - Upgrade the pay band of the staff
- c. Yes, the IQAC have external members on its committee. It is as shown in above table of criteria 6.5.1(a).
- d. For the effective functioning of the IQAC, Students and Alumni contribute as follows.
- Students:** Students give feedback of individual faculty which is based on effective teaching learning methods. Based on their feedback, faculties are asked to improve by IQAC. Also during Teacher guardian meeting students give their opinions regarding academic and administrative method. These responses are taken into account and modification is made wherever necessary.
- Alumni:** Alumni give their feedback during alumni meet which is conducted every year. In this feedback they mention their opinions and suggestions regarding technology up gradation according to which different remedial actions are taken such as workshops are conducted for the students.
- e. Since all Heads of the Departments are the honorable members of the IQAC, each and every decision taken in and by the IQAC is communicated to the Department through them in regular department

meetings. This proves the direct and indirect involvement of the faculty members in the functioning of the IQAC.

6.5.2. Does the institution have an integrated framework for quality assurance of the academic and administrative activities? If ‘yes’, give the details on its operationalisation.

Yes, the institute have integrated framework for quality assurance. As our mission comprises of holistic development of the student and faculty, utmost importance is given for quality assurance. To achieve quality education and excellent environment for learning creativity, all parts of the system are integrated together as shown in the diagram below.

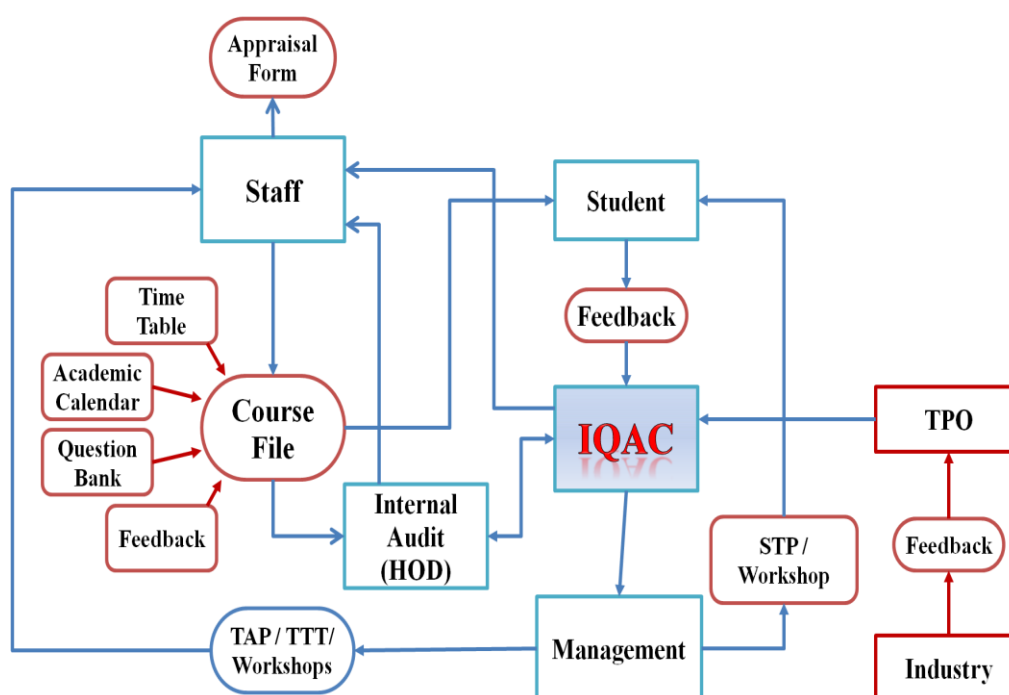


Fig.6.3 IQAC

As shown in the above diagram, our stakeholders are students, faculty, alumni, Industry, management and IQAC (AMC).

To impart quality education, all faculties are asked to maintain a course file. This course file content includes syllabus, study material, academic calendar, time table, assignments, question bank, university question papers, model answer paper, previous year result analysis and feedback of students. This course file is checked by internal advisory committee at the beginning of the semester and suggestions are given to the respective faculty. After appropriate modification, the essential contents are circulated to the students and it is used by the faculty for conducting the sessions during that semester.

Students give feedback of individual faculty depending upon various teaching parameters like no problem, low voice, improper writing, insufficient

explanation, fast, lack of communication, lack of interaction, poor English, poor presentation. Depending upon students' feedback and feedback from internal advisory committee, IQAC directs the respective staff and would ask for improvisation.

Along with the course file, staff maintains a personal file also. Staff fills an appraisal form after every academic year. This appraisal form is submitted to IQAC with HOD's remark. Depending upon this, IQAC appreciate efforts taken by staff and also give suggestion wherever necessary.

IQAC receives one more feedback and that is from Stake holders such as Industry, Parents, Alumni, and Experts etc. Our major recruiters convey the gaps present in today's educational system and technologies used in the industries to the training and placement officer (TPO). TPO conveys these gaps to IQAC.

Based on feedbacks and comments from stake holders, IQAC give collective report to management. After reviewing the common lacunas, management has started Student Training Program (STP) to improve their soft skills, communication skills and interview skills. Management also arranged various technical events, workshops etc to improve students' technical knowledge. In the similar way the TTT (train the trainer) and TAP (teacher advancement program) are organized regularly for the staff.

6.5.3. Does the institute provide training to its staff for effective implementation of the quality assurance procedure?

Yes, Institute provides training to its staff for effective implementation of the quality assurance procedure. To improve teaching skills, institute arrange various workshops and training program like Mission 10X, TAP-I (Teacher Advancement Program) and TAP-II. To impart quality education to the students, institute arranges programs like STP-1, STP-2, STP-3, STP-4 AND STP-5. Institute provides training to the staff for the same. To improve technical knowledge of staff members, institute arranges various technical workshops, STTP, Summer school Training, Guest lectures and seminars. Along with this, institute sanctions the OD and also sponsor the staff members to attain the technical and non-technical trainings, outside the institute.

6.5.4. Does the institution undertake Academic audit or other external review of the academic provision? If 'yes', how are the outcomes used to improve the institutional activities?

Yes.

The institute undertakes Academic audit and external reviews of the academic provisions from various bodies like AICTE, DTE, LIC, NAAC and NBA as shown below

Sr. No.	Committee Members	Remarks Given By The Committee	Action Taken By The Institute
2015-16			
Local Inquiry Committee 15 May 2015			
1	Dr. S. D. Bahadurkar Dr. S.M. Bhati, Prof. S.B. Somani Prof M.V. Jadhav Prof. S.V. Admane	<ol style="list-style-type: none"> 1. In the civil department, Fluid Mechanics Lab should be developed separately. 2. Plotter and printers should be purchased in Civil Department 3. Software like Auto CAD , Built Master should be purchased in Civil department 	<ol style="list-style-type: none"> 1. Lab has been developed eparately. 2. Platters and Printers are made available in Civil department. These software along with QSCT,ERP, Addcreat soft WTP soft has been purchased and installed in computer lab of civil department
2014-15			
Local Inquiry Committee 08 Apr 2014			
1	Dr. Y.P. Nerkar Dr. K.S. Sable Prof.S.N. Londhe Prof. B.R. Jadhavar Prof. M.R. Waghchaure	<ol style="list-style-type: none"> 1. Additional faculty members as per prevailing norms be appointed 2. Equipment for third year engineering program as per revision in syllabus by University of Pune be procured before July 2014 3. Approval of faculty as PG teacher be taken as per the norms of SPPU. 	<ol style="list-style-type: none"> 1. Additional faculty members as per prevailing norms have been appointed 2. Equipments are purchased. 3. Approval for 8faculty members already received. And approval for 5 faculty members awaited from university
2013-14			
Local Inquiry Committee 10 Jan 2014			
1	Dr. Y.P. Nerkar Dr. K.S. Sable Prof.S.N. Londhe Prof. B.R. Jadhavar Prof. M.R. Waghchaure	<ol style="list-style-type: none"> 1. Equipment/software required as per the revised syllabus of the University of Pune 	<ol style="list-style-type: none"> 1. Equipment/software are purshased

Sr. No.	Committee Members	Remarks Given By The Committee	Action Taken By The Institute
2012-13			
Local Inquiry Committee 29 Sep 2012			
1	Dr. Y.P. Nerkar Dr. P.M. Ghanegaonkar Prof. M.R. Waghchaure Prof. V.P. Waghe Dr. S.J.Wagh	<ol style="list-style-type: none"> 1. Adequate number of faculty members be appointed for Mechanical Engineering program 2. One i-7 computer for high end computational work should be purchased. 3. Additional titles and volumes of library books be made available urgently 	<ol style="list-style-type: none"> 1. New faculties are appointed. 2. Process for procurement of one i-7 computer is in process. Purchased order is placed. 3. 121 additional titles, 416 volumes of library books worth Rs. 1, 31,199/- have been purchased.
2011-12			
Local Inquiry Committee 28 Feb 2012			
1	Dr. R.K.Jain Dr. S.S.Sane Dr. V.P.Wani Dr. A.V. Kulkarni Dr. N.S. Mujumdar	<ol style="list-style-type: none"> 1. There are adequate faculty as per the AICTE norms, however cadre ratio to be enhanced. 2. Number of users of the software required in EnTC and Mechanical post graduate course be increased 	<ol style="list-style-type: none"> 1. College has conducted interviews as per the university norms on 24.8.2012. 2. 17 faculty members have joined as Assistant Professor, Associate Professor and Professor. 3. Purchased additional users of software.

Their reviews are used to improve the infrastructure, institutional activities and methodology. The outcomes are stated below:

- Expansion of college building
- Wifi connected campus
- Expansion of departmental library
- Number of books in central library are increased
- Advanced software and equipments are purchased
- Various workshops and events are planned and conducted for the students
- Various technical and non technical FDPs are arranged for staff
- Motivation is given for patent filling and consultancy

6.5.5. How is the internal quality assurance mechanism aligned with the requirements of the relevant external quality assurance agencies/regulatory authorities?

- The guide lines specified by AICTE, DTE and SPPU are followed by the institute.
- Admission to the program is governed as per directions given by Directorate of Technical Education Maharashtra state.
- The infrastructure and staff of each department is as per the norms laid down by AICTE and UGC and is verified by LIC of SPPU.
- The academic activities and processes are planned and implemented as per the guidelines set by these regulatory bodies and IQAC (AMC).
- Syllabus implementation and evaluation is done as per the guidelines of the University.
- Workshops, Conferences, STTP, FDP's, competitions are planned and organized by Institute from time to time as a part of quality improvement program.
- Staff members are encouraged to participate and arrange Workshops, Conferences, STTP, FDP's, competitions.
- Faculty members are also encouraged to apply for research projects which are funded by external agencies like ISRO, AICTE, and BCUD.
- Feedback is taken from students, parents and other stakeholders on quality-related institutional processes from time to time.
- The institute is monitored by SPPU, DTE committees for compliance and suggestions are incorporated

6.5.6. What institutional mechanisms are in place to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcomes?

Institution has very strong and well defined mechanisms for continuously reviewing the teaching learning process. As the Institute strives to achieve excellent academics and holistic development of the students, these mechanisms are reviewed regularly and their outcomes are used to get more efficient system.

- Daily timetable execution is monitored by the HODs
- Academic calendar execution is monitored by the Principal and Vice Principal
- Course file is checked by internal advisory committee twice in the semester
- Leave for teaching faculty is sanctioned only after alternative adjustment is done to ensure smooth conduction of lecture and practical.
- Syllabus coverage is checked by H.O.D. on monthly basis.
- Attendance of student is monitored daily and calls are made to defaulters by Teacher Guardian

- Defaulters list is displayed monthly.
- Teacher Guardian meetings are conducted frequently.
- Unit test-1, Unit Test-2, Prelim, Mock Online tests are conducted for all subjects
- Students' feedback is taken in every semester

6.5.7. How does the institution communicate its quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders?

- Vision, Mission, Quality Assurance policies are displayed on the website of the institution.
- Vision and Mission statements are displayed on boards at prominent places in campus.
- Vision, Mission and quality assurance mechanisms are illustrated in the information brochure.
- During alumni meeting, quality assurance policies and outcomes are communicated to the alumni and industry.
- Quality Assurance mechanisms and outcomes are informed to all stakeholders during students induction program, students mentoring sessions, parents meetings, alumni meetings Principal's address at seminars/conferences/ interactive sessions with stakeholders etc.



Sinhgad Academy of Engineering

Criteria 7
Innovation and Best Practices

7.1 Environment Consciousness

7.1.1 Does the institute conduct a green Audit of its campus and facilities?

Yes, The College is planning to conduct the green audit of its campus & facilities.

7.1.2 What are the initiatives taken by the college to make the campus eco-friendly?

The following initiatives have been taken by the Institute to make the campus eco-friendly.

A. Efficient use of Electrical Energy:-

- Program of electricity awareness at the institute level to spread awareness about efficient use of electricity.
- Energy audit of college as well as campus has been planned.
- While designing the buildings, the care has been taken to fetch maximum benefit from natural resources, like wind, sunlight to reduce consumption of electricity.
- Energy conservation display boards have been placed in each & every classroom & labs.
- Air conditioning is placed only at required places.
- The Institute celebrates 14th December as “Energy saving is energy generation” day on account National conservation day.
- All the laboratories are equipped with single point power controller for efficient use of electricity.

B. Use of Renewable Energy

- 240 solar panels have been installed on the rooftop of girls hostel as well as boys hostel. Capacity of individual panel is 125 liters/day. Total water heated/day = 5000 liters. It saves valuable non-renewable energy.

C. Rain Water Harvesting

- For improvement of ground water level, institute have planned Rain Water Harvesting scheme for boys & girls hostel in the campus.

D. Water Management

- The institute is having Sewage Treatment Plant (STP) of capacity 1.5 lakh liters/day. Plant includes screenings; clarifiers, oil & grease trap etc. Treated effluent is used for gardening purpose.

E. Plantation

- Approximately 40 % area of total campus is covered with plants & lawns.
- Various types of plants include medical plants like aloe vera, bottle palm, Hibiscus Rosa sinensis, Vitex negundo, Emblica Officinalis etc.
- Regular maintenance of plants is carried out by external vendor.

- To improve the plantation in the campus regular plantation drives are organized by students associations like FESA (First Year Student Association), CESA (Civil Engineering Student Association), CSA (Computer Student Association), ETSA (Electronic Technology Student Association), ITSA (Information Technology Student Association), MESA (Mechanical Engineering Students Association), NSS (National Service Scheme).

F. Solid Waste Management

- SAOE campus is having biogas generation plant with 800 kg capacity in order to dispose wet and biodegradable waste getting generated in the campus e.g. canteen food waste, mess food waste, hey etc.
- Approximately 30kg of methane (CH₄) is getting generated.
- Dry waste is collected regularly & handed over to Pune Municipal Corporation.

G. E- Waste Management

- "E-waste" is a popular, informal name for electronic products nearing the end of their "useful life". E-wastes are considered dangerous, as certain components of some electronic products contain materials that are hazardous, depending on their condition and density. The hazardous content of these materials pose a threat to human health and environment. Hence in our institute, Discarded Electronic and computer accessories are sold through auction to a licensed vendor (Poona E-waste Associate) on periodical basis.

1. Sewage Treatment Plant



2.Solar Water Heater



3. Water Softening Unit



4.Bio-Gas Plant



7.2 Innovations

7.2.1 Give details of innovations introduced during the last four year which have created a positive impact on the functioning of the college

A. Use of ERP in Administrative work (GEMS)

- A full fledged and independent ERP module i.e GEMS (Governing Education Management System) has been developed in house and most of the administrative work is undertaken using this software.
- The software is extremely beneficial for the administrative office, staff as well as students. All the data related to office, faculty and students is uploaded and available in the software.
- Most of the works such as leave management of staff, annual appraisals, faculty feedback etc. are done using ERP which increases the efficiency of human resources, reduces the paper work and also makes the whole process transparent.
- The Training and placement activities such as student registrations for various companies, eligibility criteria's, student profiles, etc. are executed using GEMS.

