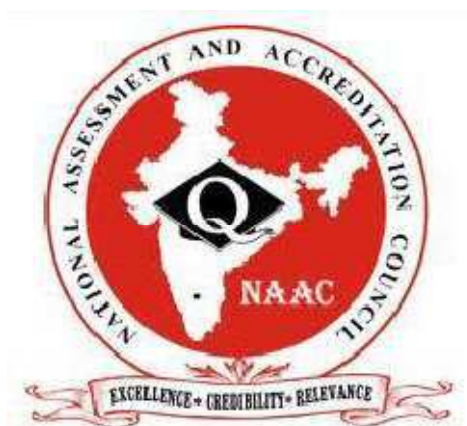


# Self-Study Report (SSR)

For NAAC-Accreditation of

## MIT ACADEMY OF ENGINEERING

Submitted To



## NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

Submitted By

**MIT** | Academy of  
Engineering

Dehu Phata, Alandi (D), Tal: Khed,

Dist: Pune, Pin: 412105. Maharashtra. India.

[www.mitaoe.ac.in](http://www.mitaoe.ac.in)

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**To**  
**Dr. Ganesh Hegde**  
Assistant Adviser  
National Assessment & Accreditation Council  
P. O. Box. No. 1075, Opp: NLSIU  
Nagabhavi, Bangalore – 5600072

**Date: 10/04/2014**

**Subject: Submission of Self-study Report (SSR)**

Ref.: NAAC/WR/GH/MH-299/Profes.-1<sup>st</sup> Cycle/2013-14, dated: 05<sup>th</sup> Feb 2014

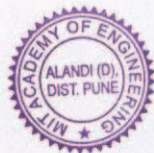
Dear Sir,

With reference to your letter No. NAAC/WR/GH/MH-299/Profes.-1<sup>st</sup> Cycle/2013-14, dated: 05<sup>th</sup> Feb 2014 regarding approval of LOI and further submission of self-study report for institute Track ID MHCOGN20189, we have uploaded Self-study report (SSR) on our institute website [www.mitaoe.ac.in](http://www.mitaoe.ac.in) on 10/04/2014.

Institute is ready for accreditation and assessment by peer team.

You are kindly requested to accept the SSR for further processing.

Thanking you with regards.



*[Handwritten Signature]*  
2014/04/10  
Dr. Y. J. Bhalerao  
**PRINCIPAL**  
MIT Academy of Engineering  
Alandi (D), Pune-412 105.

(ID No. PU/ENGG/134/1999)

Alandi, Pune 412105, India | Tel : 020 30253500 / 600 / 700 | Fax : 020 30253799 | e-mail : [principal@maepune.ac.in](mailto:principal@maepune.ac.in) | Website : [www.mitaoe.ac.in](http://www.mitaoe.ac.in)

## 2. PREFACE

The MIT Academy of Engineering (MITAOE) established in 1999, situated in a pleasant and spiritual land of saints in Pune, holds a prominent stance in imparting quality engineering education. It is a cherished vision of honorable Professor Dr. Vishwanath Karad, Founder, Executive President and Managing Trustee of the Maharashtra Academy of Engineering and Educational Research (MAEER) and the MIT Group of Institutions, Pune. The institute was established with an objective to empower the rural youth by imparting high quality education *conjugated with excellent ambience for academics, research and co-curricular and extra-curricular activities*, contributing to their all round development. The institute is affiliated to the University of Pune and approved by the AICTE, New Delhi. Recently the institute has been accredited by the National Board of Accreditation (NBA) for its four undergraduate engineering courses viz. Chemical engineering, Computer engineering, Electronics engineering and Electronics and Telecommunication engineering.

Since its inception, the institute has emerged as a unique 'Centre of Excellence' of engineering education and research. The University of Pune, on its foundation day on February 10, 2014, recognized our institute as the 'Best Professional Institute (Rural)' for its contribution to imparting quality education in the rural region. MITAOE runs six undergraduate courses (Bachelor of Engineering) and two postgraduate courses (Master of Engineering) along with a doctoral programme in Electronics engineering. All these courses are affiliated to the University of Pune. The details of the courses are as follows:

### **Under-graduate courses: (Bachelor of Engineering)**

- Chemical Engineering (60 Seats)
- Computer Engineering (120 Seats)
- Electronics Engineering (60 Seats)
- Electronics and Telecommunication Engineering (120 Seats)
- Information Technology (60 Seats)
- Mechanical Engineering (120 Seats)

### **Post-graduate courses: (Master of Engineering)**

- M.E. (VLSI and Embedded system)
- M.E. (Computer Engineering)

### **Doctoral Programme: (Doctor of Philosophy)**

- Electronics engineering

### **The salient features of the institute are:**

- Accredited by NBA, AICTE, New Delhi for the four UG programmes – Chemical Engineering, Computer Engineering, Electronics Engineering, and

Electronics and Telecommunication Engineering for imparting quality education and providing congenial ambience with modern infrastructure, well-equipped laboratories, separate boys' and girls' hostels and many other facilities.

- Affiliated to the University of Pune, India, and approved by the All India Council for Technical Education (A.I.C.T.E.), Government of India.
- ISO 9001: 2008 certified institute.
- Student – Teacher ratio is 14 : 1
- Student – Computer ratio is 3 : 1
- Student Chapters of IChE, IEEE, CSI and ISTE have been established in the Institute to keep the students updated with the up-coming technology trends.
- Institute is having Research and Development Cell to promote research culture in faculty, staff and students.
- Institute initiated R&D Incentive scheme for faculty to encourage and boost their confidence for doing research.

Learning-centred approach, personal attention to all the students and effective implementation of their valuable suggestions received through the continual feedback mechanism and '*Student Counseling Scheme*', make the teaching-learning process more effective. Each guardian faculty member takes personal care of a group of 20 students and resolves their difficulties regarding academic as well as day to day life. Selection and retention of the most efficient and talented staff members to enhance the quality of education and administration, is our key to success. A special emphasis is laid on their quality improvement by sponsoring the staff members for pursuing research and higher studies.

In order to enrich the academics, the institute organizes numerous conferences, seminars, workshops, short-term training programmes (STTPs), and guest lectures throughout an academic year. For strengthening the Industry Institute Interaction (III), the academic departments of the institute have signed MoUs with more than thirty reputed industries.

The institute is also exploring the opportunities to strengthen research in the advanced areas by collaborating with foreign universities for joint research. Currently we have signed four MoUs respectively with the University of Dundee, UK, Manchester Metropolitan University, UK, Liverpool John Moores University, UK and the iCarnegie Inc. which is a division of the Carnegie Mellon University, USA. In order to increase the number of international relations and for encouraging our students to pursue further studies in renowned foreign universities, we have set up an International Relations Office (IRO) on our campus. This IRO assists the students in their admission process and also conducts awareness programmes on international education throughout an academic year.

The Training and Placement Cell of the institute is very active and it invites almost all the renowned companies to our campus for campus placements.



The cell organizes many training programmes for the students in order to enhance their employability.

Apart from the departmental libraries, the institute has a central library which has a collection of over 30000 books and about 158 print journals. The library offers various services to the readers like Reference Service, Users Orientation Programs, Reading Hall copy service, overnight issue, Book Bank, New Arrivals books & journals, Paper Clipping facility, Accessing CD-ROMs, Resource Sharing with other libraries, Web OPAC, Book Reservation facility, Question paper bank, Digital Library, Internet facility for searching database & online e-journals, access of NPTEL web & video lecture series, Multimedia section, weekly top five users announcement & send congratulate SMS to them, call student to collect reserved book through SMS, SMS to defaulter students, Document Scanning & printing Seminar and Conference alert. It also provides photocopying facility for the convenience of the readers.

The institute has state-of-the-art infrastructure. It has spacious and well-equipped classrooms and laboratories. The seminar hall is air-conditioned and equipped with modern furniture and audio/video facility. The MITAOE also provides all the necessary sports facilities with a well-equipped gymnasium. The institute also provides separate boys' and girls' hostels with all the necessary amenities.

Along with the complete focus on enriching the teaching and learning experience of our students, the institute also pays significant attention to fostering their latent skills by exposing them to a myriad of co-curricular and extra-curricular activities. This leads to the holistic development of our students.

Thus, MITAOE aims at imparting quality education and hence stands for sheer 'Excellence'. It focuses on providing a solid academic experience to its students which keeps on contributing to their personal and professional growth.

### 3. EXECUTIVE SUMMARY

#### **Criterion – I: Curricular Aspects**

MIT Academy of Engineering (MITAOE) is self financing engineering college affiliated to University of Pune and follows curriculum given by university. Faculties of respective streams give suggestion to Board of Studies regarding addition of new contents in curriculum. Faculty involves in design of curricula in terms of members of Board of Studies, members of faculty of Engineering, etc. Institute takes feedback from all stakeholders (students, alumni, industry, faculty, etc) about curriculum and suggest to Board of Studies. The curriculum developed encompasses components for employability, research in emerging areas and social needs as a result; the curriculum is updated and equips the learner to compete successfully at the vertical and horizontal levels. Academic flexibility is achieved by introducing advanced and industry-offered courses (electives) during the final year of UG and PG degree programmes. Institute has taken initiative to start Add-on courses for undergraduate students to meet the industry requirement and bridge the gap between industry and curriculum.

#### **Criterion – II: Teaching - Learning and Evaluation**

Institute strives to achieve excellence in teaching and learning by recruiting good quality teaching faculty. 80% of admission is carried out through government quota. 20% of admission is carried out through management quota which is purely based on merit. Meticulous planning for teaching in the beginning of every Semester paves the way for efficient teaching environment. The syllabus completion status is convened after every month during academic period. The feedback mechanism for faculty from students helps in enriching the competency of the faculty. Use of ICT-based teaching enriches the teaching –learning process.

#### **Criterion – III: Research, Consultancy and extension**

Institute is having separate R&D Cell which is headed by Dean (R&D). It comprises head of departments and one faculty coordinator from each academic department. Dean (R&D) of our college is a man with the potential of excellence in research, promotes research and related activities among faculties and students. To facilitate the smooth implementation of research projects the College provides seed money, autonomy to principal investigator for utilizing overhead charges; also grants are released at the appropriate time. Interdisciplinary research related to the issue of demand is in progress. The college provides R&D incentives to the faculty for their research contribution since 2008. Departmental Review Committee and college level Research Review Committee are formed to discuss the status of the sanctioned funded projects, sending proposal to other funding agencies and design of evaluation parameters to promote quality research. Department of Electronics Engineering is having PhD research centre approved by University of Pune with 2 research scholars and 7 research supervisors. The active participation of faculty members in academic / industrial research shows



the vibrant research environment of our institute which leads to sustainable development of the society at large, subsequently the nation.

#### **Criterion – IV: Infrastructure and Learning Resources**

The state-of-the-art infrastructure augments learning which is the significant concern of the institution. Our Management is generous in enhancing the infrastructure as and when needed which promotes a good teaching-learning environment. Every class room is equipped with LCD projector, internet connection, etc. The central library, the heart of learning resources is having a seating capacity of nearly 200 students. The seminar hall is used as a multipurpose hall for conducting workshops, seminars, conferences, Parent–teacher meetings and for other college functions. Institute is having open ampy theatre, which is used for various cultural activities. The Central library of institute is having sufficient number of book titles, volumes, journals, magazines and references. The library is well equipped and has e-resource facility for easier access for resources. There is one Boys’ hostel and two Girls’ hostel. Institute is having full time medical officer, counsellor within the campus. Gymnasium is provided in the hostel to facilitate the growth of students.

#### **Criterion – V: Student Support and Progression**

There are about 2274 students from diverse background. To meet the needs of the students, student support service of our college is administered through a tutor system. In this scheme about 20 students are assigned to each faculty. Students are allowed to contact the tutor to address their academic as well as personal problems. Tutors are available all the time to support and advise the students. The T&P cell of the institute also extends its service in the form of career guidance and in other needed services. The T&P cell extends its active participation in inviting many companies for campus recruitment. Institute offers scholarship to economically backward students. Departments encourage students to participate in State, National and International level of curricular and co-curricular events. The institute has established its Alumni Association which conducts alumni meet every year. The SC/ST students get benefit of book bank facility. Institute motivate the students to participate in the extension activities such as Awareness camps, Blood donation, orphanage visits, etc through the forum “Ignited Minds” run by students.

#### **Criterion – VI: Governance, Leadership and Management**

The Management of our institute is assisted by the Executive Director, Dean, Principal, Dean (R&D), Heads of the departments, Registrar, Section Heads and Estate Officer. The Management actively takes part in the working of the institution and the oversees the day-to–day working of the college. The Managing Committee conducts periodical meetings taking stock of the situation. Management looks after the faculty requirement, infrastructure, and financial expenditure and provides the funds for different developmental activities taking place in the campus. The Management has constant touch with the Dean and

Principal to maintain cordial rapport to discuss the infrastructural needs, development, administration and appointments. The College Development Committee (comprises of Principal, head of departments, senior faculties, section heads) decide the schemes of progress for the well-being of the organization. Functions such as Annual Social Gathering (Nakshatra), Sports Day, Career Guidance Programmes and academic meetings such as Workshops, Seminars and Conferences are designed to showcase the talents of students. The HODs of various departments identifies and address the needs of the departments. Also the day- to-day activities of the departments are discuss with the Principal.

**Criterion – VII: Innovation and Best practices**

The two best innovative practices which vitally contribute towards the enhancement of the quality:

**Practical Exposure to Students:** The goal of this practice is to impart practical exposure to students in upcoming technologies by conducting workshops, guest lectures and seminars by internal and external academicians / industrialists and through industrial visits.

**Research and Development:** To facilitate academic research for the development of the academicians and the institution. It aims to bring about a dynamic equilibrium with its social and economic environment for excellence in education, research and service to the nation. To explore unreached areas by bringing openness in multi-disciplinary research. To provide a supportive research environment in which scholars, at every stage of their career, can flourish and develop.

## 4. SWOC ANALYSIS OF THE INSTITUTE

### Strengths

- Our final year results have been consistently good for all the academic disciplines.
- We offer scholarships to the bright and needy students.
- Best teaching and learning practices
- Funded research projects from the apex funding agencies like UGC, AICTE, DAE, DST, RPS, BRNS etc.
- The institute conducts significant academic events for the development of faculty and students.
- State-of-the-art infrastructural facilities like well-equipped classrooms, laboratories and hostels.
- Additional skill areas like soft skills and add-on technical skills are covered for student development
- Highly qualified and experienced faculty members
- A well implemented student counseling scheme
- A state-of-the-art Central Library
- 4 undergraduate engineering department accredited twice
- Institute introduced Add-on Courses as per requirement of industry

### Weaknesses

- Need to strengthen the Industry Institute Interaction activities
- Focus more on entrepreneurship development
- Lack of patents
- Inadequate number of faculty with vast industrial experience
- Consultancy activities to be enhanced
- Located in rural area

### Opportunities

- Situated near the Chakan industrial area which will allow us to collaborate with industry and help strengthen the industrial research and placements of students.
- Scope for research in robotics and other upcoming areas in engineering.
- Honing the skills and abilities of the students for their self-development and thereby the development of the institute.
- Scope for Inter-disciplinary research
- International relations (joint research and PhD programmes) will give international exposure to the students and faculty members.
- Higher Education

- Collaborative research along with students

**Challenges**

- Changing socio-economic scenario leading to unpredictable future.
- Rapidly changing technology and the industrial requirements ask for enhancing the employability of students for which extra measures need to be taken.
- Increasing the number of international tie-ups.
- Fill up the gap between ensuing and advanced knowledge

## 5. PROFILE OF THE INSTITUTION

### 1. Name and address of the college:

Name: MIT Academy of Engineering		
Address: Dehu Phata, Tal: Khed, Dist: Pune		
City: Pune	Pin: 412105	State: Maharashtra
Website: www.mitaoe.ac.in		

### 2. For communication:

Designation	Name	Telephone with STD code	Mobile	Fax	Email
Principal	Dr. Y. J. Bhalerao	O: 020-30253500 R:-	9823015289	020-30253799	principal@maepune.ac.in
Vice Principal	-	O: - R:-	-	-	-
Steering Committee Co-ordinator	Dr. S. V. Taralkar	O: -020-30253500 R:-	9011332500	02030253799	svtaralkar@chem.maepune.ac.in

### 3. Status of the of Institution :

Affiliated College

√

Constituent College

Any other (specify)

### 4. Type of Institution:

a. By Gender

i. For Men

ii. For Women

iii. Co-education

√

b. By shift

i. Regular

ii. Day

iii. Evening

√

### 5. Is it a recognized minority institution?

Yes

√

No

**6. Source of funding:**

Government

Grant-in-aid

Self-financing

Any other

√

**7. a. Date of establishment of the college:** 29/05/1999**b. University to which the college is affiliated /or which governs the college**

University of Pune

**c. Details of UGC recognition:**

Under Section	Date, Month & Year (dd-mm-yyyy)	Remarks (If any)
i. 2 (f)	07/01/2014	The college is now declared to fit to receive Central assistance in terms of rules framed under Section 12 (B) of the UGC Act, 1956. However, the college, being self financing and unaided, would be eligible to receive UGC's support only in respect of teachers & students related schemes as per the decision of the Commission dated 8 <sup>th</sup> July 2011.
ii. 12 (B)	07/01/2014	

(Enclosed the Certificate of recognition u/s 2 (f) and 12 (B) of the UGC Act)

**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)	Validit y	Remarks
AICTE	BE- Chemical Engineering F.No. 740-39-323(E)98	11 September 1998	1 year	Approval is extended every year by submitting the required documents as per AICTE.
	BE- Computer Engineering F.No. 740-39-323(E)98	11 September 1998	1 year	
	BE- Electronics Engineering F.No. 740-39-323(E)98	11 September 1998	1 year	



BE- Electronics and Telecommunication Engineering F.No. 740-39-323(E)98	11 September 1998	1 year
BE- Information Technology F.No 740-89-23(E)/ET/98	16 June 2006	1 year
BE- Mechanical Engineering F.No 740-89-23(E)/ET/98	16 June 2006	1 year
ME- Computer F.No 740-89-23(E)/ET/98	20 August 2009	1 year
ME- Electronics F.No 740-89-23(E)/ET/98	15 June 2009	1 year

(Enclose the recognition/approval letter)

**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: .....NA..... (dd/mm/yyyy)

b. for its performance by any other governmental agency?

Yes  No

If yes, Name of the agency .....NA..... and

Date of recognition: .....NA..... (dd/mm/yyyy)

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

Location *	Rural
Campus area in sq. mts.	44967.40 sq.m
Built up area in sq. mts.	23635 sq.m

**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: Yes, seminar hall with seating capacity 250.
- Sports facilities: Yes
- \* play ground:
- \* swimming pool: Not available
- \* gymnasium:
- Hostel
- \* Boys' hostel: 
  - i. Number of hostels: 01
  - ii. Number of inmates: 292
  - iii. Facilities (mention available facilities): Common Room with TV, Gymnasium, Indoor games, Internet connection to all rooms, Medical Officer
- \* Girls' hostel
  - i. Number of hostels: 02
  - ii. Number of inmates: 76
  - iii. Facilities (mention available facilities): Common Room with TV, Indoor games, Internet connection to all rooms, Medical Officer
- \* Working women's hostel: Not available
  - i. Number of inmates: Nil
  - ii. Facilities (mention available facilities): Nil
- Residential facilities for teaching and non-teaching staff (give numbers available -- cadre wise): Not available
- Cafeteria: Available
- Health centre –  
First aid, Inpatient, Outpatient, Emergency care facility, Ambulance.....  
Health centre staff –  
Qualified doctor    Full time        Part-time      
  
Qualified Nurse    Full time        Part-time      
(Not Available)
- Facilities like banking, post office, book shops: Union Bank of India ATM in campus, Book shop is available within campus.
- Transport facilities to cater to the needs of students and staff: Free transport facility is available for staff and as per requirement of students

- Animal house: Not applicable
- Biological waste disposal: Not Available
- Generator or other facility for management/regulation of electricity and voltage:
- Solid waste management facility: Not Available
- Waste water management: Available
- Water harvesting: Institute is having water connection from local Municipal body and most of the water provided on campus is taken from well and bore well and treated in water treatment plant having capacity of 7500 liters per hour. However, there is plan to collect rain water from roof of building and fill it in the ground to raise the water table.

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

Sl. No	Programme Level	Name of the Programme/ Course	Duration	Entry Qualification	Medium of instruction	Sanctioned/approved Student strength	No. of students admitted
1.	Under-Graduate	BE-Chemical Engineering	4 yrs	CET/AIE EE/PCM	English	60	47
2.	Under-Graduate	BE-Computer Engineering	4 yrs	CET/AIE EE/PCM	English	120	120
3.	Under-Graduate	BE-Electronics Engineering	4 yrs	CET/AIE EE/PCM	English	60	47
4.	Under-Graduate	BE-Electronics and Telecommunication Engineering	4 yrs	CET/AIE EE/PCM	English	120	99
5.	Under-Graduate	BE-Information Technology	4 yrs	CET/AIE EE/PCM	English	60	53
6.	Under-Graduate	BE-Mechanical Engineering	4 yrs	CET/AIE EE/PCM	English	120	120
7.	Post-Graduate	ME-Computer	2 yrs	CET/ BE Degree	English	18	18

8.	Post-Graduate	ME- (VLSI and Embedded Systems)	2yrs	CET / BE Degree	English	18	13
9.	Ph.D.	Electronics	-	ME/M. Tech	English	-	-

**13. Does the college offer self-financed Programmes?**

Yes  No

If yes, how many?

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

Yes  No  Number

**15. List the departments:**

Particulars	UG	PG	Research
Engineering	Chemical Engineering	Computer Engineering	Electronics Engineering
	Computer Engineering		
	Electronics Engineering		
	Electronics & Telecommunication Engineering	Electronics Engineering	
	Information Technology		
	Mechanical Engineering		

**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

b. Inter/Multidisciplinary Approach

c. Any other ( specify and provide details)

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

Yes  No

If yes,

a) Year of Introduction of the programme(s).....NA.....  
(dd/mm/yyyy)

and number of batches that completed the programme

b) NCTE recognition details (if applicable): Not Applicable

Notification No.: .....

Date: ..... (dd/mm/yyyy)

Validity:.....

c) Is the institution opting for assessment and accreditation of  
Teacher Education Programme separately?

Yes  No

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

Yes  No

If yes,

a) Year of Introduction of the programme(s).....  
(dd/mm/yyyy)

and number of batches that completed the programme

b) NCTE recognition details (if applicable)

Notification No.: .....

Date: ..... (dd/mm/yyyy)

Validity:.....

c) Is the institution opting for assessment and accreditation of  
Physical Education Programme separately?

Yes  No

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

Positions	Teaching faculty								Non-teaching staff		Technical Staff	
	Professor		Associate Professor		Assistant Professor		Lecturer					
	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F
Sanctioned by the UGC / University / State Government Recruited	06	01	05	04	62	48	-	11	116	37	38	07
Yet to recruit												
Sanctioned by the Management/society or other authorized bodies Recruited	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Yet to recruit	03		15		00		00		00		00	

\*M-Male \*F-Female

**21. Qualifications of the teaching staff:**

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Ph.D.	05	Nil	01	01	01	01	09
M.Phil. / M.Sc.	Nil	Nil	Nil	Nil	06	02	08
PG	01	01	04	03	56	44	109
PG Pursuing	Nil	Nil	Nil	Nil	Nil	Nil	11



**22. Number of Visiting Faculty /Guest Faculty engaged with the College.**

Nil

**23. Furnish the number of the students admitted to the college during the last four academic years.**

Categories	Year 1 (2012-13)		Year 2 (2011-12)		Year 3 (2010-11)		Year 4 (2009-10)	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	109	51	119	48	83	34	82	31
ST	19	6	17	6	11	3	9	3
OBC	246	96	252	81	272	68	200	58
General	865	235	966	266	973	195	955	193
Others (NT & SBC)	138	51	141	40	115	30	93	24

**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	412	30	442	412	30
Students from other states of India	74	2	76	74	2
NRI students	Nil	Nil	Nil	Nil	Nil
Foreign students	Nil	Nil	Nil	Nil	Nil
Total	486	32	518	486	32

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

3.95%

2.75 %

**26. Unit Cost of Education (Year 2012-13)**

(Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled)

(a) including the salary component

(b) excluding the salary component

Rs. 90868/-

Rs. 27112/-

**27. Does the college offer any programme/s in distance education mode (DEP)?**Yes No 

If yes,

a. is it a registered centre for offering distance education programmes of another University

Yes No 

b. Name of the University which has granted such registration.

- c. Number of programmes offered
- d. Programmes carry the recognition of the Distance Education Council.

Yes  No

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

Program/Course	Teacher-student ratio
Chemical Engineering	1:15
Computer Engineering	1:14
Electronics Engineering	1:13
Electronics & Telecommunication Engineering	1:15
Information Technology	1:14
Mechanical Engineering	1:16

**29. Is the college applying for**

Accreditation : Cycle 1  Cycle 2  Cycle 3  Cycle 4   
 Re-Assessment:

(Cycle 1 refers to  accreditation and Cycle 2, Cycle 3 and Cycle 4 refers to  re-accreditation)

**30. Date of accreditation\*** (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only) **Not Applicable**

Cycle 1: ..... (dd/mm/yyyy) Accreditation  
 Outcome/Result..... Cycle 2: ..... (dd/mm/yyyy)  
 Accreditation Outcome/Result.....  
 Cycle 3: ..... (dd/mm/yyyy) Accreditation  
 Outcome/Result.....

\* **Kindly enclose copy of accreditation certificate(s) and peer team report(s) as an annexure.**

**31. Number of working days during the last academic year:** 259 Days

**32. Number of teaching days during the last academic year**

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

166 Days  
 (We are working 5 days in week  with timing 8.30 am to 4.45 pm)

**33. Date of establishment of Internal Quality Assurance Cell**

IQAC 19/03/2014 (dd/mm/yyyy)

**34. Details regarding submission of Annual Quality Assurance Reports (AQAR) to NAAC. Not Applicable**

AQAR (i) ..... (dd/mm/yyyy)  
 AQAR (ii) ..... (dd/mm/yyyy)  
 AQAR (iii) ..... (dd/mm/yyyy)  
 AQAR (iv) ..... (dd/mm/yyyy)

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

**4 undergraduate programs of engineering are accredited by National Board of Accreditation (NBA) and 2 undergraduate programs of engineering are awaited for result. The details are as follows:**

Sr. No.	Name of Department	NBA-Accreditation status
1.	Chemical Engineering	Accredited for 2 years
2.	Computer Engineering	
3.	Electronics Engineering	
4.	Electronics & Telecommunication Engineering	
5.	Information Technology	Result awaited
6.	Mechanical Engineering	

## **6. CRITERIA-WISE INPUTS**

### **CRITERION I: 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:** To develop the institute into a world-class learning centre with an excellent ambience for academics and research conjugated with vibrant environment for honing the extra and co curricular skills of all its stake holders to enable them to meet the challenge of a fiercely competitive world.

**Mission:** To leave no stone unturned in our Endeavour to ensure that every alumnus looks back at us and says MIT AOE has not merely taught us, it has educated us

**Objective:**

- To ensure the all round development of our students by fostering their academic, co-curricular and extra-curricular skills
- To give the best career opportunities to our students by enhancing their employability and entrepreneurship qualities.
- To cultivate a research culture by guiding and encouraging the faculty, developing state-of-the art research facilities and through collaborations, consultancy and earning research funding.
- To improve the visibility of the institute within the academic & professional fraternity in the state and country at large.
- To impart quality education to our students in order to prepare them to meet the global challenges.
- To transform the institute into a ‘center of excellence’ for innovation, academics and research.
- To establish the institute as an international centre of education and research through tie ups with renowned international universities and research institutes.
- To be a premier institute which has strong tie ups with reputed industries for giving more exposure to the faculty members and students through various collaborative activities.

**Communication to Stakeholders:**

The institution’s mission and vision are displayed in Principal office, college website in all the departments, Library, entrance of administrative building and at all prominent places .It is communicated to the students through college brochure, college newsletter and during the FE induction program.

**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).**

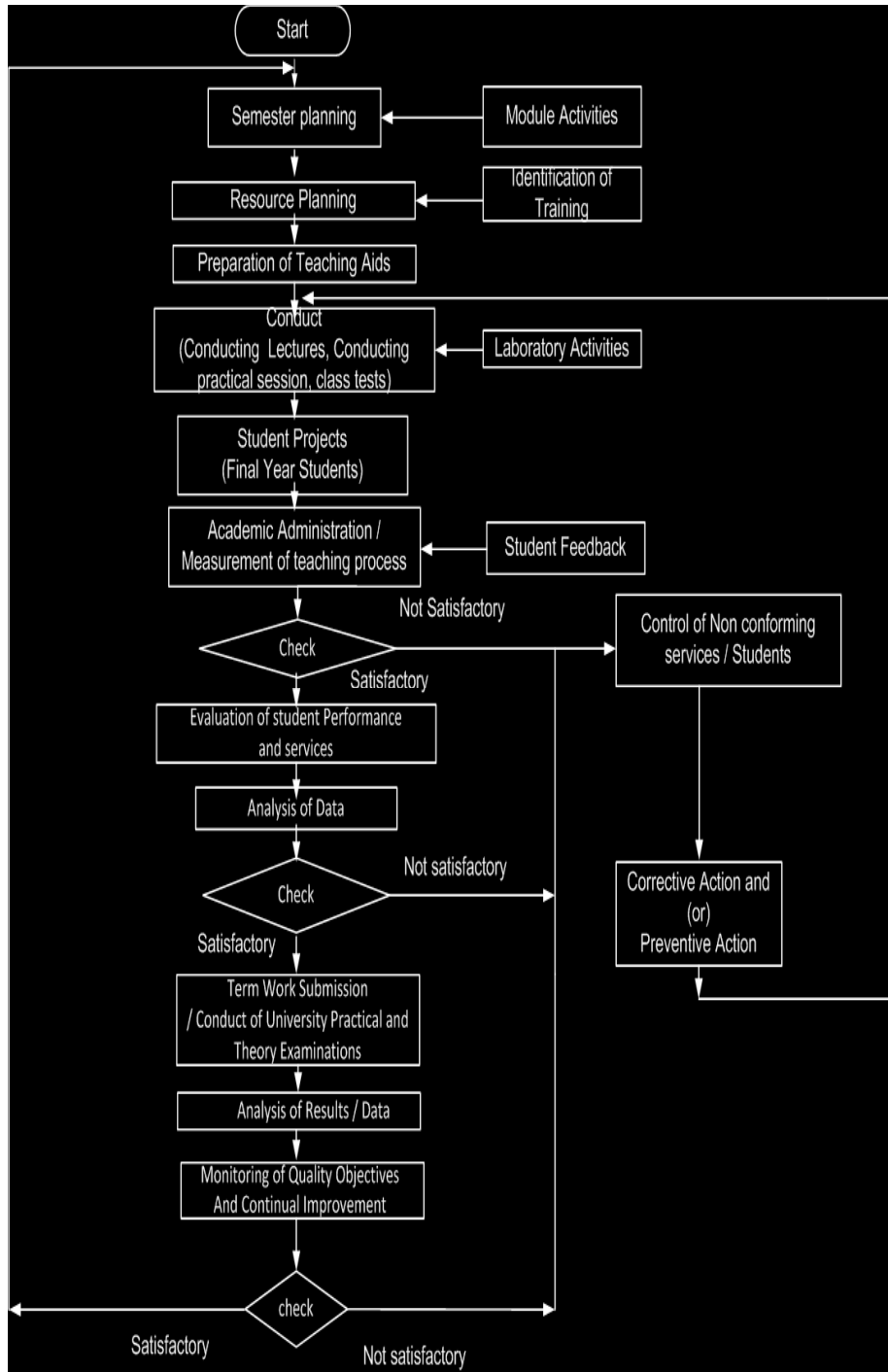
The institution meticulously plans for effective implementation of the curriculum. The detailed process is as given below:

Planning for the Term:

- Curriculum and academic calendar are prescribed by the University.
- Before the end of current term the subjects for next term from curriculum are floated to the faculty and faculty submits 5 subject priorities to the HOD. The electives are floated and choice is taken from the students, to finalize and plan in advance for the electives.
- Allocation of the subjects to the faculty is done taking into consideration, the faculty priority choice listed, and qualification, area of specialization, number of times subjects taught, and experience. The subject distribution is planned and communicated well in advance for preparation.
- At the start of each term Institute academic calendar is prepared considering the calendar received from university and circulated to every department. The department then plans their academic calendar. Class Tests, Extra curricular and co curricular activities are planned and included in the calendar. Class, faculty, classroom timetable are prepared approved by HOD, Principal and displayed on notice board.
- Theory and practical Teaching plans are prepared by faculty for the subjects allocated before start of term taking into consideration the academic calendar and timetable.
- Preparation of Lab Manual for a subject taking into account the compulsory experiments to be conducted in that subject. Incorporating detailed procedures for conduction of experiments and adequate safety precautions in the lab manual.
- Course files are prepared and maintained by the faculty which includes class notes, teaching material and OHP transparencies, PPT slides.
- Academic Monitoring Committee regularly monitors the classes and takes a review of the teaching in the class, academic progress of the students, grievances, feedback if any, and conveys it the HOD for corrective measures.
- In Attendance monitoring process every faculty maintain daily attendance sheet for each theory/practical course. Class Coordinator/Teacher appointed collects attendance from respective subject teachers to identify absent students. Regular telephonic conversation with parents of those students who remain frequently absent is taken care of by the class teacher. Also SMS Alert is sent to the parents about the absence/ Non conformance of their ward in theory/practical sessions.
- 1<sup>st</sup> Level is conducted in the first month and the same feedback is conveyed on basis of teaching to faculty for corrective measures. Interim feedback and final feedback is taken and analysis done.

- The progress of syllabus coverage, nonconforming students at end of each month is prepared by class teacher and monitored by HOD. Follow up of the nonconforming students is done by counseling and sending attendance reports to parents.
- Resources Planning is done at the start of term by identifying the subjects for which faculty is not available. Stock verification of laboratories, identifying instruments, which require repair or are obsolete. Identifying the need of new equipments, instruments, demonstration kits & software for the laboratories. Quotations are called and comparative statements are prepared to release requisition for purchase of equipments, instruments or kits. After receipt the demonstration is arranged for all faculty involved and test report is generated.
- The list of research projects floated by the senior faculty or any project of interest is presented to the students. Based on this the students choose their project and the according to the subject expertise the guide is assigned to the project group. The project progress is monitored regularly by conducting seminars, periodical demo of the project as per the action plan, the progress report is maintained. The following flowchart describes the effective implementation of the curriculum





**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?**

- Senior faculties participate in the meetings conducted for syllabus revision, which happens after every 4 years and revised syllabus is implemented in the curriculum in the subsequent year. The faculty suggests some revision in the subject topics or sometimes depending on the technological development new subjects are introduced.
- The detailed syllabus topic wise for the subject's for theory and practical are given by the Board of studies members during Syllabus detailing workshop conducted for faculty. The text and reference books subjects are also prescribed by the university in the syllabus. At least one faculty per subject is deputed by the institute for these workshops.
- The Institute also encourages the faculty to attend faculty development for latest technological development workshops for enriching their subject knowledge.
- Faculty is encouraged to attend Industrial training during vacation. The summer and winter training are conducted in the college and attended by faculty. These carry significant weightage for the performance appraisal.
- For effective teaching methods, the institution provides OHP, LCD projectors and internet connectivity in each class room.
- Internet connectivity is available throughout the entire campus for free access of journals and e books and learning materials like NPTEL Videos etc.
- Add on modules are conducted in all departments every term by industry experts to bridge the curriculum content gap.
- The R& D cell in the college conducts orientation programs and workshops to inculcate the research & teaching aptitude in faculty.
- Faculties are deputed for higher education for post graduate course, Doctorate programs and certification courses.
- Every department has a student chapter of professional society to keep pace with the research and recent advancements IEEE, ACM, IETE, IEI & ISTE to name a few.
- The University of Pune grants research funds for faculty research projects. The institute further supports by giving seed money to carry out extensive research. The faculty is also supported financially for attending conferences, workshops in India and abroad.
- The faculty participates as referee in events like World skill India at the international level, Robocon India, India Robot Olympiad and First Lego League at national level.
- Faculty from every department was deputed for the CISCO certification courses. The certified trainers in turn conduct the training sessions of add on module in the campus for the students.

- The advanced Labs like Mobile Computing, Networking and Embedded Systems are setup in the college. Advanced technology equipments are procured in various labs of the departments to promote research among the faculty members and also to strengthen the curriculum delivery by way of conducting practical.
- Two of our faculty Mr. S.A. Khandekar & Mr. V.B. Kulkarni are qualified as expert in the skill of Mobile robotics for world skill Robotics competition
- Four faculties participated in the E-Yantra Robotics competition conducted by IIT, Mumbai they are shortlisted for the next rounds.
- The department encourages the students to attend implant training for the faculty and students and organizes Industrial and visit to esteemed organization to gather information and understand the real time working environment. For eg. Chemical department organize implant trainings and Industrial visit to process plants.
- The Central Library has a rich collection of books on Computer, Electronics, Chemical, Mechanical, Information Technology and E&TC Engineering. Library also has a good collection in the areas of Mathematics, Civil, Mechanics, Physics, Chemistry, Electrical, Management, Graphics as well as general books. Every department also has separate departmental library maintained for the student's ready reference. Digital Library gives access to Syllabus, Old Question Bank, Project Report, and Video Lectures from NPTEL. The Institutional Membership of BCL, ARAI, UOP, CSI, and DELNET are available. The library has resources worth of 2.19crore,.The library offers Reference Service, Reprographic Service, Over Night issue, Web OPAC, Inter Library Loan, Clipping, Seminar Conference Alert, New Arrival Alert, Book Bank, Accessing CD-ROMs, Book Reservation, Internet facility for searching database online e-journals like ACM Digital Library, Springer, ASME etc. are available.

**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.**

- Institute is ISO Certified under ISO 9001:2008. Curriculum delivery and transaction controlled by ISO work process and documentation. The process involves following steps. Quality Objectives based on Quality Policy are prepared by every department. The same are communicated to all the faculty & staff members and displayed at all prominent places. The action plan for Quality Objectives is prepared and targets set with indicators. They are monitored timely in review meetings and internal audits. Corrective actions and preventive measures for achievement of Quality Objective are taken.
- The training needs of the faculty and staff are identified. Accordingly either the faculty is deputed for training or resource persons are identified as per designation, experience, qualification and expertise.

- Theory & Practical Course Plan are monitored for the continual improvement.
- The monthly progress of students in theory class and practical work along with the performance in class test is monitored and corrective action taken immediately.
- Continuous evaluation of Labs and assignments is done
- The interim feedback is taken from students, and intimated to faculty and faculty counseling is done for improvement
- The teaching process is reviewed in the weekly departmental meeting with the faculty/staff and also general and specific problems of the department are discussed.
- The departments have Counseling / Mentor Scheme introduced. Every faculty are assigned students from SE, TE, BE as Guardian Teacher or Counselor. The personal interaction timely helps to resolve student's personal problems and motivate them for overall development.
- The Library is open up to 9pm daily. The Library and reading is open to the students all 365 days.
- Wireless lease line with Speed of 10 MBPS, 1:1 BW to facilitate high speed Internet surfing. Internet Center remains open all 7 days in the week from 8.00am to 8.30 pm. Internet Browsing facility available for Boys Hostel after College working Hours & Separate 4 MBPS Lease Line for Girls Hostel Students .
- IT Setup is capable for conducting video conferencing/Webcast & Online Courses. Whole Campus IT Setup is Air conditioned and with Backup of UPS – 272.5 KVA as well as Generators with 420 KVA capacity.
- Permission is granted to the students for use of laboratories after college hours. This helps students to participate in national level competitions like Robocon, World Skills India, IIT E-Yantra and complete the task during this period.
- Central language laboratory in the Institute adopts the modern approach to English language teaching which promotes the use of computer and web-based applications for teaching various elements of the English as a Second Language. It also ensures all round development of students with a special emphasis on placement oriented training.
- Professional Training is imparted to enhance our students communicative competence in English language, build up their confidence and positive attitude and give them exposure to formal (business) communication
- Modern teaching aids like Smart board device, providing on screen presentations using projectors, PPT presentation, Webinars, Video conferencing, NPTEL Videos can be directly run in the classroom using internet connectivity. Uses of latest applications build on windows or Linux platform for ex. different media players to show some videos in the education sector. PA system is also used to address the students for important notices in the institute.

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

The institute has setup an Industry Institute Interaction Cell (IIC) with following scope

- The main objective of this cell is to bridge the gap between Institutional theoretical concept delivery and Industries practical approach. IIC Cell setup in the college has collaborated with various esteemed organizations like IITM (Indian Institute of Tropical Meteorology)-Pune for SAFAR – Pune, Gemini Training and Staffing Pvt. Ltd., Infosys Ltd, Wipro Technologies, Microsoft Ltd, IBM Ltd., Cognizant Tech. Solutions Ltd, Sungard Technology Services, Tata Consultancy Services, Amdocs Development Centre India Ltd., Zensar Technologies. KPIT Cummins Ltd., Sandvik Asia Ltd., 3DPLM Software Solutions Ltd., Honeywell Automation India Ltd., National Entrepreneurship Network, Rashtriya Chemicals & Fertilizers Ltd (RCF), Chembur, Mumbai, National Skills Development Corporation (NSDC), Federation of Indian Chambers of Commerce and Industry (FICCI), Confederation of Indian Industry (CII)

#### Industry Level Interaction:

- At department advisory board is formed. Meetings are arranged to get inputs for add module area, contents beyond syllabus topics to be covered, lab setup for new technologies how they can be introduced their feasibility. Below is the table of department advisory board of IT department.

Sr No	Name	Designation	Company/ Organization	Experience	Expertise Area
1	Dr. Y.J. Bhalerao	Chairman	MIT AOE, Alandi	16Years	Mechanical Engineering
2	Dr. C. Sahasrabudhe	Member Advisory	Persistent	15 Years	Project management
3	Mr. Rakesh Gotecha	Member Advisory	IBM Pune	20 years	Project Management
4	Dr. Sachin Lodha	Member Advisory	TCS Pune	12 years	Data security
5	Mr. Deepak Naokar	Member Advisory	IBM Pune	20 years	Networking
6	Mr. Deepak Patil	Member Advisory	Amazon Pune	12 years	Software Engineering
7	Prof. S.M. Bhagat	Secretary	MIT AOE, Alandi	24years	Networking

- **Following is the list of Eminent Visitors, those who have visited the department and given valuable inputs.**

Sr. No	Name	Designation	Company/ Organization	Experience	Outcome
01	Dr. V. M. Gadre	Professor	IIT Bombay	20 years	Electrical Signal Process
02	Mr. Kavi Arya	Professor	IIT Bombay	26 years	Robocon, NSDC, Embedded System
03	Mr. Anant Malewar	Technical Director	Nex Robotics, Bombay	10 years	Robotics, WSI
4	Mr. Anand Kolharkar	CEO Opine Group	Opine Group	15 years	Expert Talk Series
5	Mr. Mahesh Karwa	HR Manager	Hire on Dot	8.5 years	Expert Talk Series
6	Dr. Sachin Lodha	Senior Scientist	TCS	12 years	Expert Talk Series
7	Mr. Anand Bodake	Senior Software Developer	McAfee	5 years	Expert Talk Series
8	Mr. Deepak Patil	Project Manager	Cognizant	12 years	Expert talk Series
9	Mr. Pramod Chaudhary	Project manager	IBM	14years	Expert Talk Series
10	Mr. Rakesh Gotecha	Project manager	IBM	20 years	Expert Talk Series
11	Ms. Susan Kearvell,	Faculty	Manchester Metropolitan UK	10 years	Education in the UK
12	Utterashwar Chaudhary	Project Leader	Synechron	10years	Skills on DOT NET
13	Ms. Vidya Deshpande	Senior Lecturer	MIT	20years	Session on Software Development
14	John Sinclair	Professor	Moore's University	5 years	Collaboration for higher Studies
15	Dr. Ines Arana	Professor	The Robert Gordon University, UK	10 years	Collaboration for higher Studies
16	Prof. Mohamed	Director of	Dundee	10 years	Collaboration

	Branine	Research Degrees & Postgraduate Admissions	University		for higher Studies
17	Chandrashekar Dhamankar	GM, Technical	Forbes Marshall	32 years	Industry Institute Interaction

- MOU's are signed with the relevant Industry and International University related to department. For eg. the Institute has signed an MoU with the Liverpool John Moores University (LJMU) UK and Manchester Metropolitan University, UK for academic purpose. This will help to explore the potential for joint academic and research based activities like exchange of research materials, publications and information, development of collaborative research & academic programmes, joint supervision of PhD & final year (BE) projects and the exchange of students and academic staff etc.
- This academic partnership will certainly contribute to the enhancement of research and academic activities at both the partner institutions. This really helps to setup recent technology lab and outcomes from them mapped with Program outcome

#### **Consultancy:**

- MOU signed with iON TCS Pvt., Ltd., Pune for conduction of Online Examinations on Saturday and Sunday.

#### **R& D Cell:**

- We have a strong R&D cell in place in the institute to inculcate the spirit and culture of Research amongst all the stakeholders, enhance interaction and cooperation between researchers for interdisciplinary and multidisciplinary work. The R&D Cell links with various R&D organizations and funding agencies for sponsored and contract Research. The academic and research collaborations with national and international universities, government and industries is also taken care. College has received grants of Rs. 1.35 crores From DST, DAE, NBHM, UOP, AICTE etc. The institute has ongoing Research Projects Funded by Department of Science and Technology, New Delhi, Department of Atomic Energy, Govt. of India, AICTE, New Delhi and University of Pune. Submitted 12 Research Proposals to University of Pune, 28 to AICT, New Delhi, 03 DST Government of India, and 02 to UGC, New Delhi.

#### **Incubation Centre**

- The Institute has setup an Incubation Centre to help startups and produce successful companies that will have the potential to create products, jobs, revitalize commercialize neighborhoods, new technologies, and strengthen economies.

#### **International Relations Office (IRO)**

- It is setup in the institute to create conducive environment for nurturing global education culture on the MITAOE campus. To encourage students



to join PG and PhD courses in renowned foreign universities by giving them complete assistance. To collaborate with renowned foreign universities to enhance the academics and research at the institute. And also to give global exposure to faculty members for pursuing doctoral programs, attending academic events at foreign universities by giving them necessary guidance and assistance. Collaborated with the iCarnegie Inc., Pittsburgh, USA and Technophilia Systems Pvt. Ltd., Mumbai and University of Dundee, UK.

#### **Professional Society activities**

- Indian Institute of Chemical Engineers (IChE) Students' Chapter in Chemical Engineering department organizes technical events and sports competition. IETE Student Forum in Electronics dept. provides a National Level common platform for the student members to exchange ideas and information. It organizes technical programmes and activities, such as, special lectures, workshops, seminars, symposia, exhibitions etc for the benefit of student members

#### **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.**

- All the senior faculty of department are involved in the syllabus revision and detailing meetings at University The university appoints several faculty members as members of Syllabus revision committee, Paper setter member/Chairman periodically. Maximum numbers of faculty are involved in the University Paper revaluation. Based all these inputs the faculty suggest the changes as corrective to the Board of studies members to reflect these changes during the syllabus revision.

