ANNUAL QUALITY ASSURANCE REPORT (AQAR) (2015-16)

submitted to

National Assessment and Accreditation Council (NAAC)

An Autonomous Institution of the University Grants Commission
P. O. Box. No. 1075, Opp: NLSIU, Nagarbhavi, Bangalore - 560 072, India.

by

Amrutvahini Sheti & Shikshan Vikas Sanstha's

Amrutvahini College of Engineering
('A' Grade Accredited by NAAC with a CGPA 3.1)
(Three Times Accredited by NBA, New Delhi)
Sangamner – 422608, Dist.: Ahmednagar (M.S.), India.

The Annual Quality Assurance Report (AQAR) of the IQAC

Part – A

AQAR for the year	2015-16

1. Details of the Institution

1.1	Name of the Institution	**Amrutvahini College of Engineering, Sangamner**
1.2	Address Line 1	A/P - Ghulewadi, Tal–Sangamner, Dist-Ahmednagar
	Address Line 2	Amrutnagar, S.K.
	City/Town	Sangamner
	State	Maharashtra
	Pin Code	422 608
	Institution e-mail address	principal@avcoe.org
	Contact Nos.	024025-259016
	Name of the Head of the Institution:	Prof. A. K. Mishra
	Tel. No. with STD Code:	02425-259016
	Mobile:	9763392499
	Name of the IQAC Co-ordinator:	Prof. R. S. Tajane
	Mobile:	9850265484

IQAC e-mail address:	iqac@avcoe.org	

1.3 **NAAC Track ID**

MHCOGN23786

OR

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

EC (SC)/13/A&A/58.1 dated 17th March 2016

1.5 Website address:

www.avcoe.org

Web-link of the AQAR:

http://www.avcoe.org/admin/images/Download/Documents/AQAR2015-16.pdf

1.6 Accreditation Details

Sr. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1st Cycle	A	3.01	March 17, 2016	March 16, 2021
2	2nd Cycle				
3	3rd Cycle				
4	4th Cycle				

1.7 Date of Establishment of IQAC: DD/MM/YYYY

02/01/2015

1.8 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC

    i. AQAR_____NIL_____ (DD/MM/YYYY)
    ii. AQAR_____ _____ (DD/MM/YYYY)
    iii. AQAR_____ _____ (DD/MM/YYYY)
    iv. AQAR_____ _____ (DD/MM/YYYY)

1.9 Institutional Status

University   State [ ]   Central [ ]   Deemed [ ]   Private [ ]

Affiliated College	Yes	√	No	
Constituent College	Yes		No	
Autonomous college of UGC	Yes		No	
Regulatory Agency approved Institution	Yes	√	No	

Type of Institution Co-education √ Men ☐ Women ☐

Urban ☐ Rural √ Tribal ☐

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

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

1.10 Type of Faculty/Programme

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

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

Others(Specify) ☐

1.11 Name of the Affiliating University Savitribai Phule Pune University

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

Autonomy by State/Central Govt. / University ☐

University with Potential for Excellence ☐ UGC-CPE ☐

DST Star Scheme ☐ UGC-CE ☐

UGC-Special Assistance Programme [   ]   DST-FIST [   ]

UGC-Innovative PG programmes [   ]   Any other (*Specify*)   **AICTE Affiliated**

UGC-COP Programmes [   ]

2. IQAC Composition and Activities

2.1   No. of Teachers   1 (Principal) + 1 (Director) + 12

2.2   No. of Administrative/Technical staff   01

2.3   No. of students   01

2.4   No. of Management representatives   01

2.5   No. of Alumni   02

2.6   No. of any other stakeholder and community representatives   01

2.7   No. of Employers/ Industrialists   01

2.8   No. of other External Experts   01

2.9   Total No. of members   22

2.10 No. of IQAC meetings held   07

2.11   No. of meetings with various stakeholders: No. 07   Faculty 02

Non-Teaching Staff 02   Students 01   Alumni 01   Others 01

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

If yes, mention the amount [ ]

2.13   Seminars and Conferences (only quality related)

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

Total Nos. 02   International [ ]   National [ ]   State [ ]   Institution Level 02

(ii) Themes

> 1. Techniques of teaching
> 2. Preparation of research funding proposal

2.14   Significant Activities and contributions made by IQAC

- Stake holder's feedback was taken for the academic year 2015-16.
- IQAC had promoted Research Publications and so far **232** papers were published in National and International journals. And also focused on qualification up gradation of faculties and 03 faculties successfully completed their Ph.D.
- In order to conduct Academic and administrative audit core committee were formed comprising of Principal, Dean, IQAC Coordinator, ISO Coordinator and Head of Depts.
- **01** International, **05** National and **03** State level Workshop/ Conferences/ Seminars were organised.
- IQAC had conducted **17** classes for softs skill, aptitude development, and academic development of students.
- Prepared SSR and achieved 'A' grade by NAAC

2.15   Plan of Action by IQAC/Outcome

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

Plan of Action	Achievements
To carter the needs of slow learner and identification of Fast/ active learner.	Remedial classes were conducted to improve their academic performance and active learners were promoted for competitive study to grab adequate employment and also involved in study circle.
To prepare Self Study Report Of NAAC.	Preparation did as per requirements and submitted, secured 'A' Grade.
To prepare and follow Academic Calendar.	Executed through departmental conduction of activity as per respective department Academic Calendar.
To schedule Quality checks through IQAC and ISO Audits.	Execution and implementation was audited and recorded.
To plan for Social, Environmental Awareness and Activities.	Execution did through – Fire & Safety Audit, Green Audit, Dandakaranya Abhiyan, Swachha Sanaganmner Abhiyan, Rain Water Harvesting, Renewable Energy Utilisation.
Construction of Seminar Hall Facility for MBA.	Constructed well equipped seminar hall.

The Academic Calendar of the year (2015-16) is attached as Annexure i.

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

Management   √   Syndicate ☐   Any other body ☐

Provide the details of the action taken

- ➢ Preparation of the adequate committees for respective implementation of proposed activities.
- ➢ Assistance and allocation of resources was provided for conduction of planed activity.
- ➢ Internal funding for construction work.
- ➢ Conduction of seminar/ workshop/ orientation programmer to promote Research activities and teaching/learning quality of faculty.
- ➢ Conduction of audits for respective quality checks conducted.

Part – B

Criterion – I

1. Curricular Aspects

1.1   Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
Ph.D.	01	Nil	01	Nil
P.G.	08	Nil	08	01
U.G.	08	Nil	08	31
P.G. Diploma	--	--	--	--
Advanced Diploma	--	--	--	--
Diploma	--	--	--	--
Certificate				--
Others				--
Total	17	Nil	17	32

Inter-disciplinary	--	--	--	--
Innovative	--	--	--	--

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

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	17
Trimester	--
Annual	--

1.3 Feedback from stakeholders*   Alumni √ Parents √ Employers √ Students √

(On all aspects)

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

*Provided an analysis of the feedback in the Annexure – ii

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

- **In second year engineering credit system is introduced.**
- Updation in syllabus for various subject is given below-

Subject	Salient aspects
1. Civil	
1. Building Technology and Materials	1. Framed structures –types; light frame structure timber framed structure RCC framed structure. 2. Glass block and partition wall" added 3. In term work "Masonry and Lintel" and "Auto CAD Design" points are removed.
2. Surveying	1. In unit 1 "RF Map and plan types of tapes concept of chain age" and practical application of bearing plan this points are removed. 2. In unit 2 "Principals axes of dumpy level "are added 3. In unit 3 open Travers and measurement of deflection angle using transit theodolite and open traverse survey this points are removed. 4. Unit 4 become tachometry and electronic measurement techniques. 5. Unit 5 Transited theodolite is removed
3. Strength of Materials	1. "Generalized Hook's law" points are removed 2. "MI of various figure" point are added 3. "Field test on bricks" are added in term work
4. Geotechnical Engineering	1. Practical on Determination of water content by oven drying method are removed.
2. Computer	
1. Digital Electronics & Logic Design	1. Apply the knowledge to appropriate IC as per the design specifications. 2. Design simple digital systems using VHDL
2. Advanced Data Structures	1. To apply appropriate advanced data structure and efficient algorithms to approach the problems of various domain. 2. To use effective and efficient data structures in solving various Computer Engineering domain problems.
3. Microprocessor	1. To understand the higher processor architectures descended from 80386 architecture.
3. Electrical	
1. Material Science	In unit 1,different material used for thin Film, Solar Cell, Batteries used for Electrical Vehicle and Electric Hybrid Vehicle are added
2. Electrical Measurement & Instrumentation	1. TOD Meter is removed from Unit3 and added inUnit4. 2. In Unit 5 Digital Storage Oscilloscope is added.

3.	Electrical Machines	1. In unit 1 Toroidal core transformer & all day efficiency is added. 2. In unit 2 welding transformer is added.

4. Electronics

1.	Digital Electronics	VHDL removed, Introduction to 8051 microcontroller added
2.	Electrical Circuit & machines	New subject added
3.	EDC	Unit 1, 4, 6 are completely new, FET based circuit is introduced.
4.	Signals & system	Sampling of analog signals, sampling theorem, Fourier series properties and Gibbs phenomenon are added.