Following are the some of the features of GEMS Module: -

- Staff Profiles with complete details
- On duty worksheets
- Work Load
- Annual Appraisal of Staff members
- Student Feedback
- Service book
- Leave Application

B. “Project Based Learning” Program

- First Year department organizes Project Based Learning (PBL) program for encouraging students of First Year
- In this program, groups are formed among the students for doing the projects of their respective branch.
- The best projects are awarded with prizes.
- On the basis of this, Prof. Dr N P Dharmadhikari has got the best innovative teacher award from University of Pune.

C. BAJA, SUPRA, GOKART, ROBOCON and QUAD TORC

- BAJA consists of competition that simulates real world engineering problems and their related challenges. In this competition, engineering students are tasked to design and build off-road vehicles that will survive severe punishment of rough terrain.

- SUPRA SAEINDIA is an exciting competition which presents the engineering students with a challenging task of designing, simulating and modeling a formula type race car.
- QUAD TORC-The off Road Championship is an all-terrain vehicle (a four-wheeler bike), which was initially developed as a farm-to-town vehicle in isolated and mountainous areas.
- The institute provides infrastructural support in the form of laboratories, workshop etc. so that the students can design and build their vehicles for these events.
- The institute also provides financial support to these students and till date the institute has provided more than 6 lakh rupees to the participating students.
- As a result of this, students of the institute have been winners of various prestigious awards in these competitions number of times.
- National Event – SAE BAJA 2009:- At Indore, vehicle adjudged 2nd in Endurance Run and bagged a cash-prize of Rs.1, 00,000/-.
- National Event - SUPRA STUDENTS' FORMULA 2012:Held at the Buddh International Circuit, Greater Noida (NCR), team secured 3rd overall position in 65 participating teams and bagged a cash-prize of Rs.50,000/-
- National Event -GO KARTING 2013 (SPARTANS): Team was among 50 teams to participate in the event at Kolhapur (Maharashtra) in Oct 2013 and its performance was excellent and placed at 8th position.
- The team of Institute was Champion in “QUAD TORC 2015” and won the cash prize amount of Rs 1,50,000/-.

D. Studio Facility

- The institute is equipped with state of the art Studio with high quality audio and video recording facilities.
- More than 150 lectures of various faculties have been recorded and the database is created.
- This facility helps in improving presentation skills of the faculty members.
- Also, these lectures are uploaded on YouTube for the students to access them anytime on the internet.

E. Mosaic

- Every year, The Institute publishes institute level magazine called “Mosaic” which comes with perfect fusion of science literature and arts.
- The Magazine is divided into various sections covering articles on technical, literature, fine arts, etc. written by the students and faculties as well as the interviews of eminent personalities.
- The Magazine provides a platform for students to exhibit their talents like writing, paintings, photography etc.
- This Magazine has been awarded with the “ Best Magazine” award by Savitribai Phule Pune university for consecutive four years

F. Research lab equipped K point, video lectures, NPTEL Videos

- For enhancing the research activities, four research labs are available 24x7 in the college. Every lab is equipped with advanced instruments & software required for the same. In every lab 4-7 computers are provided with high speed internet connection.
- NPTEL videos and other technical video lectures are downloaded and made available to the students in research lab.
- The audio recordings of various SE and TE subjects are done in K point software. These recordings can be accessed by students online on these software and this helps the students in preparation for university exams.

G. Activities under Entrepreneurship Development (EDC) Cell

- Entrepreneurship Development Cell has been established at the institute level to motivate the students in development of independent business ideas.
- More than 340 students are registered members of EDC till date.
- The objective of this cell is to motivate the students to start their own enterprises and guide them in the process.
- Programs such as “Business Plan” competitions are held and the best ideas are groomed by the industry experts.
- Till date more than 20 alumni have started their enterprises as a part of this cell.

H. Model Based Learning

- Model based learning program (MBLP) has been organized by Civil department for third year Civil Engineering students for the subject Structural Design – I.
- Also, subjects like Geology, Engineering Graphics, Applied Thermodynamics, Integrated Circuits, Basic Mechanical Engineering etc. are taught using various models

I. Social cell named “Life Editor”

- A social cell having students from all the department at the institute level has been established called as the “Life Editor”. This is guided by the Principal.
- The cell works towards awareness about various important social problems and works towards addressing social issues.
- Under one of such initiatives, about 57500 rupees were donated to the farmers of Maharashtra who were affected by draught.
- 'BURNING MINDS' is a social group started by the students of the institute which is focusing on all the major problems of India like poverty, corruption, bad governance, unemployment, malnutrition etc. to create awareness in society regarding socio-economic problems.

J. Faculty Development Program

- Every Saturday, guest lecture is organized for the faculty member under Faculty development Program.
- In this program, lectures are delivered by professionals on topics such as Stress Management, Student Teacher Relationships, Effective Teaching Methodologies, and Work Life Balance etc.
- “Teacher Training Programs” (TTP) and “Teacher Advancement Program” (TAP) are organized at Sinhgad Technical Educational Society for Subjects of First Year, Second Year and Third Year before the start of the semester for the qualitative teaching.

K. Classrooms with Information and Communication Technology (ICT) facility

- The institute is equipped with smart classrooms having facilities like digital projectors for presentations, audio visuals etc.
- All the classrooms are connected with servers of respective department by Local Area Network (LAN) where faculty members can access their presentations; videos etc. Repository of the teaching materials like presentations, videos etc. are also available on the servers of the institute.
- Internet facility is available in classrooms to utilize web resources for teaching learning.
- CCTV cameras are installed in all the classrooms for better monitoring by authorities.

L. Student Training Program

- Student Training Program (STP) is incorporated into the curriculum to help prepare and evaluate the students in technical and non technical skills.
- As a part of STP, subject wise, all lectures are conducted by faculty members. This is a LAN based resource to help students learn and revisit concepts discussed in the class
- The training provided is based on the need of the students to enhance the employability opportunity and higher education in India as well as abroad.
- STP program is spread over 7 semesters and total duration of program is 120 plus hours. STP program is designed to provide training and practice on soft skills, technical fundamentals, value added components, quantitative aptitude and logical reasoning, group discussion and interview preparation.

M. TBI (Technology Business Incubation) Cell

- TBI is Technology Business Incubation cell. This facilitates economic development of students and employees by improving survival and growth of new entrepreneurial groups.
- This cell accelerates the development of young entrepreneurial start ups and companies from early to mid stage development.

- TBI cell provides workspace with shared office facilities and business and professional services necessary for nurturing and supporting early stage growth of technology and technology based enterprises.

N. Patent Cell

- Patent Cell has been formed at the institute to support the Research and innovation activities by students and faculties.
- As a result of this, faculties have started filing the patents.

7.3 Best Practices

7.3.1 Elaborate on any two best practices as per the annexed format (see page..) which have contributed to the achievement of the Institutional objectives and/or contributed to the quality improvement of the core activities of the College.

BEST PRACTICE NO.1

Title of the practice:

“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.

Goal:-

1. Continuous monitoring of academic performance of students including their attendances and performance in internal exams as well as providing a support system to guide and motivate the students.
2. Enhancement of technical and soft skills of the students to improve their employability.

The practice:-

A. “Teacher Guardian” Scheme:-

The institute has a “Teacher Guardian” Program for all the students’ i.e First, Second, Third and Final Year. Under this initiative, one faculty is appointed for every 20-25 students as their Teacher Guardian. The role of the appointed faculty is to continuously monitor the academic performance such as daily attendance of the these 20-25 students in lectures and practical, reporting the absentees of the students to their parents on a daily basis telephonically, monitoring their performance in internal examinations and conducting meetings with them regularly to discuss and address their academic as well personal problems of the these 25 students. The details of the above work are maintained in a workbook by the respective Teacher Guardian.

B. Student Training Program:-

The institute runs a comprehensive “Student Training Program” which includes each and every student of the institute and is spread systematically over five semesters. When student enters his respective department in second year, he is trained in various technical and soft skill modules in each semester till the final year. The Details of the Program are as under.

Program	Year	Semester	Contents
STP 1	Second	I	Carrier and Goal Setting, Resume Writing, behavioral skills, public speaking, SWOT analysis
STP 2	Second	II	Reading, Writing, Listening and Speaking skills
STP 3	Third	I	Technical Training (Second Year Subjects)
STP 4	Third	II	Group Discussions and Personal Interviews
STP 5	Final	I	Pre-Placement Training

Context:-**A. Teacher Guardian Scheme:-**

Each student has his own strengths and weaknesses. Teacher Guardian is like mentor to his students and he/she knows and understands his students personally. In each class, weaker sections are identified by the TG's and reported to the other faculties teaching to that class and subsequently more efforts are taken to educate and improve these section. Parents are regularly updated about the performance of their ward by his TG and thus they are also involved in this process. Teacher Guardian listens to the problems faced by the students like poor academic performance, problems related to infrastructural facilities, and even personal The Teacher Guardian acknowledges and addresses these problems and also acts as a mentor to motivate and guide the students. Knowing the student personally and communicating with him/her like a guardian develops a personal connect between the TG and student which is the prime goal of this program. This in turn develops a sense of confidence, support and security in the students and they are in a better position to face the academic challenges. Effective communication with the students helps their respective TG's to understand their strengths and weaknesses. Hence they can mentor them in the right direction. In some cases, counseling for time management, stress management etc. is also provided to the students by their Teacher Guardians. All these activities undertaken by the TG's like daily call records to the parents, TG meetings, minutes of the

meetings, student performance etc. are recorded in a booklet which is maintained by each and every Teacher Guardian.

B. Student Training Program:-

The aim of “Student Training Program” is to improve the employability level of students by virtue of systematic enhancement of technical and soft skills so that they can serve the industry better. The overall skill development of students is the core of the program. STP 1 and STP 2 are conducted for second year students in semester I and II respectively. In these two programs, students are trained on the topics like Carrier and Goal Setting, Resume Writing, behavioral skills, public speaking, SWOT analysis as well as reading, writing, listening and speaking skills. In second year itself, students are trained in soft skills and communication skills which are vital from employability point of view. STP 3 and STP 4 are conducted in third year semester I and II respectively. STP 3 is technical training in which students revisit the fundamentals of all subjects of second year. STP 4 focuses comprehensively on Group Discussions and Personal Interviews. Each and every student is made to participate in various types of group discussions and mock personal interviews are undertaken. STP 5 is conducted in Final year of the course. This emphasizes on branch specific technical training. (Ex. For Civil Engineering Department, Concrete Mix Design has been organized under STP 5).

STP is designed to methodically enhance the core competencies as well as the technical competencies of the students. The contents of the program are critically designed by experts and vetted internally and externally. The complete training is provided to the students by internal and external experts. These faculties are trained by external experts before training the students. The assessment and evaluation of students for this program is done on the basis of online tests conducted by AMCAT (Aspiring Minds Computer Adaptive Tests). In every semester, the students appear for AMCAT and the detailed report card is sent to his/her mail id. Thus, the student himself understands his current level of performance in aptitude, communication, reasoning etc. and can monitor his own progress.

Problems Faced and Resources Required:-

- Inculcating sense of guardianship in the faculties for increased effectiveness of the “Teacher Guardian” scheme.
- Making the students realize the importance of “Student Training Program” in context of employability to increase their active participation.
- The Faculty members are provided with telephone facility at their respective departments for calling the parents and running the “Teacher Guardian” program smoothly.

- The institute provides soft skill training to the faculties from outside experts to conduct “Student Training Program”.

Evidence of Success:-

- The “Teacher Guardian” has proved to be extremely successful in improving the overall attendance of the students.
- Many of the problems faced by the students have come up in the TG meetings and they have been addressed by the faculty members and management. Ex. Problems like need of water cooler in civil department, need of fans etc. came up in the TG meetings and subsequently, these facilities were provided to the students.
- “Student Training scheme” has created an immense impact on the student performance in employers’ satisfaction. Students are performing better in Group discussions, Personal interviews etc. and it is evident from the increased number of placements.

BEST PRACTICE NO.2

Title of the practice: -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.

Goal:-

1. Quality improvement of students through Guest lectures by experts, industry sponsored projects, internships etc.
2. Strengthening the Industry –Institute interaction through “Memorandum of Understanding” for Knowledge sharing.
3. Nurturing the spirit of research amongst young engineers by encouraging and supporting research work.

The Practice:-

It is a practice of the institute to conduct Guest Lectures and Talks for the students on various technical topics which are delivered by experts from Industry and Academia. The institute has substantially strengthened its connect with the industry by entering into knowledge MOU’s which are highly beneficial to encourage new ideas and provide exposure to the students. Many students’ oriented programs are conducted as a part of these MOU’s. The institute constantly strives to support the research activities of students by providing facilities like research labs, financial support etc.

Context:-

It is a known fact that the pace with which the engineering sector is developing and growing is tremendous. The institute recognizes the need of exposure and understanding of students to these rapidly emerging innovations. With this, healthy and fruitful interaction with the industry has been one of the key mandates of the institute. In accordance with this mandate every

department of the institute has connected to various engineering organizations in the form of “Memorandum of Understanding”. These MOU’s are aimed at knowledge sharing, promotion of new ideas and technology transfer between the students of the institute and industry. The institute has entered into MOU’s with more than 50 numbers of companies. Many programs are conducted by the Industries as a part of interaction ex. Zensar Pvt Ltd. Conducted the employability training of selected students and also placed the success students, Campus Connect program conducted by Infosys etc.

Guest Lectures are conducted in all the Departments on various important and emerging topics. These are delivered by experts from the field of academia as well as from the Industry. The students gain a better understanding of the subject and know the practical applications of the same.

Also, the students are encouraged to carry out B.E projects in the Industry. Such projects help to enhance the skills of young engineers like critical problem solving approach, team work, leadership, communication skills and technical writing. Students are also encouraged to undergo in plant trainings and internships.

The Institute considers its responsibility towards contributing to fundamental and applied engineering research. In coherence with this approach, it is a practice of the institute to imbibe the seeds of research in the minds of young engineers by supporting the research work in all possible ways. The following initiatives have been taken by the institute to promote research work by students:

- Round the clock access to well equipped and independent research labs at every department
- Financial support to the students to publish technical papers in journals and conferences
- Financial support to the students to participate in national level competitions. Eg:- About 6 lakh rupees have been provided to the students for participating in BAJA and SUPRA competitions.
- Online access to reputed technical journals like IEEE, ASCE, Science direct etc. at the central library

Problems Faced and Resources Required:-

- Availability of space (Infrastructural resources were required to set up independent research lab at each department which was a challenge), however enough space is provided to setup independent research lab at each department.
- Finding and approaching the companies for MOU’s was a challenge for the institute.
- Making the students realize the importance of carrying out industry internships, industry sponsored projects, and conducting research work was again a challenge faced.

- Financial resources were required to support technical paper publications by students, and attending the technical workshops and conferences.

Evidence of Success:-

- The conduction of guest lectures by experts have proved to be vital in conceptual and application based understanding of various subjects which is evident in their performance in the written and oral examinations.
- The Industry Institute Interaction has made a remarkable impact in quality improvement of students which is evident from the quality of final year projects, seminars etc. The number of students getting certifications in skills like AUTOCAD, STADD PRO etc. has increased considerably.
- The initiatives taken by the institute to promote research work has lead to a remarkable increase in the number of technical publications by the faculty and students.
- Many prestigious awards have been won by the students of the institute in National and International competitions like BAJA, SUPRA, GO KART etc.