#### **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.**

- Institute offers Add-on courses to students for bridging the gap between curriculum and to fit the students as per industry needs. The examples are given in table below.

Sr. No	Title	Process of Identification	Class	Resource Person Affiliation	Assessment tools used	No. participants
1.	PLC Industrial Automation Concepts	Gap in Curriculum & Industrial Requirement	TE	Mr. Sachin Bapat, General Motors	<ul style="list-style-type: none"> <li>• Practical Assignments</li> <li>• Projects</li> <li>• Quiz</li> </ul>	25
2.	Certificate	Gap in	TE	Prasheel V	<ul style="list-style-type: none"> <li>• Practical</li> </ul>	40



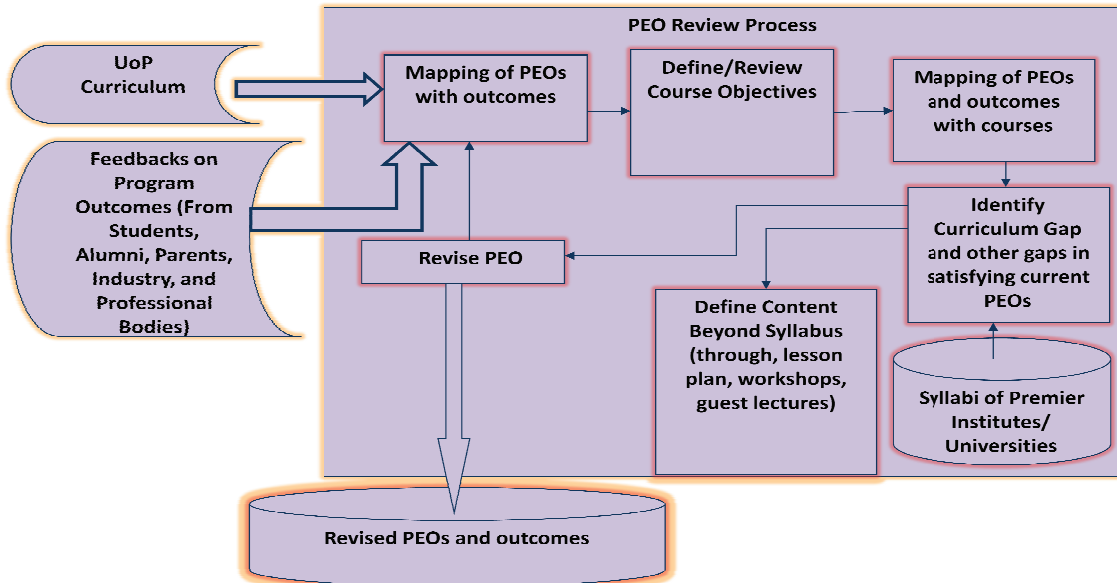
	Course on “PLC and SCADA”	Curriculum • Industrial Require ment	& BE	Suryawanshi, MITAOE, Pune. • Manohar Navale, Roman Automation, Pune. • Dnyaneshwar Padol, Roman Automation, Pune. • K Sudarshan, TATA Motors, Pune. • Vinayak Mhase, Mahindra Research Valley, Chennai. • Rakesh Mali, ElectroMech Instrumentation, Pune. • Mahesh Longani. AdMach Systems, Pune.	Assignments • Projects • Quiz	
3.	Certificate Course on “Electronic Hardware”	Gap in Curriculum, Industrial Requirement	SE	V. B Kulkarni	• Practical Assignments • Projects • Quiz	44

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

#### • Stated objectives of curriculum are achieved by following ways

##### Every program has PEOs and POs

- All the Program Education objectives (PEO) are achieved by the curriculum course outcomes.
- Revision of the PEO is done once in a five year as per the Pune University process.
- The content beyond syllabus is designed from the feedback of the industry, alumni and parents.
- Content beyond syllabus is covered through different activities like guest lectures, industrial visits etc.



Program Education Objectives	Program Outcomes										
	a	b	c	d	e	f	g	h	i	j	k
I	Strong	No	Average	Strong	No	Strong	No	No	Some	Strong	Strong
II	Strong	Strong	Strong	Some	No	Average	No	No	Some	No	Some
III	No	Some	Some	Average	Strong	Strong	No	No	Some	No	Some
IV	No	Average	No	No	Strong	No	No	No	Some	Strong	No
V	No	No	No	No	No	No	Strong	Strong	Strong	No	Average

Color Codes Depicting Contribution of PO to PEO	
Strong	Strong Contribution
Average	Average Contribution
Some	Some Contribution
No	No Contribution

- Every department frames Action Plan of departmental Objectives. The target for the same are set and at the ends of term-II the format of action plan are updated to find how many objectives are fulfilled and what corrective action and preventive measures to be taken to achieve them in the coming year. Following is an example of Dept. action plan for 2012-13 result.

Sr. No	Objectives	Indicator	Methodology	Target			Status		
				SE	TE	BE	SE	TE	BE
1.	To have a continual Improvement of students securing Distinction, First class.	%	Focusing on weak students & concentrating on them in theory & practical. Providing important questions. Conducting extra practice oral / practical sessions	SE	TE	BE	11	14	33
				First Class					
				10	10	20	Distinction	3.7	4.9

## 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.

Apart from the programs affiliated to university of Pune the college also offers certification courses which basically serve the purpose of value addition. These courses enhance the employability skills of the students

Sr. No.	Title	Target students	No. of participants	Resource person
1	IBM DB2 Training and certification	TE and BE	80	DB2 certified trainer from IBM
2	IBM RAD Training and certification	TE and BE	80	RAD certified trainer from IBM
3	IBM RTC Training and certification	BE	50	RTC certified trainer from IBM
4	Microsoft .NET Training and Certification	TE and BE	80	Microsoft Certified Trainer from Microsoft IT Academy
5.	Aptitude Test and Group Discussion	TE	62	Pankaj Gandhi
6.	Cisco Network Academy(CCNA)	TE & BE	40	Cisco CCNA Trainers

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

No. Institute doesn't provide any dual degree.

### **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**

#### **Improved potential for employability**

- **Skills development Courses offered in dept**

World Skill India, National level selections for the skill of mobile robotics was jointly organized by National level Skill Development Corporation and MIT Academy of Engineering. A team of students and faculty participated at Mobile Robotics competition organized by World Skill International Committee at Leipzig, Germany

#### **Progression to higher studies**

- Large no. students opt for higher studies and the records are all maintained in the department. The guest lectures for the same are organized by the training placement and International Relations Office to boost the students confidence to go for higher studies in various specializations.
- The students of final year choose two Electives subjects every term, and each has four subject options offered by the University. The choice of option tentatively depends on curriculum, the latest technologies and industry oriented requirement. The university also offers Open Elective Subject, which is designed by the department in consultation with Industry experts based on need then approved by the university Board of studies and the offered to the students.
- **Enrichment courses** like Addon modules, student's workshop, Guest lectures, Industry institute interaction are offered to students to enhance their skill set.
- Every the department arranges the **Industrial visit** for every class based on the relevant subject of term. The visit helps students can get the feel of real time environment and significance of the subject concepts applied in Industry. The industrial visit are mapped to the curriculum subjects,
- The institute also encourages in plant training of students and makes efforts in offering it to the students.
- Expert talks, guest lecture, webinar are arranged to cover Contents beyond syllabus and give students exposure to latest technologies.
- Extra Laboratories are also conducted beyond curriculum specified by university.
- The courses in University of Pune undergo syllabus revision every 5 years. Some of the subjects are made obsolete, new subjects are introduced or % of change varies every time it is revised. Following table give the details of syllabus revision of Electronics dept. for second year subjects.

SE (2003)	SE(2008)	SE(2012)	% Syllabus Revision	
			2003-2008	2008-2012
Signal and Systems	Signals And Systems	Signals and Systems	40	20
Semiconductor Devices and Circuits	Solid State Devices And Circuits	Electronic Devices and Circuits	45	40
Network Theory	Network Analysis	Network Theory	25	30
Control Systems	---	Control Systems	NA	100 (New)
Digital Systems	Digital Logic Design	Digital Electronics	20	60
Electronics Hardware workshop	Electronic Instruments And Tools	Electronic Measuring Instruments and Test	20	30
Electronic Circuits and Applications	Integrated Circuits And Applications	Integrated Circuits	40	60
Electrical Circuits and Machines	Power Devices And Machines	---	50	100 (New)
---	Electromagnetics	---	100 (New)	NA
---	---	Computer Organization	NA	100 (New)
Data Structure and Files	Data Structures	Data Structure and Algorithms	30	35
Analog Communication	Communication Theory	Analog Communication	20	15
Electronics Software Workshop	Circuit Simulation And Tools	Object Oriented Programming	50	100 (New)

- Additional lecture hours for difficult subjects as a preventive measure are introduced by department. They are included in timetable over and above specified in Syllabus.
- Problem Solving Sessions are introduced once the practical's are completed. This helps in utilizing the time for extra efforts towards improving the results of subjects. Once the results are announced the subjects those whose results are

below 75% the Remedial classes are planned in the extra classes are college hours.

**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, Institute provides skill oriented programs in terms of Robotics. Department of Electronics Engineering having MOU with NSDC, India.

**1.2.6 Does the University provide for the flexibility of combining the conventional face-to-face and Distance Mode of Education for students to choose the courses/combination of their choice” If ‘yes’, how does the institution take advantage of such provision for the benefit of students?**

No

### 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 are integrated?**

- Industrial visits, Implant Trainings, Co curricular activities, Extra Curricular Activities are organized by the department keeping in view the Institution goals and objectives.

**1.3.2 What are the efforts made by the institution to modify, enrich and organize the curriculum to explicitly reflect the experiences of the students and cater to needs of the dynamic employment market?**

- Student association is present in every department to supplement the University’s Curriculum by inculcating the leadership and managerial skills in the students. For eg students association Federation of Academic and Cultural Excellence – Information Technology (FACE-IT), ENCODE – Electronics and Communication Organization of Developing Engineers, EESA- Electronics Engineers Student association, Forum of computer undergraduate students (FOCUS), Mechanical Engineering Students Association(MESA), Students Association of Chemical Engineers (SACE)

Sr. No	Event in various departments	Activities in the Event	Objective/ Purpose	No. of participants
1.	ESSOTSAV 2013	Competition like Paper Presentation, Quiz, Roborace, Line follower, VolleyBall, Roadies,	To bring students from all disciplines of engineering in	125

		chess, carrom, Counterstrike, NFS MW	one cultural event this is cheerful as well as refreshing to young minds from their daily academic routine.	
2	Enthrall'12 by EESA	Cultural Activities	Fresher's Party	
3.	ONYX'13 by MESA	Carom, Design It (AutoCAD), Manual Robot, Lathe war, Pixel Mania Etc.	Holistic Development of Students.	1000
4.	Technodium'13 by FOCUS	Technical and Non - technical events	To realize the students their strengths for different technical competitions.	450
5.	FOCUS Programming Contest	Exam on syllabus practical	Academic Excellence	250
6.	RED FM sponsored "Talent hunt" by ENCODE	Talent represented by Singing, dancing, poetry, mimicry etc.	It's competition bet" best two from 12 colleges	60
7.	IICHe Students Chapter and Students Association of Chemical Engineers (SACE)	One day Workshop on Sophisticated Analytical Instruments. Workshop on Placement, Workshop on Matlab, PRAKALP-2012	To encourage the students to take initiatives, learn organizing tactics, search for innovative ideas and their presentation	200
8.	EXCEED- 13	Logic Gates, General Quiz, General Quiz, Google-IT		65 39

- Soft skills classes are included in the timetable of all Second year students
- Communication skills classes are conducted by visiting faculty specialized in this domain. These classes are part of Third year of every department.
- Aptitude training classes are conducted by Pankaj Gandhi classes specially to train the students for the final year placements.
- German language classes were organized for interested students. More than 100 students were certified after an exam conducted at the end of course.

- Guest Lecture on ‘Data mining analysis’, by Prof. Dr. Beatriz, East Anglia University, UK, Guest Lecture on ‘Education in the UK’, by Ms. Susan Kearvell, Manchester Metropolitan University, UK, Guest Lecture on ‘How to crack GMAT & GRE’, by the Chopras, Guest Lecture on ‘Business English Certification’, by Mr. Yatin Patwardhan, BEC, Pune, Student Awareness Programme on ‘Global Education Scenario’ by Mr. Amit Hiray.

### **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?**

#### **Integrate the cross cutting issues into the curriculum**

- In 2008 course for Second year we have subject “Humanities and social sciences”. Learning Objective includes Human and social development, Contemporary national and international affairs, Emergence of Indian society and Economics, Sectoral development and Economic development related issues (such as international economics, WTO, RBI, etc).
- Indian Institute of Tropical Meteorology (IITM), Pune, a constituent under the Ministry of Earth Sciences, Government of India, is spearheading country's first major initiative named as "System of Air quality Forecasting And Research (SAFAR)". The vision is to put our country in frontiers of Air Quality Forecasting Research. The ultimate objective is to increase the awareness among general public regarding the air quality in their city well in advance so that appropriate mitigation action and systematic measures can be taken up for the betterment of air quality and related health issues. This system is installed in our college campus.
- Grievances Redressal Cell The grievances at the staff and the student level are dealt by the college grievance committee. The grievance committee consists of Principal, Vice Principal, Registrar, Head of department concerned and lady faculty member and representative of student associate (while dealing with students complaints)., Anti Ragging Committee, Woman Grievances Cell, RTI Cell Right To Information Act, 2005 Cell of RTI is formed.the authorities :Dr. Y.J. Bhalerao, Principal, First Appealing Officer and Mr. Manoj Bade, Registrar, Information Officer are formed at the Institution level.
- Counselor/ Mentor Faculty members are assigned as mentors for a group of students for a period of three years. The Counselor Provide the information about Program Educational Objectives, Program Outcomes, Mission and Vision of the department and college to students. They also help students to solve their problems, providing information to parents about their wards progress through mail/ SMS/ telephone/ by post and retain detailed personal file of their students.
- Earn and Learn Scheme introduced by University of Pune is run in the college. The students from weaker section take advantage by working after college hours.
- Scholarship scheme for needy students is introduced for every two student from each department based on merit and need based.



### 1.3.4 What are the various value-added courses/enrichment programmes offered to ensure holistic development

#### Value-added courses for holistic development

- To imbibe the moral and ethical values in students blood donation camps, Guest lecture on awareness to health issues, Art of living courses are organized for the students and faculty

Sr. No.	Topic	Speaker
1	Valuables through values	B.K. Sister Sarita Rathi
2	Impressive Personality	B.K. Brother Dr. Sachin Parab
3	Values of Life	B.K. Brother Dr. Sachin Parab
4	The World and Me	B.K. Sister Kamlesh

- We have Ignited Minds group which arranges guest lectures of social workers for enhancing social awareness of the students Shiv Jayanti Programme, Exhibition: 'Prachin Bhartiya Vidnyan', Visit to tribal areas near Bhimashankar, celebration of Youth Day, Guru Pournima, Ganesh Festival
- Every morning the Worlds peace prayer is played in the institute at 8.25am before the start of classes. This really helps the students to rise up at their places and mediate for few minutes.

To enhance the **Employable and life skills** and expose to **Better career options** following efforts are taken

Sl. No	Name of Activity	Date	No of students Counseled
1	Career guidance and counseling session for the TE Computer Engineering Students	10/09/2013	30
2	Career guidance and counseling session for the TE Electronics Engineering Students	10/09/2013	37
3	Career guidance and counseling session for the TE E&TC Engineering Students	11/09/2013	66
4	Career guidance and counseling session for the TE Mechanical Engineering Students	11/09/2013	49
5	Career guidance and counseling session for the TE IT Engineering Students	13/09/2013	44
6	Coordinated a visit of the three UK universities viz. The University of Northampton, De Montfort University and Staffordshire University, to the MITAOE Campus	2/4/2013	Coordinated by the Manager, IRO
7	Participation in the UKTI event organized by the British Trade Office, Pune on April 2, 2013 at Hotel Westin, Pune	1/04/2013	The Manager, IRO participated.
8	Guest Lecture on UK as a destination for	8/2/2013	41

	further education by Mr. Saf, University of Southampton, UK		
9	Guest Lecture on 'Educational Opportunities in the UK', by Mr. David Thornber, University of Durham, UK	7/2/2013	66
10	Guest Lecture on 'Course offered in the University of Bristol UK', by Ms. Stephanie Wood, University of Bristol, UK	5/2/2013	38
11	Guest Lecture on 'Business English Certification', by Mr. Yatin Patwardhan, BEC, Pune	10/1/2013	58
12	Guest Lecture on 'How to crack GMAT & GRE', by the Chopras, Pune	29/9/2012	86
13	Guest Lecture on 'Securing Admission to a UK University', by the Chopras, Pune	22/8/2012	88
14	Guest Lecture on 'France as a destination for education', by Ms. Neha Kheterpal,	24/1/2012	80
15	Guest Lecture on 'Education in the UK', by Ms. Susan Kearvell, Manchester Metropolitan University, UK	7/2/2012	60
16	Guest Lecture on 'data mining analysis', by Prof. Dr. Beatriz, East Anglia University, UK	19/2/2013	48
17	Student Awareness Programme on 'Global Education Scenario' by Mr. Amit Hiray for SE Comp Engg	30/7/2012	54
18	Student Awareness Programme on 'Global Education Scenario' by Mr. Amit Hiray for TE Mech Engg	24/12/2012	28
19	Student Awareness Programme on 'Global Education Scenario' by Mr. Amit Hiray for BE IT Engg	17/9/2012	24
20	Student Awareness Programme on 'Global Education Scenario' by Mr. Amit Hiray for TE Chem Engg	17/9/2012	47
21	Student Awareness Programme on 'Global Education Scenario' by Mr. Amit Hiray for BE Chem Engg	19/7/2012	54
22	Student Awareness Programme on 'Global Education Scenario' by Mr. Amit Hiray for SE IT Engg	11/7/2012	47
23	Student Awareness Programme on 'Global Education Scenario' by Mr. Amit Hiray for SE Chem Engg	19/7/2012	22
24	Participation in the India-UK partnership event	April 2012	The Manager,

	(UKTI,) jointly organized by the British High Commission, MIT group of Institutions, Pune and AISSMS, Pune.		IRO participated.
25	Coordinated the visit of the three UK universities Viz. the University of Northampton, University of East London and the University of Abertay, Dundee to the MITAOE campus and made a presentation before them about MITAOE.	April 2012	Coordinated by the Manager, IRO
26	Participation in the 'Campus France International Education Event' at Juhu, Mumbai.	February 11 & 12, 2012.	The Manager, IRO participated.
<b>Total number of students counseled for better career options</b>			<b>1067</b>

- **Community orientation** The faculty and students in their free time visit one of the schools in nearby village and introduce them to computers. Also the institute runs free robotics classes for school children in Pune district. Robocon Junior is initiated keeping in view we introduced the from the age group of 6yrs to 15yrs, Children from Pune and other cities gathered in the MIT AOE campus enthusiastic to compete for the 8<sup>TH</sup> INDIAN ROBOT OLYMPIAD 2013. The completion is organized every year all over the country by the Stem Foundation in association with Techtronics Education. The regional competitions are followed by the Nationals. The winning teams at the Nationals compete at the international level in the WORLD ROBOT OLYMPIAD
- Large no. of students Participate in NSS, NCC camps. The institute has NSS cell formed in the college which takes care all the social commitment activities.
- Social activity taken up in the department:
  - Donation to Anandgram, Alandi
  - Donation to Vikas Anath Ashram, Chikhali

Sr. No	Details	Academic Year	Activity
1	103 students from different disciplines	2012-13	Blood donation camp
2	141 students from different disciplines (List attached)	2013-14	Blood donation camp

• **Other social activity taken up in the department**

Sr. No	Details	Academic Year	Activity
1	SE/TE/BE E&C Students	2012-13	“world population day” poster/article show
2	40 students from	2013-14	Ganpati Idol

	different disciplines & 10 faculty		making Workshop
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- Students are volunteers for Bhartiya Chatra sansad at MIT. It was started with the view that youth who are committed to politics and willing to embrace public life with a view to strengthen the democratic fabric of our nation need a platform. It is in a way is a classroom that provides political coaching to nearly 10,000 students in the age group of 18-25. It provides lessons on the functioning of a democracy and encourages the students to serve the society by entering public life and assuming leadership roles

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

Institute takes feedback from its stakeholders like students, alumni, parents, industries, etc. and considers in enriching the curriculum. The best Example of this is as per industry requirement institute started add-on courses in all departments for students to meet the industry need s and bridge the gap between curriculum and industry.

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

#### **Evaluation of enrichment programmes is done in following ways**

- Assignments evaluation is done during the add on module/Course. Assignments are evaluated based on the design aspects, objective and scope
- Exam of Courses conducted and Results displayed and discussed.
- Students receive certification at the end of Course
- Assessment of project work at the end of Addon Course is done based on (i) the state-of-the-art technology used in execution , (ii) their relevance to industry and academics , (iii) the coverage of border areas of the programme and (iv) the quality of the project Project report evaluation at end of course
- Assessment is based on the balanced laboratory and project work along with theory, to meet the PEOs.
- In Term-I, presentation is conducted and preliminary project report is submitted, which will be evaluated by the external and internal academic examiner. In Term-2 a midterm presentation is conducted which is evaluated by the Internal Guide.
- Paper presentation and Project Competition through Student Association Activity. Projects and papers are evaluated by external academic and industrial experts.
- Exam Results of certification courses conducted in 2013-14

Sr. No.	Name of certification	Number of Participants	Number of students cleared
1.	IBM DB2 certification	76	69
2.	IBM RAD Certification	73	73
3.	IBM DB2 certification	60	45
4.	IBM RTC Certification	44	44
5.	Microsoft .NET certification	98	Arranged in March 2014

## 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 regularly attend workshops and seminars on revision of curriculum. Some faculty members of institute are on the BOS and faculty of Engineering in the university, they actively contribute to develop the curriculum of the university. The College forwards the suggestions of its faculty to the university through the members of Board of studies. The design and development of the curriculum is in the hands of the university only. Institute deputed the faculty for organizing curriculum development workshop organized by the University.
- Following activities are undertaken during development of curriculum for the university
  - Formulation and finalization of structure considering the expected outcome of individual course
  - Selection of appropriate subjects with due consideration of prerequisite and post role with respect to higher classes
  - Designing the course objectives and course outcomes of individual courses
  - Designing course content and its implementation
  - Reinforcing theory content by appropriate tools like term work , practical's, etc. ensuring cognitive and mortar skills
  - Finalizing assessment criteria's
- The institution takes part in the curriculum development process through appropriate analysis of feedback given by the various stake holders from time to time and assimilates the suggestions in the functional style of the institution. The meeting ratifies the responses and makes suggestions for modifying curriculum. Finally, the institution represents these suggestions through members of Board of studies to the universities for appropriation of curriculum

**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, the college has a well established system of collecting feedback from its stakeholders. Interaction is done with Alumni of the department during alumni meet and through email, telephonic discussion. Alumni are encouraged to interact with the juniors in the department during their visit in the campus. They are also invited as a judge for technical activities, Alumni meet and Annual Social Gathering.
- **Few Alumni feedback details compiled are listed below**

Sr . No.	Name of the Alumni	Feedback comments	Corrective action if any	Preventive action	Effectiveness to corrective action	Triggered Addon Module/ Workshop
1	Kalpesh Ahire	Bookish approach of teaching	Apart from book for teaching other new technologies are used.	Faculty are asked to use modern teaching aids and cover application areas of the topic covered	Student has knowledge apart from syllabus	Workshop
2	Potdar R. N.	Knowledge beyond syllabus	Add-on courses for different Technologies	Add on courses have started	Students clear aptitude test	Add-on Course
3	Gaurav Sahani	Training on communication Skill	Extra hours in time for Soft Skill	Communication skill hours have been include in Time table	--	--
4	Amogh Ghodke	More time for project work(Internships Project)	More practical session for project work in week	--	Student participation in project competitions	--
5	Aikansh Jain	Focus on Competitive exams	Guest Lecturers for Higher	Aptitude test started	Student score in Gate, GRE	--

			educations			
6	Kalpesh Hiralal Chavan	Required Technical Knowledge and skills	Guest lecture on Soft skill is arranged	Frequency will be more	Technical Skills improved	Workshop on Electronic Design Hardware Club
7	Rajiv Gorana	Required Technical Skills more	Workshop on ATMEL AVR Controller	Every Semester Efforts Required	Technical Skills improved	Workshop on Electronic Design Hardware Club
8	Ketan Unkale	Require Guidance for Communication Skill	Communication Class Added in their Time table	Every Semester Efforts Required	Communication Skills Improved	Add-on Module on Antenna Design
9	Amit Pathak	Needs improvement in Technical Knowledge	Workshop on VHDL Programming	Every Semester Efforts Required	Technical Skills improved	Workshop on Electronic Design Hardware Club
10	Ameya Vedpat hak	Technical Knowledge Background	Workshop on EDC	Every Semester Efforts Required	-	Module on Portable Antenna Design, Simulation

- **Employer, Departmental Advisory feedback details compiled are listed below**

Sr. No.	Name of the Employer	Feedback comments	Corrective action if any
1	Persistent Systems-Nitansh Joshi	Extra session on languages	Starting add-on courses on languages
2	Eatov technologies-Deya B.	Emphasis on Fundamental	Conducting aptitude test on fundamental subject
3	Sigma – Sushant Verma	Focus on problem solving ability	Tutorials for problem solving on real time scenario
4	Synecron technologies-Milind Mutalik	Finishing, confidence in student	Soft skill classes are included in time table

5	Columbus Solution-Praveen R.	Extra Session on Communication	More Practice on soft skill
6	John Deere-Nilesh Deshpande	Interview rooms are not adequate.	Environment of interview is created

- Interaction is done with the industry by organizing the event like expert talk series, courses on Add on skills and also by joining them as advisory member of department. Employer feedback is taken during Campus Recruitment, Visit of Resource Person from Industry during guest lecture or when is an invitee for technical event or through T&P Officer. The feedback obtained is addressed and measures are taken to ensure effectiveness.
- Student Feedback system adopted in the department for teaching learning and other facilities available in dept is well defined. Level I, Interim Feedback and Final feedback
- Parents meetings are conducted periodically and interactive sessions are done in addressing various areas for improvement. Feedbacks are taken from parents for improvements. Parents are invited during events conducted by department, Annual social gathering –Nakshtra and National Robotics competition - Robocon. Attendance status reports / Class test results are sent to all parents every month and feedback is taken by parents on paper in questionnaires form during parents meet or telephonic discussion. Also SMS Alert is sent to the parents about the absence/ Non conformance of their ward in theory/practical sessions.

**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?)**

Nil



## CRITERIA II: TEACHING - LEARNING AND EVALUATION

### 2.1 Student Enrollment and Profile

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

- Institute involves in Centralized Admission Process (CAP) of government of Maharashtra.
- The college ensures publicity and transparency in admission process by following means:
  - a) Prospectus
  - b) Institutional Website
  - c) Advertisement in Regional/ National Newspapers
  - d) Conducting technical events such as Robocon, Jr.Robocon
  - e) Hoardings

#### 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 programmes of the Institution.

- Institute is involved in Centralized Admission Process (CAP) of state Government.
- Institute follows admission rules, regulations and guidelines setup by the state government.

#### 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.

Sr. No.	Programme	Year of Admission	Min. CET Marks of Admitted students	Max. CET Marks of Admitted students	Min. marks of students affiliated to college/univ within the city/district	Max. marks of students affiliated to college/univ. within the city/district
1	Chemical Engineering	2013-14	75	128	The entry level admissions are through CAP only and managed by Directorate of Technical Examination (DTE), Maharashtra. The data for minimum and maximum marks is not available.	
		2012-13	77	115		
		2011-12	78	109		
		2010-11	97	123		
		2009-10	94	138		
2	Computer Engineering	2013-14	48	108		
		2012-13	75	118		
		2011-12	62	107		
		2010-11	69	129		
		2009-10	107	131		
3	Electronics	2013-14	61	108		

	Engineering	2012-13	56	114
		2011-12	78	128
		2010-11	101	125
		2009-10	96	121
4	Electronics and Telecommunication Engineering	2013-14	63	117
		2012-13	68	119
		2011-12	86	116
		2010-11	93	142
		2009-10	109	138
5	Information Technology	2013-14	83	103
		2012-13	42	115
		2011-12	80	95
		2010-11	84	124
		2009-10	95	125
6	Mechanical Engineering	2013-14	73	134
		2012-13	116	132
		2011-12	53	129
		2010-11	93	147
		2009-10	102	140

**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?**

- As the engineering admission process in the state is governed by Director of Technical Education(DTE); institute follows rules, regulation & guidelines set up by the state government.
- The institute analyses student profile in terms of CET, AIEE & PCM marks.
- Institute conducts an activities like Robotics competition, mobile robotics, Junior robotics to attract the student.
- The institute has mechanism to review the admission process & student profile.

**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/NT**
  - **OBC**
  - **Women**
  - **Differently abled**
  - **Economically weaker sections**
  - **Minority community**
  - **Any other**

- As admission process in the State is governed by Director Technical Education; Institute follows the rules, regulations & guidelines set up by state government body.
- It offers seats to SC, ST, OBC, woman, economically weaker student as per the government norms, rules & regulations.
- The admission of Institute level quota is offer to the students all over the India. Institute has students from various states.
- There is special reservation for the candidate of J&K.

**2.1.6 Provide the following details for various programmes 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.**

Sl. No.	Programme	Year	Number of applications (Y)	Number of students admitted (X)	Demand Ratio (X/Y)
	<b>UG</b>				
1	Chemical Engineering	2013-14	Admission process in the State is governed by Director Technical Education; Institute follows the rules, regulations & guidelines set up by state government body	47	0.78
		2012-13		60	1.0
		2011-12		50	0.83
		2010-11		60	1.0
		2009-10		60	1.0
2	Computer Engineering	2013-14		120	1.0
		2012-13		120	1.0
		2011-12		117	0.97
		2010-11		120	1.0
		2009-10		120	1.0
3	Electronics Engineering	2013-14		47	0.78
		2012-13		60	1.0
		2011-12		60	1.0
		2010-11		60	1.0
		2009-10		59	0.98
4	Electronics and Telecommunication Engineering	2013-14	99		
		2012-13	60	1.0	
		2011-12	60	1.0	
		2010-11	60	1.0	
		2009-10	60	1.0	
5	Information Technology	2013-14	53	0.88	
		2012-13	60	1.0	
		2011-12	54	0.9	
		2010-11	60	1.0	
		2009-10	60	1.0	
6	Mechanical Engineering	2013-14	120	1.0	
		2012-13	60	1.0	
		2011-12	60	1.0	
		2010-11	60	1.0	
		2009-10	60	1.0	
7	ME Engineering &	2013-14	31	0.86	
		2012-13	36	1.0	

	Technology	2011-12		36	1.0
		2010-11		36	1.0
		2009-10		18	1.0
8	Ph.D	2013-14		-	
		2012-13		4	
		2011-12		2	
		2010-11		2	
		2009-10		-	

**The reasons for increase / decrease and actions initiated for improvement:**

- Trends for post graduate courses.
- Total number of seats available for admissions in the state.
- National and global employment scenario which is projected by industry and society survey.
- State of art in the related areas.

**2.1 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?**

Institute identifies the needs of differently-abled students & provides

- Wheel chair
- Seating arrangement in class & lab
- Book bank facility
- Institute makes the special arrangement for differently-abled students in the university examination

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

- The qualifying marks and the overall ranking in the merit list of the student gives an idea about the knowledge of the student, which is known as entry level analysis.
- Training is provided to students to enhance soft-skills, group discussion and aptitude test capabilities as well as interview techniques. Special training courses are organized for students by Industry experts as well as professional trainers to make them conversant with the ever-changing industrial requirements.
- Institute conducts lectures & tests for final year student to guide them for the selection of project work.
- At the start of course the first two lectures of each subject are devoted to discuss with student to understand their special needs.

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

- Institute carefully considers the content of syllabus which the student studied till 12th standard. It has the mechanism to identify the gap in the syllabus to understand the engineering curriculum of first year.
- Institute arranges add on & remedial lectures to bridge these gaps.
- Institute has identifies the gaps between the university curriculums which are to be bridge to understand the higher level programs of the subjects.
- Institute organizes interdisciplinary paper & project competitions for the student & is also depute/send students to such competitions.

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

To create awareness of equality in students & staff,

- Institute arranges the special social activities to maintain good social environment in the Institute.
- Institute provide equal opportunity to ladies & gents for all the activities & process which include administrative teaching, co - curricular, extracurricular, sports, deputation to the courses, programs, higher studies, appointments, committees, placements etc.
- Institute celebrates teachers and engineers day where student and teacher can interchange the role of each other.
- Institute organizes special training programs on value and moral for teaching & non-teaching staff.
- Institute offers admission and employment opportunities to staff and its family members in institution which promotes the inclusion.

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

**Institute identify the need by considering**

- Articles of the students in newspapers, journals.
- Activities of professional bodies like IEEE,CSI, IETE.
- By offering special practical & theory lecturers.
- By conducting the special sessions & test on problem solving.
- Close observation of student in projects, paper presentation, NSS camps, visits, etc.
- Organizing experts lectures.
- Organizing industrial visits.
- By organizing competitions on paper presentations, projects, robotics, games, software development etc.
- Interaction of faculty and staff members with students.
- Participation of students in value added courses, content beyond syllabi programs, Social programs.
- Teacher Guardian interacts with students regularly and identifies their needs, the results of Electives and other subjects.

### The Institute responds the need

- By giving guidance about patents, project management and prototype building

#### 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.)?

Sl. No	Tools/ Process for assessment	Frequency	Administered
1	University Examination Result Analysis	01/ Semester	University of Pune
2	ISO Based files maintained by Faculty/ Dept reflecting attendance/ Class tests/ Mock Exams/Prelim exams/syllabus completion	03/ Semester	ISO I/C HOD
3	Students feedback on teaching learning process	03/ Semester	Subject Teacher, HOD
4	Teacher guardian/mentor meet	08/ Semester	Counselors
5	Parents feedback	01/ Semester	Class Teacher
6.	Industrial Visit	02/Class/Semester	All Faculty
7.	Guest Lecture	01/class/Semester	All Faculty
8.	Assignments	02/Theory Subject/Semester	All Faculty
9.	PSS	One per week	All Faculty
10.	Remedial Classes	One per week after declaration of results.	Subject result less than 75%

- Institute carries out University result analysis for the different programs & it gets the information about academic performance of student at the risk of dropout.
- Internal evaluation tests of Institute also help to get the information about students from the disadvantaged sections of society, physically challenged, slow learners, economically weaker students.

- Teacher guardians conducts / interact regularly with student 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 & economically weaker students.
- Institute conducts parent meets and collects the feedback about the drop out of different class of students.

Institute uses the data as follows.

#### **Support for Physically Challenged**

- Counseling of the physically challenged students is done if any and problems are resolved.
- Curricular needs of the Physically Challenged student are taken care of by providing necessary facilities such as wheelchair etc.
- In addition to the curricular requirements, guidance is provided to these students regarding availability of facilities such as scholarships from Government and Non-Governmental Organizations, special employment opportunities and also reservations in higher studies.
- Ramp for physically handicapped students

#### **Support for Slow Learners**

- Institute has provision for additional tutorial, remedial classes for slow learners where individual attention is given to each one of them.
- In these classes, the teacher navigates through the teaching content at a low pace so as to meet the requirement of slow learners. A regular interaction with parents of slow learners also helps in understanding the requirements of such students and bringing in a gradual improvement in their learning capabilities.
- Class Room material for such students is prepared in an elaborate manner detailing all the points so as to enable easy understanding of the subject by the students.
- Teacher prepares specially designed notes for slow learners to understand the content easily.

#### **Support for Economically Weaker Section**

- Institute implements schemes adopted by the Government of Maharashtra.
- Institute provides information about government and NGO aids, scholarship etc.
- Institute implements earn & learn scheme of university of Pune.
- Institute provides partial / full concession in fees to few deserving candidate.
- Providing additional books on loan basis to these students.
- Institute implemented earn and learn scheme for students

#### **Support for Disadvantaged sections of the society**

- SC/ST/OBC/minority students are given benefits of reservations in admission and scholarship and guided about various scholarship / social welfare schemes available to these students as per Government norms.

- Institute has a separate Student Section in the administrative office which is headed by a Registrar, who is well versed with the rules and regulations related to Social Welfare Schemes and provides guidance to students to apply for these schemes in the proper formats as per statutory requirements.

## **2.3 Teaching-Learning Process**

### **2.3.1 How does the college plan and organise the teaching, learning and evaluation schedules? (Academic calendar, teaching plan, evaluation blue print, etc.)**

- Every year academic starts in the month June.
- The concerned department conducts the meetings of faculty and discusses the syllabus of the program and calls the subject preferences from the faculty. Using this HOD distributes the load. Also HOD along with ISO incharge faculty prepares the academic calendar of the department which is in concurrence with the University calendar.
- The faculty prepares course file which includes detail course plan, Attendance sheet, continuous evaluation sheet, Class test papers with evaluation scheme and result, notes and other study material, experimental write ups, previous year University question papers, assignments, e- learning material etc.
- The file is evaluated by concerned HOD as well as Principal.
- The students are informed about time table, teaching plan and academic calendar well in advance.
- The students and other stake holder, feedbacks are collected periodically when teaching is in process and concerned faculty uses the same to meet the requirements.
- Institute conducts Unit Tests and Prelim in the term. It gives feedback to students and parents about the performance. Teacher guardian councils the students about the academic performance.
- The Mock Practical and Orals are also conducted and performance of student is evaluated and informed to all concerned.
- At the end of Term University conducts examination and evaluate the students' performance and offers the marks sheet for the same.
- Institute organizes cocurricular and extracurricular activities to supplement the curriculum.
- Institute carries out result analysis and keep the record of the same and seeks the guidelines from it for further improvement.



Academic Calender

Academic Year: 2013-14		MIT Academy of Engineering Alandi(D), Pune-412 105								Format No: MAE/IT/F/01	
Semester: I		Department of Information Technology								Rev. No.: 01	
Class: S.E./T.E./B.E./All		DEPARTMENTAL ACADEMIC CALENDER								Rev. Date: 03/12/2012	
W.E.F.: 17/06/2013											
June' 13	Activity	July' 13	Activity	Aug'13	Activity	Sept' 13	Activity	Oct' 13	Activity		
1	SAT	1	MON	1	THU	1	SUN	1	TUE		
2	SUN	2	TUE	2	FRI	2	MON	2	WED	MAHATMA G JAYANTI	
3	MON	3	WED	3	SAT	3	TUE	3	THU		
4	TUE	4	THU	4	SUN	4	WED	4	FRI		
5	WED	5	FRI	SE Welcome & CSI Inagural	5	MON	5	THU	5	SAT	
6	THU	6	SAT		6	TUE	6	FRI	XCEED 13-14 Technical	6	SUN
7	FRI	7	SUN		7	WED	Debate	7	SAT		
8	SAT	8	MON		8	THU		8	SUN		
9	SUN	9	TUE		9	FRI	RAMZAN-ID	9	MON		
10	MON	10	WED	GL FOR SE	10	SAT		10	TUE		
11	TUE	11	THU	GL FOR TE	11	SUN		11	WED	GL for SE	
12	WED	12	FRI	GL FOR BE	12	MON		12	THU	GL for TE	
13	THU	13	SAT		13	TUE	GL for TE	13	FRI	GL for BE	DUSSERA
14	FRI	14	SUN		14	WED	GL for SE	14	SAT		
15	SAT	15	MON		15	THU	INDEPENDENCE DAY	15	SUN		
16	SUN	16	TUE		16	FRI	GL for SE	16	MON		BAKARI-ID
17	MON	17	WED		17	SAT		17	TUE		
18	TUE	18	THU	APT	18	SUN		18	WED	ANANT CHATURDSHI	
19	WED	19	FRI		19	MON		19	THU		
20	THU	20	SAT		20	TUE	APT	20	FRI	PR END	
21	FRI	21	SUN		21	WED		21	SAT		
22	SAT	22	MON		22	THU		22	SUN		
23	SUN	23	TUE		23	FRI	GD	23	MON		
24	MON	24	WED	GD	24	SAT		24	TUE		
25	TUE	25	THU		25	SUN		25	WED		
26	WED	26	FRI		26	MON		26	THU	APT	
27	THU	27	SAT		27	TUE		27	FRI		
28	FRI	28	SUN		28	WED		28	SAT		
29	SAT	29	MON		29	THU		29	SUN		
30	SUN	30	TUE	CT-I & SF	30	FRI		30	MON	SF & TERM END	
		31	WED		31	SAT					

Time Table Incharge

H.O.D.

## Teaching Plan

Academic Progress Record

### TEACHING PLAN

Class..... BE ..... Sub..... Fuel cell Tech ..... Term..... II ..... Year..... 2013-14

Week No.	Lecture No.	Topics to be covered	Syllabus Covered %
9	27	Ionic conductivity of heterogeneous electrolytes	
	28	Classification of two phase composite material	
	29	Models to explain conductivity enhancement	
10-11	30	Heterogeneous electrolyte properties	
10	31	Advantages and drawbacks of solid oxide f.c.	
	32	Material requirement of electrolytes	
	33	cathode, anode & interconnection materials	
17-21			
11	34	SOFC configuration & performance	
	35	Tubular, monolithic configurations	
	36	Planar or bipolar plate configurations	
24-28			
12	37	Fuel cell types based on support	
	38	Electrolyte support, cathode support	
3-7			
13	39	Anode support, metal interconnect support	
	40	Manufacturing processes for fuel cell.	
	41	Models to explain design of SOFC	
10-14	42	Fuel cell power systems.	
14	43	SOFC integrated power plants	
	44	Hydrogen sources, Hydrogen storage	
	45	Benefits of pressurization in hydrogen storage	
17-21			
15	46	Integrated SOFC/turbine systems	
	47	Internally reformed SOFC	
	48	Numericals from past Question paper-I	
24-28	49	Numericals from past Question paper-II	

List of books referred for the subject.

- Fuel cells - Their electrochemistry, Bockris John, McGraw Hill
- Fuel cell - Handbook, US Department of Energy.
- Fuel cells & their applications<sup>(11)</sup>, Kordesch Karl, VCH Publishers

## Evaluation sheet

Academic Year : 2013-14		MIT Academy of Engineering Alandi (D), Pune - 412 105								Format No.:MAE/IT/F/17					
Semester : I / II		Department of Information Technology								Page No. : of					
Class : S.E./T.E./B.E./All		TERMWORK ASSESSMENT SHEET								Revision No. : 02					
Batch : T1										Revision Date : 08/12/2012					
Subject : Soft Skills Laboratory															
Roll No.	Name	Assignment No.							Total	Scaled To	TH + PR Attendance	Unit Test/Mock/Preli m/Assignment	Total	Scaled to	Remarks
		1	2	3	4	5	6	7							
									70	80	10	10	100	25/90	
1	ANDHALE NUTAN VIKAS	9	8	8	9	9	9	10	62	71	8	3	82	21	
2	ANDHARE VIPUL	9	9	9	9	9	8	8	61	70	4	1	74	19	
3	ANKITA PANDEY	8	8	9	9	8	8	8	58	66	6	3	75	19	
4	APOORV SHROFF	9	10	10	9	10	10	9	67	77	6	2	85	21	
6	ASAWALE NEETA VASANT	10	9	10	9	10	9	9	66	75	7	5	88	22	
7	ASHISH CHOUDHARY	10	9	10	9	9	9	9	65	74	4	0	78	20	
9	BAGDE SONAM BHANUDAS	9	8	9	9	8	9	8	60	69	8	3	79	20	
10	BAND PANKAJ ARUN	9	9	10	9	9	9	9	64	73	9	3	86	21	
11	BANSAL HIMANSHU	10	10	9	10	9	10	9	67	77	7	2	86	22	
12	BARHE SUHAS MURLIDHAR	9	9	9	9	9	9	9	63	72	7	2	80	20	
13	BHADALE BHANUDAS	9	9	9	9	9	9	9	63	72	9	4	85	21	
14	BHALERAO HRUSHIKESH P	8	8	7	8	8	8	8	55	63	4	2	69	17	
15	BHOIR SUSHANT D	10	10	9	9	10	10	10	68	78	8	3	88	22	
17	BORSE KISHOREE	9	9	9	9	10	9	9	64	73	7	3	83	21	

Name of Faculty :

H.O.D.

Signature with Date

Signature with Date

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

The basic purposes of the IQAC are:

- To ensure continuous improvement in the entire operations of the institution,
- To assure stakeholders connected with higher education - namely, students, parents, teachers, staff, would-be employers, funding agencies and society in general - of the accountability of the institution for its own quality and probity.

- **The IQAC will evolve mechanisms and procedures for ensuring the following:**
  - a) Timely, efficient and progressive performance of academic, administrative and financial tasks.
  - b) The relevance and quality of academic and research programmes.
  - c) Equitable access to and affordability of academic programmes for various sections of society.
  - d) Optimization and integration of modern methods of teaching and learning.
  - e) The credibility of evaluation procedures.
  - f) The adequacy, maintenance and proper allocation of support structure and services.
  - g) Research sharing and networking with other institutions in India and abroad.
- IQAC shall submit a self-reviewed progress report annually, detailing the tangible results achieved in key areas which are specifically identified by the IQAC in the beginning of the academic year by devising a perspective plan. The AQAR is the outcome of the perspective plan of the IQAC.

**2.3.3 How is learning 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?**

Institute organizes technical aptitude test in the beginning of the semester to judge the aptitude of the student.

- Institute notes academic background, intellectual level, soft skill & additional skill of student & accordingly lecturers has been developed.
- Institute provides question bank, assignment to students per the requirements.
- Additional library and laboratory hours to the students.
- Institute has Professional development sessions which helps to develop the personality of the students and interactive learning.
- Institute has language lab.
- Faculty uses the ICT for active and collaborative learning.
- Wi-fi zone is available near to the internet centre that enables the student independent learning.
- Institute has conducted problem solving sessions for students which offers platform for student to give engineering solution to industrial and community problems.
- Institute finds out the specific academic needs of the students. If the need is not covered in curriculum, additional courses (addon courses) are conducted for the students.
- Institute has NTPEL lecturer series for student, to make the subject easy to understand.

**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?**

- Institute organizes the different events such as paper presentation, art& craft exhibitions, Software development competitions, Problem solving competitions, Poster competition for develop creativity and critical thinking among the students.
- Institute also encourages & guides students to participate in the national competitions organized by other Institutes & University such as Aviskar
- Institute invites eminent scientists, entrepreneurs and industry persons and the personalities to share their success stories with students.
- Institute encourages technical writing .Students write scientific articles in the leading news paper.
- Institute students are involved in industry sponsored projects and research projects which help to make them life long learners and innovators.