5. ETC

1.	Signal & systems	Fourier series is added in detail.
2.	Electronic devices & circuits	Analyse & interpret FET & MOSFET circuits
3.	Electrical circuits & machines	Completely new subject introduced in SE 2015 pattern.
4.	Data structures and algorithms	Few basic concepts of C language are introduced.
5.	Digital electronics	Introduction to microcontroller
6.	Electronic measuring instruments & tools	Signal analysis using logic analyser measure sound/video signal strength using db meter.
7.	Integrated circuits	Voltage regulator is replaced by Active filter circuit
8.	Control systems	Signal flow graph, Zeigler-Nicholas method.
9.	Analogue communication	Different methods of AM & FM transmission.
10.	Employability skill development	Analytical reasoning & quantitative ability

6. IT

1.	DELD	Introduction to Number systems, logic families, Combinational circuits, Sequential circuits, PLD devices, HDL.
2.	FDS	C programming, pointers, Abstract data type, Files, Linear data structures, Linked Data Structures
3.	PSOOP	Problem Solving with C and Cpp, Introduction to Object Oriented Programming, C++ overview, Error Handling, C++ Stream Classes, Inheritance, Polymorphism, Abstraction etc.
4.	CA	Memory Management, Control Unit, Instruction Level parallelism, Parallel Organisation, Hardware Components.
5.	DS	Graph Theory, Spanning tree, Probability, Permutation & Combination, Equivalence Relation, Equivalence Statement.

7. Mechanical

1.	Manufacturing Process	Term work assigned for this Subject. Workshop Practice is removed and added in practical's of this subject Sheet metal working process is included and

		Lab Work :
		1. Manufacturing of any one assembly consisting of minimum two components and involving all the lathe operations. 2. Demonstration of Sand Molding Processes. 3. Job on TIG / MIG/ Resistance Welding.
2.	Computer Aided Machine Drawing	Number of Drawing and assemblies are increased for final Practical examination
3.	Thermodynamics	1. A unit on Psychometric is added and unit on Fuel and combustion is shortened and limited to theoretical approach only. 2. Vapour compression processes are added in unit on Gas Power Cycles 3. An experiment on Joules Experiment is added. 4. An experiment on determination of Cp & Cv is added. 5. An experiment on Determination of CV of fuels using Boys Gas calorimeter and Bomb Calorimeter is eliminated
4.	Material Science	Tutorial of one hours has to performed by students
5.	Strength of Materials	No of experiment is increased by one and assignment is reduced by one
6.	Value Education	New course in included in syllabus with following unit ➢ Introduction of Value Education ➢ Salient values for life ➢ Human Rights ➢ Environment and Ecology ➢ Social values & Ethical values
7.	Soft Skills	New course in included in syllabus with following unit ➢ SWOT analysis ➢ Listening Skills ➢ Oral presentation skills/Speaking Skills ➢ Resume writing ➢ Corporate / Business Etiquettes ➢ Group Discussion
8.	Theory of Machines – I	Only Particles are converted to tutorials Oral based on above Term work conducted in the tutorial class.
8. Production		
1.	Material Science	Term work is converted into oral.
2.	WF	"Welding & Foundry" subject had 3 lectures/week, now it is converted into 4 lectures/ week
3.	MOM	The name of subject "Strength Analysis of Materials" is changed to "Mechanics of Materials".

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

No

Criterion – II

2. Teaching, Learning and Evaluation

2.1   Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
215	178	31	05	--

2.2   No. of permanent faculty with Ph.D.

05

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

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
15	--	01	--	--	--	--	--	16	--

2.4   No. of Guest and Visiting faculty and Temporary faculty

11		--		--

2.5   Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended Seminars/ Workshops	88	67	02
Presented Papers	82	38	10
Resource Persons	02	04	13

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

- Interactive teaching learning approach.

- Use of flash animations.

- Use of models, charts, analogy, puzzles, storytelling, brain storming.

- Use of open educational resources, E-learning - resources such as NPTEL, Khan Academy lectures, Webinars and Notes, etc.

- Intranet institute repository of teacher's notes and research papers.

- Self-learning assignments are given to the students based on e-resources.

- Value added courses

- Workshops

- Industry and site visits

- Guest lectures and expert talks.

- Study circle

- Beyond syllabus topics

2.7   Total No. of actual teaching days during this academic year   **180**

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

Institute adheres to the examination rules and regulations framed by Savitribai Phule Pune University, Pune for examination/ evaluation process and it includes:

- Credit-Grade based performance and assessment system.

- Open Book Examination for PG.

- Barcoding.

- Photocopy of answer sheets.

- Moderation of answer sheets.

- Online Multiple choice questions.

In addition to this monthly class test at institute and per-university exam are conducted & evaluated. The results of the same are informed to the parent by SMS.

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

05	13	19

2.10   Average percentage of attendance of students | 80% |

2.11   Course/Programme wise distribution of pass percentage:

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
Civil Engineering	141	41.84	28.37	3.55	Nil	73.76
Computer Engineering	146	25.34	52.05	16.44	Nil	93.84
Mechanical Engineering	230	36.52	36.52	7.39	Nil	80.43
Production Engineering	91	31.87	48.35	14.29	Nil	94.51
Electronics Engineering	89	65.17	25.84	1.12	Nil	92.13
Electronics & Telecommunication Engineering	82	62.20	26.83	0.00	Nil	89.02
Information Technology	75	66.67	28.00	1.33	Nil	96.00
Electrical Engineering	68	83.82	8.82	0.00	Nil	92.65

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

- This IQAC checks course files, lab manuals, theory and practical attendance sheets, Record-Conduction-Viva (RCV) status, staff feedback in every semester and submits the report of the same to the Principal.

- Regular follow up is taken through the weekly meeting chaired by Principal.

- Student attendance monitoring and reporting of the same to the parents by SMS.

- Mid semester and end semester teacher feedback given by the students. Based on the feedback received from the students, staff members are informed about their weakness and suggestions are given for improvement.

- Result analysis of internal examinations i.e. monthly class tests and prelims and taking remedial measures.

- Supervision of lecture and practical sessions by vigilance /monitoring committee and HoD. Counseling of staff members for improvement.

- Monthly tutor meetings are conducted to counsel the students and to discuss issues related to academics, hostel, mess and overall facilities.

2.13   Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	*Number of faculty benefitted*
Refresher courses	34
UGC – Faculty Improvement Programme	-
HRD Programmes	10
Orientation Programmes	29
Faculty exchange Programme	-
Staff training conducted by the university	43
Staff training conducted by other institutions	51
Summer / Winter schools, Workshops, etc.	124
Others	--

2.14   Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	37	--	02	--
Technical Staff	65	--	06	--

Criterion – III

3. Research, Consultancy and Extension

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

- The institute organizes annual national level mega technical event for the students. The event includes technical paper presentation, project exhibition, coding competition, quizzes, technical games, aptitude test and robotics competition to develop scientific temper and research culture in students.

- The institute sponsors the students for attending project and paper presentation, science exhibition, seminars, workshops, and other technical events.

- Students are also motivated to participate in inter college / university level competitions like project competition (Avishkar, DIPEX) and PGCON (conference for PG students).

- The institute gives recognition for student innovations.

- The institute encourages students to attend research webinars.

- The institute has organized visits to research institutes such as Giant Meter Wave Radio Telescope (GMRT), Khodad, Pune; Maharashtra Engineering Research Institute (MERI), Nashik; Water and Land Management Institute (WALMI), Aurangabad; Indo German Tool Room (IGTR), Aurangabad; Vehicle Research and Development Establishment (VRDE), Ahmednagar.

- The institute has digital library for students which has on line research journals along with e-books.

- Students are involved in the faculty research projects related to BCUD and Aakash Project of IIT, Mumbai.

- AAKASH tablets are provided to students and competitions are organized for development of Android Apps.

- Institute has Students' chapters of IEI, IEEE, IETE, CSI and ISTE through which various technical programs such as expert lectures of renowned scientists, workshops and technical fest are organized.