The Details of various Guest Lectures, MOU's, Patents, Students Publications, workshops, conferences, seminars etc. are as follows. (to be verified and resubmitted by dept.)

1. Summery of Guest Lectures,MOU's Value Added Programs, Site visits & Student Internship for last five years

Guest Lectures	Memorandum of understanding	Value Added Program	Site/Industry Visit	Student Internship
Mechanical Engineering				
12	10	4	30	23
Electronics & Telecommunication Engineering				
33	13	3	12	21
Computer Engineering				
36	8	1	4	11
Civil Engineering				
14	7	13	29	10
Information Engineering Technology				
41	9	11	5	2
Engineering Sciences				
9	0	0	0	0

2. Summary of IPR/Patents, Sponsored projects, Students Publications, Faculty Publications & Funded Projects for last Five Years

IPR/ Patents	Sponsored projects	Students Publications	Faculty Publications	Funded Projects
Mechanical Engineering				
4	28	52	142	11
Electronics & Telecommunication Engineering				
15	16	58	303	12
Computer Engineering				
-	33	60	131	1
Civil Engineering				
2	3	16	45	-
Information Technology				
-	21	72	96	1
Engineering Sciences				
4	0	0	19	2

Name of the Principal	: Dr. Vijay M. Wadhai
Name of the INstitution	: Sinhgad Academy of Engineering
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Accredited Status	: Cycle 1
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Email	: saeprincipal@sinhgad.edu
Mobile	: 9921843549



Sinhgad Academy of Engineering

Evaluation Reports

1. **Name of the Department** : Mechanical Engineering
2. **Year of Establishment** : 2005-2006
3. **Names of Programmes/
Courses offered** : UG – B.E. (Mechanical Engineering)
P.G.-M.E. (Design Engg) &
UG, PG, M.Phil., Ph.D., Automotive Engg
Integrated Masters, Integrated Ph.D. –(Mechanical Engineering)
(Ph.D etc.)
4. **Names of Interdisciplinary courses and the departments/units involved**

Sr N o	Class	Interdisciplinary Courses	Departments Involved
1.	FE	Engg Mathematics I	Mathematics
2.	FE	Engg Mathematics II	Mathematics
3.	FE	Engg Physics	Physics
4.	FE	Engg Chemistry	Chemistry
5.	FE	Basic Electrical Engg	Electrical Engineering
6.	FE	Basic Electronics Engg	Electronics & Telecommunication
7.	FE	Fundamental Programming Languages I	Computer Engineering
8.	FE	Fundamental Programming Languages II	Computer Engineering
9	FE	Basic Civil & Enviroment Engg	Civil Engineering
10 .	FE	Engg Mechanics	Civil Engineering
11 .	SE	Engg Mathematics III	Mathematics
12 .	SE	Electrical & Electronics Engg	Electrical Engineering, Electronics &Telecommunication
13 .	ME	Advanced Mathematics	Mathematics

5. **Annual/ semester/choice
base credit system
(Programme wise)** : U.G. –Semester Pattern
P.G. -Semester Pattern

6. Participation of the department in the courses offered by other departments

Sr. No.	Class	Courses	Departments involved
1.	FE (Computer, Electronics & Telecommunication Engineering, Information Technology , Civil Engineering)	Basic Mechanical Engineering	Computer Engineering, Electronics & Telecommunication, Information Technology , Civil Engineering
2.	FE (Computer, Electronics & Telecommunication Engineering, Information Technology , Civil Engineering)	Engineering Graphics I	Computer Engineering, Electronics & Telecommunication, Information Technology , Civil Engineering
3.	FE (Computer, Electronics & Telecommunication Engineering, Information Technology , Civil Engineering)	Engineering Graphics II	Computer Engineering, Electronics & Telecommunication, Information Technology , Civil Engineering

7. Courses in collaboration with other universities, industries and foreign institutions etc.

Sr. No.	Certificate Course name	Participating institution /industry
1.	Automation Studio	India Soft Technologies (P) Ltd, Pune
2.	Piping Design	Asian Academy of Professional Training, Pune
3.	Process Planning And Tolerance Analysis	Mecha-Tol Engineering Solutions, Pune

8. Details of courses/programmes discontinued (if any) with reasons: Nil

9. Number of Teaching posts: Professor- 03, Associate Professor-02 Asst. Professor- 41

10. Faculty profile with name, qualification, designation, specialization,(D.Sc./D.Litt./Ph.D. / M. Phil. etc.,)

Sr No	Name of the Teaching Faculty	Qualifications	Designation	Specialization	No. of Years of Experience	Publications
1	Dr. S. S. Kore	ME, Ph D	Assoc. Professor	Heat Transfer	16	10
2	Mr. S.C. Shilwant	ME Pursuing Ph D	Professor	Manufacturing Automation	32	15
3	Dr. D. N. Kamble	ME Ph D	Professor	Design	13	11
4	Dr. S. P. Deshmukh	ME Ph D	Professor	Design	10	26
5	Dr.P.P. Hujare	ME Ph D	Assoc. Professor	Machine Design	16	08
6	Mr. A.P. Kalmegh	ME Pursuing Ph D	Assoc. Professor	Advanced Prod. System	14	-
7	Mr. P.M. Sonawane	ME Pursuing Ph D	Assoc. Professor	Design	14	10
8	Mr. S. R. Patil	ME Pursuing Ph D	Asst. Professor	Heat Power	20	15
9	Mr. A.V. Bhosale	ME MBA Pursuing Ph D	Asst. Professor	Design	16	01
10	Mr. M. K. Wasekar	ME Pursuing Ph D	Asst. Professor	Manufacturing Automation	16	02
11	Mr. S.S. Ghorpade	ME	Asst. Professor	Heat Power	14	-
12	Mr. P.G. Ranaware	ME Pursuing Ph D	Asst. Professor	Metallurgy	17	-
13	Mr. N.P. Jadhav	ME Pursuing Ph D	Asst. Professor	Heat Power	14	01
14	Mr. V. K. Dhumansure	ME Pursuing Ph D	Asst. Professor	Machine Design	11	-
15	Mr. T. R.	ME	Asst.	Metallurgy	8	-

Sr No	Name of the Teaching Faculty	Qualifications	Designation	Specialization	No. of Years of Experience	Publications
	Shinde	Pursuing Ph D	Professor			
16	Mr. R J Gawande	ME	Asst. Professor	Design	13	-
17	Mrs. R.B.Patil	ME	Asst. Professor	Design	8	03
18	Mr. V. Ramanathan	ME Pursuing Ph D	Asst. Professor	Thermal & Fluid	11	-
19	Mr. S. S. Vasekar	BE , ME	Asst. Professor	Energy Studies & Heat Power	13	-
20	Mr. S. C. Shamkuwar	ME Pursuing Ph D	Asst. Professor	Thermal	5	-
21	Mr. A.V. Jomde	ME Pursuing Ph D	Asst. Professor	Heat Power	5	05
22	Mr. M.V. Chitale	ME	Asst. Professor	Manufacturing	7	-
23	Mr. P. J. Tipole	ME Pursuing Ph D	Asst. Professor	Heat Power	6.5	04
24	Mr. S. B. Sollapur	ME Pursuing Ph D	Asst. Professor	Design	7	04
25	Mr. A. S. Patil	M-Tech Pursuing Ph D	Asst. Professor	Heat Power	8.5	-
26	Mr. A. J. Rajguru	M-Tech Pursuing Ph D	Asst. Professor	Mechanical	5	03
27	Mr. Y. U. Chapke	ME	Asst. Professor	CAD / CAM	3	01
28	Mr. A A Bijagare	M-Tech	Asst. Professor	Design	4.5	04
29	Mr. V T	ME	Asst.	Auto Engg.	4	01

Sr No	Name of the Teaching Faculty	Qualifications	Designation	Specialization	No. of Years of Experience	Publications
	Pawar		Professor			
30	Mr. Y K Dhage	M-Tech	Asst. Professor	Metallurgy	2.5	-
31	Mr. D K Kokare	ME Appearing	Asst. Professor	Design	6	-
32	Mr. S. A. Ladkat	ME Mech	Asst. Professor	Heat Power	8	
33	Mr. M. R. Khilare	ME Mech	Asst. Professor	Design	1	
34	Mr. R. D. Agham	ME Mech	Asst. Professor	Heat Power	3	
35	Mr. M. Rampure	ME Mech	Asst. Professor	Design	2	
36	Mr. V. A. Naikwadi	ME Mech	Asst. Professor	Design	2	
37	Mr. A. A. Maske	BE, ME Appearing	Asst. Professor	Automotive	1	-
38	Ms. Priya Sen	ME Appearing	Asst. Professor	Automotive	1	-
39	Mr. I. B. Bagmar	ME Appearing	Asst. Professor	Design	1	-
40	Mr. S. M. Pabale	ME Appearing	Asst. Professor	Design	1	-
41	Mr. N. S. Watekar	BE, ME Appearing	Asst. Professor	Design	1	-
42	Mr. C. M. Mane	ME Appearing	Asst. Professor	Design	1	-
43	Mr. N. M. Lonkar	ME Appearing	Asst. Professor	Design	1	-

Sr No	Name of the Teaching Faculty	Qualifications	Designation	Specialization	No. of Years of Experience	Publications
44	Mr. K. Kulkarni	ME Appearing	Asst. Professor	Design	1	-
45	Ms. A. S. Yadav	ME Appearing	Asst. Professor	Automotive	1	-
46	Mr. R. S. Mangrulkar	ME Appearing	Asst. Professor	Automotive	2	-

11. List of senior visiting faculty : 20 % of sanctioned faculty
 12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty : 21%
 13. Student -Teacher Ratio (programme wise)
 U.G.: 1: 18.46. P.G.: 1:12
 14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Academic support staff	
Number of academic support staff (technical)	13
Number of administrative staff	04

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.
 Ph.D: 04 M. Phil: Nil PG : 36
 16. Number of faculty with on-going projects from National and International funding agencies and grants received
 National : 07 (12.7 Lacs)
 International funding agencies : NIL
 17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR etc.
 02 (29 Lacs)
 18. Research Centre /facility recognized by the University
 YES, PhD Research Centre recognized by SPPU, Pune
 19. Publications: (Research Articles)
 Refer Table of title No 10 for Publication By Faculty

National Journal	3	Monographs	NIL
International Journal	106	Chapters	NIL
National Conference	25	Books	21
International Conference	10	Overall Citations	H-10

20. Areas of consultancy and income generated

Rs.37,807 (for Ansys , Robosys & Mat LAB training)

21. Faculty as members in National, International Committees and Editorial Boards

Sr. No	Faculty Name	Members(National/International Committee /Editorial Board)
1.	S C Shilwant	SPPU Syllabus Finalization committee member for Fluid Mechanics, Turbo Machinery, CFD, Hydraulics & Pneumatics Subjects [SE,TE &BE]
2.	Dr. D N Kamble	International Journal Taylor and Francis Rewiever .National conference ATIME 2014 Editorial board member Subject Chairman Vehicle dynamics, Mathematical Modelling Life Member ISTE
3.	Dr. S P Deshmukh	BoS Member for Marathawada North University, LIC Member SPPU, Pune, Mumbai University Syllabus Structuring and Finalization Member for Mechanical Engineering Board, SPPU Syllabus Structuring and Finalization Member. Chairman for different subjects DOM, Mechatronics, Finite Element Method,
4.	Dr.S.S.Kore	Reviewer of International Journal of Hear Transfer ,Springer

22. Student projects

(a) Percentage of students who have done in-house projectsincluding interdepartmental / Programme

Sr. No.	Year	No. of In-house Projects	% of in-house Projects
1.	2015-16	75/80	93
2.	2014-15	50/53	94
3.	2013-14	42/53	79
4.	2012-13	24/30	80
5.	2011-12	16/18	88

(b) Percentage of students placed for projects in organizationsoutside the institution i.e.in Research laboratories/Industry/other agencies

Sr.No.	Year	No. of Projects in Collaboration	% of projects done in Collaboration
1.	2015-16	5/80	7
2.	2014-15	3/53	6
3.	2013-14	11/53	21
4.	2012-13	6/30	20

5.	2011-12	2/18	11
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23. Awards / Recognitions received by faculty and students

(a) Faculty Achievements

Faculty: 4 awards

(b) Student Achievements Summary

Year	2014-15	2013-14	2012-13	2011-12
No.of Prizes won	11	01	03	04

24. List of Eminent Academicians and Scientists / visitors to the Department

Sr. No.	Name of visitor	Organization	Purpose of visit
1.	Mr. Tomio Isogai	MD Sharp Products	Chief guest for Entrepreneurial activities
2	Mr. Y.H.Gharpure	President Technology transfer Association	Guest of Honor Entrepreneurial activities
3.	Mr. A Gupta	Brose Company	Engineers Day Celebration
4.	Vijay C. Suttatti	Suttatti Enterprises Ltd	MOU and Interaction with students
5	Mr. Kedar Gokhale	SCS Renewable Energy Pvt Ltd	MOU and Interaction with students
6.	Shri. Sutatti Rajendra	Sumax Enterprises	MOU visit
7.	Mrs. Ashwini Shinde	Shivam Pressing	MOU visit
8	Mr. Bakhtiyar Pervez Gandevia	Machine Preconditioners Pvt	UG project exhibition
9.	Shri Dilip Dhopavkar	Everest Electromagnetics	MOU ,Product development
10.	Mr. Prashant Jadhav	Venus Technology	Software Training
11.	Mr. Shivaji Jadhav	Neeshionics	Product Development
12.	Mr. Pratik Jain	Embryyo Technology Private Ltd	Bio Project development
13.	Er Tilakraj V Duthade Deputy	National Cold Chain Training centre	New products

25. Seminars/ Conferences/Workshops organized & the source of funding

a) National for Staff

Sr. No.	Events	Staff Co-ordinator	Date	Funding
1.	National Conference of Advanced Technology and Innovations in Mechanical Engineering	Dr. Dinesh N. Kamble	22-24 Jan 2015	SPPU-BCUD
2	Research Methodology for innovative Research in Mechanical Engineering	Dr. Dinesh N. Kamble	16-21 April 2012	UGC
3	Heat Transfer Augmentation	Dr. Kore S.S	18-19 Oct 2013	BCUD

b) International : Nil

26. Student profile programme/course wise

Name of the Course/programme	Applications received		Enrolled		Pass Percentage
			*M	*F	
Mechanical Engineering	2014-15	Online process of DTE	208	32	90.25
	2013-14		212	29	90.00
	2012-13		210	38	97.14
	2011-12		165	26	83.33

27. Diversity of Students

Name of the Course	Academic Year	Students from the same state	Students from other States	Students from abroad
Mechanical Engineering	2014-15	222	18	Nil
	2013-14	222	19	Nil
	2012-13	228	20	Nil
	2011-12	176	15	Nil

28. How many students have cleared national and state competitive examinations such as NET, SET, GATE, Civil services, Defense services, etc.