**2.3.5 What are the technologies and facilities available and used by the faculty for effective teaching? Eg: 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.**

- Faculty members used visual library, MATLAB, Multisim, Proteus, Keil, PSIM and other platforms to make the subject easy to understand.
- Faculty members used visual library, auto Desk, Pro V, scilab and other platforms to make the subject easy to understand.
- Institute provides e-book, e-tutorials, and application notes by industry such as Intel, HP and Microsoft etc to the students.
- Institute made available the freeware, IGATE journals, free e-journals of AICTE & online journals to faculty members.
- Institute sponsored the faculty for membership of professional societies. The literature of these societies is made available to the students.
- Faculty provides online tutorials, notes, study material to the students.
- NPTEL lectures are made available to the students.
- Institute gives important academic tips on the mobile of the students.
- Institute provides Webinars.

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

- Institute organizes expert lectures, seminar, conference, workshop, summer & winter school to expose student & faculty to advance level of knowledge.



- Institute deputed the faculty for continuous learning programs, academic programs, Conferences, Workshops etc. Institute takes faculty feedback of such programmes and considers the same while planning the next event.
- Institute organizes the paper presentation, project competitions, expert tutorials.
- Institute has the students chapters of professional bodies like IEEE, IETE, ACM, CSI which organizes the events to expose the students for advanced level of technology.

**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 advice) provided to students?**

- All the students get the academic and personal guidance from the concerned Teacher guardian.
- The training & placement department do professional counseling of the students.
- NSS activity also gives the social ethical awareness among student. It also gives training for psycho-social support.
- The personality/ professional development sessions are organized for students.
- HODs also counsel the students & give them advice time to time.

**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 the impact of such innovative practices on student learning?**

- Faculty uses Laptop, modems, digital library, and online journals to download lectures, study materials & data from internet.
- Faculty use models, graphs, ppt presentation to present the content in the syllabus.
- Faculty prepares question bank for the students.
- Faculty uses collaborative learning and active learning.
- For conceptual understanding of the subject, special projects are given to students.
- Faculty make special laboratory set ups for clearly understanding the principles of the subjects.
- Faculty records their own classroom videos and make them available to students.
- Institute deputed the faculty for teaching learning programs like WIPRO Mission 10X, Infosys Academic leadership, IUCEE Teacher Academy.
- Institute makes arrangement to telecast special Webinars on the related topics.

**2.3.8 How are library resources used to augment the teaching-learning process?**

- Teacher uses the library resources like education CDs, text books, reference book to develop the teaching material.

- Teacher takes the help of library material to understand the topics in the curriculum which are difficult to understand.
- Students get the books to issue at home. Also they have access to reference section and digital library. They can study; prepare seminars, papers and projects using the library material.
- To understand current affairs student read news papers and other related magazines.
- Student can avail the additional book and references as per their need to study the regular subject in curriculum, project work, paper presentation, seminars etc.
- Student and faculty use to refer UG & PG project reports, Research Journals Transactions, Proceedings for development of study material, projects and seminars.
- Teacher use Tutorial offered by renewed publisher to develop the study material.
- The library downloads e-learning material which include tutorials FAQ, Notes, applications, Presentations and courseware & make it available to students & staff. These are used by Student & faculty for teaching learning process.

**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.**

- Teaching plan does not conform the intellectual ability of student, we could not perform totally, according to plan.
  - The individual faculty plan, depends upon individual perfection & capacity, it may not match with the academic calendar & hours by University.
  - University gives the uniform time slots for all subjects but certain subject need lesser or more time & there time slot depends upon actual contact with students and grasping power of students.
  - Prerequisite of the subject plays important role in teaching learning
  - State government admission process the engineering programs also affect academic.
  - Declaration of result time also affects academic planning.
  - Ninety days are given for academics which include University holidays, Sundays and days required for co-curriculum & extra curriculum activities.
- Efforts to overcome the challenges**
- Faculty discussions with student to understand their capacity and then plan teaching.
  - Faculty also uses the result analysis of students to understand the capacity.
  - Institute makes Saturday and Sunday working & make up the academics.

- Institute gives the freedom to keep additional hours working at Saturday & Sunday. Institute allows the student to attend the class right from the first day. Institute may offer fees installment so that students are encouraged to attend the lectures from first day.

### 2.3.11 How does the institute monitor and evaluate the quality of teaching learning?

- Institute takes feedback from students, industry persons, employers and parents.
- Institute arranges unit Test, retest and preliminary examination and analyses its results.
- Institute analyses university regularly.
- HODs and senior faculty attends classes and practical of other faculty members and if required gives suggestions for improvements.
- The faculty members gives presentations to HOD and Principal on the study material, assignment prepared for teaching learning.
- Institute evaluates the papers and projects prepared by students.
- Institute monitors University ranks and results and evaluates the teaching learning process.

## 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

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
<b>Permanent Teachers</b>							
<b>D.Sc./D.Litt.</b>	NIL	NIL	NIL	NIL	NIL	NIL	NIL
<b>Ph.D</b>	05	-	01	01	01	01	09
<b>M.Phil</b>	-	-	-	-	06	02	08
<b>PG</b>	01	01	04	03	55	44	108
<b>Temporary teachers</b>							
<b>Ph.D</b>	NIL	NIL	NIL	NIL	NIL	NIL	NIL
<b>M.Phil</b>	NIL	NIL	NIL	NIL	NIL	NIL	NIL
<b>PG</b>	NIL	NIL	NIL	NIL	NIL	NIL	NIL
<b>Part-time Teachers</b>							
<b>Ph.D</b>	NIL	NIL	NIL	NIL	NIL	NIL	NIL



<b>M.Phil</b>	NIL	NIL	NIL	NIL	NIL	NIL	NIL
<b>PG</b>	NIL	NIL	NIL	NIL	NIL	NIL	NIL
<b>PG Pursuing</b>	NIL	NIL	NIL	NIL	NIL	NIL	11

### **Recruitment Strategies:**

- Institute finds the requirement of faculty by considering the University curriculum.
- If required the regular advertisements are given and faculty is recruited.
- If eminent faculty applies, the Institute conducts interviews and appoint them.
- Institute appoints professors to have the advantage of their knowledge and expertise for specialized.
- In case where there is difficulty in appointing qualified faculty, Institute deposes/sponsors the faculty for higher studies.
- Institute conducts Faculty development programs, summer and Winter Schools, conferences and gives opportunities to study them changing requirement of their curriculum. Also Institute deposes the faculty for such programs.

### **Retention Strategies:**

Institute has the promotion policies:

- Time Bound & Performance Based. Faculty can avail the promotions. This helps for retention.
- Teacher of the year award.
- Felicitation for receiving awards and achievements and fundings.
- Institute deposes /sponsors faculty for higher studies as well as conferences, workshops etc.
- Institute provides facilities like laptops, modems, membership of professional bodies.

#### **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 (Biotechnology, IT, Bioinformatics etc.)? Provide details on the efforts made by the institution in this direction and the outcome during the last three years.**

- Institute recruitment process is open throughout the year and whenever Institute gets qualified senior faculty, it conducts interviews and appoint them
- Institute invites the senior and experienced persons from research organizations, industries and academic Institutes and organizes their resource/expert lectures. As per availability these persons regularly conducts lectures and help to cover syllabus.

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

**a) Nomination to staff development programmes**

<b>Academic Staff Development Programmes</b>	<b>Number of faculty nominated</b>
<b>Refresher courses</b>	0
<b>HRD programmes</b>	16
<b>Orientation programmes</b>	0
<b>Staff training conducted by the university</b>	44
<b>Staff training conducted by other institutions</b>	29
<b>Summer / winter schools, workshops, etc</b>	168

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

- ✓ Teaching learning methods/approaches
- ✓ Handling new curriculum
- ✓ Content/knowledge management
- ✓ Selection, development and use of enrichment materials
- ✓ Assessment
- ✓ Cross cutting issues
- ✓ Audio Visual Aids/multimedia
- ✓ OER's
- ✓ Teaching learning material development, selection and use

**❖ Teaching learning Methods/approaches**

- Orientation Programme at the onset of academic year.
- Pedagogical techniques for new faculty by experienced Professors.
- Training in the use of modern teaching aids like LCD Projectors, smart class room devices etc.,
- Lesson plan, University calendar is being followed for the teaching learning method.

**❖ Handling New Curriculum**

- Deputing Faculty members to FDP Programmes, workshops, seminars etc. conducted by University and its affiliated Colleges.
- Through brainstorming sessions so free exchange of ideas are possible which include both experience faculty members and novices.
- As per the curriculum of the University the institution strictly follows the guidelines.

❖ **Content / Knowledge Management**

- Use of multimedia Contents
- Employment of modern Pedagogical aids such as Power Points, LCD projectors, Laptop, Smart boards and OHP's.
- Learning through demonstration and experimentation.
- In the area of content / knowledge management system, our faculty members are capturing value, knowledge and understanding of corporate information, using IT system, in order to maintain re-used and re-deploy that knowledge.

❖ **Selection, development and use of enrichment materials**

- Access to top class learning materials developed by institutions of higher learning such as MITs, IITs etc.
- User friendly notes by other learning center and own notes to enrich the learning process by the students.
- Employment of animation tools to ingrain the concepts into students for effective learning.
- For the enrichment program, the institution selects the experienced faculty or consultancy organization to impart and develop the enrichment course in the institution to reduce the gap through bridge course.

❖ **Assessment**

- The assessment of student and teachers are regular practice in the institution for the day to day development.
- Feedback through test at the end of the training session.

The self-appraisal report is one of the major yard stick used for the promotion of the faculty. It gives a clear picture in terms of their research needs. Suggestions to improve the academic system are given by the faculty through self-appraisal report which are used as a reference by the college.

❖ **Cross cutting issues**

- Motivation and arousing curiosity are given predominance.
- Enhancing of retention rate through periodic review process.
- Immediate application of concepts learned to the classroom environment.

Seminars and workshops are conducted where in experts from industry/academia are invited to share and deliver their knowledge and experience. To sensitize and bring about awareness about the gender issues and empowerment of women and upliftment of socially and economically weaker society

**Audio Visual Aids/multimedia**

Faculty are trained to use audio visual aids and multimedia in the classroom. Lectures are delivered using audio visual aids in classroom. All departments are provided with audio visual aids and teaching learning aids.

**Teaching learning material development, selection and use**

Faculty are given free access to internet which helps them to traverse through ocean of learning materials. The college has a well-stocked library containing both reference and text books of various subjects. Further attending and organizing seminars, symposiums and workshops also help the faculty in developing the course material.

**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.**

<b>No. of faculty</b>	<b>Total Number</b>
Invited as a resource person in workshop/Seminar/Conference	14
Participated in external workshop/seminar/ conference	262
Presented in Conference	184

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

- Institute gives incentives for Teachers for the research grant grabbed from the funding agencies.
- Institute relieves faculty and offers them OD for FDPs, Workshops and STTPs etc.
- Institute offers laptop for faculty.
- Institute sponsors faculty for seminar, conferences, summer & winter schools and industrial training.
- Institute organizes National Conferences, FDPs, Summer and Winter Schools for the faculty.

**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.**

- Every year Institute gives best teacher award, teacher of the department award, outstanding achievement award to the faculty for excellence in academics and reserach.

**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?**

- Institute evaluates teacher by taking inputs from students and external peers.
- The studentsgives the evaluation of the concerned teachers in the specially designed format.

- The teacher gives annual presentation about the academic activities
- The teacher gets constructive suggestion about their teaching style, participative teaching learning, use of innovative methods for teaching, development of labs, projects and papers, research efforts from the peer which help him/her for improving the quality of teaching learning.

## **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?**

- Institute notifies related evaluation process and related documentation on the notice board as well as on web sites. This include frequency, nature of internal and University evaluation.
- Institute also notifies the criterions for allocation of term work marks.
- Institute organizes faculty development programs and presentations evaluation processes.
- Institute organizes the LMC meetings & the presentation evaluation process to management and other stake holders.

### **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?**

- University has suggested the online tests for F.E. and S.E. students. Institute has adopted the same. University insists to carry out continuous evaluation of term work. Institute has adopted the same.
- Institute conducts the internal Unit Tests, Prelim, Mock Practical and oral examinations.
- Institute also conducts quizzes and softskill development competitions for the students.

### **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:** Institute organizes all University examination as per schedule and requirement of University. To conduct on line examination, Institute has sufficient IT infrastructure. It effectively monitors the examination.

**Institute Examination:** Institute has exam coordinator for each department for smooth conduction of the examination. The results of evaluation are declared within eight days. The students can see their respective papers and discuss the same with concerned faculty. The model answers are also displayed on the notice boards. To conduct MOCK practicals and orals Institute invites the external experts as examiners. The term work evaluation is done by internal as well as external experts. FE and SE students have the online examination at university level. For practice sessions of online exam institute has purchased the intelltest software.

### **2.5.4 Provide details on the formative and summative evaluation approaches adopted to measure student achievement. Cite a few**

**examples which have positively impacted the system.****Formative evaluation process:**

The goal of formative assessment is to monitor student learning, to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning. Formative Assessment of the students is done on the following parameters:

- Assignments
- Presentations
- Industrial visits
- Class interactions
- Group discussions/Viva-voce
- Workshops/Seminars
- Research activities
- Projects
- Written and practical tests
- Organizing functions
- Curriculum based training
- Social activities
- Inter college competitions
- Overall attendance and conduct during the session

**Summative evaluation process:**

The goal of summative assessment is to evaluate student learning at the end of an instructional unit by comparing it against some standard or benchmark. Summative assessments are often high stakes, which means that they have a high point value.

Summative Assessment takes place at the end of the academic session which is conducted by the college during the terminal test at the end of the semester.

This process helps the students to gain confidence and to achieve good results.

The university conducts a summative evaluation at the end of each semester through the following:

- Written Exams
- Practical Exams
- Viva voce
- Project work

**2.5.5 Detail 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.**

- Faculty takes efforts to have transparency in the internal assessment. The test answers and model papers are given to the students. Student get opportunity to discuss the performance in the tests with the concerned teachers.

- Institute has the specially developed progressive assessment sheet which considers attendance, personality, behavior, extension of experiment, innovations & should include marks for writing conclusion of the practical perform. The proper weightages are given to these heads. Institute displays the internal marks obtained by students on the notice boards.
- Institute encourages the independent learning which includes paper presentation by students, project, innovative mini project, publishing the articles in news paper & gives proper weightage to these heads.
- Institute displayed marinkg scheme at the start of academic year, on the notice board website & carries out the evolution & display the result based on above evolutions.

**2.5.6 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.**

- Institute has developed Program Objectives, Program Outcomes and Course Objectives which are in concurrence with the University.
- Institute develops teaching learning process, infrastructure, and relationship with stake holders accordingly. Institute regularly monitors the attainment of Program Outcomes. If may modify the academic processes to meet the outcomes.

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

- The Institute has the redressal cell for grievances with reference to internal evaluation.
- The Cell consists of concerned, Principal, HOD, one faculty nominee, two students nominee.
- The student can apply to the cell for his evaluation grievances. The cell conducts a meet and calls students and hears his/her say and gives the appropriate decision which is binding on all.
- University also deputed CEO at Institute level who takes care of University evaluation grievances. CEO forwards the grievances to the University.
- The University settles the grievances using its own mechanism

## **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 learning outcomes are all the times notified by notices, websites and academic diaries.
- Learning outcomes are printed on the academic documents given to faculty & Students.
- Learning outcomes are notified to parents during parent meet.



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

To monitor the student progress, Institute has the continuous internal evaluation system which consist of unit tests (twice in term), prelim/end term semester examination (once in term), Mock, practical & oral exam. Using this mechanism Institute finds out the progress of the student & it uses this mechanism as a feedback to improve the academic process.

Institute communicates the grades, marks obtained in the internal examination to the parents and students regularly.

It organizes regular parents & guardians meet to have a communication with students and parents.

Affiliated university also conducts the written/theory/practical examination at end of semester. The result of same are communicated to the student & parents .The academic monitoring can also been done from university result.

The Institute carries out the analysis of each program above mentioned mean every year.

The results of the IT department for the last four years and the comparison with the university results are shown below.

Sl. No.	Year of examination	Course Examination UG	No. of students appeared	No. of students passed	Department result in Percentage	Result of the University in Percentage
1	2012-13	Second Year	63	59	90.77	84
2	2011-12	Second Year	65	56	86.15	78
3	2010-11	Second Year	71	64	90.14	83
4	2009-10	Second Year	72	60	83.33	82
Sl. No.	Year of examination	Course Examination UG	No. of students appeared	No. of students passed	Department result in Percentage	Result of the University in Percentage
1	2012-13	Third Year	63	59	90.77	84
2	2011-12	Third Year	65	56	86.15	78
3	2010-11	Third Year	71	64	90.14	83
4	2009-10	Third Year	72	60	83.33	82
Sl. No.	Year of examination	Course Examination UG	No. of students appeared	No. of students passed	Department result in Percentage	Result of the University in Percentage
1	2012-13	Final Year	66	62	93.94	85
2	2011-12	Final Year	59	53	89.83	89



3	2010-11	Final Year	34	28	82.35	88
4	2009-10	Final Year	25	23	92	92

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

- Institute has program wise learning outcomes.
- The HOD and Principal conducts the regular meetings with the faculty and appeal them to prepare course material and develop teaching learning as per the learning outcomes.
- Faculty prepares the course files and other study material to supplement the learning outcomes. The labs are developed accordingly.
- The evaluations and assessment are also conducted to monitor the achievement of outcomes.
- Training in communication and other quantitative aptitude skill development
- To conduct Presentation skills and technical seminar course to its true spirit
- Training in the technical subject aptitude through comprehension test so that the student will get an exposure to appear for the GATE examination
- Encouragement to take up mini projects of social relevance where in innovation is an integral part and offering financial assistance for the successful completion of these types of project works.
- Development Centre to aspire for an entrepreneur, other students are encouraged to attend seminar/ workshops/guest-lectures Conducting technical symposium, competitions to express student's of their innovative ideas
- Sponsorship to present/publish research papers in international conferences and journals.

**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?**

- Students are involved in research project of faculty.
- Institute organizes technical research paper competition for students.
- Our student attended the research project competition organized by UOP like Aviskar.
- Faculty is motivated to pursuing the Ph.D. or higher degree.
- Faculty is encouraged to take the research project, the faculty get the funding for same.
- Faculty present & publish the paper in conference.
- Institute conducts special programs to enhance the social & economical relevance of course.
- Institute deputed the faculty for the advance technology courses in their areas.

- Institute has membership of IEEE & other online journals the good journals are available in library.
- Institute has the PG programs to supplement the research activity.
- Institute organizes NSS Camps, Blood Donation, and activities under Ignited mind.
- E-cell - Institute organizes the program on entrepreneurship
- Training is provided to students to enhance soft-skills, group discussion and aptitude test capabilities as well as interview techniques.
- The Institute has signed Memorandum of Understandings / Collaborations with some of the world class companies like Infosys, IBM, Honeywell, KPIT Cummins, NSDC, Opine group etc.
- Institute motivate students to participate in National/ International level competitions such as Robotics, BAHA etc.

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

- Institute collects the data about learning outcomes from students, alumni, employers, industries.
- It analyses the same and discusses with faculty. The faculty use the same for planning and overcoming the barriers of learning.

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

Institute uses following means.

- Tests and University examinations.
- Assignment and extension of experiments.
- Monitoring attendance of students
- Periodic students feedback
- Organizing make up / resource lectures to meet the students requirements.
- By using webinars and other elearning material.
- By monitoring participation and achievement of students in co curricular activities
- By evaluation projects and innovations of the students
- By identifying the slow learners and fulfilling their specific needs

To ensure the achievement of learning outcomes, Institute focuses on planning and effective implementation of teaching learning. It also inculcates the research culture and value based education.

**2.6.7 Does the institution and individual teachers use assessment/evaluation outcomes 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.**

When the teacher plans the course, he/she formulates the objective for the course. The teacher uses the following factors to check fulfillment of objectives:

- At the end of lecture verbal questioning, object test and feedback is taken.
- The student satisfaction level and application of mind is also evaluated.
- Mock tests give information about performance of student.
- Faculty closely observes the lab skills developed by students.

Using above, if required the teacher can modify the teaching learning process. Institute also uses the evaluation and assessment measures to check whether objectives of program are fulfilled. It also monitors the progress of programs as per vision and mission.

### CRITERIA III: RESEARCH, CONSULTANCY AND EXTENSION

#### 3.1 Promotion of Research

The process of promoting research culture among faculty and students is ensured by facilitating participation in research and related activities, providing resources and other facilities

##### 3.1.1 Does the institution have recognized research center/s of the affiliating University or any other agency/organization?

The institute have recognized research center of affiliating University of Pune (UoP) for providing essential research platform for electronics engineering. Following are recognized guides,

Sr. No	Name of Guides
1	Dr. G.K. Kharate
2	Dr. B.P. Patil
3	Dr. A.S. Abhyankar
4	Dr. R.D. Kharadkar
5	Dr. M.D. Goudar

##### 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.

Institute is having separate R&D cell. The R&D cell comprises of faculty members from various departments of the institute. This committee oversees the smooth and efficient coordination of research and development activities in the institute, thus fostering overall growth. A senior faculty heads this cell in the capacity of Dean (R&D), ably supported by Associate Dean (R&D); with the Principal providing advisory support. The faculty members that constitute the R&D Cell are,

Sr. No.	Name of the Faculty	Position
1	Dr. Y. J. Bhalerao	Principal
2	Dr. S. M. Khairnar	Dean (Research & Development)
3	Prasheel V. Suryawanshi	Associate Dean ( R & D) and Head (E & TC)
4	Prof. Nitin M. Rane	Head (Chemical Engineering)
5	Prof. Mrs. Uma Nagaraj	Head (Computer Engineering)
6	Prof. Mahesh D. Goudar	Head (Electronics Engineering.)
7	Prof. S. M. Bhagat	Head (Information Technology)
8	Prof. N. Murali	Head (Mechanical Engineering)
9	Dr. Suyog Taralkar	Faculty (Chemical Engineering)
10	Mrs. Sunita S. Barve	Faculty (Computer Engineering)

11	Mrs. Prabha Kasliwal	Faculty (Electronic Engineering)
12	Ms. Pranali Choudhary	Faculty ((Information Technology)
13	Dr. M. L. Kulkarni	Faculty (Mechanical Engineering)

### **Aims and Objectives of R& D Cell**

The institute believes in a judicious combination of teaching and research for the benefit of student community at large. The institute envisages innovation and technological development through its R&D axis. It has plans to cultivate academic and research collaborations with national and international universities, governments and industries to meet the immediate needs of society and industry. The institute also remains committed to long-term research as the foundation for future development. The institute's serene atmosphere, infrastructure that keeps abreast of global standards and excellent academic facilities coupled with intellectual freedom; richly add to the perfect ambience for conducting cutting-edge research that can make a positive change in the lives of the citizens.

#### **Aims**

- To inculcate the spirit and culture of research amongst all the stakeholders.
- To enhance interaction and cooperation between researchers for interdisciplinary and multidisciplinary work.
- To forge academic and research collaborations with national and international universities, governments and industries.
- To establish links with various R&D organizations and funding agencies for sponsored and contract research.
- To work towards development of MIT AOE as a global R&D centre.

#### **Objectives**

- To enhance the research awareness by organizing national and international conferences, symposia, workshops on research methodology, IPR and patents, talks and discussions with eminent researchers.
- To motivate faculty for doctoral and post doctoral assignments at various national and international universities and organizations of repute.
- To encourage faculty to undertake research projects in, thrust areas in science and engineering funded by various national and international agencies.
- To explore new horizons of knowledge and ensure its practical implementation through collective efforts and quality research work.
- To provide a creative atmosphere, complemented by adequate facilities and resources in which research thrives amongst the faculty and students.

#### **The Role and Responsibility of research monitoring committee are,**

- To encourage and motivate faculty for externally funded research and development, interdisciplinary and multidisciplinary research, product design and development, publications in journals of high standing.

- To facilitate discussions and collaborations with researchers from other institutes, with the possibility of joint work in various thrust areas of national and international importance.
- To initiate and promote MoU with industries and R&D organizations; for consultancy, collaborative research, sponsored projects, industry institute interactions etc.
- To arrange talks and interactions by eminent personalities from industry, R&D organizations and institutions of repute; for the better understanding of research methodology and practices currently followed.
- To support faculty for delivering talks at different events and conducting workshops, training programs, seminars, conferences, symposiums, faculty development programs.
- To visit R&D organizations and disseminate information regarding the effective implementation of research projects vis-a-vis the institute.
- To suggest peer reviewed national and international journals for subscription in central library as well as department library.
- To formulate the R&D budget of department in close co-operation with the faculty and the Head.
- To keep everyone abreast of all announcements by various funding agencies like DST, DAE, DRDO, ISRO, CSIR, AICTE, UGC, UoP, and the like.
- To motivate students for presenting papers in National and International conferences, and projects in competitions and exhibitions. B.E. projects can be considered as a mini research project. Interdepartmental / collaborative work to be encouraged positively.
- To attend and discuss the progress of R&D in the periodic meeting.

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

- Autonomy to the Principal Investigator-Yes
- Timely availability or release of resources-Yes
- Adequate Infrastructure and Human resources—Yes
- Time-off, reduced teaching load, special leave etc. to teachers-Yes
- Support in terms of Technology and Information needs-Yes
- Facilitate timely auditing and submission of utilization-Yes
- Certificate to the funding authorities-Yes

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

All departments of the institute organize different activities to create curiosity among the students as well as to get a chance to meet the distinguished experts of the related area.

- The students are encouraged to participate in different workshops, seminars, national and international conferences to promote research culture.
- The students are encouraged to participate in different technical competitions like Avishkar, SciCon, Science fair, Project and Paper competitions to demonstrate their innovative ideas.

- Research groups are formed for sharing specialized knowledge in new research area with faculty members and students.
- Regular guidance provided by giving platform for interaction with the expertise guest faculty.
- Faculty members are constantly motivated to acquire knowledge and higher qualifications.
- The institute organizes visit to industries and R&D organizations.

**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.**

All departments of institute have specialized active research areas for supporting and guiding student research projects. Research projects in these areas are promoted by sharing and demonstrating different ideas to students. Following are active research area

<b>Department</b>	<b>Research Areas</b>
<b>Chemical Engineering</b>	Energy And Environment, Advanced Separation Processes, Process Design and Modeling, Reaction Engineering and
<b>Computer Engineering</b>	Computer Networks, Systems, Data Mining, Machine Intelligence and Applications
<b>Electronics Engineering</b>	VLSI & Embedded Systems, Image & Signal Processing, Power Electronics, Automation
<b>Electronics and Telecommunication Engineering</b>	Systems and Control, Signal and Image Processing, Embedded Systems and VLSI, Wired and Wireless Communication
<b>Information Technology</b>	Networking, Wireless Networking, Database & Big Data, Image Processing, Operating System, Distributed System Internet Technology
<b>Mechanical Engineering</b>	Heat Power & Thermal Engineering, Design and Manufacturing, Thermal Engineering & Heat Power, Design Engineering
<b>Engineering Science</b>	Image Processing, Geometric Functions theory, Polymer synthesis for waste water treatment

**Individual/collaborative Research Project**

<b>Chemical Engineering</b>			
<b>Sr. No</b>	<b>Name of Faculty</b>	<b>Collaborative/ Individual</b>	<b>Name Research Project</b>
1.	N. M. Rane	Collaborative	Removal of Cr(VI) from Industrial waste by using Agrowaste
2.	J M Satbhai	Collaborative	Water hyacinth based aquatic treatment for Industrial Waste
3.	S P Shewale	Collaborative	Recovery of Sugar from Sugar Cane Juice by Ultrafiltration
4.	D J Garkal	Collaborative	Extraction of Anti-diabetic active ingredients from medicinal plants/herbs
5.	Dr. S. V. Taralkar	Collaborative	Isolation of Active ingredients from Crude Extract of Medicinal Plants using Membrane Processes
6.	D J Garkal	Collaborative	Extraction of Active ingredients from Ocimum Sanctum Linn
7.	M Senthilkumar	Collaborative	Revolving Tray Tower
8.	R R Joshi	Collaborative	Optimization of Supply Chain Networks
9.	P M Deshpande	Collaborative	Compact Heat Exchanger for Heat Recovery
<b>Computer Engineering</b>			
10.	MayuraKinikar	Collaborative	Linux Network Accelerator for Multicast Protocol
11.	MayuraKinikar	Collaborative	Faster Booting Technique: An Alternate for Traditional Cold Boot
12.	Amar More	Collaborative	Dynamic Cache Resizing in Facebook Flashcache
13.	R. R. Badre	Collaborative	Insert and Retrieve Bigdata From Hbase Under Hadoop From a Search Client Built on Andriod
14.	Manish Giri	Collaborative	Medical Application of Wireless Sensor Network
15.	MayuraKinikar	Collaborative	Adding Virtual Station Support in WPA Supplicant
16.	MinakshiVharkate	Collaborative	Enhancement in the Flash Translation Layer of Solid State Disks
17.	Kavitha S	Collaborative	Enhancing Network Security by Dynamic Encryption



18.	MayuraKinikar	Collaborative	Hibernation
19.	Amar More	Collaborative	Elastic Map reduce
<b>Electronics Engineering</b>			
20.	Dr. B.P.Patil	Individual	DSP based grid connected photovoltaic system for electrical appliances
21.	M.D.Goudar	Individual	
22.	M.G.Wani	Individual	Microcontroller based high frequency inverter with power factor corrector.
23.	P.S.Kasliwal, Dr. B.P.Patil	Collaborative	Implementation of arithmetic unit using vedic mathematics in FPGA
24.	B.K.Shiragapur, Dr. B.P.Patil	Collaborative	Capacity improvement through adaptive power control in CDMA
25.	D Y Sakhar, Dr. M D Goudar	Collaborative	Development of embedded platform for summarization algorithm
26.	S A Pangaokar	Individual	Development of effective method for evaluation of vocal cords disorders with speech analysis
<b>Electronics And Telecommunication</b>			
27.	Prasheel Suryawanshi	Individual	Self balancing two wheel system With obstacle avoiding capability
28.	S. M. Mahamuni	Individual	Spectrum Sensing in Cognitive Radio Networks
29.	Prachi R. Rajarapollu	Individual	Digital Water Marking System For Extracting Text Message From Image
30.	Prachi R. Rajarapollu	Individual	Software and Hardware Implementation of High Speed Digitally Controlled SMPS using MSP430
<b>Mechanical Engineering</b>			
31.	Dr.M.L.Kulkarni	Individual	Design and development of MRBFFP based machine tool for Micro/ Nano finishing.
32.	Dr.Y.J.Bhalerao	Collaborative	Thermal analysis of face and shoulder combined grinding.
<b>Science Engineering</b>			
33.	Dr. S.M. Khairnar	Individual	Geometrical Aspects of Univalent functions
			Applications of GFT on duality principals
34.	Dr. S.M. Khairnar	Individual	Omitted area problems and applications
35.	Satyawati Nath	Individual	Impact of climate change on waves
36.	Dr. Arika Kotha	Collaborative	Chemical & Biological Removal of Phenols from waste water
37.	Dr. N. S. Haram,	Collaborative	Synthesis, characterization and

Mr. A. M. Kapse	electrochemical investigation of coumarin based metal complex
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**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.**

<b>Name of Activity</b>	<b>Resource Person And Details</b>
<b>Chemical Engineering</b>	
Faculty Development Program	Mr.Edwin , Director, Chemsys
AICTE Sponsored national level workshop on Role of Bio-energy in Sustainable Growth.	Dr.Poonani, Bits,Goa, Dr.Ashish Chaurasiya, VNIT,Nagpur, Dr.Aarohi Kulkarni, PrajMatrix,Pune, Dr.C.V.Rode, NCL,Pune, Dr.Kalyanraman, Thermax,Pune Dr.Parag Gogate, ICT,Mumbai Dr.V.G.Gaikar, ICT,Mumbai.
National Level Workshop on “Industrial Energy Optimization and Recovery”	Academic Researchers
Guest Lecture	Mr. Sunil Choudhary, Praj Industry, Pune.
Guest Lecture	Mr. M. B. Patil, MAE, Alandi., Dr. A. P. Walavade, PVG COE
Simulation of Chemical Plant Using Modeling Simulators (SCPMS)	Mr. Vikas Thorat, Director, Chemsys, Pune Mr. Khandelwal Manager, Konzept Learning Centre, Pune, Mr. Khandelwal Manager, Konzept Learning Centre
<b>Computer Engineering</b>	
Tech Talk on research Methodologies	Dr. P.K.Sinha, C-DAC Pune.
Tech Talk on Storage Area Networks	NitinThorve
Tech Talk on Computer Ethics	Dr. Don Gotterbarn
Tech Talk on NP Completeness	Dr. Sanjeev Khadilkar
Relevance of Research in Teaching-Learning Process	Dr. M.L. Kulkarni
Workshop on Android Technology	Concourse Education & Fortune Info comm. PL
Workshop on Networking with Routing protocol	Suresh Patel,Jetking Pune
Cloud Computing	nxTech Consultancy,Pune
Guest lecture on Research methodology and scientific writing, Multidisciplinary research	Dr.P.J. Kulkarni WCoE, Sangli
<b>Electronics Engineering</b>	

Work shop on MSP 430	Gurjit Singh,,Gill Instruments
RFID technology	Nambiar, Quark gen technologies limited,Pune
PSOC - An accelerated way to Design	Pheonix, Cypress Banglore
DSP Application	Dr. M. S. Sutaone (COEP, Pune)
Router Management and Networking	S. M. Bhagat
Automotive embedded System	Vishwas Vaidya, Asst G M Tata Motors
NSDC Workshop on Mobile Robotics	Resource person from NSDC and MIT AOE
Workshop on Lab VIEW COEP E&TC	Prasheel Suryawanshi, U.M.Chaskar, Nisarg Shah
Design and Implementation of Topology & Protocol of wireless N/W Using NS-2	Resource person from SKNCOE
E-Yantra	Dr. Kavi Arya, IIT, Bombay
Seminar on 'Introduction to Ultra Low Power SoC-MSP430'	GurjeetSingh,MD, Gill Instruments, Bangalore
'Embedded System using SoC (MSP430)- Fundamentals & Applications	Gurjeet Singh, MD, Gill Instruments, Banglore
Recent Trends in PLC	MadhavHallae, Tejas Electronics, Pune
Scope of Embedded in Industry	BaipalliVasu, Easy Arm, Banglore
<b>Electronics And Telecommunication</b>	
Workshop on PADS	Mr. Subhash Akiwate, Director, Akiwate PCB design services, Pune.
Technobot 2010 Project competition	Judges from Industry & Academia.
Workshop on PADS	Mr. Subhash Akiwate, Director, Akiwate PCB design services, Pune.
Technobot 2010,Project competition	Judges from Industry & Academia.
Workshop on “Labview”	Prof. P. V. Suryawanshi
“Power supply design contest”	Dr. Sanjay. A. Patil and Mr. Satyajit Pangaonkar
“Design and simulation contest”.	DhanashriGawali
Workshop on “Microcontroller Programming”	Aadeesh Bhagwatkar, Mr. Aman Gupta
A National level event “MAE Quest 2011”	Judges from Industry & Academia
Workshop on “Usual follies in C Language programming”	Mr. Nagesh Patil
Project Competition	Faculties of E&TC Dept
Technical events “Industry on campus” and “Spectrum 2012”	Alexander Adyt, Vikram DesaiDeshmukh, Ritu ,Sandeep Athawale, Mr. Ninad Dixit
2 Days workshop on PCB design	Mrs. Smita Pawar ,Mr. Sanjeev

	Ranjankar
Add-on module on PLC Industrial Automation concepts	Mr. Sachin Bapat.
“Under Graduate National level Conference on Emerging Trends in Electronics & Telecommunication Engineering.- UGCON-2013”	Prof. V. B. Bapat, Prof. V. B. Jawale
Workshop cum Competition on Robotics	Mr Satish Kumar ,WebnetInfotechPvt Ltd
Workshop on ATMEL AVR Controller	Jay Gaikwad-Anvil Technologies. Rahul Bhatt- ROBOTA Cop. Pune
Workshop on Digital Image Processing using MATLAB	Avinash Ithape , TECHNICAL SPECIALIST, TATA ELXSI LIMITED (India
Workshop on Electronic Product Design	Mr. Vinayak Bapat
Workshop on VHDL Programming	Prof. Prabha Kasliwal
E-yantra ROBOTIC competition	Piyush, E-yantra Engineer, IIT Mumbai
2-day Workshop on PIC16F8XX Controllers	Dr. Ajay V. Deshmukh, Resonance Technology, Pune
<b>Information Technology</b>	
Innovation 2012 ,Regional Research Conference sponsored by UOP	Various Researchers as contestant
National seminar on Reverence of Research in Teaching learning process	Dr. S.E. Talose , Mr. A.M. Patankar, Dr.M.L.Kulkarni.
Research Talk	Dr. Y.J.Bhalerao, Dr. Vijay Wadhai, Dr. S.S.Sonowane, Dr. Sanjay Patil, Dr.B.P.Pani
<b>Mechanical Engineering</b>	
Innovation 2012 ,Regional Research Conference , sponsored by UOP	Various Researchers as contestant
National seminar on Reverence of Research in Teaching learning process	Dr. S.E. Talole, Mr. A.M.Patankar(BARC), Dr.M.L.Kulkarni.(MITAOE)
Guest lecture	Dr. Y.J.Bhalerao, Dr.Sanjay Patil, Dr.S.M. Khainar Dr.Vijay Wadhai,Dr. S.S. Sonowane, ,Dr.B.P.Patil, PrasheelSuryawanshi
<b>Engineering Science</b>	
NCEAM Program per academic year	Dr, T. P. Shrinivasan, Scientist ISRO
National Conference on Engineering Applications of Mathematics	Dr.T.P.SrinivasanDr.S.M.Khairnar
Mathematics Quiz Competition	-----
National Science Day	Dr. R.C.Pathak
Mathematics Quiz Competition and	-----

Poster Presentation on Applications of Mathematics in Engineering	
SciCon	Dr Sulbha Kulkarni

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

<b>Department</b>	<b>Research Areas</b>	<b>Faculty Expertise</b>
<b>Chemical Engineering</b>	Energy and Environment	M. B. Patil
	Advanced Separation Processes	S P Shewale
	Process Design and Modeling	Dr. S. V. Taralkar
	Reaction Engineering and Process	N. M. Rane
<b>Computer Engineering</b>	Computer Networks	S. A. Jain
	Systems	A. H. More
	Machine Intelligence and Applications	Vijay Rughwani
	Data Mining	M. U. Kinikar
<b>Electronics Engineering</b>	VLSI & Embedded Systems	P. S. Kasliwal
	Image & Signal Processing	Sonali Bhadoria
	Power Electronics	M D Goudar
	Automation	. D Y Sakhare
<b>Electronics And Telecommunication Engineering</b>	Systems and Control	Prasheel V.
	Signal and Image Processing	Vinayak B. Kulkarni
	Embedded Systems and VLSI	Bhiarvi N. Sawant
	Wired and Wireless Communication	Shubhangi
<b>Information Technology</b>	Networking	S.M.Bhagat
	Wireless Networking	J.A.Patil
	Database & Big Data	P.P.Chaudhari
	Image Processing	B.C.Bhokse
	Operating System	S.M.Bhagat
	Distributed System	J.A.Patil
	Internet Technology	S.M.Bhagat
<b>Mechanical Engineering</b>	Heat Power & Thermal Engineering	Dr. Y.J. Bhalerao
	Design and Manufacturing	Dr.M.L.Kulkarni
	Thermal Engineering & Heat Power	N.B.Totala
	Design Engineering	M.M.Charde
	Design And Metallurgy	B.S.Padekar
<b>Engineering</b>	Polymer synthesis for waste water	Dr. A.M. Kotha

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

- Initiate and promote MoU with industries and R&D organizations.
- Arrange talks and interactions by eminent personalities from industry, R&D organizations and institutions of repute; for the better understanding of research methodology and practices currently followed.

**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 percentage of faculties utilized Sabbatical Leaves in last five years is 2%. It is useful for research in collaboration and increasing the interaction with outside world. Due to this facility various research proposals are forwarded and received funding for setting up research facilities.

**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)**

- Students are motivated to participate in various technical programs and contests inside and outside institute like Avishkar, Prakalp, Robocon to demonstrate research and project work
- Institute provides fund to encourage and support students to participate in various project competitions.
- Project exhibitions are organized to demonstrate project work for transfer of relative finding of research
- Institute encourages faculties to visit industries, institutes and organizations to give invited lectures and keynote speeches.

**Participation of Faculty in Research Activities**

Sr. No	Academic Year	No. Of Conferences Attended	No. of FDP/ Workshops Attended	Any Other
1	2009-10	79	46	17
2	2010-11	51	51	50
3	2011-12	42	78	61
4	2012-13	31	82	46
5	2013-14	27	65	20

### 3.2 Resource Mobilization and 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.**

Particulars	Utilized Amount AY 2009-10 (Rs. in Lakh)	Utilized Amount AY 2010-11 (Rs. in Lakh)	Utilized Amount AY 2011-12 (Rs. In Lakh)	Utilized Amount AY 2012-13 (Rs. In Lakh)	Sanctioned Budget AY 2013-14 (Rs. In Lakh)	Utilized Amount AY 2013-14 (Rs. In Lakh)
Information Resources-Books/Journals	11.02	27.69	26.65	34.86	30.00	1.30
Laboratory Equipment	106.04	74.29	70.61	207.18	160.00	47.36
Laboratory Consumable	3.32	5.97	13.58	6.67	15.00	5.13
Travel	3.74	5.75	12.02	10.92	13.00	9.48
Conferences And Seminars	4.21	14.91	0.28	4.55	5.00	1.58
Training /Workshops	5.20	2.40	2.95	1.87	5.25	2.27
Student Activities	40.12	66.00	66.33	69.66	97.00	62.07
Industrial visit	3.54	3.19	4.93	5.00	5.00	1.58
<b>TOTAL</b>	<b>177.19</b>	<b>200.20</b>	<b>197.35</b>	<b>340.71</b>	<b>330.25</b>	<b>130.77</b>

**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?**

Sr. No	Name Of Faculty Member	Name Of Research Project Undertaken	Amount as Seed Money in Rs.	Total Cost of the Project
1	N. M. Rane	Removal of Cr(VI) from Industrial waste by using Agrowaste	2.47	2.0
2	S. M. Bhagat	Development of VANET Routing Protocol for Intelligent Transport	0.25	1.4

3	Dr. Y. J. Bhalerao	Thermal analysis of face and shoulder combined grinding process	7.0	30
4	S. S. Barve	Cognitive Radio Network using GNU Radio and USRP	0.20	1.4

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

Institutes encourage and provide financial support to students for their research

- By providing fund for purchasing project equipments (Hardware and Software)
- By providing finance for conferences and national and international level competition
- By providing financial support to encourage students to become member for professional bodies and digital libraries.

### 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 interdisciplinary research.

Sr . No	Name Of Project	Participating Department	Name Of Supervisor/G uides
1	ROBOCON 2014	Computer Engineering ,Electronics, Electronics and Telecommunication, Information Technology, Mechanical Engineering	Mr. S.A. Khandekar
2	SAE-BAJA 2014	Computer Engineering ,Electronics and Telecommunication, Information Technology, Chemical Engineering, Mechanical Engineering	Mr. Pavan Chaudhari
3	SAE-SUPRA 2014	Computer Engineering , Chemical Engineering, Mechanical Engineering	Mr. Pavan Chaudhari
3	ROBOCON 2013	Computer Engineering , Electronics, Electronics and Telecommunication, Information Technology, Mechanical Engineering	Mr. S. A. Khandekar
4	ROBOCON 2012	Computer Engineering ,Electronics, Electronics and Telecommunication, Information Technology, Mechanical Engineering	Mr. Chougule



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

- Library: Journals, Reference Books, Proceeding Copies of National and international conferences
- Lab Equipments: Latest technology pertaining Hardware and Software of all department related all research domain
- Institute maintain log books and entry registers to keep records of usages
- R& D Cell takes periodical review of all research facilities to know the status of all research areas

### 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.

Industry/other Beneficiary Agency	Created Research Facility/ Instruments	Grants / Finances in Rs.in lakh
<b>Chemical Engineering</b>		
Honeywell	Process plant simulation software- Unisim	Softwares
AICTE, New Delhi	Gas Chromatography	6.0
RPS, UoP	Batch Extractor, Soxhlet extractor	1.5
	Batch Extractor, Soxhlet extractor	1.5
	Adsorption column, Perstartic pump, UV Spectrophotometer	2.0
	Batch Extractor, digital speed controller agitator, temperature controller	2.5
	Ultrafiltration membrane setup	1.5
	Cross flow filtration setup, compressor cum vacuum pump	2.5
	Ultrafiltration membrane setup	1.5
<b>Computer Engineering</b>		
RPS, UoP	Samsung LCD Monitor and Samsung Printer	1.0
	Dell VOSTRO	1.5
	Wireless Sensor Nodes	1.4
	USRP B210	1.4
RPS, AICTE	USRP N210 Kit, SBX-40 USRP Daughterboard, Octo-Clock Bootable USB, Vertical Antenna, Wireless Controller	16.38
<b>Electronics Engineering</b>		
NSDC	Robotics Components	2.25
<b>Electronics And Telecommunication Engineering</b>		
AICTE - MODROBS	Inverted Pendulum System, Industrial Workstation, Embedded Control System Development Setup, TMS320F28335 Development Board with Isolation modules for Input, Output and	15

	<b>PWM</b>	
DAE – BRNS	C2000 Series JTAG,Emulator	6.91
RPS, UoP	MSP 430 Processor Kit Development Board for PWM to control through MSP 430	0.75
	Wireless Communication Setup with Labview	2.8
DAE BRNS	Industrial Plant Emulator	24.39
<b>Information Technology</b>		
RPS, UoP	Library Books, Digital Camera, miscellaneous material	1.1
RPS, UoP	Wireless Access Points, Remote client devices	0.5
<b>Mechanical Engineering</b>		
Science and Engineering Research Board	Universal CNC cylindrical grinding machine	12

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

The depth of R&D culture, in any institution is judged by the number of grants approved and funds generated via various projects. A large number of new research projects are initiated every year with funding from various national and international governmental organizations and industries. The R&D cell keeps the faculty, abreast of all such announcements for R&D projects and encourages them to submit proposals for funding.