3.2   Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	--	--	--	--
Outlay in Rs. Lakhs	--	--	--	--

3.3   Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	09	--	01	--
Outlay in Rs. Lakhs	14.1	--	02	--

3.4   Details on research publications

	International	National	Others
Peer Review Journals	137	01	--
Non-Peer Review Journals	21	--	--
e-Journals	74	--	--
Conference Proceedings	41	--	04

3.5   Details on Impact factor of publications:

Range

<div style="border:1px solid">0.25 to 6.025</div>

Average

<div style="border:1px solid">3.1375</div>

Maximum h-index

<div style="border:1px solid">15</div>

Nos. in SCOPUS

<div style="border:1px solid">18</div>

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

Nature of the Project	Name of the funding Agency	Total grant sanctioned	Received
Major projects	--	--	--
Minor Projects	--	--	--

Interdisciplinary Projects	--	--	--
Industry sponsored	Rahul Enterprises, Nashik	Only Technology Transfer	Grant not received
	Elite Technologies, Nashik		
	N-Sys Technologies, Pune		
	Microworld, Nashik		
	Spectra Innovation		
	All Cargo global logistics	--	--
	R.M. Engineering Works	--	--
Projects sponsored by the University/ College	BCUD Savtribai Phule Pune University	1360000/-	680000/-
	Amrutvahini College of Engineering (Solar Rickshaw)	45,000/-	45,000/-
	Amrutvahini College of Engineering (Wind Turbine)	40,000/-	40,000/-
Students research projects *(other than compulsory by the University)*	Ministry of Defence, Ahmednagar	--	--
Any other(Specify)	NVIDIA	80000/-	80000/-
Total:		**1525000/-**	**845000/-**

3.7   No. of books published   i) With ISBN No.   12   Chapters in Edited Books   03

ii) Without ISBN No.   --

3.8 No. of University Departments receiving funds from

UGC-SAP   --   CAS   --   DST-FIST   --

DPE   --   DBT Scheme/funds   --

3.9   For colleges   Autonomy   --   CPE   --   DBT Star Scheme   --

INSPIRE   --   CE   --   Any Other (specify)   --

3.10   Revenue generated through consultancy

<div style="text-align:right">**300645.00**</div>

3.11   No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	01	02+01*	01	--	--
Sponsoring agencies	Self	Self * BCUD	Self	--	--

3.12   No. of faculty served as experts, chairpersons or resource persons   74

3.13   No. of collaborations   International   03   National   03   Any other   02

3.14   No. of linkages created during this year   61

3.15   Total budget for research for current year in lakhs:

From Funding agency   39.93   From Management of University/College   6.43557

Total: 46.36557

3.16   No. of patents received this year

Type of Patent		Number
National	Applied	03
	Granted	--
International	Applied	--
	Granted	--
Commercialised	Applied	--
	Granted	--

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

Total	International	National	State	University	Dist.	College
16	01	--	--	15	--	--

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

| 01 | 09* |

       and students registered under them

| 06 | 20* |

       * Research guide and students attached to research centre

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

| -- |

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

       JRF | -- | SRF | -- | Project Fellows | -- | Any other | 01 |

3.21   No. of students Participated in NSS events:

       University level | 02 | State level | -- |

       National level | -- | International level | -- |

       College Level | 100 |

3.22   No. of students participated in NCC events:

       University level | -- | State level | -- |

       National level | -- | International level | -- |

3.23   No. of Awards won in NSS:

       University level | 02 | State level | -- |

       National level | -- | International level | -- |

3.24   No. of Awards won in NCC:

       University level | -- | State level | -- |

       National level | -- | International level | -- |

3.25   No. of Extension activities organized

University forum | -- | College forum | 03 |

NCC | NA | NSS | 18 | Any other | 04 |

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

1. Swachha Bharat abhiyan

2. Blood donation.

3. Tree plantation under Dandkaranya abhiyan

4. Microsoft student partnership program

5. Water conservation program

6. Conducted technical training session for faculty & students (T.E and B.E.) under center of excellence established with Texas Instrument, India

7. Donate sport kit @ velhale deaf and dump school

8. Cleaning India – Green India (Sangamner town)

9. Counselling citizen about dissociation of wet garbage and dry garbage separation.

10. Rain water harvesting and kitchen garden motivation.

11. Cleanliness campaign

12. Spread awareness, counselling and encouragement regarding harm in using plastic carry bags, usefulness of water conservation, wet garbage etc. in Sangamner city.

13. Lecture Series on "Carrier Opportunities after 12th" to junior college students by faculty.

Criterion – IV
4. Infrastructure and Learning Resources

4.1   Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	92080 sq. mts. (23.02 Acres)	Nil	Institute	92080 sq. mts (23.02 Acres)
Class rooms	47	01	Institute	48
Laboratories	92	04	Institute	96
Seminar Halls	08	01	Institute	09
No. of important equipment's purchased ($\geq$ 1-0 lakh) during the current year.	137	15	MODROB (AICTE) / BCUD (SPPU, Pune) & Institute	152
Value of the equipment purchased during the year (Rs. in Lakhs)	6,00,61,085/-	78,10,955/-	MODROB (AICTE) / BCUD (SPPU, Pune) & Institute	6,78,72,040/-
Others (Tutorial Rooms)	15	--	Institute	15

4.2   Computerization of administration and library

> **Computerization of administration:**
>
> Ananosoft (EMS) system is used for administration activities as following tabs
>
> - Admission
> - Registration
> - Fee Receipt & Payments
> - Attendance (Student)
> - Attendance (Staff)
> - Library Management System
> - Scholarship Management
> - Students Results

- Certificate Generation

- Hostel Management

- Store Management

- Internal Approval System (DP Management)

- Event Management

- Principal Desk

- Training & Placement

- Alumni

- Notice Viewer

- Student Comments

Computerization of Library:

- Online library portal (FTP Server) is made available through intranet within the Campus for access library electronic resources such as NPTEL videos, e-books and notes of faculty.

- Library provided OPAC (Online Public Access Catalogue) facility.

- All the department library are connected by LAN and also equipped with NPTEL and technical videos, notes, etc. placed on desktop computers.

- CCTV cameras are installed in the department and library at various places for security purpose.

4.3   Library services:

	Existing		Newly added		Total	
	No.	**Value**	**No.**	**Value**	**No.**	**Value**
Text Books	57535	1,89,44,283/-	2143	1121879/-	59678	2,00,66,162/-
Reference Books						
e-Books	261	00	00	00	261	--
Journals	122	308470/-	122	311543/-	122	311843/-
e-Journals	4867	14,66,075/-	4867	16,70,134/-	4867	1670134/-
Digital Database	05	1654134/-	06	1670134/-	06	1670134/-
CD & Video	447	--	--	--	447	--
Others (specify)	--	--	--	--	--	--

4.4   Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Brows-ing Centres	Computer Centres	Office	Depart-ments	Others
Existing	1138	34	100mbps (404 PCs Excluding IT, Civil & MBA)	09	11	Anano soft (ERP System)	Anano soft	--
Added	89	01	(19 PCs Excluding IT, Civil & MBA)	01	01	Anano soft**	--	--
Total	1227	35	100mbps (423 PCs Excluding IT, Civil & MBA)	10	12	--	--	--

** New version which include online feedback system from stakeholders.

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

A. Software value added courses for students: (Dept. of Civil Engineering)

- AutoCAD for SE and TE students (100 Nos.)

- 3D MAX SE and TE students (103 Nos.)

B. ERP training attended by technical Assistants and teachers arranged by Department of Computer/ IT. (Dept. of Electrical Engineering)

C. For Technology up-gradation following value added courses are conducted (Dept. of Computer Engineering)

- Course on " Red Hat"

- Course on Java programming

- "CUDA: A Parallel Programming Technique"

- "Latex: A Report Writing Tools"

- "Python Technology"

- "Bigdata" & Hadoop"

- "3D Animation"

D. Dept. of Electronics Engineering

- Department of Electronics Engineering established Centre of Excellence under Texas Instruments (TI) India University Program.

- 05 Faculty members and 40 students were given training on TI MSP430 Microcontrollers and TIVA launch pads.

E. Software value added courses for students: (Dept. of Production Engineering)

- Dedicated Computers with internet facility for individual staff members.

- Creo 2.0 for TE and BE students (30 Nos.)

- Witness for BE students (20 Nos.)

- CATIA V5R20 (40 Nos.)

- Industrial Hydraulics and Pneumatics (38 Nos.)

- German Language (A1) (06 Nos.)

- Six Sigma (13 Nos.)

F. Software value added courses for students:(Dept. of E&TC)

- Three day's workshop conducted for TE E&TC (59 students) on "Fundamentals of PIC Microcontroller."

- Two day's workshop conducted for BE E&TC (34 students) on "Wireless networks using Arduio."

G. Software value added courses for students & Staff (Dept. of Mechanical Engineering)

- One day training programme on 'Future CAM', a module of Del CAM.

- One day FDP on 'Automation Studio' by Indiasoft.

- A training programme on 'Master CAM'

H. Software value added courses for students & staffs (Dept. of I.T.)

- ERP Training for T.A. and Teachers (24 Nos.)

- Dronatech Workshop (32 Nos.)

- Course on Redhat TE & BE Students (23 Nos.)

- Course on Java SE Students (47 Nos.)

- Course on Web Development TE Students (17 Nos.)

- Course on Andriod S.E. & T.E. Students (33 Nos.)

4.6   Amount spent on maintenance in lakhs:

i) ICT

| 0.512 |

ii) Campus Infrastructure and facilities

| 31.131 |

iii) Equipment's

| 5.9966 |

iv) Others

| 1.61275 |

Total: | 39.25235 |

Criterion – V
5. Student Support and Progression

5.1   Contribution of IQAC in enhancing awareness about Student Support Services

> The Student support Services and progression are primarily looked after by the Dean of our institution. Introduction of student centric welfare schemes, addressing various requirements of residential students and providing necessary support system for student related issues are managed by the Dean in consultation with Deans of the Faculties, wardens of the Hostels and Student representatives. The IQAC has a very limited role to play in these activities. The institute is publishes its updated prospectus/handbook annually and this prospectus are distribute among students with application form who applies for different discipline.
>
> The accountability of these all is done annually by providing information to the students as below
>
> A. The academic schedule of the academic year with test date, Parent teacher meeting, and other activities.
>
> B. The students could also find the various co-curricular and extracurricular activities.
>
> C. Summarize each department with Intake, Staff Strength, Laboratories, software, equipment's, and Result with toppers list.
>
> D. Detail information of department of Master of Business Administration with campus photo given in Boucher.
>
> E. Highlights about Gymkhana, sports, Shopping complex, Mess and canteen, Transportation etc.
>
> F. Provide Information of college Library with facility of reading hall, and etc. in this given information about the various scholarship provided by the institute.
>
> G. Mention the various committee information available in the institute like Ant ragging, Women's Grievance cell, Discipline Committee.
>
> H. The institute is providing academic calendar.
>
> I. Providing Information of various events organised and conducted by the institution like Seminar, Workshop, Value addition course, Training Programme, Expert lecture, Conference etc.
>
> J. Sport activity played by students indoor and outdoor games and achievement by students at various level like District, State, zonal and Regional level etc.
>
> K. Each department has its own association under this conducting various activities for students are like Group discussion, Debate etc.
>
> L. Prospects contain the information about the Admission of students.
>
> M. Regular Checking of Course file in every start of academic year for smooth conduction of lecture for students.
>
> N. Conduction of regular meeting with IQAC and Student member for better improvement of student support.