Sr. No.	Competitive Examinations	No of Students Passed			
		2011-12	2012-13	2013-14	2014-15
1	NET/ SET	NA	NA	NA	NA
2	GATE	01	01	02	03
3	Defence Services		01		
4	CAT		01		

29. Student progression

Student progression	Against % enrolled			
	2014-15	2013-14	2012-13	2011-12
UG to PG	03	25	30	15
PG to M.Phil.	NA	NA	NA	NA
Employed				
• Campus selection	29	34	23	17
• Other than campus recruitment	00	08	08	18

30. Details of Infrastructural facilities

a) Library

Particulars	Titles	Volumes
Books		
U.G.	657	2894
P.G.	73	558
On line journal		
ASME On line	32	-

- **Internet facility for staff and :** Internet service :Total 12 MBPS broadband line

(a) Students

- (b) Class rooms with ICT facility:** All class rooms are provided with LCD projector

Sr No.	Class Room (UG)	Class Room (PG)	Tutorial Room	Laboratory
01	12	1	7	16

Sr. No.	Name of the Lab	Sr. No.	Name of the Lab
1	Basic Mechanical Engg.	9	Metrology & QC Lab
2	CAD CAM/ AutoCad/Computer Graphics	10	Refrigeration & AC Lab
3	Theory of Machine	11	Heat Transfer
4	Fluid Mechanics	12	Mechatronics
5	IC Engine and Auto	13	Industrial Fluid Power
6	Metallurgy Lab	14	Workshop
7	Civil Lab	15	Mech. Computer Lab
8	Fluid Machinery Lab	16	Mech. R&D Lab

31. Number of students receiving financial assistance from college, university, government or other agencies

Refer Table of Criteria No. 5.1.3 for scholarship details

32. Details on student enrichment programmes (special lectures workshops /seminar) with external experts

Sr. No.	Academic year	Competition	Special Lecture	Workshop	Seminar	Social
1	2015-16	02	02	02	--	01
2	2014-15	10	02	--	--	01
3	2013-14	11	05	01	--	02
4	2012-13	02	03	02	01	--

33. Teaching methods adopted to improve student learning

- Guest Lecture
- Workshop
- Quiz
- Video Lecture
- Industrial Visits
- Mock Interviews
- Assignments/Semester
- Class Test
- Tutorial
- Seminar
- Feedback Analysis
- Department Library Facility
- Internet Facility

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

- By involving students in Blood Donation Camps
- Celebrating Teachers Day
- By involving students in National Festival celebration Republic and Independence day
- By involving students in plantation activity

35. SWOC analysis of the Department and Future plans

Strengths

- Wellqualified experienced and dedicated faculty.
- State-of-the-Art computing facilities
- Well-equipped Workshop facility
- Library– International Journals
- Enthusiastic, dedicated Mechanical students who are consistent in their enrollment.
- Air-conditioned seminar Halls, fully equipped with state-of-the-art audio-
- Visual devices.

- High success rate
- High speed internet facility for students & staff
- Well-furnished class room

Weaknesses

- Professional skills needs to be further improved among students
- Communication skills among rural based students needs improvement
- Affiliated University curriculum is not Industry Oriented.
- Insufficient core modules in the affiliated curriculum
- Lack of international student attraction

Opportunities

- Leader in providing quality engineering education clubbed with placements
- Industry oriented training
- Becoming a leader in student placements
- Becoming a leader in interdisciplinary and integrated learning
- An opportunity to interact with eminent personalities

Constraints

- Lesser Placement opportunities due to recession faced by the mechanical industries
- Fee restriction by the state government

Future plans:

- Enhancement in Research Activities
- Centre of excellence
- Enhancing industry Institute interaction for projects by students and faculty
- Industrial training for faculty
- Patent enrollments etc

1. **Name of the department** : Electronics & Telecommunication Department
2. **Year of Establishment** : 2005
3. **Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D Integrated Masters; Integrated Ph.D., etc.)**

Courses Offered	Name of the Course	Specialization
U.G.	B.E. E&TC	Electronics & Telecommunication
P.G.	M.E. E&TC	VLSI and Embedded Systems
	M.E. Electronics	Digital Systems

4. **Names of Interdisciplinary courses and the departments/units involved**

Sr. No.	Course	Department
1	Engineering Mathematics III	Engineering Sciences
2	Data Structure	Information and Technology
3	Object Oriented Programming	Information and Technology
4	Object Oriented Programming	Computer Engineering

5. **Annual/ semester/choice base credit system (program-wise)** : U.G. :Semester -Pattern
PG : Semester -Pattern Credit system

6. **Participation of the department in the courses offered by other departments**

Sr.No.	Course	Department
1	Basic Electronics Engg	Engineering Sciences
2	Digital Signal Processing	Computer Engineering

7. **Courses in collaboration with other universities, industries, foreign institutions, etc.**

Sr. No.	Name of the Course	Name of the Industry
1	Android	MEIS India Pvt. Ltd, Pune
2	JAVA	Mass Technologies Pune
3	PLC & SCADA	ETA Pune

8. **Details of courses/programs discontinued (if any) with reasons** : Nil

9. Number of Teaching posts

Professor: 02

Associate Professor: 03

Assistant Professor: 31

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	Years of Experience
Dr. V.M.Wadhai	Ph.d	Principal	VLSI Embedded	29
Dr. K. P. Patil	Ph.d	Vice-Principal	Communication	28
Mr. M.M. Sardeshmukh	MTech (E&TC)	Assi. Prof. & HOD	Image Processing	14
Dr. Mrs. J .P. Shinde	Ph.d	Asso. Prof.	Microwave Communication	14
Dr. P. N. Shinde	Ph.d	Asso. Prof.	Microwave Communication	22
Mrs. S H Rajput	ME (Elex)	Assi. Prof.	VLSI Embedded	12
Mr. R. P.Borse	Ph.d	Asso. Prof.	Image Processing	12
Mr. C G Patil	ME (Elex)	Assi. Prof.	Image Processing	24
Mr. D.K. Kamat	ME (Elex)	Assi. Prof.	VLSI Embedded	18
Mr. R.U. Yawale	ME (Elex)	Assi. Prof.	Image Processing	8
Ms. C. C. Athavale	ME (Elex)	Assi. Prof.	VLSI Embedded	9
Mrs. M. M. Patil	ME (E&TC)	Assi. Prof.	VLSI Embedded	10
Mr. A.B. Ingole	ME (Elex)	Assi. Prof.	Image Processing	12
Mrs. R. A. Jain	MTech (E&TC)	Assi. Prof.	Communication	12
Mr. C. P. Mahajan	ME (E&TC)	Assi. Prof.	VLSI Embedded	12
Mrs. V. P Patil	ME (E&TC)	Assi. Prof.	VLSI Embedded	8
Mr. M. H. Naikwadi	ME (Elex)	Assi. Prof.	Communication	12.5
Mrs. J A Bagban	ME (Elex)	Assi. Prof.	VLSI Embedded	9
Mrs. P. R. Shahane	ME (Elex)	Assi. Prof.	Image Processing	6
Mrs. R. B. Kakkeri	MTech (E&TC)	Assi. Prof.	Instrumentation	8
Ms. V.V.Joshi	MTech (E&TC)	Assi. Prof.	Communication	10
Mr. V D Bharate	MTech (E&TC)	Assi. Prof.	Image Processing	9.5
Mr. A P Joglekar	MTech (Elex)	Assi. Prof.	Communication	35
Mrs. K N Jagtap	ME (Elex)	Assi. Prof.	VLSI Embedded	3
Mrs. A.K.Patel	ME (Elex)	Assi. Prof.	Microwave Communication	10

Name	Qualification	Designation	Specialization	Years of Experience
Mrs. S.M.Parvat	ME (E&TC)	Assi. Prof.	Communication	6
Mr. S.M.Kasar	ME (E&TC)	Assi. Prof.	Image Processing	4
Mr. S..V.Thakur	ME (E&TC)	Assi. Prof.	VLSI Embedded	4
Mrs. S.S.Phule	ME (E&TC)	Assi. Prof.	VLSI Embedded	3
Mrs. S.M.Potdar	ME (Elex)	Assi. Prof.	VLSI Embedded	4
Mrs. R.K.Patil	ME (Elex)	Assi. Prof.	Communication	2
MR. S. R. GORE	M.B.A.	Assi. Prof.	Marketing & Finance	16
Ms. V. P. Khirodkar	ME (E&TC)	Assi. Prof.	VLSI Embedded	0.5
Mr. A. N. Shinde	ME (E&TC)	Assi. Prof.	VLSI Embedded	0.5
Mr. N. M. Vasekar	ME (E&TC)	Assi. Prof.	VLSI Embedded	0.5
Ms. V. S. Londhe	ME (E&TC)	Assi. Prof.	VLSI Embedded	0.5

11. List of senior visiting faculty : 20 % of sanctioned faculty

12. Percentage of lectures delivered and practical classes handled (programme wise) by Faculty temporary : 11%

13. Student -Teacher Ratio (programme wise) :
UG: 18:1 **PG :** 12 : 1

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled
 Technical Staff: 06

15. Qualifications of teaching faculty with D.Sc./D.Litt./ Ph.D/ M.Phil. / P.G.

Ph.D.: 5 (Completed) Ph.D.: 8 (Pursuing) P.G.: 19 PG (Pursuing): 04

16. Number of faculty with ongoing projects from (a) National (b) International funding agencies and grants received :

Sr. No.	Name of Faculty	Title of Project	Funded By	Funding Amount
1	Dr. Mrs. J.P. Shinde Dr. P.N. Shinde	Space Radiation from the Optically Transparent Planar Microstrip Antenna Integrated with the Solar Panels of Small Satellites	S.P. Pune University, ISSRO	11.7 Lakh

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR etc. and total grants received

Sr. No.	Project Status	Number of Project	Funded By	Funding Amount
1	Completed	06	S.P. Pune University	11.5 Lakh
2	Ongoing	05	S.P. Pune University	8.7 Lakh
Total				20.2 Lakh

**18. Research Centre /facility recognized by the University : YES
Department of Electronics and Telecommunication - Phd Program**

19. Publications:

a) Publication per faculty :

No. Of Journal Publications: 216

No. Of Conference Publications: 192

b) Number of papers published in peer reviewed journals (national /international) by faculty and students

No. of papers published in peer reviewed journals	158
No. of publications listed in international	0
Monographs	0
Chapters in Book	2
Books edited	0
Books with ISBN/ISSN no. with details of publisher	3
Citations	55
SNIP	0
SJR	0
Impact factor(Average)	2.24
H-index average	5.58

20. Areas of consultancy and income generated :

Name of Area : Design and Testing of Antenna(Communication)
Rs=3200

21. Faculty as members in National committees, International Committees, Editorial Boards

- a) National Committee : 15 Nos
- b) International committee : 3 Nos
- c) Editorial Committee : 5 Nos

22. Student projects

a) Percentage of students who have done in-house projects including inter departmental/programme : 90%

b)Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/other agencies : 10%

23. Awards / Recognitions received by faculty and students

Faculty : 05

Student: 63

24. List of eminent academicians and scientists / visitors to the Department

Sr. No.	Name of the visitor	Designation & Organization	Purpose of visit
1	Prof. Ramjee Prasad	Director , CTIF, HQ, Alborg University , Denmark	One week Faculty Development Program
2	Prof. Fleming Bjerger Frederiksen	Asso. Prof., CTIF, HQ, Alborg University , Denmark	One week Faculty Development Program
3	Dr. Nicola Marchetti	Asst. Prof., CTIF, HQ, Alborg University , Denmark	One week Faculty Development Program
4	Mr. Tomio Isogai	Director, COO of Indian Region , Sharp India Ltd. Managing	Research Lab Inauguration and MOU Signing
5	Dr. Abhay Jere	Chief Scientist, R&D Persistent, Associate Vice President Persistent	Hackathon Event
6	Dr. Aditya S Abhayankar	Professor & Dean, Department of Technology , SPPU, Pune -411007	One week Faculty Development Program
7	Dr. M.B. Kokare	Associate Professor & Coordinator, Centre of Excellence in Signal And Image Processing , SGGS , Nanded	One week Faculty Development Program
8	Dr. Munir Sayyad	GM, Reliance Gio Communication Ltd , Mumbai	Guest Lecture
9	Dr. Sanjay Moghe	CEO , RFIC Solutions INC SM Wireless Solutions Pvt. Ltd , Nagpur	ED Cell and TBI Inauguration

25. Seminars/ Conferences/Workshops organized & the source of funding

- a) **National** Institute Funded: 20 University Funded: 5
 b) **International** Institute Funded:01

26. Student profile programme/course wise:

Name of the Course/ programme (refer question no. 4)	Year	Applications received	Selected	Enrolled		Pass Percentage
				*M	*F	
UG: Electronics & Telecommunication	2014-15	As the admission process is governed by DTE .		126	35	94%

*M = Male *F = Female

Name of the Course/ programme (refer question no. 4)	Year	Applications received	Selected	Enrolled		Pass Percentage
				*M	*F	
PG: Electronics & Telecommunication	2014-15	As the admission process is governed by DTE .		6	19	61.11 %

27. Diversity of Students

Diversity of Students

Academic Year	Number of students from the same state	Number of students from other States	Number of students from abroad
UG			
2015-16	137	50	Nil
2014-15	141	19	
2013-14	156	7	
2012-13	169	9	
2011-12	162	21	
PG			
2015-16	25	0	Nil
2014-15	22	1	
2013-14	36	0	
2012-13	36	0	

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services etc. ?: 07

29. Student progression

Student progression	Against % enrolled			
	2011-12	2012-13	2013-14	2014-15
UG to PG	00	01.39	04.06	04.67
Employed Campus selection	34.69	20.27	13.95	25.14
• Other than campus recruitment	01.36	00	02.90	01.75
Entrepreneurship/Self-employment	Nil	Nil	Nil	Nil

30. Details of Infrastructural facilities

a) Central Library

:

No of Titles	155
No of Volumes	267
No of Online Journals	275
No of Printed Journals	125

- b) Internet facilities for Staff :** 1) 10 Mbps BSNL Leased Line
& Students 2) 2 Mbps TATA Docomo Leased Line.
 3) 300 Mbps Wi-Fi Facility

Class Room (UG)	Class Room (PG)	Tutorial Room	Laboratory
8	1	5	14

c) Laboratories

Sr. No.	Name of the Lab	Sr. No.	Name of the Lab
1	Basic Electronics Lab	8	Network Lab
2	Digital Systems Lab	9	VLSI Lab
3	Audio-Video Lab	10	Control / Power Lab
4	Communication Engg.	11	Project Lab
5	DSP Lab	12	Computer Center

Sr. No.	Name of the Lab	Sr. No.	Name of the Lab
6	Electronic Design Lab	13	PG Lab - I
7	Embedded System	14	PG Lab - II

31. Number of students receiving financial assistance from college, university, government or other agencies

Refer Table of Criteria No. 5.1.3 for scholarship details

32. Details on student enrichment programmes (special lectures workshops /seminar) with external experts

Enrichment Program	No of Event Conducted
Work Shop	13
Seminar	6
Guest Lecture	32

33. Teaching methods adopted to improve student learning :

1) Theory Assignments- unit based, 2) Mock practical/oral exam, 3) Power point presentation, 4) Seminar, 5) Guest lecture, 6) Quiz , 7) Industrial visit, 8) Industry internship, 9) Moodle for online exam/MCQ based exam

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

1) Yoga, 2) Blood Donation Camp, 3) Health Checkup for Girls, 4) Celebrating Teachers Day

35. SWOC analysis of the department and Future plans

• **Strength**

1. Well qualified, dedicated and dynamic faculty
2. Dedicated and supporting non teaching staff
3. Well equipped laboratory, departmental library and ICT facility
4. Very good involvement of faculty and students in extracurricular activity
5. Post graduate program
6. Professional development and communication improvement programs for student
7. Good industrial relationship
8. Academic Results

- **Weakness**
 1. Constancy work
 2. Deficiency in certain outcomes like communication skill
- **Opportunities**
 1. Alumina interaction for student development
 2. Industry oriented training
- **Challenges**
 1. 100% placement
 2. Up gradation of students as per industry need
 3. Project development for society need
 4. External funding for research
- **Future Plans**
 1. To increase consultancy work
 2. To have 30% doctorate faculty
 3. Centre of excellence

1. Name of the department : Computer Engineering

2. Year of Establishment : 2005

3. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D Integrated Masters; Integrated Ph.D., etc.)