**Ongoing and Completed Research Projects are as follows:**

Nature Of Project	Duration Year From To	Title Of The Project	Name Of Funding Agency	Grant Rs. in Lakhs		Total Grant Received till date
				Sanction	Received	
	Chemical Engineering					
	2009 -2011	Water hyacinth based aquatic treatment for Industrial Waste	RPS, UoP	2.5	2.5	14
	2008-2010	Optimization of Supply Chain Networks	RPS, UoP	1.5	1.5	
	2008-2010	Revolving Tray Tower	RPS, UoP	1.5	1.5	
	2007-2009	Extraction of Anti-diabetic active ingredients from medicinal plants/herbs	RPS, UoP	1.5	1.5	
	2007-2009	Compact Heat Exchanger for Heat Recovery	RPS, UoP	1.0	1.0	
	2012 Ongoing	Isolation of Active ingredients from Crude Extract of Medicinal Plants using Membrane Processes	RPS, UoP	2.5	2.5	
	2012 Ongoing	Recovery of Sugar from Sugar Cane Juice by Ultrafiltration	RPS, UoP	1.5	1.5	
	2011 Ongoing	Removal of Cr(VI) from Industrial waste by using Agrowaste	RPS, UoP	2.0	2.0	
	Computer Engineering					
	2007 -2009	2.5 D Facial Dynamic Representation For Personal Identification	RPS, UoP	1.5	1.5	4.4
	2007 -2009	Image Processing Server Based On Java Advanced Imaging For Distributed	RPS, UoP	1.0	1.0	
	2006- 2009	Network Based Approach For Image Enhancement Using Authorative Segmentation	RPS, UoP	1.0	0.5	
	2012 Ongoing	Cognitive Radio Network Using GNU Radio And Universal Software Radio Peripherals	RPS, UoP	1.4	0.7	
	2012Ongoing	Wireless Sensor Network For Agricultural Environment Sensing	RPS, UoP	1.4	0.7	
	Electronics Engineering					
	2008-2010	Capacity improvement through adaptive power control in CDMA	RPS, UoP	1.0	1.0	2.87
	2008-2010	Implementation of arithmetic unit using Vedic mathematics in FPGA	RPS, UoP	0.50	0.50	
	2013 Ongoing	Development of embedded platform for summarization algorithm	RPS, UoP	1.0	0.5	
	2013 Ongoing	Development of effective method for evaluation of vocal cord disorders with speech analysis	RPS, UoP	1.75	0.87	
	Electronics And telecommunication Engineering					
	2012 Ongoing	Spectrum Sensing in Cognitive Radio Networks	RPS, UoP	2.80	2.38	2.94
	2011 -2013	Software and Hardware Implementation of High Speed Digitally Controlled SMPS using MSP430	RPS, UoP	0.75	0.56	
	Information Technology					
						1.7

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	2009-2010	Adaptive Image Contrast Enhancement For Medical Images	RPS UoP	1.0	1.0	
	2013 Ongoing	Development of VANET Routing Protocol for Intelligent Transport System	RPS UoP	1.4	0.7	
	Science Engineering					
	2009-2011	Synthesis, characterization and electrochemical investigation of coumarin based metal complexes	RPS,UoP	1.5	1.5	9.14
	2011 -2013	Chemical & Biological removal of Pollutants from waste water	RPS, UoP	2.0	1.7	
	2009 -2011	Geometrical Aspects of Univalent function	DST	0.84	0.84	
	2008 -2011	Applications of GFT on duality principals	DAE	2.4	2.4	
	2008 -2010	Application of Univalent and Multivalent Functions	RPS(UoP)	1.5	1.5	
	2009-2011	Omitted area problems and applications	RPS(UoP)	1.2	1.2	
	Chemical Engineering					
	2009-2011	Extraction of Active ingredients from Ocimum Sanctum Linn-	AICTE New Delhi MODROBS	6.0	6.0	6.0
	Computer Engineering					
	2012 Ongoing	Efficient And Enhanced Spectrum Management Using Cognitive Radio Networking	AICTE New Delhi	16.38	15.03	15.03
	Electronics And Telecommunication Engineering					
	2009-2010	Development of Industry Standard Embedded Control System Lab. set-up for Linear and Non-linear systems	AICTE – MODROBS	15	15	40.3
	2010-2012	Design and Development of Active Disturbance Rejection Control Scheme for a class of Non-Linear Systems	DAE – BRNS	6.91	6.91	
	2013Ongoing	Observer based Control of Uncertain Dynamical Systems with Application to Industrial Servo Control	DAE – BRNS	24.39	18.39	
	Mechanical Engineering					
	2012 Ongoing	Thermal analysis of face and shoulder combined grinding process	DST	30	14	14
	Chemical Engineering					
Any Other (Specify), grants to conduct Training and	2013	Role of Bioenergy on sustainable growth	AICTE	1.5	1.5	2.75
	2013	Workshop on Handmade Paper	RPS,	0.5	0.5	
	2012-13	Workshop on Business Intelligence	“QIP” UoP	0.5	0.5	
	2012-13	Workshop on Ubiquitous Computing	“QIP” UoP	0.25	0.25	
	Electronics Engineering					1.74

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Seminars , Conferen ces	2009-10	National Conference on Emerging Trends in Embedded System and VLSI-2009”	QIP” UoP	1.25	1.25	
	2010-11	STTP “ARM9 Core and Embedded Linux” from 3 <sup>rd</sup> to 7 <sup>th</sup> Jan 2011	QIP” UoP	0.49	0.49	
	2013-14	National level workshop on analog and digital CMOS VLSI design using Microwind	QIP” UoP	0.5	--	
Grand Total						<b>114.87</b>

### 3.3 Research Facilities

#### 3.3.1 What are the research facilities available to the students and research scholars within the campus?

MITAOE maintains an extensive range of research facilities and equipment spread across research disciplines and departments. Facilities like Central library and Internet with 50 Mbps supports exploration of various information resources and access to digital libraries. Apart from dedicated computer system, sophisticated instruments, modeling tools, data processing software, and modern equipments are provided for creating the research infrastructural facilities to meet the needs of new and emerging areas of research. Following table represent major research facilities in various departments,

Name of the Department	Research Facilities
Chemical Engineering	UV Spectrophotometer, Gas Chromatography, Digital pH Meter Digital Conductivity Meter, Extraction equipments, Adsorption columns, Membrane separation assembly
Computer Engineering	Wireless Sensor Nodes, Tablets, Cloud Setup, Universal Software Radio Peripherals
Electronics	DSP board, DV module, Pyranometer, Solar photovoltaic panel, Virtex FPGA kit, Triggering Module Trainer, Power Module Trainer, Digital power factor meter, Wireless Sensor Network (Gateway), Purpose Target Board (TR- MSP 430), LCD Target Board), JTAG Emulator, 3 Axis Accelerometer, Long Range Wireless Module, Firebird v bots, Robotino bots
Electronics and Telecommunication	Inverted Pendulum System with Executive USR&RT Simulink Interface, Embedded Control System Development Setup, TMS320F28335, Development Board with Isolation modules for Input, Output and PWM, C2000 Series JTAG Emulator, Embedded Development Platform - NI sbRIO, Compact DAQ System - NI Cdaq, Industrial Plant Emulator Wireless Communication Setup with Labview
IT	Qualnet Network simulator, CISCO Routers
Mechanical Engineering	lathe machines, grinders TIG, MIG, CO <sub>2</sub> Welding Machine, Radial Drill and Milling Machine with DRO, Auto desk Inventor, CATIA (DIC-EDU)(ED2 EDU), Ansys (32000 Nodes), MATLAB, Cognifront Engineering Graphics, Delcam (Feature TURN ) (Feature MILL 3D) (FeatureMILL 5X) (FWIRE) (Feature CAM Solid Modeling )

#### 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?

MITAOE takes constant efforts to improve its infrastructure requirements to facilitate research in new and emerging areas,

- Research groups involving faculties and students are formed by the institute for identifying, planning and carryout research in thrust areas.
- These groups upgrade and create infrastructure facilities to meet the need of the researcher in new and emerging area.
- To meet the demand of new leading edge technology, institute continuously identify and procures new equipment's for research work suggested by research groups.
- Provision is made in institute budget for procuring latest software and equipment's to carry out the research work across all departments.
- Faculty and students always encouraged to interact with industries for exploring the avenues of collaborative and emerging research.
- Faculties are encouraged to apply various funding agencies to establish research facilities through sanctioned funded project.
- Constant initiatives taken to develop collaborations with Industry, Research Colleges and Abroad Universities etc.

**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.**

Sr. No.	Industry or other Beneficiary Agency	Created Research Facility/ Instruments	Grants / Finances in Rs.
1	Honeywell	Process plant simulation software- Unisim	Software
2	NSDC	Robotics Componants	2.25 LACS
3	DAE - BRNS	C2000 Series JTAG Emulator	6.91 lakhs
4	DAE - BRNS	Industrial Plant Emulator	24.39 lakhs

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

- Institute encourages students & research scholars to visit different research labs, IITs, and other organizations for research purpose.
- Institute arranges industrial visits for student.
- Institution is having membership cards from the leading libraries like IIT, British Council Library etc., to allow faculty and the students to use these information resources.
- Institute supports for students and faculty for research competition and exhibition.
- Supporting the students to develop the projects for IBM TGMC projects

Sr. no	Name Of Research Facility	Location and Details	Purpose
1	Mass Spectroscopy	University of Pune	Analysis of experimental samples
2	Scanning Electron Microscopy	Indian Institute of Technology,	

		Mumbai	
3	FTIR	Indian Institute of Technology, Mumbai	
4	XRD	National Chemical Laboratory, Pune	
5	High Performance Liquid Chromatography	Institute of Chemical Technology, Mumbai	
6	Voltage Security API	Persistent India Pvt. Ltd.	Final Year Project
7	Automotive Research Association Of India	Kothrud, Pune	Literature Survey Research Study

**3.3.5 Provide details on the library/ information resource centre or any other facilities available specifically for the researchers?**

Sr.No	Name Of Information Resource
1.	Online Journals (IEEE, Scencedirect, Springer, ASME etc)
2.	Journals like IETE, Electrical India, Journal of the Instrument Society of India, Journal of Mechanical (IE), ASME, International Journal of Advance in Mechanical Engineering, Advances in Vibration Engineering, International Journal of Mechanics & Thermodynamics, ICFAI University Journal of Mechanical Engineering, Indian Journal of Industrial Engineering & Technology, International Journal of Product Design, International Journal of Fluid Mechanics, International Journal of Mechanical Automobile Engineering & Research, Indian Journal of Nanotechnology & Applications, Journal of Tribology Research, Journal of Structural Engineering, Journal of Ramanujan Mathematical Society
3.	Chemical Abstracts, Automotive Abstracts
4.	Magazines like Air conditioning and Refrigeration, World Pumps India, The Machinist, Search: The Industrial source book, Indian Foundry Journal, Cutting Tool, CSI Communications, Linux for You, ACM Communication
5.	Reference Books on various research topics and subject
6.	Computational facility

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

Sr. No.	Research Area	Name of Collaborative Research Facility	Collaboration with
<b>Computer Engineering</b>			
1	Systems	Cloud Setup	NxTech, Pune
<b>Electronics Engineering</b>			
4	Embedded	Research lab	Gill instruments



5	Robotics kits	E-Yantra centre	IIT Bombay
		FESTO	NEX Robotics/ FESTO / NSDC
<b>Electronics and Telecommunications</b>			
6	Systems & Control	Industrial Plant Emulator	BRNS
<b>Information Technology</b>			
7	Business Intelligence	Develop a BI Lab	Opine Group Pune
8	Networking	CCNA Lab	CISCO
9	Network Security	Ethical Hacking Domain	Seed Infotech, Pune

### New Research Facilities created by department to promote research

Sr. No.	Research Area	Name of Research Facility	Objectives
<b>Computer Engineering</b>			
1	Systems	Cloud Setup	Optimal resource utilization Cost Reduction Student Exposure to new Technology
2	Networking	Smart Phones	Device portability with existing system Android OS Exposure to students
3	Networking	WSN Nodes	Optimal resource utilization Cost Reduction Student Exposure to new Technology
<b>Electronics Engineering</b>			
4	VLSI & Embedded	Research lab	DSP Educational Practice board, Long Range Wireless Module, Real Time JTAG Emulator, Axis Accelerometer
<b>Electronics and Telecommunications</b>			
5	Wired and Wireless Communication	Frequency Measurement Analysis facility	To analyze different frequencies using wired and wireless communication set up
6	Wired and Wireless Communication	Fiber Optic Measurement facility	To measure loss in long distance Optical Fiber and to analyze faults in Link
7	Systems & Control	Embedded control system lab setup	Development of embedded control system lab setup
8	Systems & Control	Motion Control System	Industry standard plant for testing control algorithms
9	Systems &	Data Acquisition	Exposure to Industry standard

	Control	and control system development lab setup	DAQ platform
10	Embedded Systems	Embedded System development facility	Explore the Embedded Tool chain & low cost & low power Embedded system design
11	VLSI	VLSI based system design and development facility	Explore the VLSI development platform
12	Signal & Image Processing	DSP development environment	To use facility for Hardware Platform of Texas Instruments
<b>Mechanical Engineering</b>			
13	Manufacturing	Advanced welding, Grinding machine	To carry out different machining processes and metal joining processes manufacture job or product with better productivity
14	Material Science	Universal testing machine, Vickers cum Brinell and Rockwell cum Brinell	To conduct various universal testing bending, torsion on specimen and hardness test on machines.
15	Industrial Fluid Power	Hydraulic and Pneumatic kits comprising of DCVs, FCVs and PCVs, hoses, hydraulic motors, pumps and reservoirs	To build different hydraulic and pneumatic circuits compatible for desired tasks.
16	Computer Aided Design & Computer Aided Manufacturing	Softwares like ANSYS, CATIA, Autodesk Inventor	Simulation of various flows for different processes and models for different parts and analysis.

### 3.4. Research Publication and Award

#### 3.4.1 Highlight the major research achievements of the staff and students in terms of

- Patents obtained and filed -NIL
- Original research contributing to product improvement - NIL
- Research studies or surveys benefiting the community or improving the services- NIL
- Research inputs contributing to new initiatives and social development – NIL

**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?**

No

**3.4.3 Give details of publications by the faculty and students**

Sr. No.	Department	No. of Papers published in peer reviewed journals	No. of publications listed in International DB	Mono-graphs	Chapters In Book	Books Edited	Books with ISBN In international Database	Citation Index	SNIP	SJR	Impact Factor	H-index Average
1.	Chemical Engineering	37	37	-	1	-	-	-	-	-	Average 1.5	Average 2
2	Computer Engineering	142	142	-	-	-	-	Max - 29 Min - 1	-	-	Max - 7.17 Min - 0.67	Max - 2 Min - 1
3	Electronics		34	-	-	-	-	15	-	-	-	5
4	E&TC	50	50	-	01	-	-	7	0.376	0.14	1.452	-
5	Information Technology	19	-	-	-	-	-	Max - 3 Min - 1	-	-	Max - 1.77 Min - 0.821	Max - 2 Min - 1
6	Mechanical	37	27	-	-	-	1		-	-	-	-
7	Engg. Sciences	50	50	-	-	-	-	-	-	-	-	-

**3.4.4 Research awards and Recognition received from reputed professional bodies and agencies, nationally and internationally**

1. Dr. Y. J. Bhalerao received Young Scientist Award of DST under FASTTRACK Research scheme
2. Dr S V Taralkar and Prof. S P Shewale received research award for outstanding achievement in research
3. Sunita Barve awarded for receiving research grant from AICTE and RPS.
4. S. A. Jain awarded for receiving research grant from RPS.
5. Shubhangi M Mahamuni received best paper award in National Conference at Arvindo Institute of Technology, Indore (MP)

6. S.M. Bhagat, J.A. Patil and C.H. Nemade received award for receiving grant from University of Pune
7. P. B. Chaudhari, received “Raftar Award” by SAE India Award in 2011-12 with Prize worth Rs. 1,00,000 and “Best Ergonomics and Aesthetics Award” by SAE India in 2013-14 with Prize worth Rs. 50,000.

### **Incentives given in recognitions for research contributions**

The institute follows a unique point based incentive scheme to reward the research work carried out by faculty in the respective year. This is a one of its kind scheme initiated with the patronage of our Executive Director and serves as an effective motivation for faculty to undertake research in their chosen areas of interest. Following faculty members received R & D Incentives:

Academic Year	Research Incentives received by faculty Members
2009-10	Prachi Rajarapolu, Yashwant V Chavan, Asha Gaikwad, Prasheel V. Suryawanshi
2010-11	Prasheel V. Suryawanshi, Asha A. Gaikwad, Dr.M.D.Goudar, P.S. Kasliwal
2011-12	Uma Nagaraj, Shubhangi M Mahamuni , Smita S Kulkarni, Aniket Gundecha, M.G. Wani, D.Y. Sakhare, .N. Bhadoriya, Prasheel V. Suryawanshi

## **3.5 Consultancy**

### **3.5.1 Give details of the systems and strategies for establishing institute-industry interface?**

MITAOE addresses to a productive institute-industry interface for inclusive growth of its assets. It intends to become a renowned institute providing source of knowledge, expertise, training and breakthrough R&D for industries which may leads to innovations. We follow agenda based on our originated objectives to have a healthy institute-industry interaction.

#### **System:-**

- To bridge the technical gap through effective interaction between institution and industry.
- To get the knowledge or hands-on experience of live projects from industries.
- To offer research, development, consultancy and testing services to solve industrial problems.
- To encourage engineers from industry to deliver lectures in campus. Visits of industry executives and practicing engineers to the Institute for seeing research work and laboratories, discussions and delivering lectures on industrial practices, trends and experiences.
- To sign the Memoranda of Understanding between the Institute and industries to bring the two sides emotionally and strategically closer.
- To deliver quality product to employer.

**Strategies:-**

- Arrange Workshop / FDP / SDP in collaboration with industry.
- Organizing conference and symposia with industry collaboration.
- Arrange industrial training or industrial visit.
- Identify the needs of the students and based on that recognize the industry / industries to make the agreement with them for carrying out the necessary technical activities.
- Identify the domain specific expertise from industry and call them to interact with the students to discuss industrial practices.
- Approaching for short-term/long-term internship at institute level.
- Integrated research programs and case studies by faculty and expertise from industries.

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

The knowledge and expertise of an institute is disseminated through consultancy. Consultancy covers a wide range of activities for clients from various domain. Staff gains valuable experience, as well as possible future benefits including research collaborations and studentships. Our institute delivers the technical expertise and long-term research content to the community through consultancy. We believe in promoting consultancy under our generated policies. The purpose of proposed policies is to ensure the balance between the relevance of voluntary consultancy and the core duties of the academic staff.

**Policies to promote consultancy:**

- Income generated through consultancy will be used for development of student, faculty, staff, department and institute in some ratio.
- Students, faculty, staff are encouraged to attend various development programs and their knowledge will be used for consultancy.
- The use of Faculty resources must be agreed with the Head of Faculty.
- Potential conflicts of interest should be discussed with Head of Faculty.
- Consultancy should only be pursued out of instructional/term time.

**Use of Existing Expertise:-**

- Available expertise will be used for organizing workshop, seminar etc. as per their area of interest in and out of institute.
- Through consultancy faculty and staff are sharing their knowledge for the development of students and staff in various aspects.

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

Institutional goal is to make the process of consultancy easier for academics and the departments in need of their expertise. We encourage staff by providing facilities that supports efficient and effective delivering of consultancy projects.

**Human resource works appreciation,**

- Departments encourage the staff for knowledge up-gradation, by giving on duty leaves, financial assistance to attend various workshops, seminars, training programs etc.

- Staff uses their expertise for revenue generation through consultancy.
- Publishing consultancy work of an individual in Prospectus, Annual Report and News Bulletin.
- Staff will get benefit in their annual appraisal.

**Available facilities for consultancy services are as follows,**

- Well-furnished infrastructure.
- High configured computers with high end servers.
- 24x7 high speed internets.
- 24\*7 UPS / generator backup.
- Certified computer Network.

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

Sr. No.	Name Of Industry	Nature Of Work	Resources Generated	
			Financial	Material
<b>2012 – 2013</b>				
1	iON Tata Consultancy Services Ltd., Pune	Online Entrance Examinations like MS CET, PET, MPSC, AIEEE, JEE AINS, GATE etc.	1,93,940/-	NA
<b>2013 – 2014</b>				
2	iON Tata Consultancy Services Ltd., Pune	Online Entrance Examinations like MS CET, PET, MPSC, AIEEE, JEE MAINS, GATE etc.	7,60,645/-	NA

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

Income Generated through various consultancy is shared / distributed in the ratio (60 : 40) to (Staff involved: Institution)

Sl. No.	Description	% Share of Node Payment	Remunerati on for Manpower	Remark
1	College Share	40%	NIL	Used for Institute Development
2	Department Share	40%	NIL	Used for Department Development
3	Principal	5%	NIL	Honorarium.
4	HOD	5%	NIL	
5	Administrative Head	5%	NIL	
6	Activity Coordinator	5%	NIL	
7	Center Administrator	NIL	Rs. 1125/-	Rs. 750/- for First Session & Rs. 325/- for Second Session.
8	IT Manager	NIL	Rs. 1125/-	Rs. 750/- for First Session & Rs. 325/- for Second Session.
9	Invigilator	NIL	Rs. 750/-	Rs. 500/- for First Session & Rs. 250/- for Second Session.

10	Volunteer	NIL	Rs. 300/-	Rs. 300/- for First Session & Rs. 150/- for Second Session.
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**Mutual benefits accrued due to consultancy:-**

- Faculties / staff involved will get exposure to use their expertise / capability.
- They will economically get benefited and that remuneration can be used for their higher education, self-development and for overall growth.
- Faculties and staff can utilize their time of weekly holidays for generation of revenue that will benefit the institute.
- Available infrastructure can be used for revenue generation and proper utilization.
- Outside peoples visiting our institute, help us for publicity / advertisement of institute.

**3.6 Extension Activities and Institutional Social Responsibility (ISR)**

MITAOE imbibes social responsibility, a concept that includes the dimensions of social responsibility, ethics and sustainability. We believe that these three dimensions should be incorporated, integrated, aligned with our mission, identity and daily activities.

**Highlights:-**

- Social responsibility is one of the mainstays that support our academic and research work, and it is also one of our strategic priorities. We believe that our role is something more than simply the imparting of knowledge and skills to our students and to make active agents of social change
- We aim to address and find solutions to social problems.
- We are committed to defending the ideals, responsibilities and objectives of a socially responsible academic institution.
- Institute has initiated number of community development activities for holistic, ethical and social development of pupils.

**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 student community is being helped by implementing the government reservation schemes and offering good scholarships for both merit and economic basis. The major strength of this college is its ability to ensure holistic development of students to make them responsible citizens by teaching the moral values. MITAOE always motivates the students' social participation and also drives to achieve its goal of providing higher technical education to create equitable society with ethical values. It aims to pursue excellence towards creating students with high degree of intellectual, professional and cultural development to meet the national and global challenges.

**1. Ignited Mind- (Social Students Association):** This group co-ordinates number of social and holistic events to aware pupils inside our premises. This group organizes program regarding general awareness and its objectives are,

- Serving the nation through social activity



- Arranging guest lecturers of social workers for enhancing social awareness
- Overall development of Youth
- Competitive exam forum
- Cultural activities
- Entrepreneurship Development Forum
- Vivekananda Study Circle & Bhagavad Gita Study Group

Sr No	Event/Occasion	Speaker/Resource Person
1	Shiv Jayanti Programme	Mr. Dnyanesh Purandare
2	Exhibition: 'Prachin Bhartiya Vidnyan'	Mr. Vinay Patrale
3	Independence Day	Mr. Anand Katikar
4	Visit to tribal areas near Bhimashankar	Mr. Advait Chothve
5	Youth Day	Mr. Vinay Patrale
5	Elocution Competetion	Mr. Advait Chothve
6	Shiv Jayanti Programme	Mr. Mohan Shete
6	Guru Pournima	Sou. Sindhutai Sapkal
7	Independence Day	Mr. Sharad Ponkshe
8	Ganesh Festival	Dr. Y J Bhalerao
9	Shiv Jayanti Programme	Mr. Milind Vaikar

**2. National Service Scheme (NSS):** N.S.S has enriched our student's souls and minds. The overall objective of this scheme is Education and Service to the society and by the society. Its students program where we cater to the need of the society, as and when required. It helps the students to communicate with the society. The students go to the rural areas and try to develop a Technocratic Environment and help the underprivileged people to develop themselves. Our students arranged program like Water harvesting, cleaning of village and schools, Pulse Polio awareness program, Organizing Expert lectures for villagers.

**3. Computer Awareness Program (CAP):** In 2009, student association of Computer Engineering department has initiated the social activity CAP. Every year students along with faculty members visit a primary school in a remote village to impart the basic knowledge about computer hardware and software.

**4. Blood Donation Camp:** Blood Donation Camps are being organized occasionally in each academic year to create awareness among people within the premises & masses in rural areas (Alandi (D)) and to promote voluntary blood donation.

**5. Old Age Home Visit:** a Student association member spends time with senior citizens and donates things of their daily need like bed sheets, pillow covers, pillows, socks, rice and wheat etc

**6. Visit to Orphanage:** Student association member organizes visit to Anand Gram (Orphanage) and VikasAnath ashram and use to donate groceries, daily needs, food and Study material.



### 3.6.2 What is the Institutional mechanism to track students' involvement in various social movements / activities which promote citizenship roles?

Extra-curricular activities and value education provides avenues to students to become aware of the social environment, the social evils, citizen responsibility and individual contribution to make the society a better place to live.

- We track their Management and inter personnel/ communication skill in the events like 'Idea blaze'.
- Numerous events are arranged and coordinated by students; developing their leadership quality.
- Department student association identify the students those who can work in a team and interested in social program.
- Periodic and regular meetings are conducted for highlighting the social and ethical values.
- Faculty advisors are allotted who tracks the student involvement in various social movement activities is observed and also motivated.
- Faculty advisors are responsible to give the required permission to students for participating in such activities and continuously to monitor their progress in such extension activities.

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

To provide more contemporary insights into the growing graph and upgrading success, MITAOE has systematic strategies to measure quality of performance as well as the quality outcomes. These strategies are constructed for better understanding of the roles of the stakeholders in the educational arena. The activities based on proposed strategies had been carried out to have desired and expected impact.



#### Strategies:

- To gather the stakeholder perception for modifying the educational system to fit our environment and learning needs.
- To ask Institutional stakeholders a series of questions about the current state and future direction of our Institute.
- To implant effective activities that intent to reflect and act upon stakeholder feedback.

**Activities:**

- Suggestion boxes are kept in salient places in the institute and any complaints/suggestions received by the stakeholders are inquired by a committee nominated to look into the issue by the Principal.
- Arranging Guardian/Parent meet
- Involving Alumni association in policy making
- A registered Alumni association of the college has been established which helps the institution in extending their activities like delivering lectures on placement opportunities and provide financial support to meritorious poor students; thus contributes towards overall performance and quality of the institution.
- The goals and objectives of the College are prominently displayed in the Information Bulletin given to the students at the time of admission. The College web site provides adequate space to these goals. They find place in all the offices of the college, library and other major buildings of the college. Immediately after admission the students are made aware of these goals and objectives.
- The management has developed evaluation tools for stakeholders to record their opinion, suggestions and objection for constructive developments for future. Institute is highly concerned with its stakeholder i.e. includes students, parents, staff, alumni.
- Employer Feedback

**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.**

Academic Year	Name Of Activity	Organizing Committee members	Targeted Audience	Purposes	Budget and Expenditure Details
<b>Computer Engineering</b>					
Since 2009 to 2014	Computer Awareness Program	FOCUS: Student Association members	Primary School Students of rural area.	Teaching fundamentals of computer to rural primary school students.	500/- to distribute chocolates to students
2013-2014	Old Age Home Visit	FOCUS: Student Association members	Senior citizens residing in Old Age Home	Spending time with senior citizens and to donate things of their daily need	Rs. 14,500/- (Donation from students and Faculty members)
<b>Electronics &amp; Telecommunication</b>					

2010-2011	Engineers Day	Mr. Chougule	E&TC Dep.	To bridge gap between academics and industry	No Expenses
	Guest Lecture On Youth Empowerment & Skills	Mr. Sandip S Lokhande	SE, TE & BE E & TC students	Art of Living	No Expenses
2011-2012	Workshop on "Personality Development"	Dr. Sanjay. A. Patil	SE, TE & BE E&TC students	To introduce effective communication skills	No Expenses
2012-2013	"Health Awareness Camp"	Mr. S. S. Lokhande	MIT-AOE students & staff	Awareness of Heart care amongst the participants	"Health Awareness Camp"
	"world population day" poster/article show	Mr. Vinayak Kulkarni	SE, TE & BE E&TC students	To generate awareness about population explosion	"world population day" poster/article show
2013-2014	Blood donation Camp	Mr. Satish S. Kabra	Staff & students of MITAOE	Social awareness	No Expenses
	Eco friendly GANESHA MAKING Workshop	Mr. S S Kabra	Staff & students of MITAOE	Inculcate the importance social values	1350/-
<b>Information Technology</b>					
2013-2014	Teachers day Celebration	Mr. S S Kabra	SE, TE & BE E&TC students	To provide platform for students to arrange and co-ordinate programs	Teachers day Celebration
<b>Mechanical Engineering</b>					
2013-2014	Professional development	Department	TE Students	Improve communication skills	In house faculties
	Addon Course – Ansys	Prof. D. B. Panchal	TE & BE Students	Improve Design and analysis skills	50000/-
	Addon Course	Dr. M. T.	TE &	Improve	In house

	Computational Fluid Dynamics	Bhoite	BE Students	analysis skills	faculties
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**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 College undertakes widespread cross-curricular enrichment activities through NSS, Students Associations and other forms of community development activities.
- During admission and orientation, the representatives of these units apprise students on the benefits and scope of the extension activities.
- Details of the programs are displayed on the notice board and an interaction of students is organized with NSS officer, General Students Association, and Coordinator of the Cultural events.
- The department conducts regular extension activities and services so that, education and research benefits the society at large.
- Most of the extension activities are organized by the students association at the department.
- Faculty is frequently called upon to deliver technical and non-technical lectures in various colleges and organizations, both within the city and outside.
- Some of the activities in this connection include health awareness programs, cultural festivals; inter department, and inter-college sports, literacy programs, social activities etc.
- Institute promote to organize an Election Awareness Programme, Indrayani Ghat and Dyaneshwar Mandir Cleaning, Residential winter camp(Village development and polio awareness by volunteers)
- Students are encouraged for Street Play (“Education for everyone”).
- As MITAOE is located at holistic place Alandi , institute always help pilgrims.

**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?**

1. In 2009, a survey was conducted in all the primary schools of Alandi(D) area. Departmental student association found that inadequate facilities in government primary schools, for providing computer related education to school children. To provide the computer literacy student association came with computer Awareness Program (CAP).
2. In 2011, few faculty members and students are working to find the optimized solution for water management system in agriculture sector aiming to help the famers to improve the productivity.
3. In 2013, students of the department have surveyed 3-4 Old Age homes of Pune City through Internet to find various challenges they are facing and their day-to-day activities. After this survey students have decided to visit one of the Old-age home on Independence Day.
4. In 2012, a survey was conducted by Mechanical students as a case study. Later they come up with social problems like pollution. As a

remedial solution for the same they had organized PUC free checkup for everyone within the premises.

5. They also conducted survey in AnandGram orphanage and come up with the problems and now every year they use to visit the same and donated the required needs.

**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.**

**Objectives:**

- Inculcate the importance of social and ethical values.
- To make students capable of identifying serious social problem, its impact and proposing solutions for the same.
- To use of technical knowledge gained during engineering to solve real time problems.
- To realize social responsibility for being a citizen of a country.
- To develop leadership qualities.
- To prepare students for social disasters.

**Expected Outcomes**

- Working in a team and with different team members.
- To adapt various situation in professional and personal life.
- Various sections of society are benefited through various social programs undertaken.
- Management skills
- Leadership qualities
- Social awareness
- Personality development.

**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?**

Institute organizes various community development activities like Robotic trainings to school students, blood donation camp, etc. and community also involves in these activities. Institute provides various training to communities free of cost to encourage them for participation of such activities.

**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.**

Institute developed relationship with blood banks for collection of blood during blood donation camps.

**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.**

Nil

**3.7 Collaboration**

**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.**

Sr. No.	Name of Research Laboratory/Institute/ Industry	Activities conducted by collaborating party	Benefits accrued
<b>Chemical Engineering</b>			
1	Honeywell Automation Pvt. Pune	Process Engineering Add-on course	To impart knowledge of chemical software
2	MIT skill	Process Engineering Add-on course	To impart knowledge of chemical software
3	NCL, Pune	Training and research	To impart knowledge of chemical testing
4	ICT Mumbai	Project work , training Analysis	To impart the knowledge of analysis
5	IIT Mumbai	Project work , training Analysis	To impart knowledge of chemical software
6	S V Plastochem, Nashik	Industrial Visit, BE projects	To impart knowledge of chemical firms
7	SW system(Autodesk), Pune	Design Add-on course	To impart the knowledge about Auto-Cad
8	University of Pune	Project work , training Analysis	To impart the knowledge about analysis
<b>Information Technology</b>			
9	Centre for Research and Industrial Staff Performance (CRISP)	Cisco hands on training of 20 days.	Participated faculties are conducting CCNA courses.
10	Opine Group	Training on Data Warehousing solutions	Students get hands on practice

**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.**

Sr. No.	Name of Research Laboratory /Institute/Industry/ Organization
<b>Chemical Engineering</b>	
1.	Raj Processes Equipments and Systems Pvt. Ltd. Pune
2.	S V Plastochem, Nashik
3.	Rashtriya Chemicals &Fertilizers, Mumbai
4.	Chemsys Process Engineering Pvt. Ltd, Pune
5.	SW system(Autodesk), Pune
6.	Honeywell Automation Pvt. Pune
<b>Computer Engineering</b>	
7.	IBM India Pvt. Ltd. ( MITAOE-IBM software Centre of Excellence)
8.	Microsoft Inc. (Microsoft IT Academy)

9.	NxTech Consulting Pvt Ltd (PRIVATE CLOUD and Computing)
10.	LinsysSoft Pvt. Ltd. (LINUX Training)
11.	Jet king (Hardware and Networking)
12.	Object Oriented Technology ( C++ and Java Training)
13.	Fortune Infocomm and Sandriver (Android and Mobile Application)
<b>Electronics Engineering</b>	
14.	NSDC
15.	Nex robotics / IIT Bombay ( e-Yantra)
16.	Gill instruments , Bangalore
17.	EasyARM Pvt. Ltd., Bangalore
<b>Electronics &amp; Tele-communication</b>	
18.	Rajdeep Info Techno Pvt. Ltd. Pune, Alandi (D).
<b>Information Technology</b>	
19.	Hire on Dot
20.	Opine Group
21.	Parallel Minds Technology Solutions Pvt. Ltd.
22.	Gemini Training and Staffing Pvt. Ltd.
23.	Ayansys Solutions Pvt. Ltd.
24.	Akandum Technologies Pvt. Ltd.
25.	A Plus Education Solutions Pvt. Ltd.
<b>Mechanical Engineering</b>	
26.	JMU Liverpool JOHN moores University
27.	Gemini Training & Staffing Pvt.Ltd
28.	Indian Institute of Tropical Metrology
29.	AKANDUM Technologies Pvt.Ltd
30.	A Plus education solution Pvt.Ltd
31.	i carnegie&Technophilia System Pvt.Ltd
32.	Manchester Metropolitan University

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

Sr. No.	Name of Department/ universities/ industries/Corporate/ institution-community	Activities conducted	Contributed To		
			Establishment of Facilities	Student and Staff support	Infrastructure facilities
<b>Computer Engineering</b>					
1	IBM India Pvt. Ltd	Free training and	IBM Software Centre of	Students and Faculty	All the licensed



		certification program of IBM technology	Excellence is established in 2009	members	version of the IBM software can be used for core research projects
2	nxTechConsultings	Workshop on PRIVATE CLOUD	MIT AOE PRIVATE CLOUD has been setup in 2013	Students and Faculty members	PRIVATE CLOUD environment using freeware which is useful for final year projects.
<b>Electronics Engineering</b>					
3	NEX robotics / IIT Bombay (e-Yantra)	Lab setup / competitions / training to students	Robotics lab	Students	
4	FESTO / NSDC	Robotics kit support / support for robotics competitions (WSI)	Robotino bots	Students	
<b>Information Technology</b>					
5	Centre for Research and Industrial Staff Performance (CRISP)	Provide training to the faculties on Cisco technologies	A lab is setup for department and used for conducting training	SE and TE students participate in training.	Hands on practice on routers to configure Wide area network
6	Akandum Technologies Pvt. Ltd.	Provide training on ethical hacking	Conduction of Ethical hacking workshop and FDP	Students and Staff members were benefited.	
7	Gemini Training and Staffing Pvt. Ltd.				Provided Swarm Robotics Kits
8	A Plus Education Solutions Pvt. Ltd.	Training sessions for engineering/ IT graduates.	Established V SAT setup in the department	Conducted a session on V SAT setup	



**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.**

Sr. No.	National /International Conference	Resource Person/Eminent Scientists/Participants	Description Of Contribution to Event	Date/Duration
<b>Academic Year 2012-2013</b>				
01	Under graduate National Level Conference on Emerging Trends in Electronics & Telecommunication Engineering UGCON - 2013	Vinayak Bapat and Prof. J.B. Jawale	To provide a platform for intellectual enrichment for E&TC students. To kindle the interests amongst UG students towards recent trends in Engineering and Technology. To share the role of disruptive technology as a powerful tool in the handsof a science world.	8th Feb 2013
02	National Conference (Recent Trends in Information technology )	The participants were from eminent institutes in university of Pune.	They share their thoughts and area of research. The event was successful as the research method shared by the participant was discussed further with the students	08-09/02/ 2013
03	NCEAM 13	Dr.T.P.Srinivasan, Scientist ISRO, Ahmedabad	Promotion of Research	6-7 June 2013
<b>Academic Year 2013-2014</b>				
04	National Level Under Graduate Conference on Emerging Trends in Electronics & Communication Engineering UGCON – 2014	<b>Resource persons:</b> Dr. D. S. Bormane Chairman-BoS (Etx), University of Pune Dr. S. R. Jog Chairman-IETE (Pune Center) Mr. Z.C. Bendale Faculty-DYPCOE Dr. V. M. Wadhai Principal-MITCOE Dr. Sanjay A. Patil DGM-ARAI Pune	To provide a platform for intellectual enrichment to the students community.  To kindle the interest amongst UG students towards recent trends in Engg. and Technology	14 <sup>th</sup> March 2014 One day

**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 -**

MITAOE has signed the MoUs with various National and International industries

**Curriculum development/enrichment**

Many co-curricular activities are organized in the department in collaboration with industries to enrich the curriculum. Apart from conceptual knowledge of core engineering branches through curriculum which is designed by University of Pune, students acquire in-depth knowledge of the subject through co-curricular activities.

Sr.	Name of the add on course	Name of the organization
<b>Computer Engineering</b>		
1.	.NET Course	Microsoft Inc.
2.	Workshops	IBM India Pvt. Ltd.
3.	Workshops and Seminars	NxTech Consulting Pvt Ltd
4.	Linux workshops	LinsysSoft Pvt. Ltd.
5.	Workshops	Object Oriented
6.	Hardware and networking training	Jet king
7.	Android and mobile application	Fortune Infocomm and
<b>Information Technology</b>		
8.	Business Intelligence	Opine Group
9.	CCNA	--
10.	Ethical Hacking	Seed InfoTech
11.	Oracle certified Associate	Barclays
12.	Dot Net	Synechron Pvt. Ltd.
13.	Industry practices in core java	Persistent

**Faculty exchange and professional development**

The Faculties and staff from the institute were sent for 2 weeks program conducted by Centre for Research and Industrial Staff Performance, (CRISP), Bhopal on latest Cisco technology. The curriculum is designed by the parent company, Cisco and it was delivered by the certified corporate trainer. The faculties and staff members were awarded certificate by Cisco.

**Introduction of new courses**

Sr.	Name of the	Resource	Name of the
<b>Computer Engineering</b>			
1	.NET (Core +	Allotted by	
2	Core Java		
3	IBM DB2 .RAD &	Allotted by IBM	
<b>Information Technology</b>			
1	Business	Mr. Anand	Opine Group
2	Cisco Certified		
3	Ethical hacking	Mr. Bipin	EC Council

4	Oracle certified	Mr. Jayendra	Barclays
5	Industrial	Mr. Kedar	Persistent Pvt.
6	Dot Net	Mr.	Synechron Pvt.
7	Oracle 10g	Benny Thomas	Purple Leap

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

#### **Strategies for MoU**

- To develop relationship between institute and industry for collaborative work
- To develop relationship between industry for industrial training
- Sharing the expertise with industry
- To enhance consultancy work.
- To identify the needs of the students. Based on that, recognize the industry / industries to make the agreement with them for carrying out the necessary technical activities

#### **Strategy for collaboration with industry /organization in terms of research**

- Maximize collaborative work
- Collaborative research proposals
- Live industrial problems as research problem
- Sponsored students projects
- Planned and established linkages/collaborations related to academic and research activities for students and faculty members in various specializations.
- MOU arrangements with various establishments
- Inviting Expertise from various divisions from other industries for delivering Guest Lectures, key note address in Conferences, invited speaker in workshops and symposiums.
- Conducting joint technical programs and events with other organizations.
- Industrial visits have been organized with the help of various collaborating agencies
- Establishing Industry Institute Interaction cell in the department

## **CRITERIA IV: INFRASTRUCTURE AND LEARNING RESOURCES**

### **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 institute adheres to the norms provided by AICTE and University to provide infrastructure to facilitate effective teaching and learning. The institute never hesitates to create or enhance the infrastructure in view of healthy, comfortable and technology based environment required for teaching and learning. The institute reviews all the infrastructure facilities like of human resources, IT resources, Laboratory equipments, library resources, internet facilities, sports facilities, hostel facilities, canteen, transport facilities and health and hygienic requirements every year before start of the session and enhances the necessary infrastructure in view of changed syllabus by the University or in view of additional courses etc.

#### **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 equipment for teaching, learning and research etc.**

The institute always comes forward to provide IT enabled environment for active teaching and learning in the class rooms. Each department is provided with class rooms equipped with OHPs or LCD projectors and smart boards.

The institute facilitates spacious and well ventilated class rooms with reasonable aspect ratio.

All the class rooms and laboratories are equipped with white boards and markers to create dust free environment in class rooms.

Public announcing Systems are also provided in all class rooms to enable any mass communication required

The college has a fully air conditioned seminar hall with a seating capacity of 250 students and is equipped with LCD projector, LCD screen, white board and public addressing system.

Each department is equipped with sufficient number of tutorial rooms to conduct classes in small groups to answer the queries of students.

The institute has well equipped laboratories in which the instruments are continuously enhanced and maintained to suit the requirements of institute intake and to give better practical exposure to students.

The institute optimally provides and utilizes the infrastructure for teaching, learning and research.

The departmental wise area details of class rooms, laboratories, tutorial rooms and seminar halls are as follows:-

Branch	No. of Class rooms	Area of class rooms (sq. m)	No. of labs	Area of labs	Area of Tutorial Rooms (sq. m)	Area of Library	Total area (sq. m.)
E & TC	02	189.56	08	645.46	46.40	*	881.42
Computer	06	409.70	10	710.48	53.31	72.66	1246.15
Electronics	02	185.40	09	656.81	30.00	*	872.21
IT	02	160.87	05	342.00	-	18.00	520.87
Mechanical (including workshop)	03	209.06	15	2017.33	71.72	18.00	2316.11
Chemical	02	185.40	11	1036.00	33.00	16.00	1270.40
FE	06	331.98	03	213.99	-	-	545.97
Library							902.00

Note: \* - Common with one of the laboratories

In addition, the Mechanical Department is equipped with 2 drawing rooms of area 133.56 sq.m.

The institute is provided with many specialized facilities and equipment for teaching, learning and research etc.

Many computer based teaching learning tutorials are possessed by various departments, total cost of which is around 19 lakhs.

To facilitate all the R & D activities in the institute among students and faculty members the R & D cell is functional and is being steered by the Principal, Dean (R&D) and active representatives from each department. A unique incentive increment scheme was introduced for faculties to boost R&D culture in the institute. Each department is allotted with a special budget for R & D to encourage research in the institute.