5.2   Efforts made by the institution for tracking the progression

1. Effective Interaction between class teachers &students.

2. Conducting Regular test, alumni meet, feedback from Stake holders, Group discussion, Surprise test and social networking.

3. Result evaluation, Placements. Research papers writing by students.

4. Motivates to participate in Project Competition,

5.3   (a) Total Number of students: **3780**

UG	PG	Ph. D.	Others
3518	253	09	00

(b) No. of students outside the state

28

(c) No. of international students

00

Men

No	%
2401	63.51

Women

No	%
1379	36.48

Last Year						This Year					
General	**SC**	**ST**	**OBC**	**Physically Challenged**	**Total**	**General**	**SC**	**ST**	**OBC**	**Physically Challenged**	**Total**
893	255	88	2542	02	3780	893	255	88	2020	02	3258

Demand ratio: **NA***   Dropout %: **1.85%**

 * All seats are allocated through centralised admission by Director of Technical Education-

5.4   Details of student support mechanism for coaching for competitive examinations

Summary of Competitive Exam Training			
Year	Expert Lectures	Workshops/ Training	Total
2015-16	03	01	04

Competitive Exam Cell
Coaching For Competitive exams
1st July-2015 to 30th June 2016

Sr. No	Year with Date	Event/Expert lecture/ Workshop/ Test	Resource Person/Organization	Target Audience	Remark
01	22/06/2016	"GATE 2017"	Mr. Sreedhar Kuduppi	BE (All branches)	Importance of GATE exam
02	05/10/2015 to 06/01/2016	GATE Workshop	Imperial Institute of Excellence, Pune	TE, BE (IT, COMP, MECH, PROD, Electrical, ETC, ELEX)	To prepare all branch students to crack GATE.
03	20/08/2015	GATE 2016 overview	Prof. Paresh Gugale	TE, BE (IT, COMP, MECH, PROD, Electrical, ETC, ELEX)	New aspects of GATE 2016 and its importance
04	14/07/2015	Expert Lecture "MTECH as a career option and GATE"	Mr. Surya V V Prasad M, Senior Marketing Manager, GATEFORUM, Hyderabad	BE (All branches)	To aware the students about MTECH admission with GATE score

No. of students beneficiaries   **650**

5.5   No. of students qualified in these examinations

NET `--`   SET/SLET `--`   GATE `20`   CAT `01`

IAS/IPS etc. `--`   STATE PSC `12`   UPSC `--`   Others `09`

5.6   Details of student counselling and career guidance

Institute has Mentoring Scheme in which a Tutor/Mentor (faculty) is allotted to students from first to final year. Monthly meetings are conducted by the mentor with the students to discuss academic performance and progress of the allotted students. Mentors render guidance in studies, career planning and also address personal and psycho social issues.

A. Academic

The institute provides regular counselling to the students to address issues relating to their academic shortfall and obstacles. The institute has a tutor scheme where a group of students are placed under the guidance of tutor. The Tutor looks after their academic requirements and makes arrangements for remedial and tutorial classes.

B. Personal

The Tutors perform regular collaboration with the students placed under their tutorship at a one to one level. The students are encouraged to share their personal problem and a friendly environment is provided to make them comfortable to share their personal difficulties. The tutors maintain secrecy of any personal information and takes necessary corrective steps in consultation with senior official staffs, thereby addressing personal problems.

C. Career

The students, at the time of the admission, are guided by the faculty in choosing appropriate branch. They are informed about the scope and nature of the various subjects that form the syllabus. They are counselled adequately to shape their career. Personalized counselling and parental care is made possible by tutor schemes practiced in the institute. The institute also encourages the students towards taking Higher Education and Research by arranging in house special training for Competitive Exams, Soft Skills, and Aptitude Tests etc.

D. Psycho-Social

The candidates at times come face to face with certain social issues or problems which tend to bring the inferiority complex in them. The teachers make it sure that no such deterioration happens with the psycho social understanding of the students. They are counselled to become better human beings and advised to stand tall for the social cause.

Sr. No	Event	Resource Person/ Organization	Class & Branch	Conduction Date
1	Awareness about Training and Placements	Prof. Gautam Vikhe	BE (All Branches)	16th June 2015
2	Importance of Soft Skills	Mr. Anil Salunke Seed Infotech, Pune	SE,TE,BE	7th July 2015
3	TCS Campus Commune Orientation Session	Prof. Gautam Vikhe Prof. S D Kharde	BE students	8th July 2015
4	How to Prepare for Campus recruitment	Mr. Ajay Kumar Lal, Kimplass, Deputy, GM, HR	BE Mech/Prod	11th July 2015
5	Awareness of Soft Skills	Mr. Mayur FACE, Focus academy, Coimbatore,	BE Students	14th July 2015
6	Current Trends in industry	Mr. Makrand Kulkarni GM,HR, Badave Group	BE Mech/Prod/Electrical	15th July 2015
7	One day workshop on IC Engine	Prakrasa, Pune	BE Mechanical students	20th July 2015
8	Orientation Session on CAD/CAM	Mantra CAD CAM solution, Pune	BE Mech/Prod	1st Sep 2015
9	TCS Specific	FACE, Focus academy, Coimbatore	BE Students	17th Sept to 20th Sept 2015
10	Mock Interviews	MBA Faculties	ALL BE & MBA Students	28th ,29th ,30th, Sept
11	Seminar on Career guidance in niche engg fields	Mr. Ramakant Deogogi, MIT Skills, Pune	BE Students	29th Jan 2016
12	Communicat-ion Skills	Mr. Rushikesh Parandkar, MITCON, Pune	FE Electrical & SE Mech	5th Feb 2016
13	Guest lecture on "SOFT SKILL"	Dr. Narendra Telrandhe, Director, MBA, AVCOE	BE	28th June 2016

No. of students benefitted **3568**

5.7   Details of campus placement

On campus			Off Campus
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
35	450	248	70

5.8   Details of gender sensitization programmes

Gender sensitization

It refers to the modification of behavior by raising awareness of gender equality concerns. This can be achieved by conducting various sensitization campaigns, workshop, programs etc.

Sensitization in the domain of Humanities and Social Sciences, is seen an awareness informed propensity or disposition which aims at changing behavior so that it is sensitive to certain issues.

Gender sensitization may be seen as "the awareness informed disposition or propensity to behave in a manner which is sensitive to gender justice and equality issues.

It is interlinked with gender empowerment.

Gender sensitization theories claim that modification of the behavior of teachers and parents (etc.) towards children can have a causal effect on gender equality.

Gender sensitizing "is about changing behavior and instilling empathy into the views that we hold about our own and the other gender.

It helps people in "examining their personal attitudes and beliefs and questioning the 'realities' they thought they know."

Point Discussed under this issue:

1. Safety of Girls health issues. Personality Development.

2. Awareness of Maintaining Hemoglobin.

To overcome all this problems & understanding of gender equality, empowerment our college has arranged the various Guest Lectures to motivate students on Gender Sensitization.

1. **Self-Motivation & Stress Management.**

   The Program Titled "Personality Development" of student was organized on **5th Feb 2016 sponsored by Board of Student Welfare, SPPU, Pune** and the topic was "Self-Motivation & Stress Management." For the session renowned the Resource Person invited was **Dr. S. V. Benke**. She is expert in academic field & working for society. Total 350 students & staff members were present for programme. All the session was interactive & full of Knowledgeable which helps our students to develop their personality in all means.

2. **Prevention of Thyroid & Hormonal Imbalance.**

   The Program Titled "Safety of Girls health issues of girls' student" was organized on **17th Feb 2016** and the topic was "Prevention of Thyroid & Hormonal Imbalance." For the session the Resource Person invited was **Mr. Sammer Shah**. He is expert in Naturopathy Ayurveda. Total 150 students & Ladies staff members were present for programme. All the session was interactive & full of Knowledgeable which helps our students to develop their health issues.