Courses Offered	Name of the Course	Specialization
U.G.	B.E.	Computer Engineering
P.G.	M.E.	Computer Engineering

4. Names of Interdisciplinary courses and the departments/units involved

Sr.No.	Class	Course	Department
1	SE Comp	Engineering Mathematics III	Department of Engineering Sciences
2	TE Comp	Digital Signal Processing	Department of Electronics and Telecommunication
3	SE Comp	Discrete Structure	Department of Engineering Sciences
4	BE Comp	Mobile Computing	Department of Information and Technology
5	TE Comp	Theory of Computation	Department of Information and Technology

5. Annual/ semester/choice base credit system (programme wise)

U.G. Semester System

PG : Semester System Credit wise

6. Participation of the department in the courses offered by other departments

Sr.No.	Class	Course	Department
1	FE	Fundamental of Programming Languages – I	FE
2	FE	Fundamental of Programming Languages – II	FE
3	SE-ENTC	Object Oriented Programming	E&TC
4	SE-ENTC	Data Structure	E&TC
5	SE-IT	Computer Graphics	IT

7. Courses in collaboration with other universities, industries, foreign institutions, etc.

Sr.No.	Name of the Course	Name of the Industry
1	Campus Connect	Infosys
2	Zensor ESD Program	Zensar
3	Game Development	Thumbneil
4	Linux training	Red hat

8. Details of courses/programs discontinued (if any) with reasons : Nil

9. Number of Teaching posts:

Total teaching staffs available in department are 33.

Professors	Asso. Professors	Asstt. Professors
Nil	Nil	33

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Years of Experience	Publications
Mr.B.B.Gite	M.E.Ph.D Pursuing	Asst.Prof.	Computer	16	11
Mrs. L. J. Sankpal	M.E.Ph.D Pursuing	Asst.Prof.	CSE	23	19
Mr. S.P.Godse	M.E.Ph.D Pursuing	Asst.Prof.	CSE-IT	10	12
Mrs.. M. E. Sanap	M.E.	Asst.Prof.	CN	8	4
Mrs. S.S. Vanjire	M.E.	Asst.Prof.	CSE-IT	8.3	8
Ms. S.R. Pawara	M.E.	Asst.Prof.	CN	5.3	1
Mrs.S.V.Wankhade	M.Tech.	Asst.Prof.	Computer	7	8
Mr. B S. Thakare	M.E.Ph.D Pursuing	Asst.Prof.	CSE	5	14
Mrs.P.V.Pate	M.E.	Asst.Prof.	CSE	3	3
Mr.S.B.Rathod	M.E.(Ph.D Pursuing)	Asst.Prof	IT	6	5
Mr. A.P. Ramdasi	M.Tech.	Asst.Prof.	CSE	5	1
Mr. S.S. Pawar	M.Tech.	Asst.Prof.	Software Engg	5.5	0
Mrs. S.V. Pawar	M.E.	Asst.Prof.	CSE	6	1
Mrs. H. M.Kute	M.E.	Asst.Prof.	MS	3.2	1
Mrs. A.S.Chanchlani	M.E.	Asst.Prof.	IT	4.4	3
Ms. Preeti Moon	M.E.	Asst.Prof.	CSE	5.4	1
Mrs. D.N. Chawde	M.E.	Asst.Prof.	CSE	2	2
Mr. S. N. Shelke	M.E.	Asst.Prof.	CSE-IT	7	8
Mr.J.D.Jadhav	M.E.	Asst.Prof.	IT	4	0
Mr.K.S.Avhad	M.E.	Asst.Prof.	Computer	7	3
Mr. R.S.Yenape	M.E.	Asst.Prof.	Computer	7	1
Mr.M.A.R.Shabad	M.E.	Asst.Prof.	CSE	5	1
Mrs.K.U. Jadhav	M.E.	Asst.Prof.	Computer	5	0
Mrs.P. Nanaware	M.E.	Asst.Prof.	Computer	4	0
Mrs.S.A. Iyer	M.E.	Asst.Prof.	Computer	5	0
Mrs.S. Kakade	M.E.	Asst.Prof.	IT	9	0
Ms.K. Pise	M.E.	Asst.Prof.	Computer	0.8	0
Ms. B.N. Vijapure	B.E.	Asst.Prof.	ENTC	0.3	0
Ms. V. V.Salunkhe	B.E.	Asst.Prof.	ENTC	0.3	0
Mr. V. S. Gunjal	B.E.	Asstt. Prof.	Computer	0.3	0
Mr. R. V.Chougule	B.E.	Asstt. Prof.	Computer	0.3	0

Name	Qualification	Designation	Specialization	No. of Years of Experience	Publications
Mr. M. P. Taware	B.E.	Asstt. Prof.	Computer	0.3	0
Ms A. S. Yadav	B.E.	Asstt. Prof.	Computer	0.3	0

11. List of senior visiting faculty : 20% of sanction intake

12. Percentage of lectures delivered and practical classes handled (programme wise) by Faculty temporary : 12%

13. Student -Teacher Ratio (programme wise) : UG- 18.62:1 PG- 1:12:1

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Supporting Staff	
Technical Staff	5
Administrative Staff	2

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.

Ph.D.	P.G.
4(Pursuing)	29

16. Number of faculty with ongoing projects from (a) National (b) International funding agencies and grants received : Nil

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR etc. and total grants received

Sr. No.	Name of the faculty	Title of Research Project	Year	Funding Agency	Amount
1	Mrs.L.J.Sankpal	Meaning Based Search Engine	2012	Savitribai Pune Phule University	2 Lakhs

18. Research Centre /facility recognized by the University :
IT and computer department has research lab.

19. Publications:

a) Publication per faculty :

Refer Table of title No 10 for Publication By Faculty

20. Areas of consultancy and income generated : Nil

21. Faculty as members in National committees, International Committees, Editorial Boards

a) National Committee:

Sr.No.	Name of faculty	Committee Name
1.	Mr.B.B.Gite	Indian Society for Technical Education
		Computer Society of India
		Institute of Engineers of India
		Indian Science Congress Association
2	Mr.S.P.Godse	Indian Science Congress Association
3.	Mrs.S.S.Vanjire	Indian Society for Technical Education
4.	Mrs.A.S.Chanchlani	Indian Society for Technical Education
5.	Mrs.S.A.Iyer	Indian Society for Technical Education

International committee:

Sr. No.	Name of faculty	Committee Name
1.	Mrs.M.E. Sanap	International Association of Engineers (IAENG)

b) Editorial Committee:

Sr. No.	Name of faculty	Committee Name
1.	Mr.B.B.Gite	IJCTE-Paper reviewer

22. Student projects

a) Percentage of students who have done in-house projects including inter departmental/programme

Academic Year	2015-16	2014-15	2013-14	2012-13	2011-12
Percentage of students who have done in-house projects	83%	80%	72%	70%	87%

b) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/other agencies

Academic Year	2015-16	2014-15	2013-14	2012-13	2011-12
Percentage of students who have done in-house projects	17%	20%	28%	30%	13%

23. Awards / Recognitions received by faculty and students:

Academic Year	2015-16	2014-15	2012-13	2011-12
No. of Achievements	05	13	03	18

24. List of eminent academicians and scientists / visitors to the Department

Sr. No.	Name of the visitor	Designation	Date of visit
1	Dr. Abhay Jere	Chief Scientist, R&D Persistent, Associate Vice President Persistent	2 Sep 2015
2	Dr. S.C.Tamhane,	JNEC, Aurangabad,	10 Jun 2015
3	Bipin Kulkarni	CEO,Bitwise Info Systems,Pune	23 Mar 2015
4	Mr. Sachin Londhe	DataMato	23 Mar 2015
5	Mr.Sanjay Deshpande	Chaitanya Software Technologies	23 Mar 2015
6	Dr.U.V.Kulkarni	Professor and Dean,SGGS Nanded	14 Dec 2014

Sr. No.	Name of the visitor	Designation	Date of visit
7	Dr.R.C.Thool	Professor,SGGS Nanded	13 Dec 2014
8	Dr. Sachin Ruikar	Walchand College of Engg. Sangli	15 Jul 14
9	Dr. Suhas Patil	HOD, Computer, COE, Bharati Vidyapith, Pune	18 Jul 14
10	Dr.S. T. Patil	Professor, VIT, Pune	25 Jul 14

25. Seminars/ Conferences/Workshops organized & the source of funding

a) National

Sr. No.	Name	National	Funding details	Year
1	Workshop on “Network Security Championship”	National	Institute	2014-15
2	Workshop on “Question Bank Preparation And Paper setting Methodology (SE Computer Engg. 2012)”	National	Institute	2013-14

b) International : NIL

Source of Fund : NIL

26. Student profile programme/course wise:

UG:

Name of the Course/programme (refer No. 4)	Applications received	Selected	Enrolled		Pass percentage
			*M	*F	
2015-16	As the admission process is governed by DTE . The rules and regulations are followed in the admission process		127	59	Nil
2014-15			122	58	82%
2013-14			108	65	77%
2012-13			122	64	79%
2011-12			83	44	86%

*M = Male *F = Female

PG:

Name of the Course/programme (refer No. 4)	Applications received	Selected	Enrolled		Pass Percentage
			*M	*F	
2015-16	Admission Through DTE		9	3	Nil
2014-15			12	6	71.42
2013-14			12	11	79.17
2012-13			08	16	66.66

27. Diversity of Students:

Name of the Course	Number of students from the same state	Number of students from other States	Number of students from abroad
UG			
2015-16	127	59	0
2014-15	154	26	0
2013-14	157	16	0
2012-13	117	10	0
2011-12	113	14	0
PG			
2015-16	12	0	0
2014-15	18	0	0
2013-14	22	1	0
2012-13	24	0	0

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc. ?
Two students in Academic Year 2014-15.

29. Student progression

Student progression	Against % enrolled			
	2011-12	2012-13	2013-14	2014-15
UG to PG -	1.4	Nil	Nil	4.7
PG to Ph.D.	00	00	Nil	Nil
Ph.D. to Post-Doctoral	00	00	Nil	Nil
Employed				
• Campus selection	43.83	31.08	40.69	35.93
• Other than campus recruitment	4.2	Nil	Nil	Nil
Entrepreneurship/Self-employment	Nil	Nil	Nil	1

30. Details of Infrastructural facilities

Class Room (UG)	Class Room (PG)	Tutorial Room	Laboratory
8	1	4	11

Sr. No.	Name of the Lab	Sr. No.	Name of the Lab
1	Software Lab	7	Computer Lab
2	Project Lab	8	Information System Lab
3	Hardware Lab	9	Multimedia Lab
4	Programming Lab	10	Operating System Lab
5	Network Lab	11	Computer Operating System
6	Software Development Tools	--	--

Library	Count
Books	
No. of Title	220
No. of Volumes	512
Project Reports	
Preliminary Report	95
Final Report	95

d) **Internet facilities for Staff & Students :**

- 1) 10 Mbps BSNL Leased Line,
- 2) 2 Mbps TATA Docomo Leased Line.
- 3) Wi-Fi Facility

31. Number of students receiving financial assistance from college, university, government or other agencies

Refer Criteria No. 5.1.3

32. Details on student enrichment programmes (special lectures workshops /seminar) with external experts

Sr. No.	Academic year	Competition	Special Lecture	Workshop	Seminar
1	2015-16	05	03	02	--
2	2014-15	19	10	01	01
3	2013-14	11	19	02	--
4	2012-13	00	00	00	--

33. Teaching methods adopted to improve student learning :

- 1) Theory Assignments- unit based
- 2) Mock practical/oral exam
- 3) Power point presentation
- 4) Seminar
- 5) Guest lecture
- 6) Quiz
- 7) Industrial visit
- 8) Industry internship
- 9) Moodle for online exam/MCQ based exam

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

- 10) Yoga
- 11) Blood Donation Camp
- 12) Health Checkup for Girls
- 13) Celebrating Teachers Day
- 14) National Festival celebration Republic and Independence day

35. SWOC analysis of the department and Future plans

- **Strength**
 - Well qualified and dynamic faculty
 - Dedicated and supporting non teaching staff

- Well equipped laboratory, departmental library and ICT facility
- MOUs signed with different industries
- Very good involvement of faculty and students in extracurricular activity
- Post graduate program
- Professional development and communication improvement programs for student
- Good industrial relationship

- **Weakness**
 - R&D work need to be increased
 - Consultancy work need to be improved
 - Deficiency in certain outcomes like communication skill, lack of practical knowledge in graduating students

- **Opportunities**
 - Alumina interaction for student development
 - Industry oriented training

- **Challenges**
 - 100% placement
 - Up gradation of students as per industry need
 - Project development for society need
 - External funding for research

- **Future Plans**
 - To establish research centre
 - To increase consultancy work
 - To have 30% doctorate faculty
 - Centre of excellence

1. Name of the department : Information Technology

2. Year of Establishment : 2005-2006

3. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)

Courses Offered	Name of the Course	Specialization
U.G.	B.E.	Information Technology

4. Names of Interdisciplinary courses and the departments/units involved

Sr. No.	Class	Interdisciplinary Courses	Departments
1.	FE IT	Engineering Mathematics I	Mathematics
2	FE IT	Engineering Mathematics II	Mathematics
3	FE IT	Engineering Physics	Physics
4	FE IT	Engineering Chemistry	Chemistry
5	FE IT	Basic Electrical Engineering	Electrical Engineering
6	FE IT	Basic Electronics Engineering	Electronics & Telecommunication
7	FE IT	Engineering Mechanics	Mechanical
8	FE IT	Engineering Graphics I	Mechanical
9	FE IT	Engineering Graphics II	Mechanical
10	SE IT	Engineering Mathematics III	Mathematics

5. Annual/ semester/choice base credit system (programme wise) :
Semester

6. Participation of the department in the courses offered by other departments

Sr. No.	Class	Courses	Departments involved
1	FE	Fundamentals of Programming Languages	Computer, E&TC, Civil, Mechanical
2	SE (E&TC)	Object Oriented Programming	E&TC

7. Courses in collaboration with other universities, industries, foreign institutions, etc.

S. No.	Name of the Course	Name of the Industry
1	Employability skill Development	Zensar
2	Campus connect	Infosys
3	.Net Program	ATS Infotech
4	Big data and Hadoop	Geeks Lab, New Delhi
5	Cloud computing	Bitwise Infosystems

8. Details of courses/programmes discontinued (if any) with reasons: Nil

9. Number of Teaching posts : 10

Professors : 0 Associate Professors : 0 Asst.
Professors :10

10. Faculty Profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	Years of Experience
Mr.A.N. Adapanawar	M.E., Ph.D*	Asst. Prof.	Communication	25
Mr. S.S. Kulkarni	M.E., Ph.D *	Asst. Prof.	Communication	13
Ms. D.R. Anekar	M.E.	Asst. Prof.	NLP	10
Ms. P.Y. Pawar	M.E.	Asst. Prof.	Security	10
Ms. A.S. Shinde	M.E.	Asst. Prof.	Operating systems	10
Mr. S.L. Bangare	M.Tech., Ph.D. *	Asst. Prof.	Image processing	9
Mr. L.J. Deokate	M.E.	Asst. Prof.	Data structures	9
Ms. P.S. Bangare	M.E.	Asst. Prof.	Image processing	9
Ms. P.B. Alappanavar	M.E.	Asst. Prof.	System programming	9
Mr. N.S. Sharma	M.E., Ph.D*	Asst. Prof.	Software Engineering	4

* Pursuing

11. List of senior visiting faculty : 20 % of sanctioned faculty

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty : 0%

13. Student -Teacher Ratio (programme wise) : 18:1

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled:

Supporting Staff	Sanctioned	Filled
Technical Staff	4	4
Administrative Staff	0	0

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG :

DSc	D.Lit.	Ph.D.	M.Phil.	P.G.
--	--	4(Pursuing)	--	10

16. Number of faculty with ongoing projects from (a) National (b) International funding agencies and grants received: Nil