Major equipments available with the departments which are used for students' laboratory work as well as for research are shown in the tables below-

#### 1. Computer Department:

S.No	Equipment	Cost
1	3com make 4250T-48port switch(Qty. 3)	2,52,000.00
2	IBM X3650 Series Server, Intel Xeon DCDC	1,61,150.00
3	IBM X3200 Series Server, Intel Xeon DCDC	89,280.00
4	IBM X3200 Series Server, X3200 M2, Intel Xeon, E3110 (Qty.02)	1,00,000.00
5	CISCO 2800 Router	1,26,860.00
6	Private Cloud Setup	60,000.00
7	Smart Board Device	66,000.00
8	Wireless Access Point(Qty. 06)	2,10,000.00

9	Wireless Controller	1,00,000.00
2. Chemical Department:		
S.No	Equipment	Cost
1	Heat Exchanger Control System (PC based)	1,44,600.00
2	Interacting -Non Interacting System	69,000.00
3	Time constant of manometer	72,619.00
4	Process Control Trainer with SCADA Software	6,30,000.00
5	Shell & Tube Heat Exchanger	71,574.00
6	Plate Type H.E	1,31,780.00
7	Heat Transfer in agitated vessel	1,12,780.00
8	Plate and Frame Filter Press	68,452.00
9	Power Consumption in Agitated Vessel	93,780.00
10	Leaf Filter	1,44,780.00
11	Trommel	67,059.00
12	Sigma Mixer Model	50,000.00
13	Packed Bed Absorption Column	57,000.00
14	Humidifier and Dehumidifier	67,500.00
15	Fluidized bed dryer	1,49,780.00
16	Total Reflux Distillation Column	58,000.00
17	Solid Liquid Extraction (Packed Bed)	1,30,780.00
18	Tinocular Microscope with Computerized Attachment	95,800.00
19	Ultra-Sonic Flow Detector	1,62,000.00
20	Impact Testing Machin	95,000.00
21	Kinetics of Dissolution of Benzoic acid	50,660.00
22	Gas Chromatography	524363.00
23	Ultraviolet spectrophotometer (UV) Compaq monitor, keyboard, mouse, weighing balance.	296572.22
24	Sharp LCD Projector	61,538.00
25	Smart Board Device-"Eye RIS Micro3110"	69,289.50

## 3. Electronics Department:

S.No	Equipment	Cost
1	DC Power supply unit I/P-3 Phase 350 to 450V	51,200.00
2	Complete Robotino Package, Gripper.	9,23,715.91
3	Complete Robotino Package	5,82,789.19
4	Usb Based 32 Channel Logic Analyses & Pattern Generator (2 Qty.)	1,29,822.00
5	IBM X-Series X- 3650 Rack Mountable Server	1,47,680.00
6	AC Drive	82,400.00
7	PSIM - 7.05 Software(Network Version)	3,30,000.00
8	LCD Projector	61,538.00
9	PEL Main Module With 8 Modules(2 Qty.)	2,03,063.00
10	3Phase Dual Converter	53,950.00

## 4. E &amp; TC Department:

S.No	Equipment	Cost
1	RACK 170 D-Link I/O with TR BOX, D Link 24 port patch channel, Intel 410 switch 24 port, 48 port switch	1,65,325.00
2	WG-DSP Port 1.2 Fixed Point Trainer	87,750.00
3	DSP Development Board	66,560.00
4	Digital Storage Oscilloscope	1,22,969.00
5	Communication Trainer Kits – Set 1	92,361.00
6	Mega Zoom Oscilloscope – 20 MHz	1,71,132.00
7	Digital Communication Trainer Kits – Set 1	1,03,939.00
8	TV Trainer Kits	67,197.00
9	Microwave Lab Kit VX 2001	57,987.00
10	Microwave Lab Kit VX 2002	58,586.00
11	Spectrum Analyzer – 1.5 GHz	3,08,741.00
12	Microwave Trainer Set – 2	1,15,830.00
13	Digital Storage Oscilloscope	1,47,210.00
14	Phase Locked Signal Generator – 1	66,959.00
15	Digital Communication Trainer Kits – Set 3	86,962.00
16	Antenna Trainer Kit – 800 MHz (SIGNET S45)	1,10,568.00
17	Advanced Communication Trainer Kits	1,38,375.00
18	Audio Video Trainer Kits	1,23,750.00
19	Digital Communication Trainer Kits – Set 4	78,006.00
20	Antenna Training System – 5 MHz -2 GHz	3,24,000.00
21	Wireless Communication Setup	1,38,823.00
22	8085 Trainer Kit with SMPS, Interfacing Kits, EPROM Programmer, UV Eraser	1,79,771.00
23	CRO – 20 MHz, Dual Channel	54,900.00
24	Logic Analyzer – 48 Channels EG340	1,94,688.00
25	Lab. Tools 48: Universal EPROM Programmers Updated on 25/11/2010	77,937.00

## 5. Mechanical Department:

S.No	Equipment	Cost
1	Vibration Lab-11 Experiments (On one common frame)	52,594.00
2	Electrical Analogy Apparatus	52,593.75
3	Heat Transfer through Composite Wall Apparatus	64,350.00
4	Computerized 4 Cylinder, 4 Stroke Petrol Engine (MPFI, Wagon - R Engine) with Hydraulic Dynamometer	5,78,363.00
5	Computerized VCR Engine Set up, 1 Cylinder, 4 Stroke Diesel Constant Speed Power 3.5 kw@ 1500 RPM CR 12-18:1 with Eddy Current Dynamometer	5,36,895.00
6	Diesel Power Plant - Single Cylinder Four Stroke Diesel Engine Test Rig with AC Alternator	1,43,085.00
7	Gear Pump Test Rig	75,000.00
8	PLC Based Hydraulic Trainer with Polyhedron Make Components HYD 05	2,70,000.00
9	PLC Based Pneumatic Trainer with JELPC/SHAKTI/DATTA Make Components PNEU 05	1,74,375.00
10	Magnetic Particle Crack Detector	73,700.00
11	Jominy End Quench Test Set up with Fixture & Muffle Furnace	72,900.00
12	Universal Testing Machine	8,15,957.00
13	Vickers Hardness Tester with Stand	1,61,980.00
14	Profile Projector	1,21,500.00
15	Air Conditioning Close Loop Trainer	1,02,262.50
16	Ice Plant Tutor / Trainer	86,062.50
17	Vapour Compression Cycle Tutor (Refrigeration Tutor) Without Computerized System (Capacity 0.1 Ton)	54,490.00
18	Heat Pump Trainer	1,23,750.00
19	Universal Table.	1,23,750.00
20	Epicyclic Gear Train & Holding Torque Apparatus	57,357.00
21	Belt Drive System & Measurement of Slip Apparatus	56,418.75
22	To Measure Torque Transmitting Capacity of Clutch	90,843.75
23	Reciprocating Air Compressor (2 Stage)	65,813.00



24	Bomb Calorimeter	57,037.50
25	Pelton Wheel Turbine Test Rig (1 Kw Capacity With 5 HP Pump)	2,04,831.00
26	Francis Turbine Test Rig 1 Kw Capacity with 5 HP Supply Pump	1,98,495.00
27	Centrifugal Air Compressor (Blower) Test Rig.	1,53,450.00
28	Wood working lathe	84,937.00
29	Vernier Calliper 150 mm / 200 mm / 300mm	57,500.00
30	Arc Welding Machine (3 Ph)	66,373.00
31	Working Tables with Vice	92,960.00
32	Lathe machines	28,89,557.00
33	CO2 welding M/C 250 amp	54,825.00
34	Milling M/C Vertical & Accessories Model AG-2 turbo make	8,18,713.00
35	Radial Drill M/C & Accessories	1,48,500.00

#### 6. Engineering Sciences:

S.No	Equipment	Cost
1	Refrigerated circulating water bath	60,812.00
2	Smart Board Device eyeris	65,990.00
3	UV-visible spectrophotometer Systronic	1,77,653.00

To facilitate teaching, learning and research in the institute, the central library is equipped with more than 12000 text books and reference books with more than 33000 volumes altogether and is subscribed to about 50 magazines and 100 journals. The central library is also equipped with many web based tools like NPTEL lectures by IIT professors on various subjects. Apart from central library, each department has its own library. All departments have their own collection of NPTEL lectures and videos. Some departments have their own subscription to journals and magazines.

**b) Extra –curricular activities in terms of sports, outdoor and indoor games, gymnasium, auditorium, NSS, NCC, cultural activities, Public speaking, communication skills development, yoga, health and hygiene etc.**

To encourage personality development, team spirit and leadership qualities among students, the institute encourages students to participate in various sports and games at different levels – University to International level.

The institute is possessing 24.2m x 35.5m plus 90m x 15.3 m (near parking area) of play ground area in which various sports like cricket, foot ball, volley ball basket ball, Kabaddi etc. can be played.

The institute also possesses indoor area of about 14m x 7.5 m for playing chess, table tennis, carom etc

A well equipped gymnasium of area 14m x 7.5 m is also exists in the campus. Equipments worth Rs.2,58,000/- are available for doing exercises in gymnasium.

An open stage is available in the campus for small college functions like Independence day, Republic day and Fresher's day etc.

Every year institute organizes the NSS camps. 100 to 150 students participate in NSS camps every year. Blood donations camps, social awareness camps, gram swachhata abhiyan camps and one act plays are the commonly organized camps by the NSS cell of the institute.

Students are encouraged to organise various cultural activities in the college. Festivals like Shivaji Jayanthi, Ganesh Festival, Dahi handi, durga puja, Teachers day, saraswati puja are celebrated by students actively.

Nakshatra, the annual social gathering gives a nice platform for students to improve their social and cultural talents.

The institute has 3 inhouse faculty for teaching communication skills to first year students and two Professional Corporate trainers visit the institute twice in a week to teach soft skills like public speaking skills, leadership skills, inter personal development skills, analytical skills, stress management, time management, conflict management etc. soft skills to second and third year students.

The institute offers German language course as an add-on course in every semester. Other add-on courses like Chinese language will be introduced in coming years.

Students are encouraged to participate in various university level events to international events like Baja to improve their public speaking skills and technical skills

Various events like SciCon, Xceed, Spectrum, Prkalp, Onyx, Technodium, Wizard, MAE Quest, etc. are also organized in the college to improve the public speaking skills, technical skills of students.

Leadership qualities and organizing skills are enhanced in students by giving them opportunity to organize various inter college, state level and national level events by various departments.

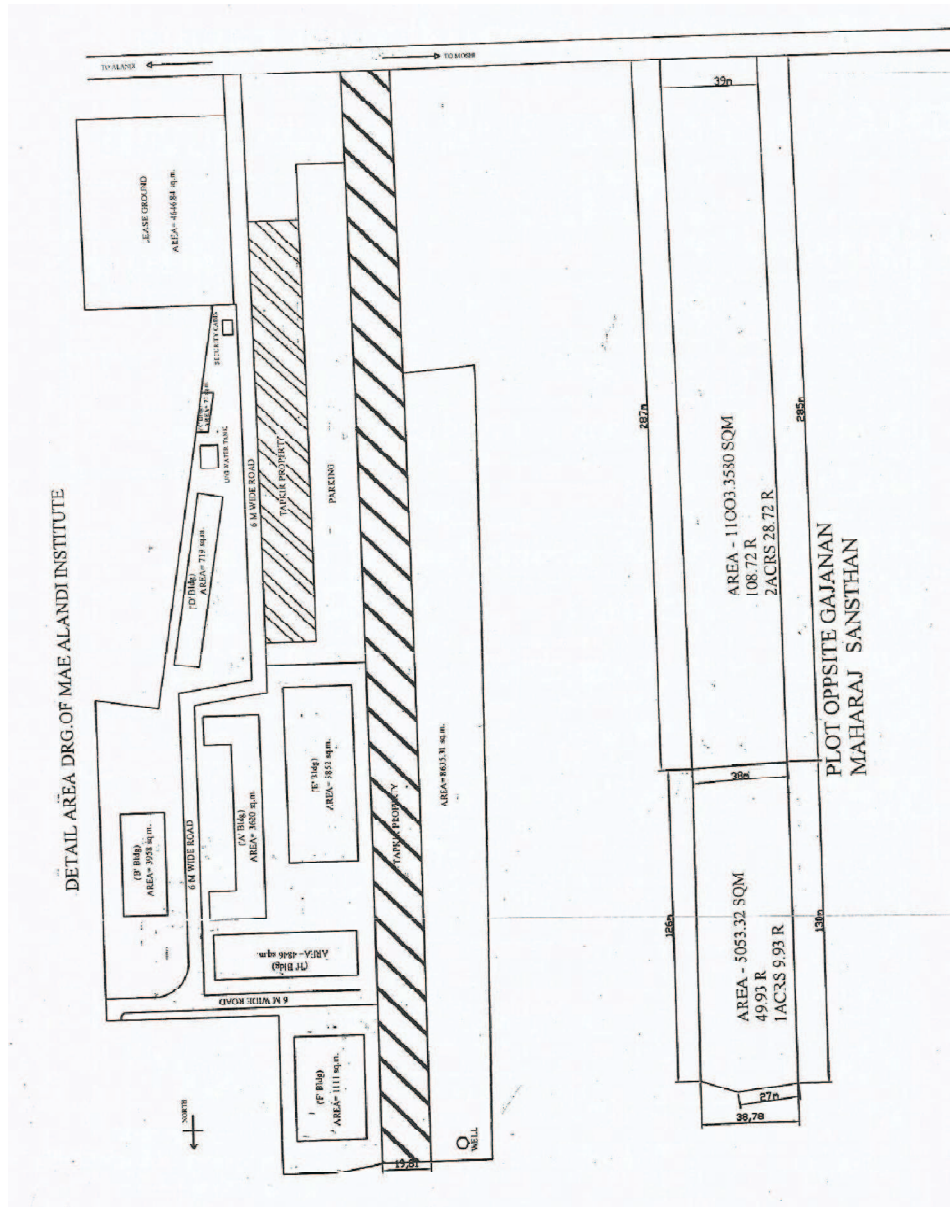
The institute concentrates deeply on Health and Hygiene. The college maintains a medical center with an in-house male doctor and a female doctor visits the college regularly. A female psychological counselor visits the college to counsel the students and staff from mental stress of examinations or any other psychological problems.

College buildings are being maintained ensuring maximum levels of safety and hygiene. Separate housekeeping cell functions exclusively to take care of hygiene in the campus.

**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 possesses the infrastructure as per the AICTE, University requirements and all the activities have been brought under the ISO quality

system. The requirements and availability of infrastructure reviewed periodically and the infrastructure is optimally enhanced or utilized.



Master Plan of the Institute

The College is situated in an area of 11.1 acres. The total built up area of all the buildings is 23635 sq.m consisting of Class Rooms, Seminar Hall, Drawing halls, Laboratories, Workshop, Central library, Faculty rooms, Administrative offices, Canteen, Hostels, Dispensary, ATM etc.

The summary of area details of the institute are shown below –

Sr. No.	Name of building	Built up Area	Carpet Area
1	A (Academics)	3620	2542
2	D (Administrative)	3997	2900
3	C (ATM / Utility)	77	64
4	B (Civil and Chemical)	843	780
5	E (Hostel)	5852	3052
6	F (Workshop+IC Engine)	1264	1170
7	H (Mechanical and Computer)	6046	4049

The Building wise details are as follows -

Building	Floor	Details of Room	Area (Carpet area in m <sup>2</sup> )
A	Ground floor	Chemical Dept. office, Instrumentation & Control lab, chemistry lab, chemical Reaction Engineering lab, Chemical Engineering Computer lab , CR-1 CR-2,Electrical lab, Power Electronics lab, Analytical lab	840.62
A	First floor	ETC HOD Office, Department library, CR-1,CR-2,System Simulation lab, Project lab, Embedded System lab, CR-3 CR-4.Advanced Communication lab	840.62
A	Second Floor	EDC Lab , Communication lab , Hardware and project lab , Ladies common room , IT HOD Office, IT labs, EHW lab, Basic Electronics lab, ICA lab	860.35
B	Ground Floor	Civil lab, Chemical Engineering. Design lab , PIC Lab, Fluid flow and HT Lab, mechanical operation lab, Chemical Engineering Materials lab , Mass transfer Lab, Canteen	779.73
C	Ground Floor	ATM , Utility Store/Xerox, Store rooms	64.53
D	Basement	Student Section, Account Department, Stores and Purchase Department, Estate Department	350.64
D	Ground Floor	4 class Rooms, Faculty room, Administrative Block, Principal Office	536.18
D	First Floor	Computer lab, System Simulation Lab., Hybrid electronics, Physics lab, T & P office, Computer/Internet Centre, Seminar Hall	613.07
D	Second Floor	Reading Hall, Central Library Periodicals section	795.17
D	Third Floor	4- class rooms, VLSI Lab , research Lab, Tutorial rooms	605.80

E	Ground floor +1+2+3	Boys Hostel, Rector room, Doctors room, Indoor games and Gymnasium	Total Area of 3052.25 equal in all floors
H	Ground floor	2- CR, Metallurgy lab , central Language lab , CAD lab, IFP & FM lab , TOM & DOM lab, Project lab, Thermal lab. Mechanical Department, Office	784.44
H	First floor	MCQ Lab , RAC Lab, Exam office, Drawing Hall , BME Lab , HT lab , Robotics Lab , Class room, Seminar Hall	753.93
H	Second floor	2 – CR , Computer department office, Department Library, Faculty rooms, Computer network lab 1 7 2 , Hardware lab , Software lab 1 &2	771.68
H	Third floor	3 CR, Project & Research Lab, Programming lab, System lab, Database Lab , Multimedia & Graphics Lab, Tutorial room.	823.92
F Workshop	Ground floor	Machine Shop	877.02
	First floor	Faculty Rooms and Tutorial Rooms	139.76
	I.C. Engine lab	I.C. Engine Lab	152.68

The investments in last four years in enhancing various infrastructure facilities are as follows –

Items	2013-14		2012-13		2011-12		2010-11	
	Allocated Budget (lakhs)	Expensed (lakhs)	Allocated Budget (lakhs)	Expensed (lakhs)	Allocated Budget (lakhs)	Expensed (lakhs)	Allocated Budget (lakhs)	Expensed (lakhs)
Acquisition of land; & new buildings and infrastructural built-up	120.00	21.50	50.00	53.05	-	3.98	10.00	11.87
Library Books, Journals, Magazines, Library Equipments	22.00	1.30	19.00	34.86	28.00	26.65	10.00	27.69
Laboratory Equipment	160.00	47.36	300.00	151.77	120.00	35.15	100.00	52.78
Computers		0.00		42.13		25.05		9.95
Software		0.00		13.28		10.41		11.56
Games and Sports/Student Activity	97.00	62.07	28.00	69.66	41.00	66.33	15.00	66.00
Buses & Cars purchase	15.00	0.00	20.00	19.74	-	-	-	-
Furniture	15.00	9.31	25.00	41.11	20.00	22.20	15.00	2.23
Administrative and other	278.25	173.05	306.20	435.14	232.17	321.05	168.68	301.08

As part of Future expansion plans, a new 5 storey building ( Basement + Ground + three floors) is under construction, the estimated cost of which is 120lakhs, out of which 21.5 lakhs is already invested till now. The expected date of completion of the new building is July 2014. After the construction is over, the space will be distributed among the departments according to need. The proposed built-up area of the new building which is in construction is 1627 sq. m of all the floors with each floor having an area of 325.44 sq. m.

The institute is also planning to introduce PG and Ph.d. courses for all the existing branches of engineering and also planning to introduce Civil engineering at undergraduate level.

#### **4.1.4 How does the institution ensure that the infrastructure facilities meet the requirements of students with physical disabilities?**

Institute has the policy that the class rooms and examination halls for physically disabled students are to be provided in the ground floors. In addition wheel chairs are available with the institute for emergency. Ramp facility is provided in the new building which is under construction.

#### **4.1.5 Give details on the residential facility and various provisions available within them:**

Hostel facility is available for girls and boys separately. Boys' hostel is situated in the institute campus and girls' hostel is situated outside campus in the opposite side of campus.

The accommodation details of both the hostels are as follows –

S.No.	Description	Boys' Hostel	Girls' Hostel
1	Area of the hostel	7859.60sq.m.	1391.2 sq.m
2	No. of floors	4	4
3	Area per floor	1964.9 sq. m	347.74 sq.m
4	No. of rooms	146	38
5	No. of students can be accommodated	292	76
6	Area of each room	17.84 sq.m	17.330 sq.m
7	Students per room	02	02

Both the hostels are provided with one TV hall and one Recreation room equipped with Table Tennis, Chess, Carrom, Badminton etc.

Both the hostels are equipped with washing machines, inverter backup, free internet facility, solar water heaters, Canteen, water cooler with mineral water facility, electric iron etc.

All the rooms in both the hostels are furnished with beds, mattresses, pillows, wardrobes, study tables, book shelves, chairs, shoe racks, folding stands for drying clothes etc.

Well equipped gymnasium is available in both the hostel.

Pantries are provided with coffee machines, refrigerators, microwave ovens etc.



Free issue and laundry facility of bed sheets, pillow covers, blankets, window curtains is also available.

A utility shop also exists in boys' hostel.

Common rooms are provided in each block for combined studies.

Daily newspapers are made available in common rooms.

Alandi water is very hard to drink, therefore, the institute provides mineral water for drinking in both the hostels.

Usable water is supplied continuously throughout the day after treating the water for reducing the hardness and turbidity in the water treatment plant available in the campus..

Girls' hostel is provided with parking area.

Security guards are employed for both the hostels.

The institute's medical care center is situated in the boys' hostel which provides the medical care facilities throughout the day for staff and students. One male doctor always stays in the center. Female doctor visits girls' hostel regularly. One female psychological counselor visits the hostel twice in a week.

Facilities are provided in both the hostels for living of wardens of both the hostels.

Two security cabins one at each entrance gate to campus is provided. Total 28 security guards are employed for the safe operations of institute.

#### **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?**

Students and staff are provided with free medical checkups, examination and treatment at medical centre in the campus.

The medical center is provided with one in house doctor and a lady doctor visits regularly.

A woman psychological counselor also visits the college twice in a week to counsel the staff and students from mental stress of examinations and personal problems.

In addition to this the institute provides transportation facility to students who are in need to visit specialist doctors in the nearby area or in Pune.

All the interested faculties are provided with Medclaim policy. Some amount of premium is paid by the institute.

#### **4.1.7 Give details of the Common Facilities available on the campus –spaces for 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.**

Internal quality Assurance Cell functional in the college constitutes Chair Person, Members from Management, Nominee from local societies, Heads of Departments and teachers, Administrative Officers and Co-ordinator of the cell. The objectives of the cell are -

1. To ensure continuous improvement in the entire operations of the institution and
2. To assure stakeholders connected with higher education - namely, students, parents, teachers, staff, would-be employers, funding agencies and society in general - of the accountability of the institution for its own quality and probity

All students and employees are encouraged to raise their grievance without fear of reprimand as we strongly believe such expressions gives us an opportunity to better our



processes and make it more strong student centered and staff friendly. The various committees formed within the institute are Grievance Redressal Committee, Grievance committee for women, Anti ragging committee and Disciplinary committee. The head of the institute and the head of the departments are all easily accessible at office hours and otherwise to ensure speedy redressal of grievance.

Each department takes care of Counselling and Career Guidance to students including first year students. Guardian faculty members are appointed for groups of 20 to 25 students each. The Guardian Faculty Members counsel the students frequently and contact the parents of the students if necessary.

In addition, the training and placement cell conducts orientation and training programmes to students by external and internal agencies. Two full time training and placement officers are recruited for the same. Bigger area for training and placement is planned in new building which is under construction. The functions of training and placement cell are as follows –

- To organize summer internship (training) with industries and reputed business organizations from all over India as per the interest area of the students.
- To prepare students to face campus interviews by arranging training in Aptitude tests, group discussions, preparing for Technical and HR interviews through professional trainers.
- To promote career counseling by organizing guidance lectures by senior corporate personnel.
- Latest happenings in the Industry through Industrial Visit, Seminars, Guest Lectures & Conferences
- Providing requisite training to students in the area of Personality Development and Communication Skills.
- Collaborate with industry for live projects, Research work, Workshop
- Focus on strengthening the fundamentals
- To have close liaison with industry for placement of students.

As part of training and placement, all the departments organise various add on courses to strengthen the technical skills of students on various topics of industry at department level. Several industrial visits are organised by departments to enrich the practical knowledge of subjects thought.

Hygienically maintained canteen facility with 218.55 sq.m built up area is available in the campus for both students and staff.

Recreational spaces for students are provided in both the hostels for girls and boys.

For drinking, institute provides mineral water to hostel students.

For usable water, college provides water treated from water treatment plant existing in the college campus. The maximum flow capacity of plant is 7500 LPH. The plant is having the coarse filtration capacity of 7500 litres per hour, softening capacity of 7500 litres per hour and chlorine dosing upto 2 ppm. Using the plant, the hardness of the water is reduced from 550 ppm to less than 25 ppm.

18 water coolers are present in the campus, all equipped with aquaguard 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 central library has an advisory committee comprises of Principal, Chairman, Secretary and members from all departments, the duties of which includes - planning and executing the requisite procedures for the functioning of the library. It includes the process of identifying, planning, and procurement of the text books, reference books, journals etc. It ensures the up gradation of the library to match with the changing syllabus and additional intake if any. The committee estimates the funds to procure books, journals etc. and also monitors the allocated funds to library.

### 4.2.2 Provide details of the following:

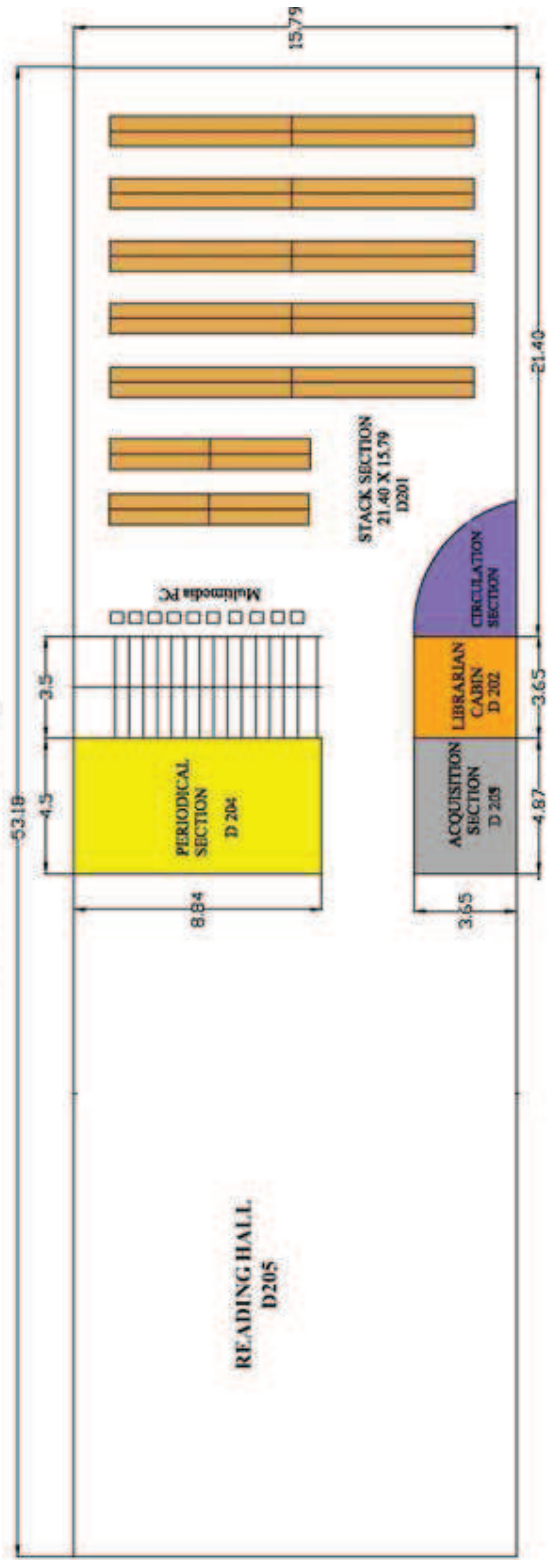
Total area of the library 902 sq. m

Total seating capacity 200

Working hours:

On working days	8.30a.m to 10.00p.m
On holidays	9.00 a.m to 5.00 p.m
Before examination days	8.30a.m to 10.00p.m An additional classroom is also allotted after library is closed
During examination	8.30a.m to 10.00p.m An additional classroom is also allotted after library is closed
During vacation	8.30a.m to 10.00p.m

# MIT Academy Of Engineering, Alandi (D), Pune Central Library



D - second floor  
All dimensions are in meter  
Scale 1:200

**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.**

The central library takes requirement of books, journals and other reading materials in the starting of every academic year and augments the facilities as required. The amount spent on augmenting various library holdings in last four years are as follows –

Library Holdings	2009-10		2010-11		2011-12		2012-13		2013-14	
	Number	Total cost (Rs)	Number	Total cost (Rs)	Number	Total cost (Rs)	Number	Total cost (Rs)	Number	Total cost (Rs)
Text books	2100	731647	1113	369436	949	316916	2814	1099614	164	70567
Reference Books	45	194179	34	95435	32	168079	106	458629	10	13244
Journal/ Periodicals	108	47037	115	159357	159	361825	146	364323	145	500
e-resources	167	--	725	2079153	5999	1790355	4477	1910251	4477	--
Any other (Specify)		38500		46000		40000		259195		61961

#### 4.2.4 Provide details on the ICT and other tools deployed to provide maximum access to the library collection?

• OPAC	Yes
• Electronic Resource Management package for e-journals	Yes
• Federated searching tools to search articles in multiple databases	--
• Library website	Yes
• In-house/remote access to e-publications	In process
• Library automation	Yes
• Total number of computers for public access	10
• Total numbers of printers for public access	01
• Internet band width/speed.....2mbps, 10mbps, 1gb	50mbps
• Institutional Repository	In process
• Content management system for e-learning	--
• Participation in Resource sharing networks/ consortia (like INFLIBNET)	INDEST

#### 4.2.5 Provide details on the following items:

• Average number of walk-ins	250-300/Per Day
• Average number of books issued/returned	180-250 Per Day
• Ratio of library books to students enrolled	13:1
• Average number of books added during last three years	5048
• Average number of login to OPAC	4-5/ Per Day
• Average number of login to e-resources	8-10/ Per Day
• Average number of e-resources downloaded/printed	80 per day
• Number of information literacy trainings organized	05
• Details of "Weeding out" of books and other materials	Nil

#### 4.2.6 Give details of the specialized services provided by the library

• manuscript	No
• Reference	Yes
• Reprography	Yes
• ILL(Inter Library Loan)	Yes
	(BCL,ARAI,UOP,DELNET)
• Information deployment and notification	Yes
• Download	Yes
• Printing	Yes
• Reading list/Bibliography compilation	NO
• In-house/ remote access to e-resources	Yes
• User Orientation and awareness	Yes
• Assistance in searching Databases	Yes
• INFLIBNET/ IUC/INDEST facilities	--

#### 4.2.7 Enumerate on the support provided by the Library staff to the students and teachers of the college.

Assistance in locating the book on shelf  
 Assistance in Browsing or searching the e-Resources  
 SMS Facility to inform about the reserved /recalled books

SMS Facility to defaulter to remind them regarding the books not returned

Circulating new catalogues to faculty for their information

Providing list of New Arrived books and Journals

Providing Soft Copy of Previous year Question Papers & Syllabus

Providing newspaper clipping related to the interest of students and Faculty

Providing SDI Services to the users

Providing digital library access which contains final year project report and NPTEL web & video courses

Providing access to list of Reference books, reading hall copy, CD-ROM, General books, Book Bank books, final year project titles and books related to aptitude test and competitive exam.

Provide information regarding Seminar, paper presentation, conference alert and new arrival in publication.

Provide access to DELNET online databases.

**4.2.8 What are the special facilities offered by the library to the visually/physically challenged persons? Give details.**

Library staff helps visually/physically challenged persons for the book issue and other procedures of library.

**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?)**

A feedback form is prepared and distributed to the students at random. The Feedback is analysed depending on the marks given to each question on a scale to 1-10. Their suggestions are taken into consideration and appropriate action is taken for the same at our level, suggestion that require involvement of the higher authority are put up to them for their approval or suggestion as per the requirement.

**4.3. IT Infrastructure**

**4.3.1. Give details on the computing facility available (hardware and software) at the institution.**

S.No.	Description	Qty	Total Qty.	Remark
1	Server	13	13	
2	Desktops	882	942	
3	Laptops	60		
4	Color Laser Printers	6	110	
5	BW Laser Printers	58		
6	Ink Jet Printers	6		
7	DMP Printers	40		
8	Plotter	1	1	
9	LCD Projector	41	41	
10	Scanners	8	8	

There is sufficient number of computers in the institute to cater the needs of students with Computer Student ratio equals to 1:2

Stand alone facilities like Printing, Scanning, Photo Copying facilities are available in the campus, the details of which are mentioned in the above table.

All the systems in the campus are connected through structured cabling – using UTP Cat 6 cables having the Back bone of Optic Fiber Cable for inter connectivity between the Departments.

Computer Center with 40 Systems – for Internet browsing is having WIFI network. The plans for making entire campus equipped with WIFI facility are in progress.

The details of licensed software available with institute are as follows -

#### Application Software

S.N.	Department	Software Details	Qty	Date of Purchase	Amount (Rs.)
1	Account	Admission Challan Software (Multiuser)	1	22/06/2005	10500
2		Tally ERP Multiuser 9.0	1	16/04/2008	46220
3		TDS-Pac	1	07-04-2008	16302
4		Budget	1	04-11-2007	10500
5		Shreelipi Dev Ratna Marathi Software	1	23/09/2011	3743
6		Payroll	1	31/05/2007	22880
7	Student section	Identity Card Master	1	14/10/2006	9545
8		Shreelipi Dev Ratna Marathi Software	1	23/09/2011	3743
9	Library	Slim 21	1	06-11-2007	145600
10	Chemical	Hysis 3.1	2	30/04/2003	140400
11		Hyperchem3.0	1	23/09/2003	97000
12		Tksolver 5.0	10	31/07/2007	41000
13		Aspen V7.2	1(150user)	09-09-2008	300000
14	Electronic	Power Sim v.7.0.1 Network Version	5	04-04-2007	330000
15	E & TC	MATLAB	5	07-11-2001	552843
16		MULTISIM 2001 Software.	1	06/08/2001	91000
17		Upgradation of Multisim 2001 to Multisim 10 (S. No.: M64X06533)	1	11-02-2007	128700
18		Xilinx ISE 8.2 I, Service Pack.	1	11-07-2006	52000
19		MATLAB	25	26/12/2005	1456392

20		PLC Trainer – Allen Bradley Micrologix 1000 with PLC Software – RS Logix 500	1	10-01-2002	91925
21		SCADA Software	1	10-10-2007	68344
22		VISIM	1	28/08/2004	304500
23		ULTIBOARD 2001 Software.	1	06/08/2001	91000
24		Upgradation of Ultiboard 2001 to Ultiboard 10 (S. No.: M64X06655)	1	11-02-2007	128700
25		Video Compressing Software	1	17/04/2007	5625
26		8051 Microcontroller Tutor - Educational Trainer License software (For 10 users )	1	29/9/2006	33694
27		Keil MDK-ARM-ED10 (software-10 user License)	1	09-05-2012	310170
28	Information Technology	QUAL NET 5.0.2	1	26/09/2011	433125
29	Mechanical	Autocad 2004 Inventor 07	5	11-01-2003	194480
30		Autocad 2008 Inventor 08	15	10-10-2008	452000
31		CATIA	12	22/12/2009	468000
32		Mathwork (Metlab Software)	10	11-08-2011	296683
33		Engineering Graphics Software	32	16/11/2011	118650
34		DelCam include Modules ( Feature Cam)	50 (10 seat of Module)	07-10-2012	410760
35		Ansys	25	10-01-2010	420000
36	Computer	Computer Software for Vidyarthi Academic information system	1	08-03-2001	7500
37		Computer Software for Vidyarthi Fees Management system	1	08-03-2001	7500
38		MS-MSDN Universal 7.0	1	20/11/2002	37000
39		Rational Suite Enterprise	5	25/10/2002	300000
40		Software Development for ISO Reporting	1	24/03/2003	280000
41		Visual Studio .net	1 set	13/01/2004	81000
42		3D Studio Max	1	13/01/2004	48000
43		Oracle 9i Data Server	10	03-02-2004	106500



44		Educational CBT's of Computer Science Stream	1	12-09-2005	4160
45		IBM Rational Rose Enterprise Suite With Instructor Led Training	1	14/06/2012	211472
46	FE	Cognifront Engineering Mechanics Tool	2		79800

System Software					
S.N.	Department	Software Details	Qty	Date of Purchase	Amount (Rs.)
1	Systems	Win SL 8.1 SNGL OLP NL Acdmc Legalization GetGenuine	200	28-12-2013	1061802
2	Systems	DesktPEdu ALNG LicSAPK OLV 1Y Acdmc Ent	80	01-01-2014	292055
3		WinSVR DataCtr ALNG LicSAPK OLV E 1Y Acdmc AP2 Proc	2		
4		SQLSvrStdCore ALNG LicSAPK OLV 2Lic E 1Y Acdmc AP CoreLic	1		
5		VSProwMSDN ALNG LicSAPK OLV E 1Y Acdmc AP	2		
6		SysCTRCnfgMgrSvrMLStd ALNG LicSAPK OLV 1Y Acdmc AP	1		
7		ExchgSvrStd ALNG LicSAPK OLV E 1Y Acdmc AP	1		
8		Symantec Endpoint Protection 12.1	200		
TOTAL			677		9824013

#### 4.3.2 Detail on the computer and internet facility made available to the faculty and students on the campus and off-campus?

All the computers in the campus are provided with the Internet facility including the Computers in the Laboratories and in faculty and staff cabins.

Institute has subscribed to Dedicated Lease Line Connectivity of 50 MBPS [1:1 BW] of Reliance communications Ltd.

All rooms in the boys' hostel are provided with the Internet facility. Around 300 nodes are available for students to access internet through LAN. Students can browse the Internet after college hours i.e. [4.30 PM to 8.30 AM on Monday to Friday & 24 Hours on Saturday – Sunday]

Dedicated Lease Line Connectivity of 50 MBPS [1:1 BW] is available for Boys hostel students in above timings.

For girls students hostel separate 4 MBPS Internet connectivity provided for Internet browsing.

**4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?**

Computer systems get up graded as per the requirement of University Syllabus for each branch and as per the requirements of Software installed. Institute always tries to provide the latest available technology to provide the best education for students.

All the Class rooms are provided with facility of OHP, LED Projectors. Some Class rooms are supported with facility of Smart Boards.

The institute is also having the plan to have WIFI campus and started implementing on it.

**4.3.4 Provide details on the provision made in the annual budget for procurement, upgradation, deployment and maintenance of the computers and their accessories in the institution (Year wise for last four years)**

The budget allocated for procurement, upgradation, deployment and maintenance of the computers and their accessories during last four years is as follows -

	2010-11	2011-12	2012-13	2013-14
Budget Allotted in lakhs	20.00	25.00	75.00	25.00

**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?**

Faculty members prepare their lectures with extensive coverage and supportive study material using the power point presentations.

Demonstrate the topics with help of Movie Clips.

Downloaded lectures of the experts on the topic are displayed in the class rooms.

Students also get trained for their presentation skills and soft skills.

Faculty and Students are accessing the online journals at the library.

Students are having access to old Question papers of the University in PDF files format.

Students are provided Xerox – Photo copying facility, Image Scanning, Printing and CD writing facility at the Library, Computer center.

Students, staff and faculty are provided Institutes Email ID's.

**4.3.6 Elaborate giving suitable examples on how the learning activities and technologies deployed (access to on-line teaching - learning resources, independent learning, ICT enabled classrooms/learning spaces etc.) by the institution place the student at the centre of teaching-learning process and render the role of a facilitator for the teacher.**

Spoken Tutorial & Online workshops are conducted in collaboration with IIT Mumbai through video conferencing. Training is provided on various topics like Linux -Ubuntu , My SQL .

Students have access to Web and Videos for learning courses.

Ample material like lecture videos by experts and IIT professors are downloaded by library. Central Library has downloaded NPTEL web and

video course for easy & quick access from the NPTEL web site for all the disciplines. Readers can access these courses from any terminal throughout the campus.

Practice sessions of Online Tests are provided to students through the Internet facility in the campus.

Language Laboratories are set up where students improve their Communication Skills by accessing various websites online.

Access to following E-Resources is provided to all students and faculty in the campus -

**ACM Digital Library (DL):** The ACM Digital Library (DL) is a complete collection of all of ACM's publications, journals, conference proceedings, magazines, newsletters, and multimedia titles.

**The IEEE/IE Electronic Library (IEL):** The IEEE/IEE Electronic Library (IEL) covers almost one third of the world's current electrical engineering and computer science literature, providing unparalleled access to publications from the Institute of Electrical and Electronics Engineers (IEEE) and the Institution of Electrical Engineers (IEE).

**The American Society of Mechanical Engineers (ASME):** ASME is a non-profit educational and technical organization serving a worldwide community of mechanical engineers. The ASME conducts one of the world's largest technical publishing operations.

**ASTM Digital Library:** ASTM International (ASTM), originally known as the American Society for Testing and Materials, is one of the largest voluntary standards development organizations in the world, a trusted source for technical standards for materials, products, systems, and services.

**McGraw-Hill:** Access Engineering from McGraw-Hill is a dynamic online resource offering quick and unparalleled access to the world's most trusted collection of critical, must-have engineering information.

**The Springer Electrical:** The Springer Electrical, Electronics & Computer Science Engineering Collection offers 149 titles in Computer Science and Electrical Engineering. This collection is aimed at providing a comprehensive database of foreign journals.

**J-Gate:** J-Gate is an electronic gateway to global e-journal literature.

**Knimbus:** Knimbus OPEN helps researchers to find and access millions of journal articles, patents and e-books.

#### **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?**

Institute possesses the membership of DELNET (Developing library network). DELNET provides access to union catalogue of books and journals, union list of current periodical, News Papers, Sound Recording, database of CD-ROM, periodical articles, e-books, Theses and dissertation etc. to the member institutes.

### **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 reviews the requirements of buildings, furniture, equipment, vehicles and computers etc. every year before start of academic session. However, the institute never hesitates to provide or maintain facilities than the allocated budget depending upon the need.

Items	2013-14		2012-13		2011-12		2010-11			
	Allocated Budget (lakhs)	Expensed (lakhs)	Allocated Budget (lakhs)	Expensed (lakhs)	Allocated Budget (lakhs)	Expensed (lakhs)	Allocated Budget (lakhs)	Expensed (lakhs)		
Building	35.00	23.86	35.00	93.47	18.00	26.61	15.00	21.45		
Furniture		4.01		3.55					7.61	9.76
Equipment										
Computers & other hardware										
Vehicles										

#### 4.4.2 What are the institutional mechanisms for maintenance and upkeep of the infrastructure, facilities and equipment of the college?

The institute outsourced garden contractor for maintenance of garden area with required equipments & housekeeping agency for cleaning & maintaining of offices, labs, classrooms, hostels etc. We have also given yearly contract for pest control.

Infrastructure is supervised twice in a week at central level. Equipment maintenance is taken care by individual departments.

Two plumbers are recruited for daily maintenance of plumbing works.

Repairs and maintenance of Civil works are done by external agencies whenever required after receiving complaints from individual departments.

Three electricians are appointed by the college for repairs and maintenance of electrical works.

Maintenance works are carried out on the basis of complaints received and also by doing regular visits by maintenance personnel.

The institute outsourced housekeeping (24 Nos.) personnel for cleaning of infrastructure facilities. They work continuously from 7am to 4pm 6days a week. Estate department keeps control over all these maintenance activities.

#### 4.4.3 How and with what frequency does the institute take up calibration and other precision measures for the equipment/instruments?

The calibration of equipments is carried out for equipments used for Research / testing tools for software application.

A list of equipments under calibration/ Verification is identified and maintained so that its status of calibration is traceable

The equipments are calibrated so that they are traceable to national and international standards.

The equipments and measuring devices are verified at the start of the term with calibrated equipments to ensure that the equipments used for conduct of practicals are fit for use.

**4.4.4 What are the major steps taken for location, upkeep and maintenance of sensitive equipment( voltage fluctuations, constant supply of water etc.)?**

The sanctioned load by MSEB to the institute is 250kVA. In addition, the institute has own transformer which is of capacity 325 kVA.

The institute also has two diesel generators of backup capacity 400kVA and 20 kvA

UPS facility is also available in all the buildings with total capacity 272.5 kVA.

For dinking, institute provides mineral water to hostel students.

For usable water, college provides water treated from water treatment plant existing in the college campus. The maximum flow capacity of plant is 7500 LPH. The plant is having the coarse filtration capacity of 7500 litres per hour, softening capacity of 7500 litres per hour and chlorine dosing upto 2 ppm. Using the plant, the hardness of the water is reduced from 550 ppm to less than 25 ppm. A big water tank of capacity 7500 litres ensures the continuous supply of water.

18 Aqua Guard machines are provided to all drinking water coolers in college campus.

**Other information regarding Infrastructure**

The institute facilitates transportation to students and faculties in various aspects. 4 busses, one Tata Sumo, one Xylo (SUV), one Tata Ace, one two wheeler and one car are available for transportation of students, faculty and staff for various purposes.

The institute is equipped with 26 powder type fire extinguishers and four CO<sub>2</sub> type fire extinguishers for emergency.

Telecom Facilities are also available with the institute for facilitating communication inside and outside of campus.

## CRITERION V: STUDENT SUPPORT AND PROGRESSION

### 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?

The institution publishes the prospectus/handbook annually. The copy of the prospectus is given along with the application forms to every candidate who applies for various programmes of the

Institute. The students could find lot of information in the handbook. The academic schedule of the academic year is clearly mentioned including the continuous Assessment Test dates, parent-teacher meeting and schedule for conducting Symposia & other activities of various departments are included. The students also could find various co curricular and extracurricular activities in the institution along with the staff in charge for those activities. Information regarding various scholarships offered, apart from the government scholarships, in the institution are provided in the handbook to make the students aware of norms and eligibility criteria for those scholarships. The students also find about the in charges of various sub committees to express about their difficulties that they are facing in the teaching learning process. The institute is committed to the information provided in the prospectus in all respects and the time schedules indicated in the prospectus. For example, the academic calendar dates for the entrance examination, announcement or results and dates for counseling is strictly adhered to.

#### 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 institute offers schemes of scholarships apart from the government scholarships. Any Amount got in prizes by the institution is distributed among the student.

MANAGEMENT SCHOLARSHIP (Amount in Rupees)

Sr. No	Session	Financial aid available	UG			
			No of Boys	Financial aid to boys	No. of girls	Financial aid to girls
1	2009-10	Nil	Nil	Nil	Nil	Nil
2	2010-11	Nil	Nil	Nil	Nil	Nil
3	2011-12	Nil	Nil	Nil	Nil	Nil
4	2012-13	Yes	1391	1	430	1
5	2013-14	Yes	1551	6	524	2

#### 5.1.3 What percentage of students receive financial assistance from state government, central government and other national agencies?

<b>Year 2009-10</b>	Financial Assistance from state government & other national agencies	Total no of students	Percentage of students
SC/ST	Freeship /Scholarship	1655	7.5%
Minority	-		-
Other (NT, OBC, SBC & EBC)	Freeship /Scholarship & State Government		30.87%
PH	Nil		-
Total			1655
<b>Year 2010-11</b>	Financial Assistance from state government & other national agencies	Total no of students	Percentage of students
SC/ST	Freeship /Scholarship	1779	7.36%
Minority	-		03.0%
Other (NT, OBC, SBC & EBC)	Freeship /Scholarship & State Government		38.05%
PH	Nil		-
Total			1779
<b>Year 2011-12</b>	Financial Assistance from state government & other national agencies	Total no of students	Percentage of students
SC/ST	Freeship /Scholarship	1896	10.02%
Minority	Nil		0.42%
Other (NT, OBC, SBC & EBC)	Freeship /Scholarship & State Government		36.76%
PH	Nil		-
Total			1896
<b>Year 2012-13</b>	Financial Assistance from state government & other national agencies	Total no of students	Percentage of students
SC/ST	Freeship /Scholarship	1821	10.15%
Minority	-		0.65%
Other (NT, OBC, SBC & EBC)	Freeship /Scholarship & State Government		40.36%



SBC & EBC)	State Government		
PH	Nil		-
Total		1821	51.16%
Year <b>2013-14</b>	Financial Assistance from state government & other national agencies	Total no of students	Percentage of students
SC/ST	Freeship /Scholarship	2024	11.31%
Minority	Nil		0.59%
Other (NT, OBC, SBC & EBC)	Freeship /Scholarship & State Government		38.63%
PH	Nil		Nil
Total			

The students are informed about the scholarships available in the institution through the class Tutors and the application forms are circulated to them. The Registrar & Student Section ensure that the above said amounts are disbursed in time to the students.

#### **5.1.4 What are the specific support services/facilities available for**

##### **a) Students from SC/ST, OBC and economically weaker sections:**

The institute arranges for the students from the economically weaker sections to get the government scholarships and the institute also provide the economic means scholarship to those who are not in a position to pay the college fees.

##### **b) Students with physical disabilities:**

The college allocates those classes, in which physically disabled students are studying, in the ground floor of a class room buildings. Ramps are provided for the students to move freely wherever possible. They are allowed to use three wheeled motor cycle inside the campus to go for laboratory, library, department blocks, hostel etc. The stool height is adjusted so that it would be easy for them to perform experiments on test bench in laboratories. They are also allowed to sit in first row of the class room to have a clear view of the board.