5.9   Students Activities

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

State/ University level | 118 | National level | -- | International level | --

(ii) No. of students participated in cultural events

State/ University level | 15 | National level | -- | International level | --

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

Sports: State/ University level | 06 | National level | -- | International level | --

Cultural: State/ University level | 03 | National level | -- | International level | --

5.10   Scholarships and Financial Support

	Number of Students	**Amount**
Financial support from institution	360	13,03280/-
Financial support from government	2459	12,51,97,421/-
Financial support from other sources	14	3,50,000/-
Number of students who received International/ National recognitions	02	2,00,000/-

5.11   Student organised / initiatives

Fairs: State/ University level 08   National level 03   International level --

Exhibition: State/ University level 03   National level 02   International level 01

5.12   No. of social initiatives undertaken by the students   05

5.13   Major grievances of students (if any) redressed:

Nil

Criterion – VI

6. Governance, Leadership and Management

6.1   State the Vision and Mission of the institution

Vision:-
To create opportunities for rural students to become able engineers and technocrats through continual excellence in engineering education.
Mission:-
Our mission is to create self-disciplined, physically fit, mentally robust and morally strong engineers and technocrats with high degree of integrity and sense of purpose who are capable to meet challenges of ever advancing technology for the benefit of mankind and nature.
We, the management, the faculty and staff, therefore promise to strive hard and commit ourselves to achieve this objective through a continuous process of learning and appreciation of needs of time.

6.2   Does the Institution has a management Information System

1. Ananosoft (MRP) system is used for administration, finance, hostel and academic work.
2. All India survey on higher education (AISHE)
In this we are storing college related and infrastructure related information, hostel capacity, department wise strength, results, staff information (teaching / non-teaching), budget, scholarships, loans and accreditation etc. information.

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

6.3.1 Curriculum Development

1. Sending suggestions to Savitribai Phule Pune University (SPPU) from all the stakeholders.
2. Suggestions at the time of Faculty orientation program.
3. Actively participating in syllabus design.

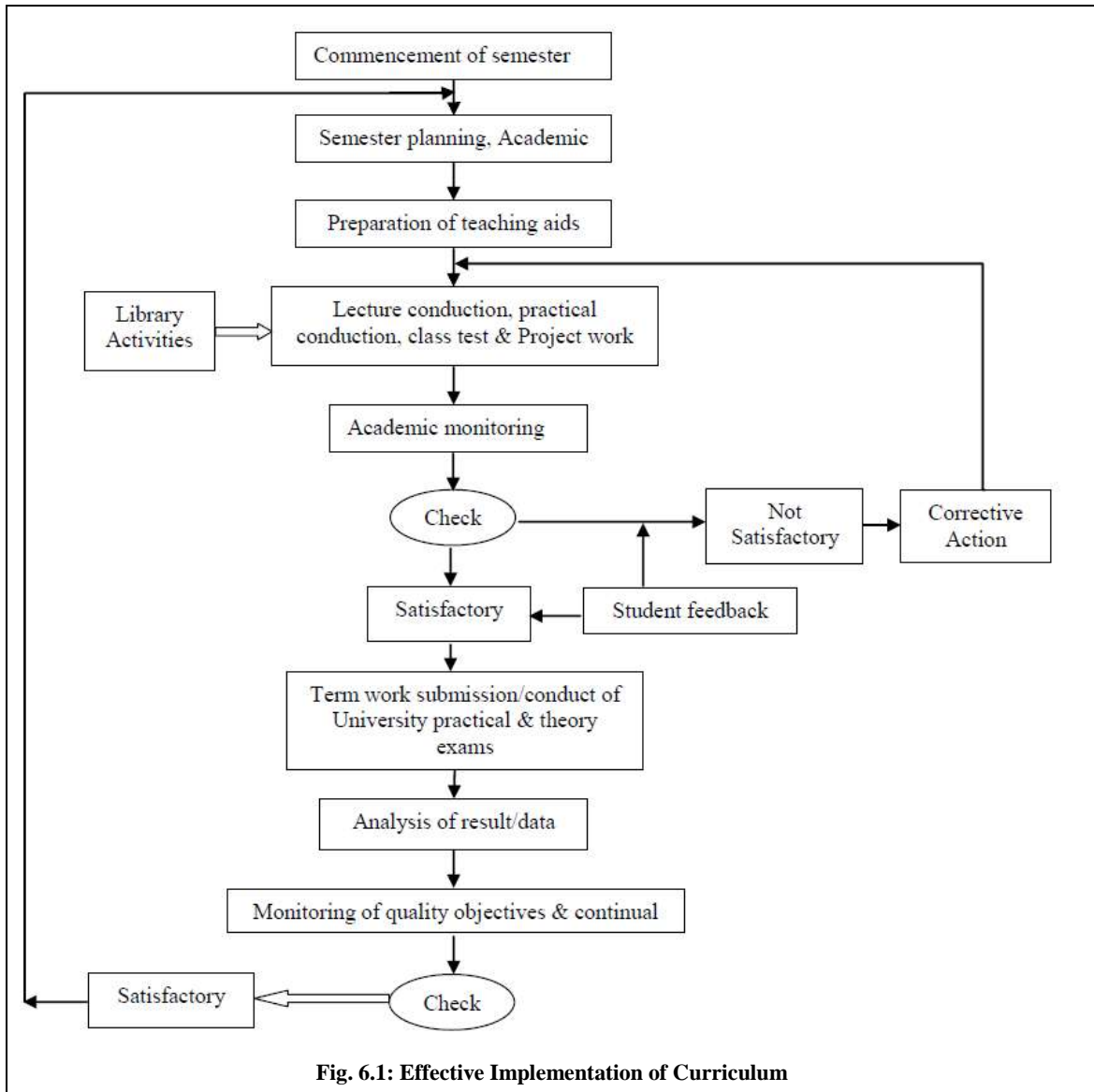6.3.2   Teaching and Learning

Fig. 6.1: Effective Implementation of Curriculum

1. Finding out the gaps in institute and industry and try to bridge the gaps using bridging the gaps programs.
2. Giving over and above to the students than the curriculum.
3. Opting more and more advanced electives.
4. Interactive classes.
5. Innovative teaching and learning methods.
6. Learner centric approach.
7. Internal assessments to crosscheck learner understanding.
8. Regular RCV conduction.
9. Remedial classes for students.
10. Self-study assignments.

11. Study Circle activities.

12. Mini projects.

13. Unit Tests and Prelim exams other than university calendar.

14. Provision of e-learning resources in Central Library.

15. Delivery of add-on-courses with external agencies.

16. Conduct of pre-placement training classes and campus connect programmes.

17. Student feed-back on teachers and necessary follow-up.

18. Pearson Education video lectures, NPTEL, Khan Academy lectures, webinars, NME-ICT workshops conduction facility.

19. Digital Library, Audio Visual Facility, Virtual classroom.

20. Soft Skill Lab, language lab equipped with Lingua phonic facility.

6.3.3   Examination and Evaluation (refer: 2.8)

Institute adheres to the examination/ evaluation rules and regulations framed by Savitribai Phule Pune University, Pune. University conducts

1.   Online examinations for First year & Second year Engineering.

2.   In semester examinations for Third year & Final Year Engineering.

3.   End semester examination for FE to BE.

Other than this Institute conducts

1.   Self-Learning Assignments.

2.   Mock online examination

3.   Internal Class test.

4.   Pre University test.

5.   Performance is evaluated and conveyed through SMS to the Parent.

6.3.4   Research and Development

1.   Submission of minor and major projects to BCUD and various funding agencies.

2.   Promotion to in-house research by offering seed money.

3.   Promoting faculty and students for research activities at PG and PhD level.

4.   Organizing Workshops and seminars for the R & D proposal writing and submissions.

5.   Encouragement to staff for publications and patent forms.

6.   Financial assistance for student's innovative projects and models

7.   Additional NVIDIA GPU Education Centre (CUDA teaching centre) and Aakash R&D Center.

8.   Revenue generated through consultancy.

6.3.5 Library, ICT and physical infrastructure / instrumentation

For Library Quality Improvement following Strategies & Services are provided:-

- Digital Library
- Book Bank Scheme
- Institutional Repository
- Book Bank Scheme for S.C/S.T Students
- Web OPAC (Online Public Access Catalogue)
- Advance Learner Facility
- Scanning Service
- Reprographic Service
- Printing Service
- Internet/ Wi-Fi Facility

No. of Books and e-journals available as follows:

	Existing (2014-15)		Newly added (2015-16)		Total	
	No.	Value	No.	Value	No.	Value
Text Books + Reference Books	57535	18944283	2143	1121879	59678	20066162
e-Books	261	00	261	00	261	00
Journals	122	309545	122	311543	122	311543
e-Journals	4867+	1654134	4867+	1670134	4867+	1670134
Digital Database	05	1654134	06	1670134	06	1670134
CD & Video	447	00	447	00	447	00
Others (specify)	--	--	--	--	--	--

- **Digital Databases E-Journal Packages & Journals 2015-2016:-**

Sr. No.	Publisher	Subject Area	E-Content
1.	IEEE	Computer Engineering + Computer Science + Electrical & Electronics Engineering Telecommunications & Related disciplines	IEEE ALL-Society, Periodicals, Packages(ASPP)161Journals Plus Back file to 2005(R.P.)
2.	Pro-Quest	Management +Engineering	3889 Titles,18000 Full Text Dissertation,16000 working papers, Business cases & case study collection & More

3.	Science Direct	Engineering + Computer Science	275 E-Journals
4.	DELNET	Computer Engineering	--

- **Library Physical Infrastructure:**

Total Area Utilized for Library is 1222 sq.m.