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR etc. and total grants received:

S. No.	Name of the faculty	Title of Research Project	Year	Funding Agency	Amount
1	Ms. D. R. Anekar Ms. P. B. Alappanavar	Extraction of Binary and Ternary Elements Using Unsupervised approach	2014-16	SPPU BCUD, Pune	Rs 50,000/-

18. Research Centre /facility recognized by the University:

IT and computer department have a joint research lab facility

19. Publications: Please refer table 3.4.3 for research paper publications

International journal and Conference	81
Books	10
Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete,	106

Dare Database - International Social Sciences Directory, EBSCO host etc)	
--	--

List of books authored by faculty

S. No.	Title of Book	Author	Year	Publication
1	Fundamentals of Programming Languages-I	Mrs. A. N. Varade	2013	Nirali Prakashan, Pune
2	Problem Solving & Object Oriented Programming	Mrs. P. S. Bangare	2013	Nirali Prakashan, Pune
3	Mobile Computing	Mrs. P. S. Bangare	2013	Nirali Prakashan, Pune
4	Computer Graphics	Mrs. P. Y. Pawar	2013	Nirali Prakashan, Pune
5	Human Computer Interaction and Usability	Mr. S.L. Bangare	2012	Nirali Prakashan, Pune
6	Advanced Databases	Mrs. P. S. Bangare	2012	Nirali Prakashan, Pune
7	Advance Database Management	Mrs. P. S. Bangare	2012	Nirali Prakashan, Pune
8	Management Information System	Mr. S. L. Bangare	2012	Nirali Prakashan, Pune
9	Digital Logic Design	Mr. S. S. Kulkarni	2009	Nirali Prakashan, Pune
10	Cloud Computing	Mr. S. L. Bangare & Mrs. P. S. Bangare	2012	Nirali Prakashan, Pune

20. Areas of consultancy and income generated: Nil

21. Faculty as members in National committees, International Committees, Editorial Boards:

- a) National Committee : 0
- b) International committee : 0
- c) Editorial Committee : 0

22. Student projects:

a) Percentage of students who have done in-house projects including inter departmental / programme:

S. No	Academic year	% In-House Projects
1	2015-16	91
2	2014-15	71
3	2013-14	72
4	2012-13	84
5	2011-12	82

b) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/other agencies:

S. No	Academic year	% Sponsored Projects
1	2015-16	9
2	2014-15	29
3	2013-14	28
4	2012-13	16
5	2011-12	18

23. Awards / Recognitions received by faculty and students

Faculty:

- Mr. S. L. Bangare has been selected as Best teacher
- Mrs. P.B. Alappanavar has received 100% student feedback

Student:

- Ms. Pooja Arora , ranked 4th in SPPU in 2011-12

S. No	Name of Student	Event/Conference	Venue	Achievement
1	Harshal Thakare	Algorhythm '15 STREET PLAY	PVG's COET	2 nd rank
2	Harshal Thakare	KJ's Youth Festival 2015 STREET PLAY	KJ Institute	1 st rank
3	Harshal Thakare	Melange 2015, Pathnatya	VIT, Pune	2 nd rank
4	Sayali Pawar	Campus2Corporate pro-2014	SAE, Pune	5 th rank
5	Payal	Campus2Corporate	SAE, Pune	23 rd rank

S. No	Name of Student	Event/Conference	Venue	Achievement
	Tinghase	pro-2014		
6	Priyanka Sharma	Campus2Corporate pro-2014	SAE, Pune	1 st rank
7	Jain Samkitkumar	Campus2Corporate pro-2014	SAE, Pune	3 rd Rank
8	Yash Gandhi	Campus2Corporate pro-2014	SAE, Pune	9 th Rank
9	Manavi Sinha	Annual Sport Meet 2014(Basket ball)	HNIMR Pune	2 nd rank
10	Ninkita Gosavi	Sinhgad Karandak 2014 – Table Tennis	STES	1 st rank
11	Vivek Sharma	Alacrity Code chef	AISSMS IOIT, Pune	2 nd rank
12	Samarth Kumar	Alacrity Code chef	AISSMS IOIT, Pune	2 nd rank
13	Rupesh Chudhari	Perception RoboWar	VIIT, Pune	1 st rank
14	Vivek Sharma	C- Programming Contest	SAE, Pune	1 st rank

24. List of eminent academicians and scientists / visitors to the Department

Sr. No.	Name of Industry	Name of visitor
1.	Deputy Director, NASSCOM	Mr. Paresh Degaonkar
2.	Opulent Infotech, Pune	Mr. Tanul Mohod
3.	SunBeam Infotech, Pune	Mr. Nitin Kudale
4.	Techflosys Technologies Pvt. Ltd.Pune	Mr. Nitin Kale
5.	PeakSoft Technologies Pvt. Ltd.Pune	Mr. Ravindra Potdar
6.	KasturiNovasoft, Pune	Mr. Sachin Jain
7.	BitWise Infosystems, Pune	Mr. Bipin Kulkarni
8.	Geekslab Technologies Pvt Ltd. Delhi	Mr. Vaibhav Gupta
9.	Cyber Cure Solutions Ltd., New Delhi	Mr. Sangeet Chopra
10.	CPAG Nashik	Mr.Tanmay Dixit
11.	Infosys , Project manager	Mr.Ravi Agrwal
12.	SEED Infotech	Mr. Imran Sayyed,
13.	Refocus lab, Pune	Mr.Shahwat Pradhan,
14.	HOD, Computer, BVCOE, Pune	Dr. Suhas Patil

25. Seminars/ Conferences/Workshops organized & the source of funding

a) National:

S.No	Title / Theme	Resource Person(s)	Date(s)	Source of funding
1.	QIP on Digital forensics	Tanmay dixit	1-2/02/2016	SPPU
2.	Workshop on Perl & Python	Atul Patil & Bhushan	19-20/01/2015	Self
3.	Big data & Hadoop	Ms. Jitender Singh	28/02 – 01/03/2015	Self
4.	Seminar on law & cyber forensics	Mr. Kalpak	19/01/2015	Self
5.	Techtalk “Modern C++ Style”	Bjarne Stroustrup	15/01/2015	Self
6.	FDP on “ Network Simulation using NS2 and Omnet++ for Wireless Networks “	Mr. P. M. PAwar	08-12/10/2012	Self
7.	Pariyojna Pratiyogita 2015	Mr. R. Phulsagar Mr. Sidhesh Bhise	4/04/2015	Self

b) International : Nil

26. Student profile programme /course wise :

Name of the Course/ programme	Year	Applications received	Selected	Enrolled		Pass Percentage
				*M	*F	
BE(IT)	2011-12	Admission process in the state is governed by DTE, Institute follows rules, regulations & guidelines set up by state government body		38	25	80.95
BE(IT)	2012-13			36	25	86.88
BE(IT)	2013-14			42	16	86.20
BE(IT)	2014-15			40	22	80.64
BE(IT)	2015-16			46	17	NA

*M = Male *F = Female

27. Diversity of Students

Year	% of students from the same state	% of students from other States	% of students From abroad
2011-12	93.65	6.35	0
2012-13	85.48	14.51	0
2013-14	93.10	6.9	0
2014-15	82.25	17.75	0
2015-16	88.88	11.12	0

28. How many students have cleared National and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?

Year	No of Students Passed			
	2011-12	2012-13	2013-14	2014-15
No. of Students	6	5	8	1

29. Student progression :

Student progression	Against % enrolled			
	2011-12	2012-13	2013-14	2014-15
UG to PG -	6	10	1	3
Employed				
•Campus selection	54	24	56	43
•Other than campus recruitment	29	16	9	17
Entrepreneurship/Self-employment	4	3	0	2

30. Details of Infrastructural facilities:

a) Library:

Departmental Library contains more than 700 books with more than 100 titles. It contains project and seminar reports of previous batches.

b) Internet facilities for Staff & Students:

- 1) 10 Mbps BSNL Leased Line,
- 2) 2 Mbps TATA Docomo Leased Line.
- 3) Wi-Fi Facility

Class Room (UG)	Class Room (PG)	Tutorial Room	Laboratory
4	-	2	10

Sr. No.	Name of the Lab	Sr. No.	Name of the Lab
---------	-----------------	---------	-----------------

1	Multimedia Lab	6	Project Lab
2	Programming Lab	7	Computer Fundamental Lab
3	Network Lab	8	Operating System Lab
4	Hardware Lab	9	Software Lab
5	Infosystem Lab	10	Software Development Tools Lab

31. Number of students receiving financial assistance from college, university, government or other agencies:

Please refer to 5.1.3

32. Details on student enrichment programmes (special lectures workshops /seminar) with external experts:

Student Enrichment Programmes in last four years

Enrichment Program	No. of Event Conducted
Work Shops, value added course	7
Guest Lecture & seminar	39

A.Y. 2011-12

S. No.	Name of Event	Resource Person(s)
1.	Value added course on “C” language”	Mr.N.B.Pokale
2.	Network Simulator -2”	Mr.N.P.Kulkarni
3.	IO Management & Disk Scheduling	Mr.V.S.Bidave
4.	Database Management System	Mr.J.B.Karande
5.	QTP Automation Testing Tool	Mr.Prashant Nikam
6.	Workshop on Introduction to LaTeX	Mr.Anirudha Rumale
7.	IO organization	Mr.M.V.Nimbalkar
8.	Softskill Interview Techniques	Dr.Sumaiya Khan
9.	Wireless and broadband network	Mr.S.R.Shinde
10.	Project Management	Mr.Ravi Agrwal

S. No.	Name of Event	Resource Person(s)
A.Y. 2012-13		
1.	LaTeX One Day Workshop	A. M. Magar
2.	Cloud Computing	Mr. Imran Sayyed
3.	Seminar on ANDROID	Mr. Chetan Natu

S. No.	Name of Event	Resource Person(s)
4.	Workshop on ETHICAL HACKING	Mr. Rahul Gupta
5.	National Level Project Competition PARIYOJANA PRATIYOGITA-2013	Mr. Amol Kale
6.	Guest Lecture on Network Simulator2'	Mr. Pranav Pawar
7.	Guest Lecture on IP subnetting	Mr. K Rajhans
8.	Guest Lecture on Wireless technology	Mr. Sandip Shinde
9.	FDP on " Network Simulation using NS2 and Omnet++ for Wireless Networks	Mr. Pranav Pawar
10.	National Level Project Competition PARIYOJANA PRATIYOGITA-2013	Mr. Amol Kale
11.	Guest lecture-Dining Philosopher's Problem and its solution"	Mr. C.O. Banchor
A.Y. 2013-14		
	Guest Lecture on "NP Hard and NP Complete Problems"	Mr. Sushant Gote
1.	Guest Lecture on "Data Structure and Files"	Mr. Riyaz Jamadar
2.	Guest Lecture on "Latest trends in location service based appli application in Mobile domain"	Mr. Guarav Taywade
3.	Guest Lecture on "Current trends in IT industry"	Mr. Rohit Ketkar
4.	Guest lecture on Career Opportunities on Software Testing	Mr. Manoj Ghugal
5.	Guest lecture on Project Planning & Development	Pravin Hinge, Prasanna Jain
6.	Guest lecture on Cloud Computing	Adesh Joshi
7.	Workshop arranged on "Cloud Computing"	Mr. Sumit Kumar Shingavi
8.	Workshop arranged on "Augmented Reality"	Mr. Shahwat Pradhan,
9.	Guest lecture on Networking Technologies Essentials	Mr. K. Rajhans
10.	Guest lecture on Emergence of mobile Era	Mr. Onkar Kulkarni
11.	Guest lecture on Cloud Computing	Mr. Nilesh Chavan
A.Y. 2014-15		
1.	Guest Lecture on Agile in Software Engineering & Guidance for Placement	Ms. Sandhya Borate
2.	Guest Lecture on Preparation for MS and higher studies	Rohan Tilekar

S. No.	Name of Event	Resource Person(s)
3.	Guest Lecture on Selenium Automation For Testing	Shantanu Deshmukh
4.	Guest Lecture on Study memory technics	Mr.Kshitij Shyam
5.	Guest Lecture on Career Perspective	Mr.Chirag Raichura
6.	Seminar Project Domain and Topic selection	Mr. Niranjan Borawake
7.	Guest Lecture on Cloud Computing	Mr. Manohar Kotapati
8.	Guest Lecture on IT Infrastructure Management	Mr. Rajendra Thale
9.	Guest Lecture on Role of Advanced Java-J2EE in Industry	Mr. Yogesh Agarwal
10.	Guest Lecture on LATEX	Mr.Sandip Shinde
11.	Guest Lecture on Importance of Data Structure in Computer Science	Mr. Santosh S. Kare
12.	Guest Lecture on Applications of Advanced Computer Graphics	Mr. Rajendra Joshi
13.	Guest Lecture on Overview of Embedded System	Mr. Yogesh Agarwal
14.	Guest Lecture on Protected Mode of 80386	Mr. M. V. Nimbalkar
15.	Guest Lecture on Multimedia Technologies using Android	Mr. Yogesh Agarwal

33. Teaching methods adopted to improve student learning:

- LCD Projectors in classrooms and labs
- All notes, PPT, videos, question banks on server
- Exclusive space in IT server for students
- Quiz, tutorials, Assignments
- Guest Lectures, seminars, workshops
- Videos, animations
- K-Point server
- Moodle for online tests
- Industrial Visits
- Content beyond the syllabus
- Industry internship
- QALR , AMCAT tests

34. Participation in Institutional Social Responsibility (ISR) and Extension activities:

- Blood Donation Camp

- Health checkup for girls
- Celebrating Teachers day, Engineers day , Republic and Independence day
- Visits to orphanage
- Participation in NSS activities

35. SWOC analysis of the department and Future plans:

Strength

- Qualified, Young, Dynamic and Dedicated faculty with adequate teaching experience.
- Excellent staff retention
- Well equipped and furnished laboratories
- Excellence in final year result
- Strong placement support
- MoUs with 9 industries
- Large number of co-curricular activities

Weakness

- Consultancy work need to be improved
- Lack of interdisciplinary projects
- R & D Work required to be improved
- Count of faculty with PhDs needs to be improved.