##### **c) Students to participate in various competitions/National and International:**

The students from this institution have participated in various international, national and state level competitions and have been proved as a valuable contributor in the field of education and research. Students have published research papers in several national and international journals and conferences. The Institute encourages students to focus on this particular area for the exposure in the international domain in association with the faculty members. ROBOCON National & International Event in association with Doordarshan is organized annually. The institute itself conducts an annual cultural event called “*Nakshatra*” is an inter-collegiate cultural festival, which is a platform for college students to showcase their cultural talents. The festival is open to all college students. The competitions include many programs such as variety program, painting, drawing, vegetable carving, fashion show, quiz, ek-minute



and skit etc. Nakshatra is usually conducted in the month of February every year. The students are also encouraged to participate in Technical/Scientific programmes such as conferences, workshops and seminars etc.

**e) Medical assistance to students: health centre, health insurance etc.**

The services of a Full Time Medical officer are available at the institute. RMO who resides in the Boys hostel attends to cases of emergency. Students can avail this facility. General medicine & First aid box is available at every departments & Laboratory. Medical stores are located from little distance of college campus. Availability of ambulance services (response times and medical facility, critical care), readily available on demand with emergency medical support system.

**f) Organizing coaching classes for competitive exams:**

The institution is supporting the students beyond the syllabus by arranging special training programs, soft skill training programs for students on a regular basis, by the internal and external experts. Being an engineering college, a special arrangement for GATE, GRE, CAT, CCNA (CISCO certification) coaching classes are organized and conducted by many departments of the Institution. In the coaching classes, primary emphasis is given to solve the questions of last ten years. Tricks and tips is another regular practice of the coaching classes. Resources are made available in the library for student reference or for self tutoring.

**g) Skill development (spoken English, computer literacy, etc.):**

The medium of instruction of all the programs at the institute is English, those students who need help in spoken and written English is coached in the classes held by Prof Bapat & Prof Sunkar. Soft skill development (SSD) classes are regularly arranged Prof Bapat & Prof Sunkar for the students to enhance their communication skill, logical, numerical ability and problem solving skills. Support of Language Lab is taken to improve spoken English skills. TSD (Technical Skill Development) classes are also arranged apart from SSD.

**h) Support for “slow learners”:**

The institution believes that slow learners can go steadily. So, personal cares are taken by individual faculty members for the students. Students are allowed to ask their problems without any hesitation. Remedial classes, extra hour classes, frequent tests are arranged on regular basis.

**i) Exposure of students to other institution of higher learning/corporate/business house etc.**

Industry visit, participation in Seminar/Workshops/Conferences/Alumni Meet/Dept.TPO Program/R&D Program/ Get Together organized in institute or other institutes or industrial organization are the common practices so that students could well aware of the out side world.

**j) Publication of student magazines:**

Institute has its own Wall Magazine (Ajaanvriksha'14) consists of Non-technical Articles, Poems, Art. Newsletter runs by the each department, producing many good qualities of creative Writing.

**5.1.5 Describe the efforts made by the institution to facilitate entrepreneurial skills, among the students and the impact of the efforts.**

Institute has an active Entrepreneurship Development Cell (EDC) It has already organised few programmes, awareness drive through NEN, IIM, MSME and has taken the following endeavour.

**1) The Objective of Entrepreneurship Development Cell**

- Encourage entrepreneurship among the aspirant students.
- Guiding students for identifying business opportunities and preparing projects relating to entrepreneurship.
- Connecting the prospective entrepreneurs to various concerned authorities such as NSIC, DIC, MSME and different chamber of commerce such as BCCI, CII, EXIM etc.

**2) The Activities of Entrepreneurship Development Cell**

- Incubation center for entrepreneurship.
- Encouraging entrepreneurship.
- New business project development.
- Training on sources and application of funds.
- New market identification and market penetration strategies

**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.**

Policies and strategies of the institution are framed in such a way to promote participation of students in extracurricular and co-curricular activities and to motivate maximum number of students to participate.

- The institution is providing financial support for transportation, entry fee payment to participate in the sports competitions and the students are given permission to practice for the competitions,
- Remedial classes and lab sessions are conducted to compensate any academic loss of the students.
- The institution has supportive environment to encourage students to participate in activities of their interest. The cultural and sports committees give opportunities to students to display their talents.
- The institution also promotes the participation of the students in intercollegiate competitions. A part of entry fee for competitions and conveyance allowance is borne by the institution.
- All Departments of institutes facilitate best outgoing student every year.
- Institute give away "MASTRO" awards to students from each department based on their overall performance in all areas such as, academics, extra-curricular, co-curricular, sports cultural, literary and all technical and non0technical events.
- Institute also helps needy students by giving them concession in fees.

**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.**

Institution has a key focus in motivating students for higher studies or research career. Many students from this institution have gone for higher studies in abroad or working as research scientists in premier research institutes like BARC, ISRO etc. The institute also arranges special coaching for preparation of GATE, GRE, CAT, Indian Army SSB Pre Screening Interview, or other government services for the students to motivate them. Aptitude classes are arranged, so that the students can get benefit from the classes. Mock tests are also arranged with this purpose.

#### **5.1.8 What type of counseling services are made available to the students( academic, personal, career, psycho-social etc.)**

Counseling services are made available to the students (academic, personal, career, psycho-social etc. by institute.

##### **Counseling services**

###### 1) Academic

The institute provides regular counseling 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 (who is the members of the faculty). The Tutor looks after their academic requirements and makes arrangements for remedial and tutorial classes.

###### 2) Personal

The Tutors perform regular interaction 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 problems. The Tutors maintain secrecy of any personal information and takes necessary corrective steps in consultation with senior official staffs, thereby addressing personal problems.

###### 3) Career

The institute encourages its students towards taking up higher studies and research. The following notable actions are taken.

1. Special Training for preparation in GATE Examination
2. Special Training for Govt. service Examination
3. Aptitude, soft skill and technical skill classes are arranged for the students apart from their normal classes through special scheduled classes.

###### 4) Psycho-social

Institute has understood that students having psychosocial disorders frequently have difficulty in coping up with social situations as this reflects in effective communication with others. The problems relating to social factors affecting student's mental health viz. peer pressure, parental support cultural and religious background, socioeconomic status, and interpersonal relationships are addressed through their mentors. At times the senior faculties members of Institute also get involved to control problems relating to above factors, special committees are also set up in this matter to help strengthen student's personality and psychological makeup.

##### **Psychological Counseling is done especially to:**

- 1) Handle crises in relationships
- 2) Deal with stress and other pressures
- 3) Resolve fears, panics and anxieties
- 4) Cope with continuing family problems
- 5) Work through difficult decisions

6) Break through depression and sadness

**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).**

Yes. The institution has a very well organized training and placement cell to support the students for their career development. Many reputed software companies, other core sector companies like TCS, CTS, Infosys, Wipro, Indian Navy, ITC Food etc. have visited our institution, and our students are working with them currently. Also various training initiative have been taken by the training and placement cell of our institute to develop the skills required to get a good employment in a reputed organization.

**Counseling and Career Guidance**

- Batch wise all the students are provided with intense and multidimensional career guidance throughout the course duration. This process is conducted in different layers taking the emotional, intellectual maturity of the students considering the ethnic, financial background in consideration. This process extends into the Mentoring System which is meticulously and scientifically designed and customized to the individual levels for all the streams.
- Group of reputed international academicians and professional and organizations and consultants / experts in higher education conducting seminars and counseling session's group wise.
- The focus is to counsel the students for all academic and campus issues, personal problem redressed and guidance. Special emphasize is given to induce students to undertake higher education in forms of Master Degree, Doctoral Degrees in India and Abroad.

**Training and placement facility**

- A dedicated Training and Placement Cell working round the year to provide efficient, effective training and employment opportunities for all students.
- The T&P Cell is equipped with state of art instruments and the database is secured and maintained through latest software's.
- Regular mental ability improvement test and technical tests are conducted where each student is evaluated every month.
- A group of trained professional rollout different soft skill development programme and technical development training programme in house on a frequent interval.

**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.**

Yes. The mechanism and composition of the grievance redressal system is discussed below: Grievance redressal system is practiced through several additional committees consisting of responsible faculty members and outside persons who are administrators/decision makers as listed below:

**1. Grievance redressal Committee****2. Disciplinary Committee****3. Female harassment Committee**

**1. Grievance Redressal Committee** : The formal procedures for the settlement of the grievances are as follows:

A suggestion & complain box is placed at all department of the Institution. The reports of the Grievance redressal /Suggestion/ feedback are analyzed by the **Committee**. Corrective measures are taken on all such cases by the Committee along with the Principal. The Managing Trustee would take a decision in any serious matter and the same will be conveyed to the employee/student preferably within a period of ONE month.

**Objectives of Grievance Redressal Committee** The Committee is entrusted to deal with the following complaints of the aggrieved students.

- i) Making admission contrary to merit determined in accordance with the declared admission policy of the Institute
- ii) Irregularity in the admission process adopted by the Institute
- iii) Refusing admission in accordance with the declared admission policy of the Institute.
- iv) Withhold or refused to return any document in the form of certificates of degree, diploma or any other award or other document deposited with it by a person for the purpose of seeking admission in such Institution with a view to induce for compel such person to pay any fee or fees in respect of any course or programme of study which such person does not intend to persue.
- v) Demand of money in excess of that specified in the declared admission policy or approved by the competent authority to be charged by such Institution.
- vi) Breach of the policy for reservation in admission as may be applicable.
- vii) Complaints of alleged discrimination by students from schedule caste, schedule tribes, OBC, Women, Minority or disable categories.
- viii) Nonpayment or delaying payment of scholarships to any students that such Institution is committed, under the conditions imposed by AICTE, or by any other authority.
- ix) Delay in conduct of examination or declaration of result beyond that specified in the academic calendar.
- x) On provision of student amenities as may have been promised or required to be provided by the Institution.
- xi) Denial of quality education as promised at the time of admission or required to be provided.
- xii) Non transparent or unfair evaluation practices.
- xiii) Harassment and victimization of students including sexual harassment.
- xiv) Refund of fees on withdrawal of admission as per AICTE instructions from time to time.

The **Grievance Redressal Committee** consisting of the following members-

Sr No	Committee Member	Designation	Department
1	Dr Y J Bhalerao	Chairman	Principal
2	Prof Uma Nagaraj	Member	HoD(Comp)
3	Dr Prasheel	Member	HoD(E&TC)

	Suryavanshi		
4	Dr N M Rane	Member	HoD(Chemical)
5	Prof M Goudar	Member	HoD(ETX)
6	Prof S M Bhagat	Member	HoD(IT)
7	Prof N Murli	Member	HoD(Mech)
8	Ms Manjusha Kadam	Member	HoD(M.BA)
9	Prof Vaishali Wangikar	Member	HoD(M.CA)
10	Mr Manoj Bade	Member Secretary	Registrar
11	Mr U R Dhakane	Member	Chief Rector
12	Ms Vandana Khandelwal	Member	Librarian/Rector

**2. Disciplinary Committee:** Role of this committee is to examine all indiscipline activities of students and staff observed. Disciplinary actions are recommended depending on the degree of indiscipline act. The report is submitted to the principal for necessary action and in major cases principal reports to the managing director for taking necessary action.

The **Disciplinary Committee** consisting of the following members.

Sr No	Committee Member	Designation	Department
1	Dr Y J Bhalerao	Chairman	Principal
2	Prof Uma Nagaraj	Member	HoD(Comp)
3	Dr Prasheel Suryavanshi	Member	HoD(E&TC)
4	Dr N M Rane	Member	HoD(Chemical)
5	Prof M Goudar	Member	HoD(ETX)
6	Prof S M Bhagat	Member	HoD(IT)
7	Prof N Murli	Member	HoD(Mech)
8	Ms Manjusha Kadam	Member	HoD(M.BA)
9	Prof Vaishali Wangikar	Member	HoD(M.CA)
10	Mr Manoj Bade	Member Secretary	Registrar
11	Mr U R Dhakane	Member	Chief Rector
12	Ms Vandana Khandelwal	Member	Librarian/Rector

**3. Women grievance redressal committee** is formed to examine the ladies harassment related cases and resolved along with the Principal. For extreme cases members examine & scrutinize all type of complaints letter and grievances representations of aggrieved students, staffs, faculties & others and take up this matters with the Chairperson for redressal.

**Women grievance redressal committee** consisting of the following members

Sr No	Committee Member	Designation
1	Dr Y J Bhalerao	Chairman
2	Mr Manoj Bade	Member
3	Dr Sanjay Patil	Member
4	Prof M Goudar	Member
5	Prof Nitin Rane	Member
6	Prof S M Bhagat	Member
7	Prof Uma Nagaraj	Member
8	Prof Vaishali Wangikar	Member



9	Ms Manjusha Kadam	Member
10	Mrs Carmel Pillay	Member
11	Ms Yogini Kendre	Member
12	Mrs Vishakha Kulkarni	Member

**Frequency of Meeting:** As and when case arise.

**5.1.11 What are the institutional provisions for resolving issues pertaining to sexual harassment?**

The institution has taken a decision to handle very strictly against this sexual harassment if any. Though no cases have been recorded so far, but the institution has its own woman grievance redressal cell, under which this kind of cases may be taken care if occurring. There are member in this committee from each and every department.

**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?**

The institution has a core anti ragging committee and an anti ragging squad, including members of faculty from each & every department and this campus is a ragging free campus. In spite of this strict monitoring are there in each corner of this institution to protect first year students from ragging. The students have to fill up an affidavit at the time of admission declaring that they shall never participate in ragging. If any student guilty in any kind of physical or mental ragging, the committee takes strict action against him or her. No instance of ragging has been reported/detected during last four years. The campus is ragging free.

**Anti-Ragging Committee** The basic aim of the committee is to make a ragging free campus. The members of the committee keeps vigilance throughout the campus and hostels to prevent any ragging activities of the students. If any ragging case is observed, the committee examines and recommends appropriate punishment to the candidate who is involved with ragging. Anti ragging campaign is made through display of banners at all important places in and around the campus.

**List of Members of Anti-Ragging Committee**

Sr No	Committee Member	Designation	Department
1	Dr Y J Bhalerao	Chairman	Principal
2	Prof Uma Nagaraj	Member	HoD(Comp)
3	Prasheel Suryavanshi	Member	HoD(E&TC)
4	N M Rane	Member	HoD(Chemical)
5	Prof M Goudar	Member	HoD(ETX)
6	Prof S M Bhagat	Member	HoD(IT)
7	Prof N Murli	Member	HoD(Mech)
8	Ms Manjusha Kadam	Member	HoD(M.BA)
9	Prof Vaishali Wangikar	Member	HoD(M.CA)
10	Mr Manoj Bade	Member Secretary	Registrar
11	Mr U R Dhakane	Member	Chief Rector
12	Ms Vandana Khandelwal	Member	Librarian/Rector

### 5.1.13 Enumerate the welfare schemes made available to students by the institution.

Following welfare schemes made available to students:

- NSS programme for 1<sup>st</sup> year students–Plantation, Campus cleaning, Blood Donation, Old cloth donation to Missionaries, Fund donation to Bharat Sevashram etc.
- Student welfare committee helps the students to understand the various aspects of college life, and adapt accordingly.
- The committee provides scope for constructive and productive interaction between the fresher's and the experienced seniors, which forms an integral part of college life.
- In case of accidents or other financial difficulties, the committee takes initiative to arrange to donate blood and/or financial assistance as collected from the students and staff members of the Institute.
- Organization of Blood Donation Camp in the Institute and arranging to contribute is a major welfare scheme.

### 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?

Institute has functioning Alumni Association but not registered. Alumni Meet is organized at institute & Department Level periodically. Prof Amar More is the head of Alumni.

Sr No	Name Alumni Association	Name of Activity conducted	Duration	No of Student participated
1	MIT AOE Alumni Association	Alumni Meet organized at College Level	1 Day 25 <sup>th</sup> August 2012	250
2	MIT AOE Alumni Association	Alumni Meet organized by Chemical Engineering Department	1 Day 14 <sup>th</sup> December 2013	30
3	MIT AOE Alumni Association	Alumni Meet organized at College Level	1 Day 7 <sup>th</sup> March 2014	60

## 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.

Student Progression	Branch	Year (Values in % )				
		2009-10	2010-11	2011-12	2012-13	2013-14
UG to PG	Mechanical	2.5	2.0	2.0	1.5	Nil
	Computer	15.77	11.62	2.49	2.49	5.83



	Electronics	0.05	0.07	0.09	0.07	0.03
	E&TC	Nil	Nil	Nil	0.06	Nil
	Chemical	6.67	23.3	12.5	10.9	Nil
	IT	0.22	0.12	0.15	0.10	Nil
PG to Ph.D.	Computer	Nil	Nil	Nil	Nil	Nil
	Electronics	Nil	Nil	Nil	Nil	Nil
Employed 1) Campus selection	Mechanical	16	28	16	19	Nil
	Computer	42.33	31.54	53.95	31.54	42.33
	Electronics	0.10	0.12	0.08	0.04	0.10
	E&TC	30.15	20.63	24.56	9.72	0.21(Cont...)
	Chemical	6.67	5.12	9.37	18.18	0.04(Cont...)
	IT	0.12	0.11	0.23	0.12	0.22
2) Other than campus recruitment	Mechanical	20	19	29	3.0	Nil
	Computer	33.2	38.18	13.28	6.64	Nil
	Electronics	0.06	0.06	0.06	0.09	Nil
	E&TC	30.15	20.63	24.56	9.72	0.21(Cont...)
	Chemical	80	25.64	21.87	16.36	Nil
	IT	0.02	0.05	0.08	0.04	Nil

**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.**

**Under-Graduate**

<b>Branch</b>	<b>Year of examination</b>	<b>Course Examination UG</b>	<b>No. of students admitted</b>	<b>No. of students pass (Final Year)</b>	<b>Percent age of pass (%)</b>
Mechanical	May 2009-10	Mechanical	44	44	100

	May 2010-11		64	90	93.75
	May 2011-12		68	55	80.88
	May 2012-13		75	62	82.66
Computer	May 2009-10	Computer	125	112	89
	May 2010-11		146	126	86
	May 2011-12		141	126	89
	May 2012-13		123	96	78
Electronics	May 2009-10	Electronics (ETX)	39	33	84.62
	May 2010-11		58	44	75.86
	May 2011-12		41	37	90.2
	May 2012-13		39	33	84.62
Electronics and Telecommunication	May 2009-10	Electronics and Telecommunication (E&TC)	79	69	87.34
	May 2010-11		84	72	85.71
	May 2011-12		72	49	68.06
	May 2012-13		81	70	86.14
Chemical	May 2009-10	Chemical	60	52	87
	May 2010-11		60	35	59
	May		54	49	90

	2011-12				
	May 2012-13		64	57	88
Information Technology	May 2009-10	Information Technology (IT)	72	60	83.33
	May 2010-11		71	64	90.14
	May 2011-12		65	56	86.15
	May 2012-13		63	59	90.77

**Post-Graduate**

Branch	Year of examination	Course Examination UG	No. of students admitted	No. of students pass (Final Year)	Percentage of pass (%)
Computer	May 2010-11	Computer	18	15	83.33
	May 2011-12		18	15	83.33
	May 2012-13		18	01	5.55
Electronics	May 2009-10	Electronics	18	17	94.44
	May 2010-11		18	13	72.22
	May 2011-12		18	02	11.76
	May 2012-13		18	08	44.44

**5.2.3 How does the institution facilitate student progression to higher level of education and/or towards employment?**

The institution motivates the students for higher study and research by providing special support and extra care for their preparation for NET, GATE, CAT, GRE etc or for any other competitive examinations. Special aptitude, soft skill and technical skill classes are arranged by the institution for the

students to groom them in industry standard. As a result of good motivation, many of our students are working with BARC, ISRO, and in different MNCs in abroad. The institute also assists students for their placement. The college has a well organized training and placement cell, which has organized many campus interviews for the students and many reputed organizations like TCS, ITC InfoTech, Capgemini, Wipro, and IBM have recruited a large number of students from this college. A good numbers of students are working in the government sector also.

#### **5.2.4 Enumerate the special support provided to students who are at risk of failure and drop out?**

Special supports are given on behalf of each and every department of this institute for those students who are academically weaker. Special remedial classes are arranged for them. Also they can practices and assess themselves with mock tests. The candidates who have got failed in examination may attend the classes for the particular subjects in the next year.

- Remedial Classes
- Extra classes both for theory and practical
- Personal care
- Counseling by corresponding Tutor
- Backlog system is there in the university
- Retest
- Assignments

### **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.**

Students participate in sports, games, cultural and other extracurricular activities conducted at institute and department level.

#### **Department: Electronics and Telecommunication**

##### **Sports**

<b>Sr No</b>	<b>Name of Event</b>	<b>Date &amp; Year</b>	<b>Duration</b>	<b>No of student Participated</b>
1	Nakshatra Solutions	2013-14	1 day	15
2	Nakshatra Technodium	2012-13	2 Days	11
3	Nakshatra Wizard	2011-12	2 Days	07

##### **Cultural Events**

<b>Sr No</b>	<b>Name of Event</b>	<b>Date &amp; Year</b>	<b>Duration</b>	<b>No of student Participated</b>
1	Nakshatra Solutions	2013-14	1 Day	15
2	Nakshatra Technodium	2012-13	2 Days	11
3	Nakshatra Wizard	2011-12	2 Days	07

**Extracurricular activities**

<b>Sr No</b>	<b>Name of Event</b>	<b>Date &amp; Year</b>	<b>Duration</b>	<b>No of student Participated</b>
1	Nakshatra Solutions	2013-14	1 Day	15
2	Nakshatra Technodium	2012-13	2 Days	11
3	Nakshatra Wizard	2011-12	2 Days	07

**Department: Computer****Sports**

<b>Sr No</b>	<b>Name of Event</b>	<b>Date &amp; Year</b>	<b>Duration</b>	<b>No of student Participated</b>
1	Technodium sports events (indoor & outdoor games)	2012-2013	2 days	150
2	FOCUS sports event for faculty & students (Dodge ball, box cricket, weekly bazaar, carom, chess )	2013-2014	2 days	200

**Cultural Events**

<b>Sr No</b>	<b>Name of Event</b>	<b>Date &amp; Year</b>	<b>Duration</b>	<b>No of student Participated</b>
1	Technodium sports events (indoor & outdoor games)	2012-2013	2 days	150
2	FOCUS sports event for faculty & students (Dodge ball, box cricket, weekly bazaar, carom, chess )	2013-2014	2 days	200

**Extracurricular activities**

<b>Sr No</b>	<b>Name of Event</b>	<b>Date &amp; Year</b>	<b>Duration</b>	<b>No of student Participated</b>
1	Nakshatra- Annual Social Gathering	2009-2010	1 week	All students
2	Teachers day celebration		1 day	All faculty members and TE students
3	Navratri color celebration		1 week	All faculty members and students
4	Nakshatra-	2010-2011	1 week	All students
5	Teachers day celebration		1 day	All faculty members and TE students
6	Navratri color celebration		1 week	All faculty members and students

7	Nakshatra-	2011-2012	1 week	All students
8	Teachers celebration day		1 day	All faculty members and TE students
9	Navratri celebration color		1 week	All faculty members and students
10	Nakshatra-	2012-2013	1 week	All students
11	Teachers celebration day		1 day	All faculty members and TE students
12	Navratri celebration color		1 week	All faculty members and students
13	Nakshatra-	2013-2014	1 week	All students
14	Teachers celebration day		1 day	All faculty members and TE students
15	Navratri celebration color		1 week	All faculty members and students

### Sports

Sr No	Name of Event	Date & Year	Duration	No of student Participated
1	Slow biking ( under EESOTSAV)	6 , 7 & 9 September 2013 (2013-14)	4 Days	FE,SE, TE, BE all branches
2	Carom ( under EESOTSAV)			
3	100 mtr race ( under EESOTSAV)			
4	Carom (under WIZARD)	22 & 23 Feb.2013 (2012-13)	2 days	Inter Institutional
5	Chess (under WIZARD)			
6	Indoor Cricket (under WIZARD)			
7	Football (under WIZARD)			
8	Carom ( under EESOTSAV)	7 & 8 Sept.2012 (2012-13)	2 days	FE,SE, TE, BE all branches
9	Chess ( under EESOTSAV)			
10	Chess (under WIZARD)	24&25Feb12 (2011-12)	2 days	FE,SE, TE, BE all branches
11	Volleyball (under WIZARD)			

**Department: Mechanical  
Cultural Events**

<b>Sr No</b>	<b>Name of Event</b>	<b>Date &amp; Year</b>	<b>Duration</b>	<b>No of student Participated</b>
1.	Teachers' day celebration	5 <sup>th</sup> Sep 2013	1 day	FE,SE,TE,BE electronics students
2	Enthrall'12 (Fresher's Party & Prize distribution of EESOTSAV 12)	7 & 8 Sept.2012	2 days	FE,SE,TE,BE electronics students
3	Teachers' day celebration	5 <sup>th</sup> Sep 2012	1 day	FE,SE,TE,BE electronics students
4	Teachers' day celebration	5 <sup>th</sup> Sep 2011	1 day	FE,SE,TE,BE electronics students
5	Teachers' day celebration	5 <sup>th</sup> Sep 2010	1 day	FE,SE,TE,BE electronics students
6	Teachers' day celebration	5 <sup>th</sup> Sep 2009	1 day	FE,SE,TE,BE electronics students

**Extracurricular activities**

<b>Sr No</b>	<b>Name of Event</b>	<b>Date &amp; Year</b>	<b>Duration</b>	<b>No of student Participated</b>
1	Bakasur	6 , 7 & 9 September 2013 (13-14)	4 days	FE,SE, TE, BE all branches
2	Blind coding			
3	Chanakya			
4	RoboRace	Wizard-12 2012-13	4 days	FE,SE, TE, BE all branches
5	Line Follower			
6	Roadies			
7	CounterStrike			
8	FIFA'12	22 & 23 Feb.2013 (2012-13)	2 days	Inter Institutional
9	NFS			
10	Robo Pratibha			
11	Quiz			
12	Pool			
13	Treasure Hunt			
14	Paper Presentation			
15	EESOTSAV – 11	2011-12	4 days	200
16	EESOTSAV – 09	2009-10	4 days	450

**Sports  
2009-10**

<b>Sr</b>	<b>Name of Event</b>	<b>Date &amp;</b>	<b>Duration</b>	<b>No of student</b>
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No		Year		Participated
1	Box cricket	Feb 2010	Two Days	63
2	Volleyball			48
3	Chess			45
4	Carrrom			60
5	Table Tennis			50

**2010-11**

Sr No	Name of Event	Date & Year	Duration	No of student Participated
	Box cricket	18/02/2011 To 19/02/2011	Two Days	60
	Volleyball			45
	Chess			40
	Carrrom			62
	Table Tennis			45

**2011-12**

Sr No	Name of Event	Date & Year	Duration	No of student Participated
1	Box cricket	3/02/2012 To 4/02/2012	Two Days	65
2	Volleyball			50
3	Chess			50
4	Carrrom			55

**2012-13**

Sr No	Name of Event	Date & Year	Duration	No of student Participated
1	Box cricket	15/2/13 to 16/2/13	Two Days	55
2	Volleyball			40
3	Chess			40
4	Carrrom			50

**Extracurricular activities****2009-10**

Sr No	Name of Event	Date & Year	Duration	No of student Participated
1	Quality Assurance	6/07/2009	1 Day	40
2	3D PLM	24/07/2009	1 Day	45
3	Energy Audit	28/07/2009	1 Day	35
4	Knowledge Based Engineering	24/09/2009	1 Day	50
5	Vibration Analysis	5/10/09 To	2 Day	35



		6/10/09		
6	Patent	9/10/2009	1 Day	25
7	Thermal,Fluid& Energy Engg.	24/11/2009	1 Day	30
8	Vibration	21/01/2010	1 Day	25
9	ONYX-10	Feb 2010	2 Days	750
<b>2010-11</b>				
1	Introduction To Automotive NVH	22/07/2010	1 Day	69
2	Ansys Software	23/07/2010	1 Day	50
3	NX S/W	20/07/2010	1 Day	40
4	Career After Engineering	29/07/2010	1 Day	41
5	Catia Training Program	16/08/10 To 20/08/10	5 Days	25
6	Vibration Analysis	8/09/2010	1 Day	28
7	Workshop on Robotics	10/01/2011 To 11/01/2011	2 Days	
8	Fund Donating	26/01/2011	1 Day	30
9	SAE Inaguration	8/02/2011	1 Day	60
10	ONYX-11	18/02/2011 19/02/2011	2 Days	850
<b>2011-12</b>				
1	Workshop on MATLAB	21/07/2011	1 Day	30
2	Guest Lecture on Applied Thermodynamics	22/07/2011	1 Day	21
3	Guest Lecture on Knowledge Based Engineering	25/07/2011	1 Day	30
4	Workshop on Solid Works	8/08/2011	1 Day	30
5	MAE Quest	15/09/2011 To 16/09/2011	2 Days	150
7	Guest Lecture on Nano Technology & 3D Printing	5/01/2012	1 Day	125
	ONYX'12	3/02/2012 To 4/02/2012	2 Days	900
9	Guest Lecture on GD &T	21/02/2012	1 Day	70
10	Guest Lecture on GD &T	4/02/2012	1 Day	40
11	Guest Lecture on Recent Trends In Mechatronics	23/02/2012	1 Day	45
12	BAJA-12	19/02/2012	2 Days	25

		20/02/2012		
14	Cognizancee	23/03/2012 To 25/03/2012	3 Days	10
15	Computational Fluid Dynamics	30/03/2012 To 31/03/2012	2 Days	15
<b>2012-13</b>				
1	Add on course on CFD	16/07/12	1 Day	80
2	Computational Technics In Mechanical Engineering	6/9/2012 &7/9/2012	2 Days	30
3	Open GL Programming	11/9/2012	1 Day	61
4	Workshop on Six Sigma	13/3/2013 &14/3/2013	2 Days	67
5	Workshop on CAD To Component	19/12/2012	1 Day	70
6	Guest Lecture on KAIZEN methodology	14/2/13	1 Day	40
7	Valve train technologies on I C Engine	3/7/2012	1 Day	40
8	Mechatronics and Automation in Automotive industry	8/2/2013	1 Day	50
9	Demo on Solidworks Suit	03/4/13	1 Day	15
10	PUC checkup	15/2/13	1 Day	40
13	ONYX'13	15/2/13 ,16/2/13	2 Days	1000

**Department: Chemical  
Sports**

Sr. No	Name of Event	Date & Year	Duration	No of student Participated
1	Football	2013	Two weeks	06
2	Football	2012	Two weeks	07
3	Weightlifting	2011 & 2012	Three days	01
4	Hand Ball	2011	Three days	02
5	Cricket	2010	Two weeks	03

**Cultural Events**

S r . N o	Name of Event	Date & Year	Duration	No of student Participated
1	P u r u s h o t t a m	2013	Three days	06

	karandak 2013			
2	Nakshtra Annual social gathering 2014	2014	Two days	15
3	Dance competition	2013	Two days	02
4	Purushottam karandak 2012	2012	Three days	05
5	Nakshtra Annual social gathering 2013	2013	Two days	15
6	Guitar Playing in live concert	2012	One week	01
7	Nakshtra Annual social gathering 2012	2012	Two days	18
8	Nakshtra Annual social gathering 2011	2011	Two days	12
9	Nakshtra Annual social gathering 2010	2010	Two days	08
10	Nakshtra Annual social gathering 2009	2009	Two days	12

#### Extracurricular activities

**NSS:** Each year NSS camp is arranged for students where students will visit to nearby rural place and provide some social services to villagers. 10 to 15 students from chemical engineering are part of NSS team.

Sr. No	Name of Event	Date & Year	Duration	No of student Participated
1	Ignited minds Shiv Jayanti Programme	19 <sup>th</sup> February 2014	One day	20
2	Ignited minds Independence Day	15 <sup>th</sup> August 2013	One day	16
3	Ignited minds Guru Pournima	22 <sup>th</sup> July 2013	One day	18
4	Ignited minds Shiv Jayanti Programme	19 <sup>th</sup> February 2013	One day	12
5	Ignited minds Elocution Competition	7 <sup>th</sup> February 2012	One day	15
6	Ignited minds Youth Day	12 <sup>th</sup> February 2012	One day	21
7	Ignited minds Visit to tribal areas near Bhimashankar	13 August 2012	One day	13
8	Ignited minds Independence Day	13 August 2012	One day	12
9	Ignited minds Exhibition: 'Prachin	28 February 2011	One day	8

	Bhartiya Vidnyan'			
10	Ignited minds Shiv Jayanti Programme	17 February 2011	One day	16

**Department: Electronics****Sports**

Sr No	Name of Event	Date & Year	Duration	No of student Participated
1	Slow biking ( under EESOTSAV)	6 , 7 & 9 September 2013 (2013-14)	4 Days	FE,SE, TE, BE all branches
2	Carom ( under EESOTSAV)			
3	100 mtr race ( under EESOTSAV)			
4	Carom (under WIZARD)	22 & 23 Feb.2013 (2012-13)	2 days	Inter Institutional
5	Chess (under WIZARD)			
6	Indoor Cricket (under WIZARD)			
7	Football (under WIZARD)			
8	Carom ( under EESOTSAV)	7 & 8 Sept.2012 (2012-13)	2 days	FE,SE, TE, BE all branches
9	Chess ( under EESOTSAV)			
10	Chess (under WIZARD)	24&25Feb12 (2011-12)	2 days	FE,SE, TE, BE all branches
11	Volleyball (under WIZARD)			

**Cultural Events**

Sr No	Name of Event	Date & Year	Duration	No of student Participated
1.	Teachers' day celebration	5 <sup>th</sup> Sep 2013	1 day	FE,SE,TE,BE electronics students
2	Enthrall'12 (Fresher's Party & Prize distribution of EESOTSAV 12)	7 & 8 Sept.2012	2 days	FE,SE,TE,BE electronics students
3	Teachers' day celebration	5 <sup>th</sup> Sep 2012	1 day	FE,SE,TE,BE electronics students

4	Teachers' day celebration	5 <sup>th</sup> Sep 2011	1 day	FE,SE,TE,BE electronics students
5	Teachers' day celebration	5 <sup>th</sup> Sep 2010	1 day	FE,SE,TE,BE electronics students
6	Teachers' day celebration	5 <sup>th</sup> Sep 2009	1 day	FE,SE,TE,BE electronics students

**Extracurricular activities**

Sr No	Name of Event	Date & Year	Duration	No of student Participated
1	Bakasur	6 , 7 & 9 September 2013 (13-14)	4 days	FE,SE, TE, BE all branches
2	Blind coding			
3	Chanakya			
4	RoboRace	Wizard-12 2012-13	4 days	FE,SE, TE, BE all branches
5	Line Follower			
6	Roadies			
7	CounterStrike			
8	FIFA'12	22 & 23 Feb.2013 (2012-13)	2 days	Inter Institutional
9	NFS			
10	Robo Pratibha			
11	Quiz			
12	Pool			
13	Treasure Hunt			
14	Paper Presentation			
15	EESOTSAV – 11	2011-12	4 days	200
16	EESOTSAV – 09	2009-10	4 days	450

**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.**

Sr No	Name of Event	University/ State/Zonal/ National/ International	Date & Year	Duration	No of student participated	Student achievements
1	Paper Contests	National	2012-13	2 days	37	1 <sup>st</sup> and 2 <sup>nd</sup> winner
2	Design Contests				351	Winner and runner up
3	Paper Contest	National	2011-12	2 days	118	1 <sup>st</sup> and 2 <sup>nd</sup> winner

	s					
4	Design Contests				142	NIL
5	Paper Contests	National	2010 -11	2 days	32	2 <sup>nd</sup> and 3 <sup>rd</sup> winner
6	Design Contests				38	2 <sup>nd</sup> winner
7	Paper Contests	National	2009 -10	2 days	58	3 <sup>rd</sup> winner
8	Design Contests				140	1 <sup>st</sup> and 3 <sup>rd</sup> winner

**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?**

**Student Feedback:**

Feedback is collected as a regular practice at the mid & end of the semesters. This is used to analyze the performance of the faculty and corrective measures are taken if required.

**Employers Feedback:**

This is collected in a structured questionnaire by the Training and Placement Cell and is used for communicating the industry requirements to the departments concerned. It is used for improvement of the class delivery and grooming up of students as per industry requirements.

**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.**

In this institution, the extracurricular activities of the students are highly encouraged. Institute has its own Wall Magazine (**Ajaanvriksha**) consists of Non-technical Articles, Poems, Art. Newsletter runs by the each department, producing many good qualities of creative Writing. The interested students post their poetry, story, article and other materials their.

**5.3.5 Does the college have a Student Council or any similar body? Give details on its selection, constitution, activities and funding.**

The Institute has its independent Students' Council (**General Students Association-GSA**)

Executive Committee	
Chairman	Dr. Yogesh J. Bhalerao
Coordinator	Dr. Suyogkumar V. Taralkar
NSS Officer	Mr. Husain Shaikh
Sports Officer	Mr. Atul Waghmare
General Secretary	Mr. Rahul S. Auti, BE ETC
Sports Secretary	Mr. Rakesh S. Sonawane, BE IT

Cultural Secretary		Mr. Sujit G. Bhasme, BE Chemical	
Ladies Representative		Ms. Kirtana R. Nair, BE Chemical	
Class Representatives			
Class	Name of Student	Class	Name of Student
FE (A)	Ms. Madhulika Dashputre	SE Chemical	Mr. Azziur Ahmad
FE (B)	Mr. Hiren Waghmare	TE Chemical	Mr. Akshay Bibave
FE (C)	Mr. Alok Anshu	BE Chemical	Mr. Sujit Bhasme
FE (D)	Mr. Omkar Unde	Chemical LR	Ms. Kirtana R. Nair
FE (E)	Ms. Vidisha Goyal	SE Comp (A)	Mr. Dhananjay Pathak
FE (F)	Ms. Yashashree Watkar	SE Comp (B)	Mr. Vishal Singh
FE (G)	Mr. Shubhanshu Wahi	TE Comp (A)	Mr. Nipesh Roy
FE (H)	Mr. Rohan Luniya	TE Comp (B)	Mr. Abhishek Yewle
FE LR	Ms. Madhulika Dashputre	BE Comp (A)	Mr. Mayur Patil
FE LR	Ms. Vidisha Goyal	BE Comp (A)	Ms. Nadaf Bibi Ayesha
FE LR	Ms. Yashashree Watkar	Computer LR	Ms. Samidha Halve
SE ETX	Ms. Nasaab Ahmad	SE E&TC (A)	Ms. Ann Maria Wilson
TE ETX	Mr. Prashant Badwe	SE E&TC (B)	Mr. Abhishek Raj
BE ETX	Mr. Rahul Auti	TE E&TC	Mr. Manish Kumar
Electronics LR	Ms. Sudiksha Janmeda	BE E&TC	Ms. Harshali Chopade
SE IT	Mr. Akshay Gadhe	E&TC LR	Ms. Harshali Chopade
TE IT	Mr. Lalit Pradhan	SE Mech	Mr. Ashish Dange
BE IT	Mr. Rakesh Sonawane	TE Mech	Mr. Nikhil Ugale
IT LR	Ms. NNikita Ramteke	BE Mech	Mr. Rohit Zade
SY MCA	Ms. Sapana Shete	Mechanical LR	Ms. Vasundhara Sutar
SY MCA	Mr. Pawan kumar Shukla	SY MBA	Ms. Chaitali Patil
TY MCA	Mr. Devdatta Shinde		

**5.3.6 Give details of various academic and administrative bodies that have student representatives on them.**

**Academic:**

1. CR Committee
2. Innovative Project Committee
3. Seminar / Conference Committee
4. Wall Magazine Committee
5. News letter Committee

**6. Robocon Committee****Administrative**

1. Antiragging committee
2. Antiragging squad
3. Cultural Committee
4. Fest Committee
5. Canteen Committee

**5.3.7 How does the institution network and collaborate with the Alumni and former faculty of the Institution.**

- Alumni Meet
- Fest
- Seminar/ Conference/Workshops
- Summit
- Annual carnival
- Get together
- Picnic
- Interaction with formers faculty member is done through
  - 1) Invitation seminar and workshop
  - 2) Invited as external examiners



## **CRITERION VI: GOVERNANCE, LEADERSHIP & MANAGEMENT**

### **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 characteristics 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.?**

#### **VISION**

To develop MIT AOE into a world-class learning center with an excellent ambience for academics and research conjugated with vibrant environment for honing the extra and cocurricular skills of all its stake holders to enable them to meet the challenge of a fiercely competitive world.

#### **MISSION**

To leave no stone unturned in our endeavour to ensure that every alumnus looks back at us and says MIT AOE has not merely taught us, it has educated us.

Our motto basically comprises of the three fold approach of excellence, variety and perfection to education. Following our motto we have moulded our students to become good scientists, technocrats, administrators and entrepreneurs with social awareness, professional ethics and leadership qualities.

**6.1.2 What is the role of top management, Principal and Faculty in design and implementation of its quality policy and plans?**

#### **Quality policy:**

We, at MIT Academy of Engineering, Alandi (D) are committed to promote value based engineering education as per the need and expectations of students and global environment. This we shall achieve through the process of continual improvements in quality of educational service, infrastructure, learning environment with a focus on extra and cocurricular activities and additional academic courses so that the students become competent in the competitive world.

MITAOE has various process measures for each and every activity of the department and the college as well. It substantiates the execution of all the plans. It conducts various guest lectures, seminar, workshop from various industry organizations to provide skills needed as per the industry requirement. MIT AOE has a department research committee and institute research committee to perform research activities at various levels. MITAOE follows the quality management system (ISO 9001: 2008) to monitor the performance of the various activities of the institution. Design and execution of quality policy and plans are substantiated with the following. In order to achieve vision and mission of the institute, institutes leadership encourages every employee to take active responsibility considering following areas.

- Efficient Teaching Learning Process- Our college promotes efficient teaching patterns that works towards academic excellence, and foster research while simultaneously providing opportunities for co-curricular and extra-curricular activities.

- Extra and Co-Curricular Activities-Our college emphasizes more on holistic development of students through academics and extracurricular activities that enables them to compete in the global arena.
- Infrastructure- The top management takes paramount care in providing excellent infrastructure facilities and conducive learning environment to the faculty and students.
- Industry Interaction- The tertiary education which is industrial exposure is provided through organizations which have a reputed name in the market by us. Each and every student can access the particular industrial sector he/she is interested in or have opted for.

### 6.1.3 What is the involvement of the leadership in ensuring :

- **The policy statements and action plans for fulfillment of the stated mission short and long term goals**

Management of MIT Academy of Engineering has both long term goals and short term goals of the Institute

**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 centre of education and research through tie ups with renowned international universities and research institutes.
3. To be a premier institute which has strong tie ups with reputed industries for giving more exposure to the faculty members and students through various collaborative activities.
4. Incubation center in each discipline

**Short Term Goals:**

1. To ensure the all round development of our students by fostering their academic, co-curricular and extra-curricular skills
2. To give the best career opportunities to our students by enhancing their employability and entrepreneurship qualities.
3. To cultivate a research culture by guiding and encouraging the faculty, developing state-of-the art research facilities and through collaborations, consultancy and earning research funding.
4. To improve the visibility of the institute within the academic & professional fraternity in the state and country at large.
5. To impart quality education to our students in order to prepare them to meet the global challenges.
6. Academic Autonomy

- **Formulation of action plans for all operations and incorporation of the same**

Under the supervision of Principal, heads of the department, activities of academic term is formulated in terms of the templates of ISO 9001: 2001. Academic calendar, time tables and lesson plans are prepared prior in order to formulating and achieving the strategic plan at every department.

- **Interaction with stakeholders into the institutional strategic plan**

MIT AOE has arranged different meetings of the stakeholders like parent meeting, alumni meeting, on regular basis in order to interact and incorporate their suggestions during the preceding year.

- **Proper support for policy and planning through need analysis, research inputs and consultations with the stakeholders**

Through the continuous assessment, different heads of the department review different activities of the department. Based on the suggestions given by the stakeholders during interaction, add-on courses, training programme, guest lecture were planned to fill the gap between industry and academics. Organization of these event is always supported and encouraged by our management.

- **Reinforcing the culture of excellence**

Developing an excellent organization is essentially a task of growing an excellent culture. In order to achieve quality in each and every work we need excellence. Students are also trained to achieve excellence in their work.

MIT Academy of Engineering always benchmarks itself against the best industry practices.

- It channelizes the procedures and practices with respect to the prevailing external environment and hence proves to create an atmosphere as Center for Excellence.
- It inspire people and create culture of involvement, ownership, empowerment, entrepreneurship, improvement and accountability at all levels.
- Ensure that their people can contribute to their own, and the organizations ongoing success by realizing their full potential in a spirit of true partnership.
- Support people throughout the organization to achieve their plans, objectives and targets, recognizing efforts in a timely and appropriate manner.

- **Champion organizational change**

Considering overall preceeding year performance, last year results, accepted proposals, placement percentage, and research contribution, MITAOE follows well organized working structure for implementing the required changes in the system which will improve the overall performance of the system considering the stakeholders suggestions. Base on above, best strategies decided, these are communicated to the faculties and staff through CDC meeting.

#### **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?**

During frequent meetings with the heads, section heads, dean R&D, the review of the academics taken by the principal. Our quality policies and plans are regularly governed by timely ISO audit after every semester, local management body, government body.

As per academics is concerned,

- Reporting monthly attendance and syllabus covered status to the class teacher.
- Improving the lecture delivery process taking in view, the interim feedback from students in to consideration.
- Recording the monthly progress in theory class and practical work and intimating it to the HOD.

- Taking interim feedback from students, intimating the feedback of students to faculty and counseling faculty for improvement.
- Review the conduct of teaching process, discussing general and specific problems in the meeting with the faculty/staff and take remedial(s).

#### 6.1.5 Give details of the academic leadership provided to the faculty by the top management?

The academic leadership is provided to the faculties in terms of responsibilities assigned in various committees by the top management whose functions are as follows.