6.3.6 Human Resource Management

1. Deputation of Staff for FDP / Workshops / Training / Conferences / Symposium.

2. Faculty encouragement for higher studies.

3. Formulation of institute policies and communicating the same to the staff.

4. Systematic performance appraisal process.

6.3.7 Faculty and Staff recruitment

Transparent staff recruitment policy as per UGC/AICTE norms.

6.3.8 Industry Interaction / Collaboration (IIP Cell):

MOU's are done for following activity purpose:-

- Guest Lecture/Expert Lecture/Workshops/Internship training program/faculty orientation program.

6.3.9 Admission of Students:

Admission process is controlled by Directorate of Technical Education (DTE), Mumbai. However, for admission of students the institutes are performing following activities:

- Conduction of orientation programs at different nearby junior colleges.

- Delivering Expert/Guest Lecture at various nearby schools& colleges.

- Advertisement in newspaper/Radio & Social media.

6.4   Welfare schemes for

Teaching and Non-teaching

1. Group insurance policy drawn for teaching and nonteaching staff (100%).

2. Institute provides immediate fund to staff in case of medical emergency.

3. Institute provides maternity leave to ladies staff

4. Institute provides gratuity scheme.

5. Institute provides uniforms to class IV staff.

6. Tuition fees collected in Equal Monthly Instalments (EMI) for wards of the staff.

7. 15 % fee waiver for wards of the staff members in schools run by Sanstha

8. Institute provides residential facility for the staff members.

9. Institute provides Loan facility from staff society.

Students

1. Group insurance policy.

2. Book bank facility

3. Earn and learn scheme.

6.5   Total corpus fund generated: Rs. 100000/-

6.6   Whether annual financial audit has been done   Yes √   No --

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

Audit Type	External		Internal	
	Yes/No	**Agency**	**Yes/No**	**Authority**
Academic	Yes	Joint Accreditation System, Australia and New Zealand	Yes	Internal Quality Audit Cell (Once in a semester) ISO
Administrative	Yes	JAS-ANZ (Once in a year)	Yes	Principal

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

For UG Programmes   Yes | √ | No | -- |

For PG Programmes   Yes | √ | No | -- |

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

| NA |

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

| NA |

6.11 Activities and support from the Alumni Association

1. Alumni association organizes alumni meet every year, this helps the current students in their overall development.
2. Campus placement support is obtained from alumnae every year.
3. Financial help is also provided by some alumnae for financially weaker students.
4. Industrial visit to the students are arranged with the support of alumnae as a part of curriculum.
5. Advisory Committee is formed by association of Alumni

6.12 Activities and support from the Parent – Teacher Association.

In our college we don't have Parent teacher association but every year by conducting parent meet in our college we try to communicate with parents by giving information about the new activities in college, teaching learning process, placement and try to understand their expectation form college and teacher. We also take feedback from parents regarding facilities provided by college, additional courses conducted for students, so that we can improve in next academic year.

6.13 Development programmes for support staff

1. Automation Technology by Prolific.
2. Workshop on AutoCAD Electrical.

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

> Green audit is regularly conducted by checking water quality, noise level and energy consumption. Fire and Safety audit is conducted regularly. Energy audit is conducted for saving of electrical power. Solar water heaters used in boys and girls hostel. Also solar street lights are installed in campus. Hybrid power (5 KW Wind Solar) generation plant drives Electrical Engineering departments lighting road. Water harvesting is initiated and optimum use of water by drips and sprinklers. NSS conducted one day workshop on water management for active motivation among all the students to use minimum water. Dandkaranya Abhiyan and NSS are actively running for free plantation. Cleanliness is maintained in campus and less hazardous waste is generated. The major e-waste such as out of use instruments / equipment's, CRTs, Printers, Computers, Electronic gadgets, Circuits, Kits have been written off and then it is sold out to buyers by auctioning.

Criterion – VII

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

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

- E&TC Department have started Antenna club and actively running innovative activities like design, simulation, manufacture and testing of antennas.HAM radio club is established for radio transmission and reception from various communication systems for hobby and especially helpful in disaster management and medical solutions.

- In Electronics Department Personality Development and Soft skill sessions are planned and conducted batch wise for all SE to BE Electronics students.

- Electrical Department has conducted following Innovative Activities which are Self-Learning, Study Circle and Animated Videos.

- IT Department has conducted Certification course and technical lectures with awareness of competitive exam for student bridge the gap between university syllabus and academia and appreciates to the students who recognize by ORACALE professional certified

- IBM academic initiative centre has conducted activities for the students.

- Redhat Academy Partner is started for interaction and exchange of concepts with respect to vitality of global IT certification. 21 students appeared for RHCSA from TE and BE computer. All 21 got the certification from Redhat. Now total 26 students appeared for RHCSA second batch. 09 students appeared for RHCE certification course.

- BAJA team "Titans" of AVCOE has successfully completed static events viz. Design evaluation, Costing, Marketing and Sales presentation. Also the team successfully completed 8 figure and break test which is essential for qualifying dynamic events and final endurance race. The overall rank of the team throughout India was 54. The team participated in the event with DRONA-3 ATV on 21st Feb. 2016 at NATRAX Pritampur, Indore (M.P.)

- Departments have initiated innovative, society and agriculture projects like solar power auto rickshaw, wind mill setup.

- Internally departments are using digitization to exchange the information among staff members also creates Whatsapp and Google group of student with class teacher to shares important technical and student related information through it.

- Under NPTEL Study Centre students and staff has registered various online courses and completed the various courses under this NPTEL Forum.

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

- In overall ISO committee responsible for Monitoring of quality objectives & continual improvement
- Before starting semester, planning of Academic, Co-curricular and extra-curricular activities is circulated to all teaching, supporting staff and students.
- Academic monitoring conducted by senior faculties of another department for Lecture conduction, practical conduction. Also student's feedback is conducted for student's satisfaction. Notice is issued to faculties if performance of particular faculty is not Satisfactory.
- ISO Audit conducts internal and external audit in which PDCA (Plan, Do, Check, and Act) are evaluated and corresponding corrective measures taken. During last year no any major discrepancies found.
- At the end of semester term work submission completed based on continuous assessment and University practical and theory exams completed after which Results Analysis carried out and notice issued to those faculties if result is not satisfactory.

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

1. "Effective Teaching Learning System."
2. "Employability Enhancement and Entrepreneurship Skills Development."

* The details are in Annexure-iii

7.4   Contribution to environmental awareness / protection

- Conduction of green audit by regularly checking water quality, noise level and energy consumption also energy audit for checking electrical consumption.
- Regular tree plantation and maintenance of garden resulted in pleasant atmosphere in campus.
- Constructed rain water harvesting set up.
- The trees and lawns are maintained with water drips and sprinklers respectively.
- Renewable energy utilized for water heaters and street lights.
- NSS and *Dandakaranya Abhiyan are c*reating awareness among the young generation to protect and save the environment.
- Less usage of papers and noise free generator etc.

7.5   Whether environmental audit was conducted?   Yes √   No --

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

SWOC Analysis

Strengths:

The strength of the institute includes

- Sprawling campus spread over 25 acres away from city with calm and pleasant environment, ample greenery and nonpolluting ambience.
- NAAC accredited with A grade.
- Three times accreditation by NBA, New Delhi.
- ISO 9001:2008 certification.
- Five UG courses permanently affiliated to SPPU, Pune.
- Adequate infrastructural facilities such as ICT enabled classrooms, well equipped laboratories with advanced equipments and machinery, auditorium, playground, hostels and gymnasium.
- Well qualified and experienced staff.
- Excellent teaching, learning environment.
- High speed internet connectivity with a 40 mbps leased line and Wi-Fi campus.

Weaknesses:

- Situated in rural area.
- Inadequate number of PhD qualified faculty.
- Consultancy and extension activities need improvement.

Opportunities:

- Collaboration with leading research institutions and industries for research projects and consultancy.
- Enhancing industry institute interactions.
- Encouraging faculty for upgrading their qualification.
- Establishing center of excellence in respective engineering disciplines.
- Undertaking interdisciplinary research

Challenges:

- Attracting and retaining faculty having PhD qualification.
- Imparting soft skills to the students from rural background.
- Achieving 100% placements.
- Attracting students with higher PCM and CET scores.
- Development and transfer of technology useful for the rural masses.

8. Plans of institution for next year

- Attract high JEE/MHCET merit students and provide a campus environment

- Maintain excellent teaching, learning environment to achieve Zero failures, 60% and 80 % First class in 3rd and 4th years respectively with one University rank holder in each department

- Achieve good branding for AVCOE

- Initiate research culture in AVCOE by arranging workshop, technical events at state, national and international levels.

- Obtain AICTE /BCUD /DST grants from Government sources

- Introduce 20 hour/semester value addition technical and Soft Skills development courses using AVCOE's infrastructure in evening sessions after regular college hours

- Arrange GATE and competitive exam Coaching.

- Offer lab. facilities, projects and product development for other institutes and industry

- Offer consultancies services in Civil, Mechanical, Production and E&TC Engineering to Ahmednagar, Nashik and Pune's infrastructure firms, auto industry and other surrounding areas.