Opportunities

- More opportunity of R & D and interaction with industry
- Scope for more student placement
- Student participation in club activities
- More participation of students in competitive examinations

Challenges

- Large number of engineering colleges affecting the quality of incoming students
- Attracting senior faculty

Future Plans for Department

- Starting PG course
- All faculty should have Doctorate degrees
- More thrust on research and consultancy
- Increase in the Alumni and Industry interaction

1. **Name of the Department** : Department of Civil Engineering
2. **Year of Establishment** : 2010-11(FE Civil)
3. **Names of Programmes** : UG BE.Civil
4. **Names of Interdisciplinary courses and the departments/units involved**

Sr No	Class	Interdisciplinary Courses	Departments Involved
1.	FE Civil	Engineering Mathematics I	Mathematics
2.	FE Civil	Engineering Mathematics II	Mathematics
3.	FE Civil	Engineering Physics	Physics
4.	FE Civil	Engineering Chemistry	Chemistry
5.	FE Civil	Basic Electrical Engineering	Electrical Engineering
6.	FE Civil	Basic Electronics Engineering	Electronics & Telecommunication
7.	FE Civil	Fundamental Programmimg LanguagesI	Computer Engineering
8.	FE Civil	Fundamental Programmimg LanguagesII	Computer Engineering
9.	FE Civil	Basic Mechanical Engineering	Mechanical Engineering
10.	FE Civil	Engineering Graphics	Mechanical Engineering
11.	SE Civil	Engineering Mathematics III	Mathematics

5. **Annual/ semester/choice base credit system (Programme wise)** : U.G. –Semester Pattern
6. **Participation of the department in the courses offered by other departments** : Basic Civil Engineering
Engineering Mechanics
7. **Courses in collaboration with other universities, industries and foreign institutions etc.** : Nil
8. **Details of courses/programmes discontinued (if any) with reasons** : Nil
9. **Number of Teaching posts** : Assistant Professor - 20
10. **Faculty profile with name, qualification, designation, specialization**

Sr. No	Name of the Staff	Qualification	Designati on	Specialization
1	Mr. R. B.	M-Tech-(Reliability	Asst. Prof.	Reliability

Sr. No	Name of the Staff	Qualification	Designation	Specialization
	Bajare	Engineering) Ph.D-(Empirical and Theoretical Investigation of Geopathic Stress on Civil Engineering Structures) (Pursuing)		Engineering
2	Mr. R. R. Sorate	M-Tech-(Geotechnical) Ph.D- geopathic stress (Pursuing)	HOD & Asst. Prof.	Geotechnical Engg
3	Mrs. S. M. Joshi	M-Tech (Geotechnical)	Asst. Prof.	Geotechnical Engg
4	Ms. S. V. Dewalkar	M.Tech (Construction Tech)	Asst. Prof.	Construction Tech
5	Mrs.S. P. Kitture	M.E. (Structure Engg)	Asst. Prof.	Structure Engg
	Mr.C. V. Alkunte	M.E (Structure Engg)	Asst. Prof.	Structure Engg
7	Mr. A. S. Dhananjay	M.Tech (Highway Technology)	Asst. Prof.	Highway Technology
8	Mrs. A. I. Tamboli	M.E (Structure Engg)	Asst. Prof.	Structure Engg
9	Mr.A. D. Lade	M. Tech (Water Resources Engineering)	Asst. Prof.	Water Resources Engineering
10	Mr.D. V. Gawatre	M-Tech (Structure Engg)	Asst. Prof.	Structure Engg
11	Mr.S. P. Banne	M-Tech (Geotechnical. Engg.)	Asst. Prof.	Geotechnical Engg
12	Ms. A. S. Ghate	M. Tech (Environmental &Water Resources Engineering)	Asst. Prof.	Environmental &Water Resources Engineering
13	Mr. S. M. Dhote	M-Tech (Structure Engg)	Asst. Prof.	Structure Engg
14	Mr. S. N. Harinkhede	M-Tech (Structure Engg)	Asst. Prof.	Structure Engg
15	Mr. S. V. Bhagatkar	M.E(Construction & Management)	Asst. Prof.	Construction & Management
16	Ms. P. M. Pathak	M-Tech (Environmental Engg)	Asst. Prof.	Environmental Engg
17	Mrs.A.D. Bhonde	M-Tech (Structure Engg)	Asst. Prof.	Structure Engg

Sr. No	Name of the Staff	Qualification	Designation	Specialization
18	Mrs.S. Khaleel	M-Tech (Structure Engg)	Asst. Prof.	Structure Engg
19	Mr. A. C. Mane	M-Tech (Structure Engg)	Asst. Prof.	Structure Engg
20	Mr. R.H. Desai	M.Sc.(Applied Geology), B.Sc.(Geology)	Asst. Prof.	Applied Geology

11. List of senior visiting faculty

Sr.No	Faculty Name	Qualification	Total Experience	Subject Specialization
1	Mr. Vikas Patil	M.Tech (Geotechnical engg)	20 years	Retaining Wall
2	Mr.Pravin Bhukan	M.Tech (Structural engg)	8 years	Structural Engineering
3	Mr. Chetan Loni	BE (Civil Engg) ,PGDBM from NICMAR	6 years	Building Construction
4	Mr. Pratik Jain	BE (Civil Engg)	4 Years	Quantity Survey
5	Mr. Kaustubh Panse	BE (Mechanical Engg)	8 years	Auto-cad
6	Mr. Santosh Gunnal	BE (Civil Engg)	6 years	Building Construction

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty : NIL

13. Student -Teacher Ratio (programme wise)
18:1 (2015-16)

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled - Technical/Lab Asst.:04 Peon: 01

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.
Ph.D: 02 Pursuing, PG: 18

16. Number of faculty with on-going projects from National and International funding agencies and grants received
National : Nil
International funding agencies : Nil

17. Departmental projects funded by DST : Nil
FIST; UGC, DBT, ICSSR etc.

18. Research Centre /facility recognized by : Nil
the University

19. Publications: (Research Articles)

National Journal	NIL	Monographs	NIL
International Journal	49	Chapters	NIL
National Conference	09	Books	13
International Conference	07	Overall Citations	NIL

20. Areas of consultancy and income generated

2015-16	Workshop on Practical exposure and challenges	10000/-
2014-15	Workshop on AutoCAD	36,960/-
2013-14	HIT Office Construction Management ERP Student Nature Program	13,125/-
	Total	60,085/-

21. Faculty as members in National, International Committees and Editorial Boards : NIL

22. Student projects

(c) Percentage of students who have done in-house projects including interdepartmental / Programme : 85%

Academic Year	2013-14	2014-15	2015-16
Total Projects	11	18	28
In House Projects	9	17	23

(d) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/other agencies : 15%

Academic Year	2013-14	2014-15	2015-16
Outside the Institution Projects	02	01	05

23. Awards / Recognitions received by faculty and students

(c) **Faculty Achievements** Mr.R.R.Sorate, Acharya Award MSBTE Sponsored Programme

24. List of Eminent Academicians and Scientists / visitors to the Department

Sr.	Name of visitor	Organization	Purpose of visit
1.	Mr. Tomio Isogai	MD Sharp Products	Chief guest for Entrepreneurial activities

Sr.	Name of visitor	Organization	Purpose of visit
2	Mr. Y.H.Gharpure	President Technology transfer Association	Guest of Honor for Entrepreneurial activities
3	Dr.A.D.Thube	Associate Prof. COEP	Guest Lecture
4	Mr Ashok Katariya	Director, Ashoka Buildcon	Guest of Honor for Research Lab Inauguration
5	Mr. Pravin Kolhe	Executive Engineer Irrigation Dept	Guest of Honor for FE induction Programme
6	Mr.M.K.Verma	Scientist B, CWPRS	Guest Lecture

25. Seminars/ Conferences/Workshops organized & the source of funding

- a) National for Staff : NIL
b) International : NIL

26. Student profile programme/course wise

Name of the Course/programme (refer No. 4)	Applications Received	Selected	Enrolled		Pass percentage
			*M	*F	
FE Civil 2011-12	As per the rules of online process of DTE	65	55	10	97%
FE Civil 2012-13		127	112	15	NA
FE Civil 2013-14		125	107	18	NA
FE Civil 2014-15		123	70	53	NA
FE Civil 2015-16		127	108	19	NA

*M = Male *F = Female

27. Diversity of Students

Name of the Course	% of students from the same state	% of students from other States	% of students From abroad
FE Civil 2011-12	89.23	10.77	Nil
FE Civil 2012-13	94.48	4.52	Nil
FE Civil 2013-14	91.20	8.80	Nil
FE Civil 2014-15	96.75	3.25	Nil
FE Civil 2015-16	94.48	5.52	Nil

28. How many students have cleared national and state competitive examinations such as NET, SET, GATE, Civil services, Defense services, etc.

GATE Exam	GRE	NICMAR
05	02	05

29. Student progression

Student progression	Against % enrolled	
	2013-14	2014-15
UG to PG	6.4%	6.5%
PG to M.Phil.	NIL	NIL
PG to Ph.D.	NIL	NIL
Ph.D. to Post-Doctoral	NIL	NIL
Employed		
• Campus selection	12.7 %	0 %
• Other than campus recruitment	0 %	6.5 %
Entrepreneurship/Self-employment	NIL	NIL

30. Details of Infrastructural facilities

b) Library

Particulars	Count
No. of Title	359
No. of Volumes	1634
Journal Subscriptions (printed)	12

- **Internet facility for staff and :** Internet service : 10 MBPS BSNL, 2 MBPS TATA DOCOMO

Class Room (UG)	Class Room (PG)	Tutorial Room	Laboratory
8	-	4	11

Sr. No.	Name of the Lab	Sr. No.	Name of the Lab
1	Computer Lab	7	GeoTechnical Lab
2	Concrete Technology Lab	8	Hydrolic Machinery Lab
3	Engg. Mechanics Lab	9	Surveying Lab
4	Environmental Engg. Lab	10	Testing of Material Lab
5	Fluid Mechanics Lab	11	Transportation Engg. Lab
6	Geology Lab	--	--

31. Number of students receiving financial assistance from college, university, government or other agencies

Refer to Criteria 5.1.3

32. Details on student enrichment programmes (special lectures workshops /seminar) with external experts

Lecture on (Name of Subject)	Expert Invited	Details about Expert	Date and Day	Target Audience
AutoCAD	Mr. Kaustubh Panse	From CADD Center	07-01-15	SE
GRE	Mr.Shreejit Shitole	Alumni of SAE	07-10-15	SE, TE, BE
Structural Design I	Prof.S.K.Kulkarni	Asst.Prof at TCOE Pune	07-11-15	TE
Management Information System	Mr.Abhinav Deshmukh	VP,Credit Suisse	07-11-15	BE
Environmental Engineering	Dr.S.T.Mali	HOD at PCCOE Pune	21/08/2015	BE
Practical exposure and challenges	Mr.Pratik Jain	V.S.Academy	24/8/2015	BE
Structural Design I	Prof.S.R.Parekar	HOD at AISSMS Pune		TE
Hydrology and Water Resources	Dr.A.D.Thube	Associate Professor at COEP	09-09-15	TE
Structural Design I	Prof.Veena Gore	Former Principal at Govt.Polytechnic Pune	19/9/2015	TE

Programs arranged for enrichment of students

Arranged By Faculty	Workshop on	Date	Target Audience
Prof.C.V.Alkunte	AutoCAD	15/07/2015	SE
Prof.S.N.Harinkhede	Concrete Mix Design under STP V Training	19/08/2015 and 20/8/2015	BE
Prof.S.N.Harinkhede	Pre placement Training under STP-V	15 /8/2015	BE
Prof.R.R.Sorate and Prof.C.V.Alkunte	Practical exposure and challenges	21/09/2015	BE

33. Teaching methods adopted to improve student learning

- Guest Lecture
- Quiz
- Site Visits
- Workshop
- Video Lecture

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Street Play on Women Empowerment, Plantation drives, Blood Donation Program etc.

35. SWOC analysis of the Department and Future plans

Strengths

- Faculty members with specialization in structural engineering, Geotechnical Engineering, Water Resources and Environmental Engineering, Construction Management as well as Transportation engineering.
- Dedicated and supporting non teaching staff.
- Well equipped laboratories, departmental library and ICT facility.
- MOUs signed with different industries.
- In house training of students in software's like AUTO CAD, HIT OFFICE etc.
- Professional development and communication improvement programs for student

Weakness

- Research funding not available from external agencies.
- Consultancy services to the industry by the department are week.

Opportunities

- Collaborating with industries for training of students.
- Promotion of faculties for their knowledge, skills and qualification enhancement.

Challenges

- Shaping the young civil engineers according to the industry needs.
- Improvement in Placement.

Future plans:

- Establishment of the department as a state of art research facility.
- To establish department as "Centre of Excellence"
- Patent enrollments etc.

1. **Name of the Department** : Department of Engineering Science
2. **Year of Establishment** : 2005
3. **Names of Programmes / Courses** : Nil
offered (UG, PG, M.Phil., Ph.D.,
Integrated Masters; Integrated
Ph.D., etc.)
4. **Names of Interdisciplinary courses and the departments/units involved :**

Sr. No.	Course	Department
1	Basic Civil Engineering	Department of Civil Engineering
2	Engineering Mechanics	
3	Basic Electronics Engineering	Department of Electronics and Telecommunication
4	Engineering Graphics-I	Department of Mechanical Engineering
5	Engineering Graphics-II	
6	Workshop Practices	
7	Basic Mechanical Engineering	
8	Fundamental Of Programming Language-I	Department of Computer Engineering/Department of Information Technology
9	Fundamental Of Programming Language-II	

5. **Annual/ semester/choice base credit system (programme wise) :**Semester.
6. **Participation of the department in the courses offered by other departments :**

Sr. No.	Course	Department
1	Engineering Mathematics III	SE(Electronics and Telecommunication)
		SE(Mechanical Engineering)
		SE(Computer Engineering)
		SE(Information Technology)
		SE(Civil Engineering)
2	Electrical and Electronics Engineering	SE(Mechanical Engineering)

7. **Courses in collaboration with other universities, industries :** Nil
foreign institutions, etc.
8. **Details of courses/programmes discontinued (if any) with reasons :** N. A.
9. **Number of Teaching post**

Professor	Associate Professor	Assistant Professors
01	Nil	37

10. Faculty profile with name, qualification, designation, specialization,(D.Sc./D.Litt./Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Yearsof Experience	Publications
Dr Daljeet Kaur	M.Sc Ph.D	Professor	MSc-Pure Mathematics Ph.D(Applied Mathematics)	19 yrs	08
Mr. S.P. Saptale	M.Sc M.Pil, Ph,D pursuing	Asstt. Professor	Organic Chemistry	16 yrs	08
Dr. N .P. Dharmadhikari	MSc, Ph.D	Asstt. Professor	Detection of Geopathic Stress and its effects on Human system	16 yrs	16
Mrs. V. R, Rokade	M.Sc	Asstt. Professor	Analytical Chemistry	11yrs	-
Mrs. S.A. Deshpande	M.Sc	Asstt. Professor	Pure Mathematics	12yrs	-
Ms. A.M. Kulkarni	M.Sc	Asstt. Professor	Organic Chemistry	9yrs	-
Mr. Sasane S.B	M.Sc	Asstt. Professor	General Physics	11 yrs	-
Mr. S. S. Patil	M.E. Ph.D pursuing	Asstt. Professor	Power Systems	15yrs	03
Mrs.S.S.Borate	M.E.	Asstt. Professor	Power Systems	12yrs	03
Ms.Shamhad.s haikh	M.Sc	Asstt. Professor	Pure Mathematics	4 yrs	-
Ms. MinalPemgiri kar	M.Sc	Asstt. Professor	Pure Mathematics	5yrs	-
Mrs. Vanita A. Liman	M.Sc	Asstt. Professor	Pure Mathematic	7yrs	-

Name	Qualification	Designation	Specialization	No. of Yearsof Experie nce	Publicati ons
			s		
Ms. P.H. Pawar	MSc., NET Qualified, Ph.D pursuing	Asstt. Professor	General Physics	3yrs	-
Mrs.MayuriPo ojari	M.E.	Asstt. Professor	Power Systems	3yrs	02
Mrs. M. A. Mohite	M.Sc	Asstt. Professor	Pure Mathematic s	7yrs	-
Mr.Bivek Kumar	M.E.	Asstt. Professor	Power Systems	5yrs	01
Mrs. TilottamaPatil	MSc.	Asstt. Professor	Applied Mathematic s	2.5yrs	-
Mr. A. M. Magar	B.E., M.E. (Pursuing)	Asstt. Professor	CSE	11.4 yrs	06
Mr. M. K. Nivangune	B.E. (CSE), M.Tech.	Asstt. Professor	Computer	7.11 yrs	08
Mr. K. M. Gaikwad	BE, ME	Asstt. Professor	VLSI Embedded	5 yrs	03
MR. J. N. Kajale	BE, ME	Asstt. Professor	Thermal & Fluid	8 yrs	-
Ms. S. M. Wange	BE, M- Tech	Asstt. Professor	Thermal	2 yrs	02
Mr. O. N. Khandagale	BE ME(Pursuing)	Asstt. Professor	Automotive	1 yr	-
Mr. A. N. Mhaske	BE ME(Pursuing)	Asstt. Professor	Automotive	1 yr	-
Ms. G. S. Bhange	BE, ME	Asstt. Professor	Computer Networks	7.5 yrs	02
MS. R. G. Deshmukh	BE, ME	Asstt. Professor	Computer Science and Engineering	1.8 yrs	01