Functional committees for academic year 2013-2014

SR. No.	Name of Faculty	Department	Responsibilities Assigned
1	Dr. Y. J. Bhalerao	Mechanical	Principal
2	Prof. Mrs. Uma Nagaraj	Computer Engg.	Head of the Dept. , Library
3	Prof. N. M. Rane	Chemical Engg.	Head of the Dept, AICTE Related Work
4	Prof. S. M. Bhagat	I.T.	Head of the Dept Website - Layout and Update
5	Mr. Prasheel Suryawanshi	E&TC engg.	Head of the Dept Associate Dean R & D
6	Dr. S. M. Khairnar	Engg. Science	Head of the Dept , Research & Continuing Education
8	Dr. Mrs. A. S. Kotha	Engg. Science	F. E. Coordinator
9	Dr. Mayur Bhoite	Mechanical	Student's Development
10	Dr. Suyog Taralkar	Chemical engg.	Art Circle - ASG, College Magazine, Time Table Incharge
11	Mrs. Sonali Bhadoria	Electronics Engg.	News Letter Incharge
12	Mrs. R. M. Goudar	Computer engg.	ME Co-ordinator, Mandatory Disclosure of Information
13	Dr. Madan Shinde	MBA	Head of the Dept ,University related Work - LIC, Affiliation & AICTE
14	Mrs. Ranjana Redra	Computer engg.	NBA Coordinator
15	M. D. Goudar	Electronics engg	Head of the Dept ,ISO ,ISTE
16	Dr. M.L. Kulkarni	Mechanical engg	Faculty development cell
17	Mrs. Prabha Kasliwal	Electronics engg.	Entrepreneurship Development, IEEE

18	Mrs. Vaishali Wangikar	M.C.A.	Head of the Dept , Press & Publicity
19	Ms. Jenny Sabu	M.B.A	Art Circle – Annual Social Gathering, College Magazine
20	Amit Hirey	Engg. Science	Brochure
21	Mr. Satyajeet Pangaonkar	Electronics engg.	ME Co-ordinator

#### 6.1.6 How does the college groom leadership at various levels?

All the staff members are involved in all the activities in the College. The senior staff members are appointed as conveners of various committees and are given full autonomy in decision making. Various co-curricular and extra-curricular activities 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 systematic approach is followed in the management of academics and administrative functions in the college. In the case of academics, the organization depicts the flow of authority and the functions of various heads. The college organization chart is followed at the level of departments. Over a period of time we have noticed the following advantage of systems approach.

- The flow of authority & the duties & responsibilities of functional head is known to everyone in the college that brings discipline in the function.
- Taking the system's approach makes it easy to standardize the processes as required for ISO 9001:2008.
- As the system is known to everyone the functioning automatically become transparent.
- The issues which require deliberations & consultations at the college levels are taken up to the Local Management Committee.
- The local managing or advisory committee meets twice in a year.

#### Local Management Committee

Sr.No.	Name of the Member	Designation
1.	Dr. V.D. Karad	Chairman of Governing Council
2.	Prof. M.T. Karad	Academic Advisor
3.	Dr. Sunil Karad	Administration & Financial Advisor
4.	Prof. Swati Karad-Chate	Member
5.	Shri. Kisan Maharaj Sakhare	Member
6.	Shri. Suresh Vadgaonkar	Member
7.	Dr. B. B. Waphare	Member
8.	Dr. Y.J. Bhalerao	Member Secretary
9.	Prof. Uma Nagaraj	Member (Teaching staff)
10.	Prof. N.M. Rane	Member (Teaching staff)
11.	Prof. N. Murali	Member (Teaching staff)

12	Shri. Manoj Bade	Member (Non – teaching staff)
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- **Anti ragging committee:** The college also has anti ragging committee under the chairmanship of Principal. The anti ragging committee takes the proactive view of ragging & educates the students not to indulge in the unlawful activities. This is done through posters and periodic educative sessions by the teachers for the students.
- **Grievance Addressal System**  
The grievances at the staff and the student level are dealt by the college grievance committee. The grievance committee consists of Principal, Vice Principal, Registrar, Head of department concerned and lady faculty member and representative of student associate (while dealing with students complaints).

**6.1.8 Does the college promote a culture of participative management? If ‘yes’, indicate the levels of participative management.**

**Yes**

The MIT AOE functions under the Banner of MAEER. The Governing body appointed under the statutory provisions by the President of MAEER decides upon the direction & takes major decisions regarding the functioning of the college. The following members are involved in the Governing body.

**Governing body**

SR. No.	Name	Designation
1.	Dr. V.D. Karad	Chairman
2.	Adv. B.E. Avhad	Member
3.	Prof. M.T. Karad	Member
4.	Dr. Sunil Karad	Member
5.	Prof. Swati Karad-Chate	Member
6.	Dr. Shashikantha Karinkan (Bharat Forge Ltd.)	Member from industry
7.	Mr. Chandrashekhkar Sanap (Forbes Marshall)	Member from industry
8.	Dr. Shukla (AICTE Western Regional Officer)	Ex-officio
9.	Dr. W.N. Gade (PuneUniversity Representative)	Ex-officio
10.	Dr. S.K. Mahajan (Director of Technical Education)	Ex-officio
11.	Dr. Abhay Wagh Govt. of Maharashtra Nominee	Ex-officio
12.	Dr. Y.J. Bhalerao	Member Secretary
13.	Prof. Mrs. Uma Nagaraj	Teacher Representative
14.	Prof N. M Rane	Teacher Representative

## **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 college has specific plans for development of its own academic and administrative units and strategy for implementation of quality policy for functioning of the institute.

Based on the quality policy of the institute, every department has taken various actions to achieve the goals of the institutional quality policy.

#### **Process of continual improvements in**

##### **A) Educational Services :**

Following activities are planned to enhance the educational services.

1. Make up lectures / Extra Lectures / Guest Lectures / Expert Lectures
2. Industrial Visits to nearby engineering companies or plants.
3. Workshops on different topics for student development.
4. Professional development program.
5. Guest Lectures from industrial experts.

##### **B) Infrastructure**

Modern facilities for teaching learning process are existing in the institute.

##### **C) Learning Environment**

To create stimulating learning environment beyond the lecture hall. The institute is committed in creating an environment where students are supported to achieve their potential and working towards creating an inclusive learning community. Students are active partners with shared responsibilities for their own learning and achievement.

### **6.2.2 Does the Institute have a perspective plan for development? If so, give the aspects considered for inclusion in the plan.**

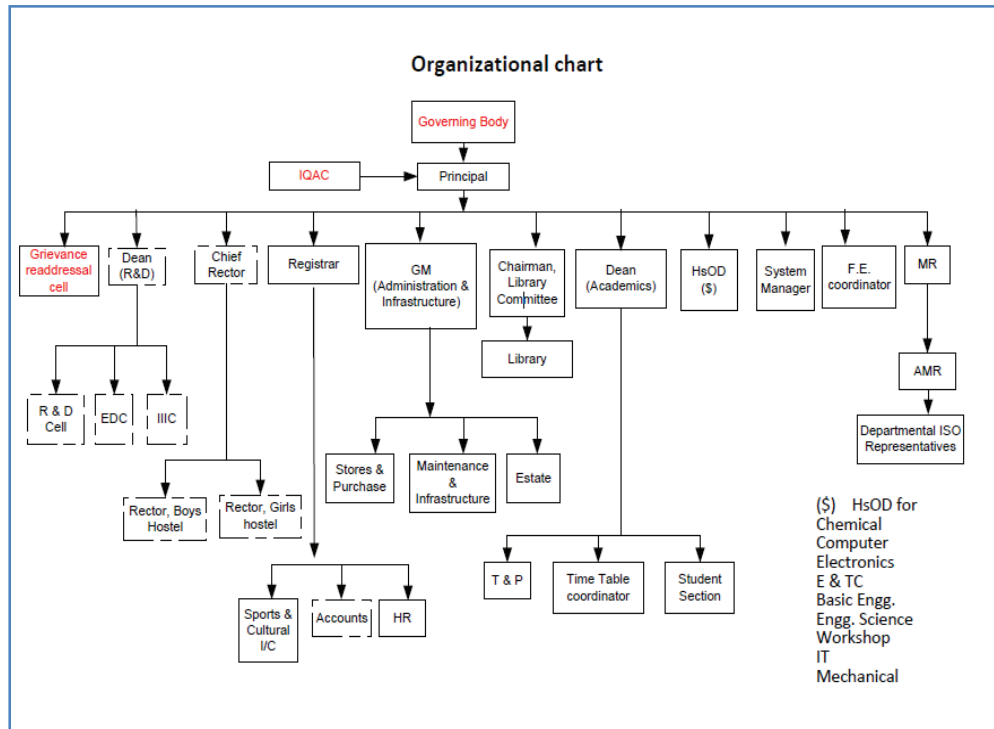
The institution has a perspective plan for its development. Based on the last experiences, stakeholders suggestions and considering changing scenario in the field of Engineering, the plan is designed.

Under MAEERs society, Our Executive director, principal, all heads along with the local management body were developed perspective institutional plan is developed. Based on that our college academic committee prepares academic calendar which includes the list of extra curricular and co-curricular activities which are planned for entire academic year. Based on the institute academic calendar, all the department heads puts their department activities in the department academic calendar depending upon the enhancement required for the departments.

### **6.2.3 Describe the internal organizational structure and decision making processes.**

Executive director is the functional head of the college. The Principal heads the academic and administrative departments of the college. Organisation chart and organization structure is shown as below.





#### 6.2.4 Give a broad description of the quality improvement strategies of the institution for each of the following

##### Teaching Learning Process

- Review of last results
- Prior Course Allocation to the Faculties
- Lesson Plan
- Lesson Notes
- ISO Audit

##### Research & Development

- Formulation Research committee
- Allocation of budget for in house R & D
- Incentives and rewards for publications/ research
- Financial assistance to faculties for attending seminars, training programme, Faculty Development Program and Staff Development Program.
- Financial assistance to faculties for to publish papers in conferences(Career Enhancement) for faculties.

##### Community engagement

- NSS activities
- Blood Donation Camps

##### Human Resource Management

- Effective selection process
- Imparting related training
- Formulation and communication of policies of the college
- Support for academic advancement
- Systematic performance appraisal system and guidance to the people concerned



- Systematic promotion policies
- Democratic way of administration with participative management

#### **Industry interaction**

- Organisation of industrial tours
- Guest lectures by the experts from industry

#### **Human Resource Management**

- Free Transport facility for Faculty and Staff
- R&D promotion policies
- Career Enhancement Scheme
- Effective administration with participative management
- Well Defined Recruitment Policy

#### **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?**

Always our faculties interact with the stakeholders formally /informally. The decisions and plans will be based on the stakeholders suggestions and involvement of the faculties and staff considering the different audit suggestions given at the department.

#### **6.2.6 How does the management encourage and support involvement of the staff in improving the effectiveness and efficiency of the institutional processes?**

Management of MIT Academy of Engineering has always encourages to the staff in improving themselves in order to actively participate in the institutional processes . The Academic and Administrative staff members play a vital role in the planning and execution of activities in the institution. Suggestions given by the stakeholders and student feedback helps to improve the activities in the institute.

#### **6.2.7 Enumerate the resolutions made by the Management Council in the last year and the status of implementation of such resolutions.**

Management Council in the last year and the status of implementation of such resolutions.

- Permanent Affiliation
- Recognition of college under pune university
- NAAC is in process
- Autonomy is in process

#### **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 process of making institute autonomy 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 analyse the nature of grievances for promoting better stakeholder relationship?**

Complaint and grievance redressal cell-The college has a Grievance Redressal Cell. Any sort of grievances or complaints are brought to the notice of the authorities by direct communication.

Suggestion/Complaint Box- The college has set up a suggestion/complaint box in place which provides a fair chance for anonymous/know complaints redressals.

Complaint register- Complaints are duly registered and overlooked.

**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?**

No

**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?**

**Feedback mechanism**

Feedback is collected for all the courses of the program

**Feedback collection process**

The first level feedback is taken by the HOD directly from the students.

The feedback is taken by the head of the department.

a) Percentage of students participating

b) Specify the feedback analysis process

The feedback analysis is done manually. The following matrix calculated

**A) First Feed Back:**

1. Audibility 2. Writing 3. Presentation 4. Understanding 5. Other

**B) Second Feedback:**

1. Audibility 2. Writing 3. Presentation 4. Understanding 5. Other

Weakness area of faculty in the area of audibility, writing, presentation, speed and knowledge are observed from the metrics for various faculty.

**C) Basic of reward / corrective measures, if any**

Best teacher is given to the faculty selected by committee based on academic and overall performance. The feedback is given to the concern faculty by personal feedback and is return; the improvements are monitored in the next feedback. Training is provided to the faculty wherever felt necessary.

**6.3 Faculty Empowerment Strategies**

**6.3.1 What are the efforts made by the institution to enhance the professional development of its teaching and non teaching staff?**

- Training teaching and nonteaching staff for excellence
- Sponsoring Faculty & staff for attending workshops, conferences at national and international level by granting academic leave.
- Sponsoring Faculty & Staff for higher education
- Conduction of development programmes for faculty and staff in the institute.
- Granting on duty for presenting paper at national and international level.
- Encouraging faculties to become a member of professional bodies like IEEE/IETE etc.
- Encouraging faculties to do their research by R&D promotion scheme.

**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 Faculties are empowered by sponsoring them to attend various programs like national / international conferences, workshops, STTP, training programmes carried out at different levels.

**Faculty Empowerment**

The institution adopts a mechanism of self-appraisal of teachers and comprehensive evaluation of teachers by HOD's and the students. While these two methods are the formal modes of performance assessment of teachers, the institution also has an informal method of evaluating staff. The informal method followed is as follows: The students assess the performance of the subject teacher in the prescribed format. The HOD conducts a one-to-one meeting with the staff and conveys the assessment and suggests any necessary improvements. The Principal also conducts meetings with student coordinators of the classes to get the feedback about the classes and other related matters. The line of interaction followed is both for corrective measures and appreciation of the services of the teachers for their initiative and good work.

**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 basic Recruitment and promotional policies are as stipulated by University of Pune, where the University stipulation not found the rules of the Government of Maharashtra are followed. In this regard the recruitment and promotional policies for reserved category as stipulated by standard process are strictly followed. Over and above these statutory provisions the college follows standard liberal promotional policies. The college also has system of internal evaluation of the teaching and non teaching staff. The candidates are promoted to the higher levels based on their performance. These promotions are over and above those made by the university selection board.

Folowing points included in the academic appraisal report.

- Name of Faculty
- Academic Assignments Given
- Specific Dities/Assignments given by HOD
- Assignments Given by University of Pune
- The manner in which assignments were carried out
- Record of Absence
- Performance Assesment
- Major Contribution Made for the benefit of student/staff/faculty/Institute
- Performance/Aspirations/Opinion
- Research contribution in terms of research projects and publictions, student involvement in the research.
- Awards/ Rewards obtained by the faculty and staff inside and outside of the institution.

**6.3.4 What is the outcome of the review of the performance appraisal reports by the management and the major decisions taken? How are they communicated to the appropriate stakeholders?**

Review of the performance appraisal by Dean-Academic , Principal for suitable suggestions and remedial suggestion. Annual increments would takes place.

Following are the faculties promoted to the higher post based on academic performance record.

**List of Faculties promoted for higher post**

Sr.	Name of the Faculty	Department	Post before Promotion	Post after promotion
<b>Year 2005-2006</b>				
1	Satyajit Pangaonkar	E & TC	Lecturer	Sr.Lecturer
2	D.J. Garkal	Chemical engg.	Asst. Prof.	Professor
3	Uma Nagaraj	Comp. engg.	Asst. Prof.	Professor
<b>Year 2006-2007</b>				
1	Bhairavi Sawant	E & TC	Lecturer	Sr.Lecturer
2	Sukumar Banduchaugule		Sr.Lecturer	Asst.Professor
<b>Year 2007-2008</b>				
1	Yogesh Bhalerao	Mechanical	Asst.Professor	Professor
2	Rajeshwari Goudar	Computer	Sr.Lecturer	Asst.Professor
3	Amar More		Lecturer	Sr.Lecturer
4	Bhairavi Sawant	E & TC	Sr.Lecturer	Asst.Professor
5	Prachi Rajarapolu		Lecturer	Sr.Lecturer
6	Sachin Subnis	MCA	Lecturer	Sr.Lecturer
<b>Year 2008-2009</b>				
1	Pramod Ganjewar	Computer	Sr.Lecturer	Asst.Professor
2	Shubhangi Mahamuni	E & TC	Lecturer	Asst.Professor
3	Sunil Kumar Bhagat	IT	Asst.Professor	Professor
<b>Year 2009-2010</b>				
4	Dr. Sanjeev Wagh	Computer	Asst. Professor	Professor
<b>Year 2009-2010</b>				
5	Soumitra Das	Compter engg.	Sr.Lecturer	Asst.Professor
6	Dipti Kapoor S.		Lecturer	Asst. Professor
7	Kiran Chaudhari		Lecturer	Asst.Professor
8	Vijay Patil		Lecturer	Asst.Professor
9	Dipti Sakhare	Electronics	Lecturer	Asst.Professor
10	Sachin Subnis	MCA	Sr.Lecturer	Asst.Professor
11	Vinita Shrivastava		Sr.Lecturer	Asst.Professor
12	Bhushan Bhokse	IT	Lecturer	Sr.Lecturer
13	Pallavi Kulkarni		Sr.Lecturer	Asst.Professor

<b>Year 2010-2011</b>				
1	Mr. Yashwant. Chavan	E&TC	Asst. Prof.	Professor
2	Mrs. Prachi Rajarapollu	E&TC	Senior	Asst. Prof.
3	Mrs. Dipti Sakhare	ETX	Lecturer	Asst. Prof.
4	Mrs. Anjali P Joshi	Mechanical	Lecturer	Senior
5	Mr. Bhushan Bhokse	IT	Lecturer	Senior
<b>Sr. No</b>	<b>Name of the Faculty</b>	<b>Department</b>	<b>Post before</b>	<b>Post after promotion</b>
<b>Year 2011-2012</b>				
1	Mr. Nitin. M. Rane	Chem	Asst. Prof.	Associate Prof.
2	Dr. Suyogkumar	Chem	Asst. Prof.	Associate Prof.
3	Mrs. Ranjana Badre	Comp	Asst. Prof.	Associate Prof.
4	Mrs. Rajeshwari	Comp	Asst. Prof.	Associate Prof.
5	Mr. Mahesh Goudar	ETX	Asst. Prof.	Associate Prof.
6	Mrs. Prabha	ETX	Asst. Prof.	Associate Prof.
7	Mr. Prasheel	E&TC	Asst. Prof.	Associate Prof.
8	Mrs. Asha Gaikwad	E&TC	Asst. Prof.	Associate Prof.
9	Dr. Mayur Bhoite	Mechanical	Asst. Prof.	Associate Prof.
10	Dr. Arika Kotha	FE	Asst. Prof.	Associate Prof.
<b>Year 2012-13</b>				
1	Mr. S.A.Jain	Comp	Asst. Prof.	Associate Prof
2	Mr. Amar More	Comp	Sr.	Asst. Prof.
3	Mrs. Kavitha S.	Comp	Sr.	Asst. Prof.
4	Ms. Anita Thite	Comp	Lecturer	Asst. Prof.
5	Mr. A.D. Gundecha	E&TC	Lecturer	Asst. Prof.
6	Mrs. Sonali	E&TC	Lecturer	Asst. Prof.
7	Mrs. Sonal Shirke	E&TC	Lecturer	Asst. Prof.
8	Mrs. S.S. Pawar	E&TC	Lecturer	Asst. Prof.
9	Mr. S.A. Khandekar	ETX	Sr.	Asst. Prof.
10	Mr. P.B.Chaudhari	Mechanical	Lecturer	Asst. Prof.
11	Mrs. B.	Mechanical	Lecturer	Asst. Prof.
12	Mr. B.C.Bhokase	IT	Sr.	Asst. Prof.
<b>Year 2013-14</b>				
1	Mr. Nilesh B. Totla	Mechanical	Asst. Prof.	Asst. Prof.(Additional Increment)
2	Mr. Amar More	Computer	Asst. Prof.	Asst. Prof. (Additional Increment)
3	Ms. Maya M. Charde	Mechanical	Asst. Prof.	Asst. Prof.(Additional Increment)
4	Mr. Sandeep P. Shewale	Chemical	Asst. Prof.	Asst. Prof.(R&D )

### 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?

Employees are given incentives in the form of additional increments every year depending upon performance appraisal results and their research contribution.

- Faculty member is promoted to higher cadre depending upon their capability and initiative.
- Contributory PF
- Free travel for faculty member by the Institute in transportation.
- Maternity Leave: A lady employee with minimum 2 years of continuous service and not more than 2 living children; shall be entitled maternity leave on full pay.
- Medical benefits: All employees can avail the facilities provided by a doctor on campus who is present during the working hours and is also available on call during emergencies.

### 6.3.6 What are the measures taken by the Institution for attracting and retaining eminent faculty?

MIT AOE is always trying to keep healthy teaching learning atmosphere which is one of the measure to retain eminent faculties at the institute. Other includes

- Faculty members are also encouraged to undergo higher education. Every year one permanent faculty member from each program is permitted to go on paid leave for a period of not more than one semester to pursue Ph.D.
- R&D incentives
- Good infrastructure facilities like library, internet facility
- Best Teacher Award

The following table clearly gives the statistics about the retention of the faculty in our institute i.e in MITAOE and list of teachers who were awarded with best teacher award.

Year	Experience of MIT AOE			
	Less than 2 years	2-5 Years	5 – 10 years	More than 10
2013-2014	46	46	39	06

#### Best Teacher Award

Year	Name of the Faculty	Department	Designation	Experience
2013-2014	Mr. Nitin M Rane	Chemical Engg.	Associate Professor	13.2Yrs.
	Dr. Suyogkumar Taralkar	Chemical Engg.	Associate Professor	4.9Yrs.
	Mr. Mr. Manesh B Patil	Chemical Engg.	Assistant Professor	5.7Yrs.
	Dr. Mahesh L Kulkarni	Mechanical	Professor	2.1 Yrs.

		Engg.		
	Mrs. Jayashree Patil	Information Technology	Assistant Professor	4.8Yrs.
	Mr. Amar More	Computer Engg.	Assistant Professor	9.5Yrs.
	Mrs. Bhairavi Sawant	ENTC Engg.	Assistant Professor	9.4Yrs.
	Mrs. Dipti Sakhare	Electronics Engg.	Assistant Professor	9Yrs.
	Mrs. Asha Abhilash	Engg.Sci. (Maths.)	Assistant Professor	2.8Yrs.
	Mr. Sagar Gadekar	MBA	Assistant Professor	3.5Yrs.
2012-2013	<b>Teaching Staff:</b>			
	Mr. Nitin. M. Rane	Chemical Engg.	Associate Prof.	11yrs.
	Mrs. Uma Nagaraj	Computer Engg.	Professor	10yrs. 5months
	Mrs. Kavitha S.	Computer Engg.	Sr. Lecturer	10yrs 4months
	Mr.PrasheelV. Suryawanshi	E&TC Engg.	Associate Prof.	9years 6months
	Mr. Sudheer S. Belsare	E&TC Engg.	Asst. Prof.	11years
	Mr. Sukumar B. Chougule	E&TC Engg.	Asst. Prof.	11yrs 5months
	<b>Administrative Staff:</b>			
	Mr. Manoj N Bade	Admin	Registrar	12.5Yrs.
	Mrs.Vishaka. C. Kulkarni	A/C	Accounts Officer	11.5Yrs.
	Suryakant Baradkar	Stores & Purchase	Estate Manager	10.2Yrs.
	<b>Technical Staff:</b>			
	Mr. Shashikant M. Naikade	IT	Chief Network Administrator	10.5Yrs.
	Mr. Kadam Sharad S.	Estate	Technical Assistant	10.1Yrs.
Mr. Dattatraya D Jagdale	ETX.Engg.	Technical Assistant	11.7Yrs.	

Mr. Tukaram N. Kendre	Computer Engg.	Lab Assistant	9.5Yrs.
Mr. Navanath S Sutar	Workshop	Sr. Instructor W/s	12.5Yrs.
Mr. Nagnath D. Sutar	Workshop	Sr. Instructor W/s	12.4Yrs.
Mr. Nanabhau R. Ghuge	Workshop	Sr. Instructor W/s	12.4Yrs.
Mr. Vikas V. Munde	Workshop	Instructor W/s	12.5Yrs.
Mrs. Vandana B. Khandelwal	Library	Librarian	11.6Yrs.
<b>SUPPORTING STAFF:</b>			
Mr. D.B. Khandve	Hostel	Sr. Assistant	10.1Yrs.
Ms. Nandini S. Phulpagar	FE	Sr. Assistant	11.6Yrs
Mr. Umakant S. Kagde	Workshop	Asst. W/S Stores	12.6Yrs
Mr. Babaji R. Badhekar	E&TC Engg.	Electrician	12.5Yrs.
Mr. Fulchand Gochade	MBA	Assistant	10.5Yrs.
Mr. Suresh Nagargoje	Computer Engg.	Assistant	10.5Yrs.
Mr. Tukaram Phunde	Computer Engg.	Sr.Clerk	12.5Yrs.
Mrs. Sunita P. Mungase	HR	Clerk	12.5Yrs.
Mr. Padmakar G. Waghmare	A/C	Clerk	12.5Yrs.
Mr. Vasant T Shinde	Estate	Clerk	10.5Yrs.
Mr. Vinayak Gije	MIT Pune	Clerk	10.2Yrs.
Mr. Vishnu Karad	Estate	Driver	10.5Yrs.
Mr. Ashok M. Phuge	Estate	Driver	11.4Yrs.
Mr. Sudham S. Ugale	Library	Watchman	12.6Yrs.
Mr. Sanjay Y. Waghule	Library	Watchman	11.7Yrs.
Mr. Vithal D. Manjare	Estate	Watchman	11.5Yrs.
Mr. Bharat D. Chavan	Estate	Watchman	11.5Yrs
Mr. Navnath D.	Estate	Watchman	11.2Yrs.



Bhandwalkar			
Mr. Dhananjay B. Mungase	Library	Watchman	10.10Yrs.
Mr. Shivaji C. Gaikwad	Estate	Watchman	10.5Yrs.
Mr. Vikas T. Mungase	Library	Book Lifter	10.8Yrs.
Mrs. Shakuntala D.Botre	IT	Peon	12.5Yrs.
Mr. Dynaeshwar V. Dhage	Estate	Peon	12.3Yrs.
Mr. Rambhau V. Mungase	A/C	Peon	12Yrs.
Mr. Vishnu H. Veerkar	Engg.Sci.	Peon	12Yrs.
Mr. Prakash S. Videkar	MBA	Peon	11.9Yrs.
Mr. Arun Mahanubhav	MIT Pune	Peon	11.8Yrs.
Mr. Shankar D. Mhaske	ETX. Engg.	Peon	11.3Yrs.
Mr. Kisan D. Mhaske	E&TC Engg.	Peon	10.1Yrs.
Mr. Datta Vahile	Stud.Sect.	Peon	10.1Yrs.
Mr. Kashinath V Dongre	Estate	Gardener	12.6Yrs.
Mr. Vishwanath M. Solanke	Estate	Gardener	12.5Yrs.
Mrs. Mukta R.Ghodke	Estate	Gardener	11.5Yrs.
Mrs. Vandana R Randhive	Estate	sweeper	12.5Yrs.
Mr. Baban S. Dhaiwal	Estate	Sweeper	12.5Yrs.

#### 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?

###### Mechanisms

- Yearly planning of Budget Under different Heads- Our Institution has well defined mechanism to monitor effective and efficient use of available resources.The Finance department is incharge of estimating the budget and allotting the available financial resources to the various departments of the institution.
- Approval of Executive Director., Principal, HOD, Registrar, Stores Head, -Purchases are made with the recommendations of duly constituted purchase committee. The amounts withdrawn from the banks follow a systematic mechanism of obtaining the signatures of the cashier, HOD, registrar, Principal,Executive Director.
- Comarision of cost and quality of the item takes place using minimum three different quotations.After comarision, purchase order on the suitable vendor will be released.

**6.4.2 What are the institutional mechanisms for internal and external audit? When was the last audit done and what are the major audit objections? Provide the details on compliance.**

Institute has well defined budget policy. From every department, college obtain, budget planning considering academics and nonacademics requirements before starting academic year.

After reviewing of the submitted budget for financial year, principal along with local management body allocates the projected budget under different heads like

- Equipments
- Consumables
- Repair & Maintenance
- Research

After recommendation of duly signed purchase order by the purchase committee, funds will be released by the account section.

Internal/External Audit	Last Audit Date	Details of Compliance
External Auditor: M/s. A. H. Joshi & Co., 1907, Sadashiv Peth, Pune - 411030.	13 <sup>th</sup> to 25 <sup>th</sup> Mar-14	Minor queries of audit are solved on the spot. After completion of Audit, we receive the report. Then we solve the queries mentioned in the Audit Report.

**6.4.3 What are the major sources 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.**

At the end of the academic year internal audit is conducted by the internal committee decided by the principal. After physical verification, committee submits their verification reports to the principal for necessary action. A qualified chartered Accountant verifies regularly accounts. No major audit objectives are identified.

Sources of Income:

- Tuition Fees
- Bank Loan

Details	2012-13	2011-12	2010-11	2009-10
Income	2065.27	2075.64	1797.89	1547.86
Academic Expenses	1242.29	1080.35	983.44	884.94
Administrative Expenses	952.51	995.29	665.65	521.40

**6.4.4 Give details on the efforts made by the institution in securing additional funding and the utilization of the same (if any).**

College had taken efforts during preceding years for getting research funds from various agencies like RPS Pune, AICTE, DST, DAE, for RPS,

MODROBs, Seminar, QIP . Total amount of Rs. 1.40 Crore obtained by mentioned different agencies.

## 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?**

Yes the institution has an Internal Quality Assurance Cell (IQAC). The Institution is also an ISO (9001-2008) certified. The college has a bold framework of its vision, mission and strong policies.

Internal Quality Assurance Cell (IQAC) constituted as follows

#### Internal Quality Assurance Cell (IQAC)

Sl. No.	Designation & affiliation	Name
<b>➤ Chairperson</b>		
1	Principal	Dr. Yogesh J Bhalerao
<b>➤ Members from the management</b>		
1	Executive Director	Dr. Sunil Karad
2	Dean	Prof. Anant M. Chakradeo
<b>➤ Nominee from local Societies</b>		
1	Principal	Dr. B. B. Waphare
<b>➤ Six Teachers</b>		
1	Member, HOD Chemical	Prof. N M Rane
2	Member, HOD Computer	Prof. Uma Nagaraj
3	Member, HOD Electronics & Telecommunication Engg.	Prof. Prasheel Suryawanshi
4	Member, HOD Information Technology	Prof. S M bhagat
5	Member, HOD Mechanical	Prof. N M Murli
6	Member, Teacher	Mrs. R R Badre
7	Member, Teacher	Dr. Suyogkumar Taralkar
<b>➤ Administrative officers</b>		
1	Member, Registrar	Mr. M N Bade
2	Member, Incharge Estate	Mr. S K Bardkar
3	Member, Account officer	Mrs. V C Kulkarni
4	Member, Hostel Warden	Mr. Uttam Dhakane
<b>➤ Coordinator of IQAC</b>		
1	Coordinator, HOD Electronics	Dr. Mahesh D Goudar

**b. How many decisions of the IQAC have been approved by the management/ authorities for implementation and how many of them were actually implemented?**

All the decisions are taken in the ISO Management Review Meeting are presented to the governing council by the Principal and after through review the same has been implemented.

**c. Does the IQAC have external members on its committee? If so, mention any significant contribution made by them.**

Yes, There are external members in the IQAC Committee. All the stake holders are involved to ensure that basic purpose of IQAC are met.

**d. How do students and alumni contribute to the effective functioning of the IQAC?**

All the stake holders are involved in the process of formulation of programme objectives. Alumni and students contribute to the IQAC functioning via senior student's exit survey questionnaire and the Alumni feedback survey questionnaire. The questionnaire is prepared to get the specific inputs for continual improvements.

**e. How does the IQAC communicate and engage staff from different constituents of the institution?**

All the heads of the department are members of IQAC committee. This ensures that all the faculty of the institution are involved directly / indirectly in effective 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 details on its operationalisation.**

Yes, the institution have an integrated framework of Quality assurance of the academic and administrative activities which is governed by the governing council and will run up till the maintenance department.

**6.5.3 Does the institution provide training to its staff for effective implementation of the Quality assurance procedures? If 'yes', give details enumerating its impact.**

Yes. The institution provides training to the staff for effective implementation of the Quality assurance procedures. Our Institution motivates the faculties to undergo the audit courses on a regular basis to enable them to perform the internal audit practically. The college will encourage the selected faculty on a regular basis to undergo the audit courses to enable them to perform the internal audit impartially. Further, the new recruits are also put on training both at the department level and outside. Employees are encouraged and sponsored for the lead auditor course.

**6.5.4 Does the institution undertake Academic Audit or other external review of the academic provisions? If 'yes', how are the outcomes used to improve the institutional activities?**

The college has appointed a seasoned academician as Dean / Principal who will convey an academic council meeting at the end of every academic sessions where academic matters related to teaching-learning and evaluation will be discussed and necessary remedial actions will be taken if required.

This academic audit consists the pros and cons of the teaching methodology as well as means to overcome the same.

**6.5.5 How are the internal quality assurance mechanisms aligned with the requirements of the relevant external quality assurance agencies/regulatory authorities?**

The feedback, review, observations and opportunities for improvement noted by the auditors will be rectified at the earliest. It is important to mention that no serious non conformity has been cited over the last few years. Audit will be carried persistently either by internal or external auditors.

**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 outcome?**

There are various process systems opted by our institute for the continuous review of teaching- learning process in the college which are briefly discussed. It includes academic council, all Heads of the departments, examination committee, etc. and above all the college governing council.

**6.5.7 How does the institution communicate its quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders?**

Our institution communicates its quality assurance policies, mechanisms and outcomes through the Vision, Mission statement, parent teacher meeting, Internal and external feedback communication system and also through the website and publications.

**CRITERIA VII: INNOVATIONS AND BEST PRACTICES****4.7.1 Environment Consciousness****7.1.1 Does the Institute conduct a Green Audit of its campus and facilities?**

There is no formal conducting of green audit of institute campus and facilities at MIT Academy of Engineering however many activities are directed towards making institute campus eco-friendly.

**7.1.2 What are the initiatives taken by the college to make the campus eco-friendly?**

The management, the head of institute and staff along with students are involved in making the campus eco-friendly. The campus can claim to be polythene/plastic free and also smoking free zone. Apart from this, the institute has taken several other initiatives to make the campus eco-friendly.

**Energy conservation**

MIT Academy of Engineering is situated at Alandi (D), about 20 km away from Pune city. To and fro bus transportation is provided free to all staff, for which four 32 seat capacity buses are provided on different route of the city. The college class rooms are so airy and well lighted that they hardly need artificial light. However, each classroom, wash room and laboratory is provided with separate switch to minimize the consumption of electricity when not occupied. Most of the rooms are provided and instructed to change with CFL bulbs in place of ordinary bulb and tube. Most of the personnel computers are provided and instructed to change with LCD monitor in place of CRT monitor. Sign stickers are effectively used near switch boards are made in order to pay everyone's attention to save energy. To save water, sprinkler system is used to irrigate lawns which are maintained in front of all the buildings.

**Use of renewable energy**

Institute uses solar water heaters (4 nos. 1500 liters capacity each) at student hostel having maximum capacity of 290 students.

**Rain water harvesting**

Institute is having water connection from local Municipal body and most of the water provided on campus is taken from well and bore well and treated in water treatment plant having capacity of 7500 liters per hour. However, there is plan to collect rain water from roof of building and fill it in the ground to raise the water table.

**Check dam construction**-not applicable.

**Efforts for Carbon neutrality**

In MIT Academy of Engineering, efforts for carbon neutrality are on the theme repair, reuse and recycle. Bio waste from trees and plants is not burn but is put in Vermicompost plant and used in garden. Paper waste in case of secret document after shredding is sell for recycle and reuse. Institute promotes use of furniture made of particle board. Air conditioner, refrigerator and water cooler are purchase of five star rating and having eco-friendly refrigerant. In case of power cut, Institute is having two gen set provided with catalytic converter for exhaust gas. Out of 5.9 acre campus, Institute is having 1.5 acre covered with lawn and Total 520 Trees (Coconut 120 Nos., Palm 110

Nos., Gulmohar 100 Nos., Fycus 160 Nos. , and Chafa 30 Nos.) are making campus green. Students also do plantation of trees in neighboring villages under NSS activities. Institute promotes paperless communication by mail and SMS and also promotes two sided printouts for communications and submission of term work. Facilities like Canteen, Cafeteria, Xerox shop, and ATM by Union Bank of India are made on campus for student and staff so that time and fuel is saved.

#### **Hazardous waste management**

Chemicals and hazardous materials used for practical/training purpose are purchase in limited quantities so that there is no question of managing/disposing outdated chemicals. Daily garbage is collected by housekeeping personnel and handed over to Municipals garbage vehicle. All waste water line from toilets; bathrooms etc. are connected with Municipal drainage lines. All waste like plastic, papers etc. are collected and sold out to scrap vendor time to time.

#### **E-waste management**

e- waste from various departments in the institute is sell for recycle to NGO.

## **7.2 Innovations**

### **7.2.1 Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the college.**

In its quest for excellence, the institute seeks continuous innovation for quality assurance in academic programs & administration. Some of the mechanisms adopted are:

#### **Academic system**

- Handouts with semester planning for theory and practical, Course objectives, assignment questions, useful Uniform Resource Locators (URL), power point presentations, references and academic calendar are distributed to the students in the beginning of the semester.
- Close monitoring of course coverage through frequent meetings of HODs with faculty members.
- Class Monitoring committee meetings are held periodically in a semester.
- Regular monitoring of academic activities by respective heads of the department.
- Periodic collection of student feedback on individual subject teachers.
- Review of performance of teachers based on feedback and pass percentage of students at university examinations.
- Tutors (Faculty counselors) for every 20 students till they completes their degree.
- Remedial classes, bridge courses to make up for weak and slow learners.
- Inviting experienced people from reputed institutions and industry experts for delivering guest lectures.
- Incentives for those carrying out research, publishing papers and participating in Seminars/Conferences/Workshops/Symposium/STTP/Summer training/Winter training etc.



- Parents are informed periodically about the performance of students. The attendance of students is closely monitored and informed to parents once in a fortnight. Also the performance of the students in the internal examination is communicated to parents. The students are counseled in this regard.
- Institute has implemented Academic Performance Indicator- API System for the academic performance evaluation of faculty and staff.

**Administrative system:**

Administrative mechanisms are in place for quality assurances are:

- An exclusive Examination Section headed by Exam-In-charge Examination is constituted.
- Training and Placement Cell takes care of all the aspects related to placements.
- Students Section to attend to the problems of students. College administration is run through Management, Director, Principal, Deans, HODs and Professors. All decisions are implemented after a consensus is arrived at.
- There is a centralized research committee with Principal, Dean R & D, Associate Dean R & D, all Heads of the Department and Senior most faculties to overview all R & D related activities at institutional level. Along with this, there is also departmental research committee in each department with respective Head of the Department and senior most faculties to overview all R & D related activities at departmental level.
- Maintenance of all buildings and other infrastructure is entrusted to maintenance team.
- Director of Physical Education attend to all sports activities of students.
- Technicians in all departments look after the repair and maintenance of lab equipment under the supervision of the teaching staff.
- HOD and senior faculty of each Department look after the teaching and learning process in each Department.

**Quality assurance for academic programmes****Performance Monitoring**

- Right from the time of admission, performance of every student is carefully monitored. Based on the examination results, Tutors take up counseling of poor performers and try to assess the reasons for their poor performance. Department arranges special classes for poor performers.
- Periodic meetings are conducted by the Principal and HODs to review the results of internal and external examinations.
- The analysis of the results of end semester examinations is carried out, and further discussed by HOD with the Principal.
- Teaching staff members guide the students in their projects, monitor their performance and counsel them regarding their performance, apart from regular teaching. Thus, teachers play different roles like project guides, tutors, etc.
- This process ensures the quality of the teaching process.



**Administration**

Academic Coordinators, Class teachers and tutors closely monitor student performance and intimate the parents.

**Student evaluation**

- At college level three class tests and a mock lab exam in a semester are conducted for internal evaluation. The university conducts the end semester examination.
- Evaluation procedure & guidelines are given to the staff for both theory & practical exams. Corrected answer scripts of internal exam are shown to the students. Students are encouraged to express their doubts and irregularities observed, if any, in the evaluation, to the notice of concerned teachers, and to HOD, if necessary. The results are monitored by the HOD.

**Quality assurance for administration**

- The MIT Academy of Engineering was established in the year 1999. It is affiliated to the University of Pune and is approved and accredited by AICTE.
- Organization is ISO 9001-2008 Certified.
- The UG engineering programme in Chemical Engineering, Computer Engineering, Electronics Engineering and Electronics and Telecommunication Engg. has been awarded the status of accreditation for two years in 2013 by NBA after considering the quality of the education imparted and other practices of the college and its infrastructure.
- Improvement in faculty expertise leading to qualified faculty.
- Provides opportunities to non teaching staff to enhance their skills and qualifications.

**Innovations in Research and Development and Extension**

- Research committee overviews the R & D activities in the college.
- R & D labs are established in each department.
- Inter-departmental research projects are encouraged.
- The IBM Software Center of Excellence is established in Computer Engineering Department.

**Various Events**

- Several state level events like seminars, workshops are conducted for students and faculty in order to update their knowledge.
- The institute conducts cultural festival called NAKSHATRA every year, in which the students participate to exhibit their talents in various cultural programmes.

**Modern ICT Tools**

For effective teaching-learning process, e - content, modern ICT tools such as LCD projector, etc. are made use of.

**Teachers' day celebrations**

The institute and all departments conduct teachers' Day Celebrations every year on 5<sup>th</sup> September. On this day, at departmental and institute level selected faculties are awarded with the best teacher awards.

**Students' exposure to industries**

The students go on frequent visits to different industries related to their branch so that they can observe the shop floor processes taking place there. This provides greater awareness and clarity on the concepts and techniques they learn in the classrooms.

**Placement**

A training and placement cell is established with necessary infrastructural facilities for providing training and placement assistance to students.

**Learner Centered Teaching**

The College adopts a mix of different methods of teaching like interactive, discussion based, project based and seminars to supplement the normal lecture method, depending on the nature of the content of instruction.

**Lecture Method**

The lecture method is used to the extent of 60 to 75 % to explain abstract and conceptual parts of the subject which demand critical thinking and analysis. Teacher presents the relevant data and diagrams through power point / chalk-board mode.

**Interactive Method**

The lecture method of teaching is supplemented with “discussion and interactive method” wherever needed.

**Project-based learning**

This method is mostly used for self learning to improve the learning ability of student and to reinforce knowledge received during the lecture. Being a technical institute, this method is extensively used to provide practical evidence of the theory learned. Students are asked to prepare projects with a clear concept of the principles learned. The teacher guides the students at various stages of developing the project, further gives timely inputs during the preparation of the project work.

**Seminar Method**

From time to time, the teacher involves the active students into the seminar method. A student is advised to come prepared on an assigned topic and present a seminar before the faculty and students. This method makes the student to undertake extensive reading and preparation, further; helps to improve the student’s communication and presentation skills.

**Computer –Assisted Learning (CAL)**

Computer-assisted Learning is a very effective method in teaching and learning process. It involves visualizing, analyzing and understanding complex topics and interpretation of large data and is extensively put in practice in this college.

**Shift from content to competency**

The practice of giving assignments and their evaluation and assigning project module for improving competency is strictly followed.

**Innovative Instructional Methods**

Experiential learning (learning by doing), inquiry and discovery, problem based learning, collaborative and cooperative learning in groups is encouraged.

**E-learning Applications**

Classrooms are equipped with latest systems, Projectors, etc., for facilitating e-learning.

**Innovative techniques in Assessment**

Surprise tests, online tests, seminars, assignments, etc. are conducted for assessment.

**Innovation in Infrastructural Planning:**

A/C seminar halls, computer labs, classrooms, separate building for amenities, separate R&D labs for researchers, IBM Centre for Excellence labs in collaboration with IBM are part of the infrastructure.

**Innovative Incentives and Reward Schemes**

The institute encourages the students to do innovative projects with special awards and prizes

The college has instituted cash awards to best outgoing student, best outgoing girl student, branch toppers, best project works, best outgoing sports person & sports woman and GATE & GRE rankers. Certificates of Excellence and Merit are also awarded.

**Computerization of Library:** The College has made the library fully computerized. The students are having their web browsing space in the library. The total working in the library is now on the computers.

**Zero-Balance Accounts:** The College has facilitated its staff with providing them the facility to maintain a zero balance bank account at the Union Bank of India, Alandi, located near the campus and It's ATM is in campus. This has helped the staff in a great many ways.

**Academic Innovations:**

- IIT, NPTEL Video Lectures
- ISO-9001:2008 Practices
- Application Oriented Teaching
- Workshops on Latest technologies in their respective areas
- Certification Courses in their streams.

**Biometric Attendance system**

It helps to maintain the attendance of the staff in turn it makes the paperless office.

**Earn and Learn scheme**

The main objective of the scheme is to develop a student as a multifaceted personality with academic excellence and a commitment to an egalitarian society.

**Soft Skill programme**

The MIT AOE has been offering the Soft Skills programme to all its students. It is mandatory for every student of the college to acquire B+ grades from this program. Attendance is very important for this course. They are provided study materials for the course.

**Anti-Ragging committee**

Ragging in any form is strictly prohibited and students who indulge in any such activity will be dealt with seriously by the authorities of the College. Anti Ragging Committee has been established in the College as per the UGC rules and plays a vital role for the welfare of the students. This Committee has deterred recurrence of ragging in the University. For maintaining confidentiality, a suggestion cum complaint box is provided at each department for informants to present their issues/problems in case of ragging.

**Women Sexual Harassment Redressal Cell**

Sexual Harassment Redressal Cell was established to promote the well being of the students and staff in the College. A committee has been constituted in such a way to deal with the claims of sexual harassment for the alleged victims and the alleged assailants.

**Health centre for students and staff**

Health Centre has been established in the College campus to cater to the basic health of students and staff.

**7.3 Best Practices**

**7.3.1 Elaborate on any two best practices as per the annexed 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-I**

**Title of the Practice: “Practical Exposure to Students”**

**Goal of this practice:**

The goal of this practice is to impart practical exposure to students in upcoming technologies by conducting workshops, guest lectures and seminars by internal and external academicians / industrialists and through industrial visits.

**The Process:**

The students are expected to be strong in academics and have good industrial exposure. They are encouraged to update their knowledge with latest developments in their respective disciplines and allied subjects. In addition to good academic record, the students need to develop leadership qualities and good communication skills and soft skills. In this aspect, eminent personalities from various reputed institutes and industries are invited to impart the practical exposure to the students through workshops, seminars, guest lectures, etc. Also, the students are motivated to share their ideas with the outside world by presenting their research work in National / International conferences. The students are monitored regularly by class monitoring committees and conduct of remedial classes where necessary. Regular tests on aptitude are conducted by the college. To gain industrial knowledge, the students are encouraged to visit the industries.

**Impact of the practice:**

The morale of the students is thus increased due to the expertise training and measures taken by the college. There is recognition and appreciation by the students and they are actively participating in all the programs. As the outcome, discernible positive change has been observed in them.

**Problems:** We will get little time in a semester to organize these all workshops in a semester.

**Resources Required:** Provision is made in the Budgetary Allocations.

**Contact Details**

Name of the Principal: Dr. Y. J. Bhalerao

Name of the Institution: MIT Academy of Engineering, Alandi (D)

City: Pune, Pin Code: 412105

**Best Practice II****Title of the Practice:** Research and Development**Goal**

- To facilitate academic research for the development of the academicians and the institution.
- It aims to bring about a dynamic equilibrium with its social and economic environment for excellence in education, research and service to the nation.
- To explore unreached areas by bringing openness in multi-disciplinary research.
- To provide a supportive research environment in which scholars, at every stage of their career, can flourish and develop.