- Purchase new Hydraulic & Pneumatic trainer kit, and gear test rig for IFPL Lab in Dept. of Mechanical Engineering.

- Purchase Sheet Metal Press in Workshop dept. for practicals of Mechanical and Production Engineering.

- Create CAM Lab. in Dept. of Production Engineering

- Purchase 1" theodolite for survey Lab. in Dept. of Civil Engineering under BCUD proposal.

- Create Switch gear and protection Lab., and computer Lab. II in Dept. of Electrical Engineering

- Create Software Lab. V in Dept. of Information Technology

- Construct Hardware and Micro-processor Lab. in Dept. of Computer Engineering

- Developed Digital Communication Lab. and purchasing related instruments and equipment's of the lab. in Dept. of Electronics and Telecommunication Engineering

- Organize inter institute cultural event "MEDHA-2017"

- Academic Planner for the academic year 2016-17 is attached in *Annexure –iv*

Prof. R. S. Tajane   *Prof. A.K. Mishra*

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

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AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER – 422608

ACADEMIC CALENDER

YEAR 2015-2016

SEMESTER I

June — NO OF WORKING DAYS=14
July — NO OF WORKING DAYS=26
August — NO OF WORKING DAYS=23
September — NO OF WORKING DAYS=24
October — NO OF WORKING DAYS=03

TOTAL NO. OF WORKING DAYS=90

Practical exam :12/10/2015 To 27/11/2015
Practical exam: 12/10/2015 To 27/11/2015
Theory Exam: 2/11/2015 To 27/11/2015

PM- Principal Meeting
DM- Departmental meeting
GL - Guest Lecture
GD - Group Discussion
IV - Industrial Visit
TQ - Technical Quiz
WS-Workshop
TM - Tutor Meeting
Debate
EL-Expert Lecture

Dr.G.J.Vikhe Patil
Principal
ACAD-R-01, Rev.: 00 Date: 03-07-2010

Academic Calendar: 2015-16 Semester-II (UG and PG)

Our mission is to create self disciplined, physically fit, mentally robust and morally strong engineers and technocrats with high degree of integrity and sense of purpose who are capable to meet challenges of ever advancing technology for the benefit of mankind and nature. We, the management, the faculty and staff, therefore promise to strive hard and commit ourselves to achieve this objective through a continuous process of learning and appreciation of needs of time.

Our Vision is to create opportunities for rural students to become able engineers and technocrats through continual excellence in engineering education.

Calendar Months

December 2015

S	M	T	W	T	F	S
	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

January 2016

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

February 2016

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29					

March 2016

S	M	T	W	T	F	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

April 2016

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Curricular Activities

Date	Activity	Remarks
14.12.15	Commencement of Teaching (UG) /Registration	
24.12.15	Eid-a-milad	
25.12.15	Christmas	
30.12.15	Tutor / Study circle meeting	
01.01.16	Commencement of Teaching (MBA)	
11.01.16	Principal / Dept. Meeting / Commencement of Teaching(ME)	
13.01.16	Seminar Finalization- I (ME/TE)	
14.01.16	Tutor / Study circle meeting	
18.01.16	Unit Test-I/ Feedback	
26.01.16	Republic day	
27.01.16	Display Provisional detention List-I	
30.01.16	Tutor / Study circle meeting	
01.02.16	In-Sem exam (TE & BE)	
15.02.16	Mid-term Project assessment	
18.02.16	Tutor / Study circle meeting	
19.02.16	Shivjayanti	
22.02.16	PM/DM/Unit test II	
29.02.16	Display Provisional detention List-II	
07.03.16	Mahashivratri	
09.03.16	Tutor / Study circle meeting	
22.03.16	Display Provisional detention List-II	
24.03.16	Holi	
25.03.16	Good Friday	
26.03.16	Term end	
28.03.16	Preliminary exam/ Feedback	
04.04.16	Detention List	
08.04.16	GudhaPadwa	
12.04.16	Mock prac. Exam & remedial classes	
13.04.16	Submission	
14.04.16	Ambedkar Jayanti	
15.04.16	Ram Navmi	
18.04.16	Concluding of Teaching ME (PG)	
06-23.04.16	University Oral/Prac exam (UG)	
25-30.04.16	University Oral/Prac exam (PG)	
02-08.05.16	Theory examination (UG)	
14.05.2016	Concluding of Teaching MBA	
16-28.05.16	Theory examination (PG)	

Total Working Days – 90

Note:
1. The Principal/HOD meeting will be on every Monday at 10:00 am.
2. The departmental meeting by HOD will be on every Monday at 4:00 pm.
3. The General meeting of all faculty members will be on First and Last day of the Term at 4:00pm.

Co-curricular Activities

Date	Activity	Remarks
25.12.15	Aptitude test (SE)	
29.12.15	Workshop on Python(SE)	
31.12.15	Guest Lecture (Deptt. Assoc.)	
01.01.16	Mock interview(TE &BE)	
07.01.16	Expert Lecture(PG)	
05.01.16	Aptitude test (SE)	
09.01.16	Debate (Deptt. Assoc.)	
12.01.16	Industrial Visit(SE)	
15.01.16	Mock interview(TE &BE)	
16.01.16	Ex-tempore (Deptt. Assoc.)	
27.01.16	Guest Lecture (Students Chapter)	
28.01.16	Workshop / Training	
29.01.16	Aptitude test (SE)	
03.02.16	Technical quiz(SE)	
06.02.16	Alumni Interaction	
13.02.16	Aptitude test (SE)	
13.02.16	Industrial Visit(TE)	
15.02.16	Soft skill training	
16.02.16	Group Discussion	
20.02.16	Mock interview (TE &BE)	
23.02.16	Debate	
24.02.16	Technical quiz	
25.02.16	Group Discussion	
26.02.16	Aptitude test (BE)	
27.02.16	Industrial Visit(BE)	
01.03.16	Expert lecture (Students Chapter)	
03.03.16	Spoken tutorial workshop	
04.03.16	Mock interview (TE &BE)	
05.03.16	Alumni Interaction	
11.03.16	Workshop / Training	
12.03.16	Ex-tempore	
17.03.16	Guest Lecture (Deptt. Assoc.)	
18.03.16	Aptitude test (BE)	
19.03.16	Group Discussion	
23.03.16	Debate	
29.03.16	Mock interview (TE &BE)	
30.03.16	Aptitude test (BE)	
01.04.16	Mock interview (TE &BE)	

Date	Value Added Courses /Ind. Visits	
Jan 2016	Soft Skill Training / National Conf./ Workshop	
Feb 2016	Technique 2K16/ International Conf./ Seminar	
March 2016	Project/ Science Exhibition	

Dr. Gurav J B
Dean Academics

Dr. G J Vikhe Patil
Principal

ACAD-R-01:Rev.:01, 16-06-2015

Amrutvahini College of engineering has well established feedback mechanism. Ananosoft Technology Pvt. Ltd. is our service provider for online feedback.

- **Feedback types & modes**

Sr. No.	Feedback type	Frequency	Mode	Standard Out come
1	Student Feedback (Overall Academic Performance)	One's in year	Manual	Stated in ISO Qua. Obj.
2	Teacher Performance by student	Twice in Sem.	Ananosoft/Manual	75%
3	Student to Institute	Twice in Sem.	Ananosoft	Suggestions
4	Student to Library	One's in year	Manual	Suggestions
5	Lab Assistant / Technical Assistant	One's in Sem.	Manual	Suggestions
6	Teacher to student	One's in year	Ananosoft	Suggestions
7	Teacher to Institute	One's in year	Manual	Suggestions
8	Hostel	One's in year	Manual	Suggestions
9	Parents	Meet/ Walking	Manual	Suggestions
10	Employer	Feasibility	Manual/Mails	Suggestions
11	Alumni	Meet/ Walking	Manual/Mails	Suggestions

The feedback on faculty performance by students was conducted for odd& even semester. The details are given in following table

- **Report on feedback- odd semester 2015-16**

Programme	Feedback no.	% of respondent	No. of faculty scored less than threshold value (75%)
UG	1	83.36	02
	2	82.22	01
PG	1	84	00
Intimations were issued for the faculties having feedback less than 75% for improving their performance.			

- **Report on feedback- even semester 2015-16**

Programme	Feedback no.	% of respondent	No. of faculty scored less than threshold value (75%)
UG	1	83.52	00
	2	84.61	00
PG	1	89.2	00
Intimations were issued for the faculties having feedback less than 75% for improving their performance.			

7.3.1 Best Practice

1. **Title of the Practice:** *"Effective Teaching Learning System."*

2. **Objectives:**

- To plan for implementing curriculum and ensure effective delivery of the contents and students satisfaction.
- To ensure the effective outcomes in terms of student's performance.
- To provide awareness of the practices of scientific research and to promote students' technical skills.

3. **The Context**

- Institutions need to develop the students who can meet the requirements of the stakeholders i.e. employers, parents, alumni.
- Teaching and learning activity is the most important activity in educational institute. So it always requires new methods or innovativeness in teaching and learning.
- For excellence in teaching and learning proper planning, conduction, assessment and identifying corrective measures has to be followed.
- In quality teaching the individual performance role is an important factor. The plan designed by the faculty becomes the reference to make the teacher accountable for the status of syllabus completion.