Name	Qualification	Designation	Specialization	No. of Yearsof Experie nce	Publicati ons
MS. A. N. Varade	BE, ME	Asstt. Professor	Computer Engineering	3.9 yrs	05
Mr. S. S. Shah	BE, ME	Asstt. Professor	VLSI Embedded	3 yrs	03
Mr. D. S. Dabi	BE, ME	Asstt. Professor	VLSI Embedded	5 yrs	02
Mr. S. A. Bankar	BE, M-Tech	Asstt. Professor	Communica tion	2 yrs	-
Mr. R. P. Bhadvankar	BE	Asstt. Professor	Automotive	1 yr	-
Mr. P. S. Rade	BE, ME	Asstt. Professor	Design	5 yrs	-
Mr. P. M. Gharkhedkar	BE	Asstt. Professor	Automotive	1 yr	-
Mr. S. P. Dive	BE, ME	Asstt. Professor	Design	4yrs	-
Mr. N. M. Bhosale	BE	Asstt. Professor	Automotive	1 yr	-
Mr. A S. Waghmare	B- Tech, ME(Pursuing)	Asstt. Professor	Design	5 yrs	-
Mr. N. S. Chavan	ME(Pursuing)	Asstt. Professor	Digital Systems	0.5 yr	-
Ms. N. P. Nikhare	ME(Pursuing)	Asstt. Professor	VLSI and Embedded Systems	0.5 yr	-

11. List of senior visiting faculty : NA
12. Percentage of lectures delivered and practical classes: 07
handled(programme wise)by temporary faculty
13. Student -Teacher Ratio(programme wise) : 20.54:1
14. Number of academic support staff (technical) and : 03
Administrative staff (sanctionedand filled)
15. Qualifications of teaching faculty : Ph.D 02
(DSc/ D.Litt/ Ph.D/ MPhil / PG) M.Phil. 02
PG 33
16. Number of faculty with ongoing projects from
(a) National Funding Agencies : 01
(b)International Funding Agencies : Nil
17. Departmental projects funded : 02 (2.85 lakhs)

(by DST - FIST; UGC, DBT, ICSSR etc. and total grants received

18. Research Centre /facility recognized by the University : Nil

19. Publications : Refer point 10

20. Areas of consultancy and income generated : Nil

21. Faculty as members in

a) National committees : Nil

b) International Committees : Nil

c) EditorialBoards : Nil

22. Student projects

a) Percentage of students whohave done in-house : NA

Projects including inter departmental/programme

b) Percentage of students placed for projects : NA

In organizations outside the institution i.e. in

Research laboratories/Industry/other agencies

23. Awards / Recognitions receivedby faculty and students : 02 Awards
Faculty achievements

24. List of eminent academicians and scientists / visitors to theDepartment : Nil

25. Seminars/ Conferences/Workshops organized & the source of funding : Nil

26. Student profile programme/course wise:

Name of the Course/ programme	Academic Year	Applications received	Selected	Enrolled	
				*M	*F
FE All Branches	2014-15	The Admission process is governed by DTE		561	205
	2013-14			576	184
	2012-13			605	96
	2011-12			466	163

*M = Male *F = Female

27. Diversity of Students :

Name of the Course	Academic Year	No of students from the same state	No of students from other States	No of students from abroad
Engineering Sciences	2014-15	684	81	Nil
	2013-14	704	56	Nil
	2012-13	746	54	Nil
	2011-12	568	61	Nil

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc. : NA

29. Student progression : NA

30. Details of Infrastructural facilities

e) Library : Titles-590 Volumes-2547 Journals-6

f) Internet facilities for Staff : 12MBPS
& Students

c) Class rooms with ICT facility : All class rooms are provided with LCD projector, computer system and internet connection.

d) Laboratories: 05 having Standard Quality Equipment

Sr. No.	Name of the Lab
1	Electrical Engg Lab
2	Physics Lab
3	Chemistry Lab

31. Number of students receiving financial assistance from college, university, government or other agencies :

Please refer to the Criteria 5.3.1

32. Details on student enrichment programmes (special lectures workshops /seminar) with external experts :

Enrichment Program	No of Event Conducted
Guest Lecture	09
Competition	03

33. Teaching methods adopted to improve student learning

- Arrangement of guest lecturers / workshops to enhance the knowledge of the students.
- Tutorials and practice sessions are conducted to create the interest and enhance the analytical ability of the students.
- Students are given assignments based on the need of the topic.
- Organizing competitions like Poster and Project to provide a platform to the students to enhance the talents.
- Provide support material in the form of notes, journals.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities :

Yoga
Blood Donation Camp
Health Checkup for Girls
National Festival celebration Republic and Independence day

**35. SWOC analysis of the department and Future plans :
Strengths**

- Qualified, dedicated, committed faculty Members
- Well equipped labs and class rooms
- Efficient Technical Staff

Weaknesses

- Multidisciplinary research
- Collaboration with industry and research organization
- Faculty with PhDs needs to be improved.
- Lack of involvement of students in research

Challenges

- Syllabi at par with industry
- Fill up the gap between existing and advanced knowledge
- Multidisciplinary research
- Interaction with outside world

Future Plans

- Research based teaching and learning
- Publications on Multidisciplinary research
- Developing E-Learning centre
- Maximum faculty in the department with research aptitude



Sinhgad Institutes

Prof. M. N. Navale

M.E. (Elec.) MIE, MBA
FOUNDER PRESIDENT

SINHGAD TECHNICAL EDUCATION SOCIETY'S

SINHGAD ACADEMY OF ENGINEERING

(Affiliated to University of Pune & Approved by AICTE)

S. No. 40 Kondhwa-Saswad Road, Kondhwa (Bk), Pune-411048 • Tel.(D) : 26934550,

• Tel.(O) : 26934441, • Telefax : 26934297 • Email : saepincipal@sinhgad.edu • Website : www.sinhgad.edu

Dr. (Mrs.) Sunanda M. Navale

B.A., MPM, Ph.D.
FOUNDER SECRETARY

Dr. V. M. Wadhai

B.E., M.E., Ph.D.(E&TC)
MIEEE, MIETE
PRINCIPAL

Ref.: SAE/Office/2015-16/2175

Date: 28/03/2016

DECLARATION BY THE HEAD OF THE INSTITUTION

I certify that the data in the Self Study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions and no part thereof has been outsourced.

I am aware that the Peer Team will validate the information provided in this SSR during the Peer Team Visit.


DR. VIJAY M. WADHAI
PRINCIPAL

Place : Pune
Date : 28/03/2016





All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. Western/1-2454201164/2015/EOA

Date: 07-Apr-2015

To,
The Secretary,
Tech. & Higher Education Deptt.
Govt. of Maharashtra, Mantralaya,
Annexe Building, Mumbai-400032

Sub: Extension of approval for the academic year 2015-16

Ref: Application of the Institution for Extension of approval for the academic year 2015-16

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Western	Application Id	1-2454201164
		Permanent Id	1-4676331
Name of the Institute	SINHGAD ACADEMY OF ENGINEERING	Institute Address	S.NO. 40, KONDHWA(BK), KONDHWA- SASWAD ROAD, NEAR PMC OCTROI POST, PUNE-411048, MAHARASHTRA, PUNE, PUNE, Maharashtra, 411048
Name of the Society/Trust	SINHGAD TECHNICAL EDUCATION SOCIETY	Society/Trust Address	44/1, VADGAON(BK) OFF SINHGAD ROAD ,PUNE-411041,PUNE,PUNE,Maharashtra,411041
Institute Type	Unaided - Private		

Opted for change from Women to Co-ed	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2015-16

Application Number: 1-2454201164*

Page 1 of 4

Note: This is a Computer generated Letter of Approval.No signature is required.

Letter Printed On:13 April 2015

Printed By : AE1717511



All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

Application Id: 1-2454201164			Course	Full/Part Time	Affiliating Body	Intake 2014-15	Intake Approved for 15-16	NRI Approval status	PIO Approval status	Foreign Collaboration Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	AUTOMOTIVE ENGINEERING	FULL TIME	University of Pune, Pune	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	COMPUTER ENGINEERING	FULL TIME	University of Pune, Pune	24	24	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	DIGITAL SYSTEMS	FULL TIME	University of Pune, Pune	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	MECHANICAL ENGINEERING DESIGN	FULL TIME	University of Pune, Pune	24	24	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	VLSI AND EMBEDDED SYSTEMS	FULL TIME	University of Pune, Pune	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	CIVIL ENGINEERING	FULL TIME	University of Pune, Pune	120	120	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	COMPUTER ENGINEERING	FULL TIME	University of Pune, Pune	120	120	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRONICS AND TELECOMMUNICATIONS ENGINEERING	FULL TIME	University of Pune, Pune	120	120	NA	NA	NA



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Application Id: 1-2454201164			Course	Full/Part Time	Affiliating Body	Intake 2014-15	Intake Approved for 15-16	NRI Approval status	PIO Approval status	Foreign Collaboration Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	INFORMATION TECHNOLOGY	FULL TIME	University of Pune, Pune	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MECHANICAL ENGINEERING	FULL TIME	University of Pune, Pune	180	180	NA	NA	NA
ENGINEERING AND TECHNOLOGY	2nd Shift	UNDER GRADUATE	COMPUTER ENGINEERING	FULL TIME	University of Pune, Pune	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	2nd Shift	UNDER GRADUATE	ELECTRONICS AND TELECOMMUNICATIONS ENGINEERING	FULL TIME	University of Pune, Pune	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	2nd Shift	UNDER GRADUATE	MECHANICAL ENGINEERING	FULL TIME	University of Pune, Pune	60	60	NA	NA	NA
MANAGEMENT	1st Shift	POST GRADUATE	MASTERS IN BUSINESS ADMINISTRATION	FULL TIME	University of Pune, Pune	60	60	NA	NA	NA

Note: Validity of the course details may be verified at www.aicte-india.org>departments>approvals

The above mentioned approval is subject to the condition that SINHGAD ACADEMY OF ENGINEERING shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.



All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Dr. Avinash S Pant
Actg Chairman, AICTE

Copy to:

1. **The Regional Officer,**
All India Council for Technical Education
Industrial Assurance Building
2nd Floor, Nariman Road
Mumbai - 400 020, Maharashtra
2. **The Director Of Technical Education,**
Maharashtra
3. **The Registrar,**
University of Pune, Pune
4. **The Principal / Director,**
SINHGAD ACADEMY OF ENGINEERING
S.NO. 40, KONDHWA(BK), KONDHWA- SASWAD ROAD,
NEAR PMC OCTROI POST, PUNE-411048,
MAHARASHTRA,
PUNE,PUNE,
Maharashtra,411048
5. **The Secretary / Chairman,**
SINHGAD TECHNICAL EDUCATION SOCIETY
44/1, VADGAON(BK) OFF SINHGAD ROAD ,PUNE-411041,
PUNE,PUNE,
Maharashtra,411041
6. **Guard File(AICTE)**

Savitribai Phule Pune University

(Formerly University of Pune)

Telephone Nos. :

020 – 25691233

25601258

25601259

25601257



ACADEMIC SECTION

Ganeshkhind, Pune – 411007, INDIA

Telegraph : 'UNIPUNE'

Fax : 020-25691233

Website : www.unipune.ac.in

E-mail : dyracademic@unipune.ac.in

Ref. No. : CA/170

Date : 03/02/2016

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Sinhgad Technical Education Society's Sinhgad Academy of Engineering, Kondhwa-Saswad Road, Kondhwa (Bk), Pune 411 048 is affiliated to the Savitribai Phule Pune University, since 2005 (PU/PN/ENGG/228/2005) and the following courses are taught in the said college as per approval.

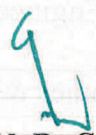
Courses <u>Under Graduate</u>	Duration of the Course	Affiliation (Permanent / Temporary)	Validity Period
Computer Engineering	04 Years	Temporary	Upto 2015-16
Civil Engineering	04 Years	Temporary	Upto 2015-16
Electronics & Telecommunication Engineering	04 Years	Temporary	Upto 2015-16
Information Technology	04 Years	Temporary	Upto 2015-16
Mechanical Engineering	04 Years	Temporary	Upto 2015-16

Courses <u>Post Graduate</u>	Duration of the Course	Affiliation (Permanent / Temporary)	Validity Period
Master of Engineering (Computer Engineering)	02 Years	Temporary	Upto 2015-16

..2..

Courses <u>Post Graduate</u>	Duration of the Course	Affiliation (Permanent / Temporary)	Validity Period
Master of Engineering Electronics (Digital Systems)	02 Years	Temporary	Upto 2015-16
Master of Engineering E & TC (VLSI & Embedded systems)	02 Years	Temporary	Upto 2015-16
Master of Engineering (Mechanical Design)	02 Years	Temporary	Upto 2015-16
Master of Engineering (Automotive Engineering)	02 Years	Temporary	Upto 2015-16

The said certificate is issued as per the request application received from the Principal of the college Ref. No. SAE/2015-16/2040A, dated 20.01.2016 so as to submit it to the National Assessment and Accreditation Council (NAAC), Bangalore.


Dr. V. B. Gaikwad
Director, B.C.U.D.

सावित्रीबाई फुले पुणे विद्यापीठ

(पुर्वीचे पुणे विद्यापीठ)

दूरध्वनी क्रमांक :

०२०-२५६९१२३३

२५६०१२५८

२५६०१२५९



शैक्षणिक विभाग

गणेशखिंड, पुणे-४११ ००७

टेलिग्राफ : 'युनिपुणे'

फॅक्स : ०२०-२५६९१२३३

वेबसाइट : www.unipune.ac.in

ई-मेल : dyracademic@unipune.ac.in

दिनांक : २४/०७/२०१५

संदर्भ क्र. : सीए/२७६१

प्रति,

मा. प्राचार्य,

सिंहगड टेक्निकल एज्युकेशन सोसायटीचे,

सिंहगड अँकॅडमी ऑफ इंजिनिअरिंग,

कोंढवा - सासवड रोड, कोंढवा बु.

पुणे- ४११०४८

विषय :- संशोधन केंद्राच्या नव्याने मान्यतेबाबत

संदर्भ क्र. : सीए/५६७ परिपत्रक क्र. ६६/२०१३ दि. २७.०२.२०१३

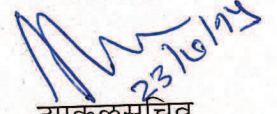
महोदय,

उपरोक्त विषय व संदर्भांकीत परिपत्रकातील नियमांच्या अधिन राहुन विद्यापीठ अधिकार मंडळाने घेतलेल्या निर्णयानुसार आपणास कळविण्यात येते की, आपल्या महाविद्यालयात खालील रकान्यात नमूद केलेल्या विषयांच्या पीएच.डी. संशोधन केंद्राच्या नव्याने मान्यतेचा अहवाल दर सहा महिन्याचा प्रोग्रेस रिपोर्ट (Progress Report) शैक्षणिक विभागात सादर करण्याच्या अटीवर परवानगी देण्यात येत आहे.

अनु. क्र.	विषय	विद्याशाखा	शैक्षणिक वर्ष	कालावधी	नव्याने/नूतनीकरण
१.	पीएच.डी. मेकॅनिकल इंजिनिअरिंग,	अभियांत्रिकी	२०१५-१६ ते २०१७-१८	३ वर्षे	नव्याने
२.	ई.अँड टी.सी. इंजिनिअरिंग				

कळावे,

आपला,



उपकुलसचिव
(शैक्षणिक विभाग)