4. **The Practice**

- The Institute has adopted ISO 9001-2008 policy by which regular plan, conduction, assessment and corrective measures procedure are carried out by internal and external audit. Internal Quality Audit Cell is working for review of teaching and learning. Academic monitoring of the classes is conducted regularly.
- Attempt to cover complete syllabus by effective teaching and learning system has outcome in better results.
- The institute conducts extra classes for late admitted first year and direct second year diploma students to bring them up to the regular student's academic classes.
- The institute has taken initiative in arranging makeup classes to complete syllabus in scheduled period.
- Arranging remedial classes for backlog students.
- Arranging remedial classes also for academically weak students from XII standard.
- Study circle activities are carried out in batch-wise in which high merit students discuss and solve the syllabus, practical related queries of other students.
- Every department has Incubation Cell by which higher class students teaches to lower class students in skill oriented courses.

- Preparation of subject wise course file include notes from reference books, text books, NPTEL videos, web material for covering syllabus prescribed by SP Pune University along with bridging of gap in theory and practical between academics and industry and on & above topics for knowing latest trends in technology.

- For better performance in online examinations, web based multiple choice questions (MCQ) bank is provided to students and also practice sessions are conducted.

- Teaching learning is well supported by state of art equipment's and infrastructural learning facilities.

- Twice in a semester teacher's feedback is obtained from students and corrective measures are taken accordingly.

- Mentor scheme for students counseling includes one faculty member for maximum 20 students, who conducts regular meeting and discuss academic progress.

- Regular conduction of Industrial visits to get industrial exposure for the students.

- Students are assigned self-learning assignments based on web material, Text books, reference books and NPTEL video lectures.

- Departmental students association conducts activities GD, Extempore, aptitude tests and technical quiz personality development, confidence building.

- Activity based learning is achieved by introducing mini projects and establishing hobby club in individual department where student right from second year onwards come forward with their innovative ideas and build the mini projects / hobby gadgets. This activity based learning has provided students a potential platform to represent themselves at several national/international paper presentations and project exhibitions increasing their moral confidence.

- Faculties are motivated to participate in FDPs, Workshops, Seminars and conferences to update contents in syllabus as well as trends in technology.

5. Evidence of Success

- The evidence of improved system is reflected in student academic results

- Batch –wise students' performance has improved from first year to final year.

- Students admitted for first year engineering are of average merit but the same student gets first class or distinction in final year.

- Our students have performed well at university level and College rank is within the 20 among all affiliated Engineering Colleges for academic results.

6. Problems Encountered and Resources Required

- As our Institute falls under rural zone students have less exposure to the current state of art technology. Hence in order to overcome this problem institute arranges expert lectures, value added courses and conferences.

- Curriculum to all courses is provided by SPPU. To make students understand various topics incorporated in curriculum in a better way the gaps in curriculum is bridged by bridge the gap notes. Also to give them exposure beyond curriculum on and above topics are included in teaching learning process.

- ISO 9001:2008 was introduced to nurture uniformity, discipline, accountability and transparency in teaching learning system.
- University syllabus is updated every four years. To meet the new requirements in syllabus institute always updates/ purchases equipment's
- Being rural institute it is difficult to recruit Professors and Associate Professors (Ph.D. qualified) hence institute promotes faculty to upgrade their higher qualification (ME /M.Tech. / Ph.D.).
- In mini projects and events participation expenditure was the problem faced by the students but it was solved with financial assistance provided to the students.

7. Notes:

For effective teaching and learning system, regular planning of curriculum, conduction, and its assessment along with corrective measures procedure should be carried out.
ISO 9001-2008 and Internal Quality Audits are the important procedures for review of teaching and learning.

7.3.2 Best Practice 2

1. Title of the Practice

"Employability Enhancement and Entrepreneurship Skills Development."

2. Goal

The aim of institute is to,
- Check the availability of various employability options.
- Give focused training to the students to increase the employability, which results into good placement.
- Maintain healthy relations with Corporate for proper Industry- Academia Interaction.

3. The Context

Amrutvahini College of Engineering, Sangamner lies in Golden quadrangle of Industrial Cities Mumbai, Pune, Nasik and Aurangabad. Hence this point was taken as very positive feature by the institute and started proper interaction with this companies in ways like Delivery of Expert lectures, Internships, Sponsor Projects, Pre- Placement Talk, and then Final Placements. But initially there was poor response from the industry, as Corporate were not able to give sufficient time for this activities. But with proper approach from the institute in terms of providing the Finished Products, this was welcomed by Corporate and then after actively participated in institute activities.

4. The Practice

Considering the multidimensional 360 degree development of the students, Institute is offering various soft skill programs to the students of all years. Department and Professional agencies/ trainers are putting the efforts for upgrading the skill sets of students. Aptitude Training is specially conducted for Final year Students. For the companies like TCS, MU-Sigma, CTS, Infosys company specific training is done, in which the exam pattern and most likely questions are taken by third party agency. Online

Aptitude is conducted monthly for final year students. Various pre-placement activities such as Group Discussion, debate, extempore, technical and general aptitude test, Technical quiz, Mock Interviews etc. are allocated in academic calendar and under the department students association conducted accordingly. Special Training and Placement Officer is appointed who is responsible of training and placement activities. Separate budget is allocated for placement; TCS recognized the remarkable efforts of students in TCS on line aptitude test. Institute is TCS accredited. Global competencies have been achieved by arranging foreign language classes. Through third party GATE coaching classes have been conducted for final year students. Competitive examination cell conducts various activities throughout the year. Industry Institute Interaction Cell: Number of MOU signed 41 and number of MOU in pipeline are 259. Every year Training programme are conducted for entrepreneurship development.

8. Evidence of Success:

Number of students trained for various companies are 450 and total students are placed 313 in industries/organizations. This count is increasing every year as institute is putting more efforts for training conduction.

6. Problems Encountered and Resources Required

As the Institute is in rural area, the maximum input i.e. the students come from different culture and rural areas. So the main problem is to enhance the communication and other employability skills. The need to enhance the employability skills is taken as the most important priority of Institute which is very important for successful career of students. Various Third party agencies as resource are appointed by institute for delivery of various Personality Development and Soft skills Programs. Initially Resources like additional man power for coordinating the department level activities was necessary for proper coordination for achieving long term goals.

7. Notes:

Regular planning of industry based training activities are important for effective placements. Training activities plays a crucial role in placements. The purpose of training should be employability skills enhancement required by the companies which leads to good placement.

Sr. No.	Activities Planned	Remark
1	Display of Master Time Table and Distribution of Individual Time Table	
2	Start of Semester Meeting by Principal	
3	Students Registration	Start of semester
4	Commencement of Teaching (U.G.)	
5	Course File Checking by IQAC	Start of semester
6	Tutor / Study Circle Meeting	Once in a month
7	Guest Lecture	Once in a month
8	Commencement of Teaching (MBA)	
9	Mock interview (T.E. & B.E.)	End of semester
10	Guest Lecture	
11	Students Association Activities (GD, Debate, TQ, etc.)	
12	Commencement of Teaching (M.E.)	
13	Industrial Visit (S.E.)	Once in a semester
14	Seminar Finalization (M.E. / T.E.)	
15	Tutor / Study Circle Meeting	
16	Unit Test-I/ Feedback	
17	Feedback/ Monthly Attendance Record Submission	
18	Display Provisional detention - I	Once in a semester
19	Tutor / Study Circle Meeting	
20	Annual Social Gathering	Once in a year
21	Alumni Meet	Once in a year
22	Online Exam (F.E. & S.E.)	
23	In-Sem Exam (T.E. & B.E.)	Once in a semester
24	Alumni Interaction	
25	Mid-term Project assessment	Once in a semester
26	Mock interview (T.E. & B.E.)	
27	Students Association Activities (GD, Debate, TQ, etc.)	
28	Tutor / Study circle meeting	
29	Unit test II/ Feedback	Once in a semester
30	Feedback/ Monthly Attendance Record Submission	
31	Guest Lecture	
32	Display Provisional detention - II	Once in a semester
33	International/National Level Event	Once in a year
34	Online Exam (F.E. & S.E.)	
35	Students Association Activities (GD, Debate, TQ, etc.)	
36	Guest Lecture	
37	Tutor / Study circle meeting	
38	Mock interview (T.E. & B.E.)	
39	Concluding of Teaching	
40	Concluding Meeting by Principal	

41	Preliminary exam/ Feedback	Once in a semester
42	Feedback/ Monthly Attendance Record Submission	
43	Detention List	Once in a semester
44	Internal ISO Audit	Once in a semester
45	Mock practical exam & remedial classes	
46	Submission	
47	Concluding of Teaching (M.E.) (P.G.)	
48	Subject Distribution for Next Semester	
49	Concluding of Teaching MBA	
50	Theory examination (U.G.)	
51	University Oral/ Prac. exam (U.G.)	
52	University Oral/ Prac. exam (P.G.)	
53	Theory examination (P.G.)	

* The Principal /HOD meeting every Monday at 10:00 am

* The department meeting by HOD meeting every Monday at 4:00 pm

* One Value Addition course for each class (U.G.) per semester

* IQAC Checks the lectures and practical's of all faculty once per semester

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