**The Context**

Research at MIT AOE is nurtured through various academic programs run by the different departments. MIT AOE is committed to knowledge transfer and engage in technology transfer and economic development activities that benefit the society. The researchers address many of the major challenges that face the society from energy sector including non-conventional energy sources, nuclear energy to development of medical diagnostic techniques, studies on metal based anti-cancer and insulin mimic drugs and network security issues. As a part of the career development, faculty members have opportunities to register for Ph.D. degrees. A large number of faculty members in various departments are pursuing Ph.D. programmes as part of career advancement. Number of publications in reputed journals, which is a good indicator of research output has been quite satisfying during the last three years. Interdisciplinary approach is being used to address common issues in society.

**The Practice**

- Devise strategies to assist the research scholars in meeting their research objectives
- Periodical review of research strategies and plans of individual department through road map
- Analyzing the road map areas for initializing inter disciplinary research
- Identification of new initiatives and opportunities in the innovation area
- Effective publication of the research works in reputed journals and conferences.
- Identification of social issues and bringing about a solution to the issues
- Encouraging active scientists from relatively small and less endowed University Departments and Institutions.

**Evidence of Success**

The research activities are funded from organizations such as DRDO, DST, ICMR, AICTE, MNRE, BRNS. More than Rs.4.75 Crore has been received during the last five years. Few projects are given below:

- Comparative performance analysis of grid connected solar photo voltaic power plants with poly crystalline thin film, other new materials and concentric pv and with different inverter configurations funded by MNRE
- *DST – 2010-2013- Cu(II) and Zn(II) complexes of imidazole and amino acid donors: Synthesis, stability and biological activities.*
- Tuning Of Nonlinear PID Controllers for Twin Rotor MIMO systems funded by AICTE

- Artificial Intelligence based Computer Aided Detection for Medical Application funded by IGCAR
- Development of Hall Sensor array based Magnetic Flux Leakage (MFL) system for non-destructive image and evaluation of localized defects in ferromagnetic steam generator tube, funded by BRNS, Mumbai
- Design and development of an intelligent structural health monitoring system for a simply supported bridge using wireless sensor network funded by IE
- Diagnosis of Diabetic Retinopathy by Feature Extraction from Retinal Images funded by ICMR
- Design and development of large diameter slewing ring bearings for Fast Breeder Reactors
- Prediction and control of distortion in components during hard facing.

**Problems Encountered and Resources Required**

The reception of funds for the implementation part of the project. Unavailability of Senior Research Fellows and Junior Research Fellows for the project

**Future Plans**

To start interdisciplinary Add on course/ programme

To bring out consultancy work.

**Contact Details**

Name of the Principal: Dr. Y. J. Bhalerao

Name of the Institution: MIT Academy of Engineering, Alandi (D)

City: Pune, Pin Code: 412105

## 7. EVALUATIVE REPORT OF THE DEPARTMENTS CHEMICAL ENGINEERING

- 1 **Name of the department** : Department of Chemical Engineering
- 2 **Year of Establishment** : 1999
- 3 **Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)** : BE Chemical Engineering
- 4 **Names of Interdisciplinary courses and the departments/units involved** : NA
- 5 **Annual/ semester/choice based credit system (programme wise)** : Semester
- 6 **Participation of the department in the courses offered by other departments** : NA
- 7 **Courses in collaboration with other universities, industries, foreign institutions, etc.** :  
 1. Process Engg Add-on Course in collaboration with MIT School of Design, Pune  
 2. Auto cad certification Add-on course in collaboration with Auto Desk.  
 3. Piping design course in collaboration with Techint, Mumbai.
- 8 **Details of courses/programmes discontinued (if any) with reasons** : NA
9. **Number of teaching posts:**

	Sanctioned	Filled
<b>Professors</b>	01	Nil
<b>Associate Professors</b>	02	02
<b>Asst. Professors</b>	09	10

### 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	No. of Ph.D. Students guided for the last 4 years
N M Rane	PhD(Reg) M.E (Chem Engg) B.E (Chem Engg)	Associate Professor and Head of Dept	Chemical Engineering	14	Nil
Dr S V Taralkar	PhD Chem Engg, M.Tech	Associate Professor	Chemical Engineering	9	Nil

	(Chem Engg) B.E Chem Engg				
M B Patil	PhD (Reg) M.Tech(Chem Engg) B.E (Chem Engg)	Assistant Professor	Chemical Engineering	11	Nil
S P Shewale	PhD (Reg) M.E (Chem Engg) B.Tech(Chem Engg)	Assistant Professor	Chemical Engineering	6	Nil
Ms M D Sardare	M.Tech(Chem Engg) B.Tech (Chem Engg)	Assistant Professor	Chemical Engineering	6	Nil
S S Gandhi	M. Tech (Petro Chem) B.E Chem Engg	Assistant Professor	Petrochemical	4	Nil
V A Tarange	MSc (Physical Chemistry ) BSc(Chemistry)	Assistant Professor	Chemistry	8	Nil
A Soni	M. Tech (Chemical Engg), BE (Chem Engg)	Assistant Professor	Chemical Engineering	4	Nil
V D Pakhale	M. Chem BE (Chem Engg)	Assistant Professor	Chemical Engineering	2	Nil
Mrs A Tamarkar	M .Tech (Chem Engg) B Tech (Chem Engg)	Assistant Professor	Chemical Engineering	4	Nil
Mr M Senhilkumar	M.Tech (Chem Engg) B.Tech (Chem Engg)	Assistant Professor	Chemical Engineering	19	Nil
Ms S V Admane	M E (Chem EnggApp) B E (Chem Engg)	Lecturer	Chemical Engineering	1	Nil

**11. List of senior visiting faculty:** NIL

**12. Percentage of lectures delivered and practical classes handled**

(programme wise by temporary faculty: NIL)



**13. Student -Teacher Ratio (programme wise)**

Year	Total number of students	Number of faculty	Student -Teacher Ratio (STR)
2009-10	106	12	8.83
2010-11	146	12	12.16
2011-12	166	12	13.83
2012-13	156	12	13
2013-14	178	12	14.83

**14. Number of academic support staff (technical) and administrative staff; sanctioned and filled**

	Filled	Sanctioned
Number of academic support staff (technical)	04	No specific guideline from university
Number of administrative staff	03	

**15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.**

Qualification	Number of Faculty
PhD	01
PG	10
UG	01

**16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received**

No of faculty with ongoing projects from National funding agencies	Grants received from National funding agencies	No of faculty with ongoing projects from International funding agencies	Grants received from International funding agencies
02	4,00,000	Nil	Nil

**17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received**

Sr. No	Name of the Faculty (PI)	Funding Agency & Year	Amount (in Rs) Lac
1.	Dr S V Taralkar	Pune University (2012-14)	2.5
2.	S P Shewale	Pune University (2012-14)	1.5
3.	N M Rane	Pune University (2011-13)	2.0
4.	V A Tarange	Pune University (2011-13)	2.0
5.	D J Garkal	AICTE, New Delhi (2009-11)	6.0
6.	Ms. J M Satbhai	Pune University (2008-10)	2.5
7.	D J Garkal	Pune University (2007-09)	1.5
8.	P M Deshpande	Pune University (2007-09)	1.0
9.	R R Joshi	Pune University (2007-09)	1.5
10.	M Sentihlkumar	Pune University (2007-09)	1.5
<b>Total</b>			<b>22</b>

**18. Research Centre /facility recognized by the University:** Not applicable (don't have research center recognized by university)

**19. Publications:**

Sr. No .	Name of the Faculty	No. of Papers published in peer reviewed journals Faculty /Student	No. of publications listed in International DB	Mono-graphs	Chapters In Book	Books Edited	Books with ISBN In international Data base	Citation Index	S N I P	S J R	Impact Factor	H-index Average
1.	Mr. N. M. Rane	6	6	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Average 1.5	Average 2
2	Dr. S. V Taralkar	9	9	Nil	1	nil	Nil	Nil	Nil	Nil	Average 2.5	Average 3
3	M. B. Patil	7	7	Nil	Nil	nil	Nil	Nil	Nil	Nil	Average 1.5	Average 2
4	S P. Shewale	7	7	Nil	Nil	nil	Nil	Nil	Nil	Nil	Average 1.5	Average 2
5	Ms. M.D. Sardare	3	3	Nil	Nil	nil	Nil	Nil	Nil	Nil	Average 1.5	Average 2
6	Mr S S Gandhi	1	1	Nil	Nil	nil	Nil	Nil	Nil	Nil	Average 1.0	Average 1
7	A Soni	1	1	Nil	Nil	nil	Nil	Nil	Nil	Nil	Average 1.0	Average 1

8	Mr. V.D. Pakhale	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
9	Mr. V. N. Tareng	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
10	A. Tarmrakar	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11	M. Senthil Kumar	4	4	Nil	Nil	nil	Nil	Nil	Nil	Nil	Average 2.0	Average 2
12	Ms. S. V. Admane	2	2	Nil	Nil	nil	Nil	Nil	Nil	Nil	Average 1.5	Average 2

#### 20. Areas of consultancy and income generated:

Sr. No.	Area of consultancy	Name of Industry/organization	Income generated
1.	Herbal Extraction	Maimera Herbals	Nil (In Progress)
2.	Solid waste disposal	Jubilant Life Sciences	Nil (In Progress)

#### 21. Faculty as members in:

Committee	No. of Faculty
National	01
International	NIL
Editorial	01
Reviewer	03

#### 22. Student projects

a) Percentage of students who have done in-house projects including inter departmental/programme

Year	No of In-house Projects	% of Projects done in-house
2009 - 10	4	50
2010 - 11	16	88.9
2011 - 12	9	69
2012 - 13	17	77
2013 - 14	19	82.6

b) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies

Year	No of Projects in Collaboration	% of Projects done in Collaboration
------	---------------------------------	-------------------------------------

<b>2009 - 10</b>	4/8	50
<b>2010 - 11</b>	2/18	11.1
<b>2011 - 12</b>	4/13	31
<b>2012 - 13</b>	5/22	23
<b>2013 - 14</b>	4/23	17.4

### 23. Awards / Recognitions received by faculty and students

<b>Sr. No.</b>	<b>Name of Faculty</b>	<b>Awards received by the faculty and students</b>	<b>Recognition received from reputed professional bodies and agencies, nationally and internationally</b>
1.	Dr S V Taralkar	Outstanding achievement in research 2012-13	MITAOE, Alandi
2.	S P Shewale	Outstanding achievement in research 2012-13	MITAOE, Alandi
3.	Prof. N. M. Rane	MAEER's MIT Pune Foundation Day Award	MIT, Kothrud, Pune
4.	Mr. M.B.Patil	Best teacher award of year 2013-14	MITAOE, Alandi
5	Dr .S. V. Taralkar	bets teacher of the department award of year 2013-14	MITAOE, Alandi
6	Mr. M.B.Patil	Outstanding achievement in Academics 2013-14	MITAOE, Alandi
7	Mrs. A. Soni	Outstanding achievement in Academics 2013-14	MITAOE, Alandi
8	Mr. Amit Warkar, Rajani Gaigawali and Pranali Patil (BE Chemical )	third prize in the event 'Recent Trends in Chemical and Technology ' in REACT 2014 organized by LIT 201314	Laxminarayan Institute of Technology, Nagpur
9	Sarthak Agarwal, Akshay Belwarkar, Kirtna Nair (BE Chemical) and Rohit Mistry	first prize in <b>Chem-e-jet for Best Design in Azeotropy 2014</b>	first prize in <b>Chem-e-jet for Best Design in Azeotropy 2014</b>
10	Ms. Anuja Chavan, Ms. Madhura	getting certification of <b>Auto-Cad 2013</b>	SW system Pune and MITAOE, Alandi

	Kulkarni, Ms. Nisha Waghare, Mr. Rohit Mergu, Mr. Rishab Ramolia and Mr. Saurabh Thakur	Professional by Autodesk (US)	
11	Mr. Pravin Agalave, BE Chemical Engg.	1 <sup>st</sup> rank in University of Pune examination (2012-13).	University of Pune
12	Mr. Sumitabh Saha, a student of BE Chemical Engg.	10 <sup>th</sup> rank in University of Pune examination (2012-13).	University of Pune
13	Mr. Deebdeep Dhar BE Chemical Engg.	M A E S T R O 2013-14	MITAOE, Alandi
14	Debdeep Dhar and Shrushti Rawat	3 <sup>rd</sup> in Paper presentation SCHEMCON 2013	MVGR, Vizianagaram, Conference, Andhra Pradesh, September 14-15 2013
15	Sujay Atakare, Sanjay Purswanii and Mayank Sharma	1 <sup>st</sup> in paper presentation SCHEMCON 2013	Maharaj Vijayaram Gajapathi Raj College Of Engineering (MVGR), Vizianagaram, Conference, Andhra Pradesh, September 14-15 2013
16	Chirag chandaliya (TE chemical ) and Amit warkar (BE chemical)	1 <sup>st</sup> in poster presentation SCHEMCON 2013	Maharaj Vijayaram Gajapathi Raj College Of Engineering (MVGR), Vizianagaram, Conference, Andhra Pradesh, September 14-15 2013
17	Priyanka Jadhav (BE chemical)	2 <sup>nd</sup> in poster presentation SCHEMCON 2013	MVGR, Vizianagaram, Conference, Andhra Pradesh, September 14-15 2013
18	Surbhabh thakur, Rohit mergu, Monish sutradhar	1 <sup>st</sup> prize in PRAKALP 2013	MITAOE, Alandi
19	Anuja chavan, Marline Methue ,	3 <sup>rd</sup> prize in PRAKALP 2013	MITAOE, Alandi
20	Renu , Shishi kumar	2 <sup>nd</sup> prize in PRAKALP 2013	MITAOE, Alandi
21	Nidhi Rawat & Puckraj Mistry	1 <sup>st</sup> in paper presentation SCHEMCON 2012	BITS Pillani (Rajasthan)

22	Mr. Aniruddha Kulkarni, Ms. Mayuri Khairnar, Mr. Pravin Suroshe	Third Prize, PETROVISION-2012	Maharashtra Institute of Technology, Pune
23	Jyoti Abhang , Nidhi Rawat	First Prize in paper presentation PRAKALP 2012	MITAOE, Alandi
24	Supriya Ddhume , Ajinkay Dagade	First Prize in poster presentation PRAKALP 2012	MITAOE, Alandi
25	Mr. Anoop Uchagaonkar and Ms. Ritu Kedia	First Prize YICC-2011	ICT Mumbai
26	Raj Markana, Pravin Aglawe, Pranam khandekar	First Prize MAE Quest 2011	MITAOE, Alandi
27	Ritu Kedia and Anoop Uchagaonkar	Prestigious “VICAL” Award SCHEMCON-2010	IIT,Roorkee
28	Ms. Swapna Naik and Ms. Akila Kawalekar	Second prize in paper presentation 2011	Dr. B. A. Technological University, Lonere
29	Sumitabh Saha	Second prize NFS-Most Wanted Medallion 2011	MITAoE Alandi

**24. List of eminent academicians and scientists / visitors to the department**

Sr.No.	Name of visitor	Profile of visitor
1	Prof. A. B. Pandit	Professor & Scientist at ICT, Mumbai
2	Mr.S.P.Singh	Praj Industries Ltd.
3	Dr.S.G.Kulkarni	Scientist-F IAT ,Pune
4	Dr. G.S.Tasganekar	Former ChairmanIBLA,Pune
5	Mr.U.D.Kapre	VP,Alembic Ltd
6	Dr.V.S.Sapkal	VC Nogpur University
7	Dr.R.Baskar	Asst.Prof. Kongu Engineering College
8	Prof.Dr.V.G.Gaikar	ICT,Mumbai
9	Mr.S.K.Saha	Dy. General Manager SAIL,Bhilai
10	Dr.V.S.Sapkal	Vice Chancellor,RTM Nagpur University
11	Mr.S.Saimani	GM,Alkyl Amines Ltd.
12	Mr.Pradeep Dhotey	Vice President Praj Industries Ltd.
13	Dr.Yogesh Koparkar	Sr.Manager ,Gujarat Themis Biosyn Ltd.
14	Mr.Pradeep Dhotey	Praj Industries Ltd.
15	Mr.Amit Gupta	Vice President,Jubilent Life Sciences
16	Mr.K.V.Nayak	Deepak Fertilizers & Petrochemicals Ltd.
17	Dr.Kailas Wasewar	VNIT,Nagpur
18	Dr.K.N.Ponnani	BITS,Pilani,Goa Campus
19	Dr.Madhavi Sardeshpande	NCL,Pune

20	Dr.J.B.Naik	Prof.& Head,UDCT,Jalgaon
21	Mr..G.A.Bathe	Asst.Prof.UDCT,Jalgaon
22	Mr.Dnyneshwar Awasare	Scientific officer,NPCIL,Tarapur
23	Mr.N.V.Kulkarni	Director,Mojj Engineering Systems ltd.
24	Mr.Anil Katyal	Vice President,Indo World trading Corporation

### 25. Seminars/ Conferences/Workshops organized & the source of funding

#### a) National:

Event	Funding Agency	Amount (Rs)
Seminar	AICTE, Delhi	1,50,000
Workshop	University of Pune	25,000
State Level Seminar		50,000
Expert Lecture Series		20,000
LCD, UPS		75,000
National Level Workshop	AICTE, Delhi	75,000
<b>Total</b>		<b>3,95,000</b>

#### b) International: NIL

### 26. Student profile programme/course wise:

Name of the Course/programme	Academic Year	Applications received	Selected	Enrolled		Pass percentage
				M*	F*	
Chemical	2009-10	As the admission process it is governed by DTE. As the rules and regulation are followed as per DTE		50	10	87%
	2010-11			51	9	59%
	2011-12			39	15	90%
	2012-13			54	10	88%
	2013-14			41	9	Nil

\*M = Male \*F = Female

### 27. Diversity of Students

Name of the Course	Academic Year	% of students from the same state	% of students from other States	% of students from abroad
B.E (Chemical Engineering)	2009-10	70%	30%	NA
	2010-11	81.6%	18.3%	NA
	2011-12	83.3%	16.6%	NA
	2012-13	76.6%	23.4%	NA
	2013-14	66.6%	16.6%	NA

### 28. Students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.

Sr. No.	Academic Year	Name of Students	Courses opted
1	2013-14	Sarthak Agrawal	MS
2		Akshay Belwankar	MS
3		Shrushti Rawat	MS

4	2012-13	Supriya Dhunme	M.Tech
5	2011-12	Pravin Suroshe	M.Tech
6		Mayuri Khairnar	M.Tech
7		Gore Amruta	M.Tech
8		Fahad Shaikh	M.Tech
9		Radhika Pandharkar	MBA
10	2010-11	Ritu Kedia	PGDM-BE
11		Ajinkya D Sirsikar	MBA
12		Patil Sandeep	UPSC
13		Saif A Shaikh	MS
14		Chitnis Shalaka	MBA
15		Apurva Alhat	ME
16		Vivek Pokhankar	M Tech
17		Archana Nagawade	ME
18	2009-10	Khirsagar Abhijeet Bandu	M. Chem

### 29. Student progression

Student progression	Percentage against enrolled				
	2013-14	2012-13	2011-12	2010-11	2009-10
UG to PG	3/60 (5%)	NA	4/32 (12.5%)	9/39 (23.077%)	1/15 (6.67%)
PG to M. Phil.	NA	NA	NA	NA	NA
PG to PHD PG to Post Doctoral	NA	NA	NA	NA	NA
Campus selection	4/60 (7%)	10/55 (18.18%)	3 /32 (9.375%)	2/39 (5.128%)	1/15 (6.67%)
Other than campus recruitment	NA	NA	7/32 (21.875%)	10/39 (25.641%)	12/15 (80%)
Entrepreneurs	NA	NA	NA	NA	NA

### 30. Details of Infrastructural facilities

**a) Library:** Department having separate library for a capacity of 30 members contains 315 books and 55 copies of journal and magazine also it is equipped with racks, wardrobe, chairs, table, watch, light, curtains, wall painting, charts, air circulation, lighting, fans, exits, ambiance.

**b) Internet facilities for Staff & Students:** Separate PC with internet connection provided to all faculty and staff in the department also the faculty room is equipped with printer and telephone. For usage of internet facility for student's two laboratories in the department having capacity 45 pc are available.

**c) Class rooms with ICT facility:**

- A conducive and spacious class rooms equipped with the following facilities is available:
  - Smart Board
  - White board



- Charts
- Over Head Projector
- LCD Projector
- Podium
- Models
- Internet connection
- Class room size: min 70 sq m
- Well maintain chairs and benches
- Proper air circulation and lighting
- Two doors for entry and exit
- UPS and Generator backup
- Audibility and the overall ambiance are good for conducting lectures.

**d) Laboratories:** Department has 13 Exclusive and 01 Shared laboratories equipped with PC with internet connection, UPS backup, drain line, first-aid box and fire extinguisher in order to fulfill the curriculum requirements

**31. Number of students receiving financial assistance from college, university, government or other agencies:**

Year	Financial Assistant		Total
	Male	Female	
2013-14	146	33	179
2012-13	122	34	156
2011-12	132	34	166
2010-11	113	33	146
2009-10	85	21	106

**32. Details on student enrichment programmes (special lectures / workshops /seminar) with external experts**

Sl.No.	Programme	Name of Event	In association with/ resource person
1	Guest lecture	Guest lecture	Mr.V.P.Jawanjal, BATU
2	Guest lecture	Guest lecture	Mr.Bivekanand Basu
3	Workshop	Matlab Workshop	Prof.C.S.Mathpathi
4	Add-on course	Add-on course on Unisim, HTRI	Persons from Honeywell
5	Add- on Course	AutoCAD Add- on Course	SW Systems,Pune
6	Workshop	Hand Made Paper Workshop	Dr. R.S.Sapkal
7	Workshop	AICTE Sponsored Workshop,RBGES	Industry Persons & Scientist
8	Guest lecture	Guest lecture	Mr. Sandip Gharat, PhD.IIT, Bombay
9	Guest lecture	Guest lecture	Mai. Sindhutai Sapkal, Social Servant
10	Guest Lecture	Guest Lecture	Mr. Nikhil Jain, M.Tech IIT, Bombay

11	Guest Lecture	Guest Lecture	Mr. Vikas Thorat, Director, Chemsys & Mr. Khandelwal, M.Tech IIT
12	Guest Lecture	Guest Lecture	Dr. Santosh Kumbharkar, PDF, Imperial College, London
13	Expert Lecture Series	Expert Lecture Series	Mr.Vinit Kale,Dy.M Sulzer India Ltd. & Dr.Chaitnya Karale,Halliburton,Pune
14	Guest Lecture	Guest Lecture	Dr.Nagesh Kini
15	Workshop	Workshop on “Analytical Instruments”	Dr.P.S.Kankekar,Praj matrix Pune,Dr.J.G.Gujar,SCOE, Pune
16	Guest Lecture	Guest Lecture	Dr.Umesh Ingle,Praj Matrix,Pune
17	Workshop	Workshop on “CFD”	Dr.Ganesh Visawale,CCTech,Pune
18	Sports Event	Sports Event	SACE Cup
19	Guest Lecture	Guest Lecture	Mr.N.V.Kulkarni,Director Mojj Engg., Pune
20	Guest Lecture	Guest Lecture	Mr.Anil Katyal,VP Indo world trading Company
21	Workshop	Workshop on “MATLAB”	Prof.C.S.Mathpati
22	Guest Lecture	Guest Lecture	Mr.Dnyaneshwar Awasare,NPCIL,Tarapur
23	Add-On Course	Add-On Course on Hysis Software	Mr.Vikas Thorat,Chemsys Pune
24	Prakalp	Prakalp	National Level Paper & Poster Presentation competition
25	Guest Lecture	Guest Lecture	Mr.P.R.Kshirsagar,Scientist Agarkar research institute
26	Work Shop	Work Shop on MATLAB Software	Prof.C.S.Mathpati
27	Guest Lecture	Guest Lecture	Mr.Ramesh Ukidve
28	Lecture Series	Lecture Series on “Advances in Chemical Engineering ”	University of Pune
29	Seminar	Seminar on “Recent Development in Sustainable Developments”	University of Pune

**33. Teaching methods adopted to improve student learning:**

- The subject allocation to faculty members is done well in advance.
- The faculty members are making teaching plans before start of the term.
- Faculty maintains the course file containing; teaching plan, question papers, course material & articles related with the course.
- For mathematical subject, one extra lecture is allotted apart from the university curriculum. This lecture emphasis on paper solving session of previous university question papers.
- For the effective understanding of theoretical concept, the industrial visits, guest lectures are organized.
- The regular class tests are conducted to evaluate the students understanding about the course.
- The modern teaching aids are used for better understanding.

**34. Participation in Institutional Social Responsibility (ISR) and Extension activities**

1. Every year departmental students take part in National Service Scheme (NSS) camps and take over some task in nearby villages.
2. Every year departmental staff takes part in ghat duties during kartiki/Ashadi ekadashi. During this staff distributes food and snack to the visitors coming to Dnyaneshwar Maharaj Temple from all over Maharashtra.
3. Every year college organizes blood donation camp and faculty, staff and students take active participation in the same.
4. College staff have also contributed one day salary for flood relief fund at Utarrakhand .
5. Through social activity of Ignited Minds different social events are celebrated and it also works to help for needy peoples of the society.

**35. SWOC analysis of the department and Future plans SWOC analysis****Strength**

1. Qualify & dedicated faculty member
2. State of art laboratory
3. Sophisticated analytical facility
4. Advanced computing facility

**Weakness**

1. Rural location
2. Quality of students
3. Retention of qualified faculty

**Opportunities**

1. Enhancement of industry Institute interaction activity
2. Enhancement of Research & development activity
3. Focus on IPR (Intellectual Proper Rights)

**Challenges**

1. Students placement
2. Up gradation of students as per industry needs.
3. Project development for society needs.

**Future Plans**

1. To make the department self sustainable
2. To establish post graduate / Research centre
3. To increase the consultancy work
4. To improve employability of the students
5. Up gradation of faculty qualification

## COMPUTER ENGINEERING

1. **Name of the department:** Computer Engineering
2. **Year of Establishment:** 1999
3. **Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D.,**

**Integrated Masters; Integrated Ph.D., etc.):**

Course 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/unitsinvolved**

Sr.No	Names of Interdisciplinary courses	Department involved
1	Digital Electronics and Logic Design	Electronics Engineering
2	Data Communication	Electronics & Telecommunication
3	Microprocessors and Interfacing Techniques	Electronics & Telecommunication
4	FMIS	MBA

5. **Annual/ semester/choice based credit system (programme wise):**

U.G.-:Semester system

P.G.-: Semester based credit system.

6. **Participation of the department in the courses offered by other Departments:**

Sr.No.	Course Name	Offered to (Dept.Name)
1	Java Programming	MCA
2	Mobile Computing	MCA

7. **Courses in collaboration with other universities, industries, foreign institutions, etc.:**

Sr.No.	Name of the course	Name of Collaboration
1	Training and certification on IBM DB2,RAD ,RTC	IBM India Pvt.Ltd.
2	Add on course on .Net Technology	Microsoft
3	Java Technology	Concourse Education & Fortune Infocomm Pvt. Ltd.
4	Hardware Troubleshooting & Network Essentials	Wipro Pvt.Ltd.
5	Cloud Computing	NxTech Pvt.Consultant

6	Object Oriented Programming concepts	Object Technologies
7	Add on Course on Core Java & Adv. Java	Vinca Labs Info.Pvt. LTD.
8	Android 3 Days Workshop for TGMC-2014	Bit Code Pvt Ltd , Pune
9	IBM Worklight Training Program	IBM India Pvt Ltd

**8. Details of courses/programmes discontinued (if any) with reasons:**

Nil

**9. Number of teaching posts:**

Post	Sanctioned	Filled
Professors	2	1
Associate Professors	6	3
Asst.Professors.	16	19

**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	No.Of Ph.D. Students guided for the last 4 years.
Mrs. Uma Nagaraj	M.E.	HOD & Prof.	Network	22	NA
Mrs. R. M. Goudar	M.E.	Asso. Prof.	Network	23	-
Mrs. RanjanaBadre	M.E.	Asso. Prof.	Distributed Systems	16.5	-
Mr. Shitalkumar Jain	M.E.	Asso. Prof.	Network	12.8	-
Mrs. MayuraKinikar	M.E.	Asst. Prof.	Data mining	12	-
Mrs. SunitaBarve	M.E	Asst. Prof.	Machine Learning	12	-
Mr. Manish Giri	M.E	Asst. Prof.	Network	11	-
Mrs. PrajaktaUgale	M.E	Asst. Prof.	System	8.5	-
Mrs. NehaHajare	M.E.	Asst. Prof.	Network	5	-

Mrs. DipteeChikmurge	M.E.	Asst. Prof.	Image Processing	5.8	-
Ms. Padma Nimbhore	M.E.	Asst. Prof.	Image Processing	6.10	-
Mrs. Kavitha S.	M.E.	Asst. Prof.	Distributed Systems	12	-
Mr. Amar More	M.E.	Asst. Prof.	Cloud Computing	10	-
Mr. P D Ganjewar	M.Tech	Asst. Prof.	Data Mining, Wireless Sensor Network	13.4	-
Mr. SantoshWarpe	M.E.	Asst. Prof.	Operating Systems, AI, Networking	5.6	-
Mr. Sanjay Ghodke	M.Tech	Asst. Prof.	Network	15	-
Mr. MahendraSethi	M.E	Asst. Prof.	Data Mining & E-Learning	10	-
Mrs. M.N. Vharkate	M.E.	Asst. Prof.	Data Mining	14.4	-
Mr. ChaitanyaPatil	M.E.	Asst. Prof.	Mobile Adhoc Network	8 Months	-
Mr. Mahesh Pavaskar	M.E.	Asst. Prof.	Cloud Computing	5	-
Mrs. PranaliLokhande	M.E.	Asst. Prof.	Image processing	7.5	-
Mr. Vijay Rughwani	M.E.	Asst. Prof.	Machine Intelligence	12	-
Mr. SumitKhandelwal	M.E.	Asst. Prof.	Adhoc Network	4.6	-
Ms. RachanaNemade	M.E.	Sr. Lecturer	Data Mining	14	-
Ms. Shubhangi Kale	ME (Appeared)	Sr. Lecturer	Data Mining	12	-
Ms. B R Alhat	B.E.	Lecturer	Distributed System	5.7	-

Ms. KanchanHadwale	B.E.	Lecturer	Computer Networking	3.5	-
Ms. AshwiniAbhale	B.E.	Lecturer	Ad-hoc networks	2.5	-
Ms. Shikha Thakur	B.E.	Lecturer	Cloud Computing	1.6	-

11. List of senior visiting faculty: Nil

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty: Nil

13. Student -Teacher Ratio (programme wise) :- 1:14

14. Number of academic support staff (technical) and administrative Staff, Sanctioned and filled

Post	Sanctioned	Filled
Technical staff	07	07
administrative staff	04	04

15. Qualifications of teaching faculty with D.Sc./D.Litt/ Ph.D./ M.Phil/PG.

Qualifications of Teaching faculty	Total Number of staff
P.G..	23

16. Number of faculty with ongoing projects from a) National b) International funding Agencies and grants received:

Sr. No	Number of faculty	Amount of funding
1	2	Rs. 19,1800/-

17. Departmental projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received:

Sr. No	Name of faculty	Funding Agency	Amount of funding
1	Prof. Uma Nagaraj Prof. Amar More	University of Pune.	Rs.1,50,000/-
2	Prof. S.A.Jain	University of Pune.	



	Prof. S.S.Das		Rs.1,00,000/-
3	Prof. S.A.Jain Prof. S.J.Wagh	University of Pune.	Rs.1,00,000
4	Mrs. SunitaBarve	AICTE, New Delhi	Rs.16,38,000/-
5	Mrs. SunitaBarve	RPS, University of Pune.	Rs. 1,40,000/-
6.	Prof. S. A. Jain	RPS, Universityof Pune	Rs. 1,40,000/-
<b>Total Grant received</b>			Rs. 22,68000/

18. Research Centre /facility recognized by the University: NIL

19. Publications:

Sr. No	Faculty Name	No. of Papers published in peer reviewed journals Faculty /Student	No. of publications listed in International DB	Monographs	Chapters	Books Edited	Books with ISBN/ISSN numbers with details of publishers	Citation Index	S N I P	SJ R	Impact Factor (Avg)	H-index Average
1	Mrs. Uma Nagaraj	20	-	-	-	-	-	31	-	-	4.23	2
2	Mrs. Rajeshwari Goudar	05	-	-	-	-	-	8	-	-	3.92	2
3	Mrs. RanjanaBadre	07	-	-	-	-	-	-	-	-	0.67	-
4	Mr. Shitalkumar Jain	07	-	-	-	-	-	6	-	-	6.35	2

5	Mrs. MayuraKini kar	06	-	-	-	-	-	0	-	-	3.7	-
6	Mrs. SunitaBarve	13	-	-	-	-	-	9	-	-	2.55	2
7	Mr. Manish Giri	6	-	-	-	-	-	2	-	-	1.73	1
8	Mrs.PUgale	2	-	-	-	-	-	-	-	-	-	-
9	Mrs. Kavitha S.	4	-	-	-	-	-	4	-	-	-	1
10	Mr. Amar More	3	-	-	-	-	-	1	-	-	-	1
11	Mr. P D Ganjewar	5	-	-	-	-	-	-	-	-	1	-
12	Mr. Sanjay Ghodke	2	-	-	-	-	-	-	-	-	-	-
13	Mrs. Vharkate	4	-	-	-	-	-	-	-	-	1.34	-
14	Mr. Mahesh Pavaskar	5	-	-	-	-	-	-	-	-	-	-
15	Mr. VijayRughwani	06	-	-	-	-	-	-	-	-	-	-
16	Mr. SumitKhandelwal	03	-	-	-	-	-	-	-	-	2.08	-
17	Ms.K.Hadwale	03	-	-	-	-	-	-	-	-	4.29	-
18	Ms. AshwiniAbhale	03	-	-	-	-	-	-	-	-	2.08	-

## 20. Area of consultancy and income generated

Sr.No.	Name of the consultant	Income generated
1	TCS iON Pvt. Ltd., Pune (For Conduction of Online	8,50,165/- (from 1 Feb 2013 To

	Examination in association with iON Pvt. Ltd., Pune)	31 Jan 2014)
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21. Faculty as member in
- National committees :NIL
  - International committees-02
  - Editorial boards :01

22. Students projects

- a) Percentage of students who have done in house projects including inter departmental/ programme

Sr. No.	Academic Year	% In-house Project
1	9-10	68%
2	10-11	95%
3	11-12	100%
4	12-13	84%
5	13-14	80%

- b) Percentage of students placed for projects in organizations outside the institution i.e. research laboratories/industry/other agencies.

Sr. No.	Academic Year	% Outside Project
1	9-10	32%
2	10-11	5%
3	11-12	0%
4	12-13	16%
5	13-14	20%

23. Awards / Recognitions received by faculty and students

• Faculty

Sr. No.	Award from the Department	Name Of Faculty
1	Best Teacher Award	Prof. Amar More

• Student

Sr. No.	Achievement	Name Of Student
1	MAESTRO(best outgoing student of the college)	Mr.AnkitGoel
2	Participated in India's Great Youth Leadership	Sourav Kumar

	Hunt. He won the regional Final round of TYCOONS 2009.	
3	First Position in Robotics & RoboRace Competition at Sinhgad College of Engineering, Pune.	Abhjeet Gaikwad
4	A first prize in Softkriti organized in Techkriti, the Annual technology and entrepreneurship festival of IIT Kanpur	Rahul Datta Ajinkya Jadav Animash Rawat
5	Won 2 <sup>nd</sup> prize in Mobile Robotics  (National Selection for World Skills Competition 2012) organized by National Skill Development Corporation (NSDC)	Uday Patil
6	Won 1 <sup>st</sup> prize in project competition Concepts 12	Akshay Karle, Nishant Gulhane, Shreyash Mahure, Ashutosh Tripathi
7	Zonal winner in National Security Championship India	Akshay Shah

**24. List of eminent academicians and scientists / Visitors to the department**

Sr. No.	Name of academician/Scientist	Designation	Date of visit	Name of organization
1	Dr. Milind Pande	Professor	09/03/2012	MIT Pune
2	Shivang Agarwal	Developer	15/12/2013	NXTech Pvt. Ltd.
3	Dr. Mrudula Kulkarni	Professor & HOD (Applied Mechanics)	3/1/2013	MIT Pune
4	Dr. G.K. Patnaik	Professor & HOD (Computer Engg.)	12/01/2013	Shram Sadhana Bombay Trust College of Engg. And Technology, Jalgaon

5	Rajesh S.Vartak	Director & CTO	6/02/2013	Seed InfoTech Pvt. Ltd.
6	KiranH.Divekar	Project Manager	9/02/2013	Marval India
7	RavindraC.Thool	Professor & HOD (IT)	11/02/2013	S.G.G.S Nanded.
8	Amit Kale	Managing Director	14/02/2013	LinSysSoft Technologies Pvt.Ltd.
9	RashmiDravid	Sr. Lecturer	2/04/2014	Northampton University
10	SachinDinkarPalwe	Team Leader	8/06/2013	Silicon India
11	Bhushan Mali	Project Leader	08/06/2013	Cognizant

## 25. Seminars /conference /Workshop organized & the source of funding

### a) National

Sr. No.	Seminar/conference/workshop	Year	Source of funding
1	National Workshop on big Data &Hadoop	4 <sup>th</sup> & 5 <sup>th</sup> October 2013	MITAOE
2	Sensitization programme	21 <sup>st</sup> September 2013	MITAOE
3	Sensitization programme	10 <sup>th</sup> October 2013	MITAOE
4	Workshop on CLOUD Computing	10 <sup>th</sup> July 2013 To 11 <sup>th</sup> July 2013	MITAOE

## 26. Student profile programme/ course wise

Name of the course/programme	Application received	Selected	Enrolled		Pass percentage
			Male	Female	
Computer2009 -10	Admission process in the State is governed by Director Technical Education. Institute follows the rules, regulations & guidelines set up by state government body.		99	21	123
Computer 2010-11			90	30	121
Computer 2011-12			103	14	95
Computer 2012-13			77	43	94
Computer 2013-14			83	37	NA

**27. Diversity of students**

Name of the course and Year	% of students from the same state	% of students from other state	% of students from abroad
Computer2009 -10	87	33	--
Computer 2010-11	105	15	-
Computer 2011-12	87	33	-
Computer 2012-13	88	32	-
Computer 2013-14	105	15	-

**28. How many students have cleared national and state competitive examinations such as NET,SELECT, GATE, Civil services, Defense services etc.**

Sr. No	Year	Competitive Exam	Qualified No. of students
1	2012-13	GATE	6
2		CCNA	4
3		TOFEL	1
4	2011-12	GATE	1
5		TOFEL	1
6		GRE	1
7	2010-11	GATE	1
8		TOFEL	1
9		GRE	1
10		CAT	1
11	2009-10	GATE	1
12		TOFEL	5
13		GRE	5

**29. Student progression**

Student progression	Against % enrolled				
	2009-10	2010-11	2011-12	2012-13	2013-14
Year					
UG to PG	15.77	11.62	2.49	2.49	5.83
PG to Ph.D.	Nil				
Ph.D.toPost Doctoral	Nil				
Employed					
Campus selection	42.33	31.54	53.95	31.54	42.33
Other than campus recruitment	33.2	38.18	13.28	6.64	-
Entrepreneurship/Self employed					

**30. Details of infrastructural facilities****a) Library**

- No. of titles –520
- No. of volumes –1113
- No of journals(National/International)-Nil

**b) Internet facilities for staff & students**

- All staff rooms are equipped with computers and Internet facility to keep track of the latest trends and advancements in technology
- Each Computer in the laboratory has facility to access USB drive / internet / intranet.
- Internet speed: 50Mbps

**c) Class rooms with ICT facility– 08****d) Laboratories**

Sr. No.	Number of Laboratories	Facilities
1	12	188 P IV Desktop with 4 GB RAM, 2.8 GHz, 500 GB HDD with internet facility, Wi-Fi Access, Smart device, Projector

**31. Students receiving financial assistance from college, university, government or other agencies**

	Govt of Maharashtra			College
	Freeship & Scholarship	EBC	Minority	Merit Scholarship
FE	48	13	-	-
SE	68	18	2	-
TE	72	19	2	1
BE	45	14	1	-

**33. Details on student enrichment programmes (Special lecture/workshops/seminar) with external expert**

Sr. No	Name of the Programs	Name of the Expert	Date
1	Seminar on Projects in Linux for BE	Mr. Amit Kale	26/06/2013
2	Seminar on Carrier Guidance	Mr. Pankaj Gandhi	10/09/2013
3	In house Workshop on DS using C Language	Mrs. R.M Goudar , Mrs.R.R. Badre	26/06/2013 28/06/2013
4	In house Workshop on Microprocessor Architecture	Mrs.Minakshi Vharkate and Ms. Kanchan H.	26/06/2013 27/06/2013
5	Workshop on Core Java & Advanced Java	Mr. Venkatesh Badiger Vinca Lab Infotech	04/07/2013 09/07/2013
6	Workshop on Operating System & Administration	Mr. Amit Kale & Mr. Kiran Divekar	12/07/2013 14/07/2013
7	Workshop on Cloud Computing	Mr. Sanjay Suryadevra	10/07/2013, 11/07/2013
8	Workshop on Operating System & Administration	Mr. Amit Kale & Mr. Kiran Divekar	02/08/2013, 04/08/2013
9	Workshop on Advanced Data Structures	Ms. Sujata Jadhav and Nivedita Shivare	01/08/2013, 04/08/2013
10	Workshop on Python Programming	Yogeshwar Shukla Eaglet	10/08/2013 11/08/2013
11	Workshop on LaTeX	Prof. Suresh Limkar	10/08/2013 11/08/2013
12	Workshop on Python Programming	Yogeshwar Shukla Eaglet	17/08/2013 18/08/2013
13	Workshop on Android for TGMC-2014	Bit Code	23/01/2014, 24/01/2014, 30/01/2014



14	SDP on Java Programming and Android Introduction	Object Technologies	13/02/2014, 14/02/2014, 15/02/2014,16/ 02/ 2014
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### 34. Teaching methods adopted to improve student learning

1. White Board Teaching
2. LCD /Power point presentation
3. Use of Multimedia
4. Quiz Contest/ Tutorials
5. Guest Lectures
6. Seminars
7. Collaborative learning

### 34. Participation in Institutional Social responsibility (ISR) and Extension activities

Following social activities done by department

1. Computer awareness program in rural school
2. Visit to oldage home.
3. Short term course on “Youth Empowerment through Value Education”

### 35. SWOC analysis of the department and future plans (strength, weakness, opportunities & challenges)

#### ❖ Strength

1. Well qualified, highly motivated and devoted faculty.
2. Well equipped & Furnished laboratories.
3. Good result and placement.
4. Well Stocked Departmental Library.
5. Managing capability for conducting workshops and faculty development Programs.
6. Class rooms are equipped with Internet facility and Projectors.
7. Dedicated and experienced supporting staff.
8. Good Industry Institute Interaction cell.
9. “Focus” a Computer society organizing different events for students to strengthen Knowledge of students.

#### ❖ Weakness

1. Consultancy work needs to be improved.
2. Lack of Inter-disciplinary projects.
3. R&D work needs to be increased.

#### ❖ Opportunities

1. Leader in providing quality engineering education clubbed with placements.
2. Industry oriented training
3. Scope for more student placements
4. Workshops and seminars conducted for the faculty to develop their skills and academic challenges.
5. Student participation in club activities, inter college competitions, etc.,

**❖ Challenges**

1. Students with diverse background.
2. Constant changes to technology.
3. Adapting to changing student expectations.

**❖ Future plans of the department.**

1. Planning to apply for Major/Minor Research Projects.
2. To offer consultancy services.
3. To Establish a Research Center
4. Organize Summer / Winter School and STTPs
5. To Enhance R&D Activities
6. To have 40% Doctorate Faculty

## ELECTRONICS ENGINEERING

1. Name of the department: Department of Electronics Engineering
2. Year of Establishment: 1999
3. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.):

Program of Study	Description
UG in Electronics Engineering.	<ul style="list-style-type: none"> <li>• Started with 40 seats in 1999-2000 (F. No. 740-89-323(E)/ET/98) Date:- 11/9/98</li> <li>• Intake increased to 60 in 2006-07 (F. No. 740-89-323(E)/ET/98) Date:- 16/6/2006</li> <li>• Accredited by NBA in 2007-08 for 3 years (F. No. NBA/ACCR-846/06) Date:- 22/1/2008</li> <li>• Accredited by NBA in 2012-13 for 2 years (F. No. 28-325/2010-NBA) Date:- 07/12/2013</li> </ul>
PG in ME (Electronics) specialization in VLSI and Embedded Systems	Started with 18 seats in 2009-10 (F. No. 740-89-323(E)/ET/98) Date:- 15/9/2009
PhD (Electronics)	Started with 18 seats in 2010-11 (Reference No. CA/3222 dated 11/8/2010)

4. Names of interdisciplinary courses and the departments / units involved: Department of Electronics & Telecommunication, Department of Mechanical Engineering
5. Annual / semester / choice based credit system (programme wise):
  - UG – Semester
  - PG – Semester with CGPA system
6. Participation of the department in the courses offered by other departments:

Academic Year	2013-14	2012-13	2011-12	2010-11	2009-10
Courses	SS,DSA, DSP,PD, MCR, NSFD BEE	Mechatronics Data Structure DLD	Mechatronics ET BEE	Mechatronics	Mechatronics, ET BEE PIL
Name of Department	E&TC FE	Mechanical E&TC Computer	Mechanical FE	Mechanical	Mechanical FE IT

7. Courses in collaboration with other universities, industries, foreign institutions, etc. :

Sr. No.	Name of add on course	Resource Person /Faculty and Affiliation
1	Embedded System using SoC-MSP430	Gill Instruments, Bangalore
2	Mobile Robotics (WSI)	Nex Robotics, Mumbai

**8. Details of courses/programmes discontinued (if any) with reasons: NIL****9. Number of Teaching posts:**

Teaching Posts	Sanctioned		Filled
	UG	PG	2013-14
Professor	1	1	1
Associate Professors	2	1	1
Assistant Professors	9	1	15

**10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.):**

S. No.	Name of Faculties	Qualification	Designation	Specialization	No. of Years of Experience (years)	No. of Ph.D. students guided for the last 4 years
1	Dr. M. D. Goudar	Ph.D.	Professor	Electronics	26	Nil
2	Mrs. P. S. Kasliwal	M.E., Ph.D. registered	Associate Professor	Digital Electronics	17	Nil
3	Mr. S. A. Pangaonkar	M.Tech., Ph.D. registered	Assistant Professor	Speech processing	15	Nil
4	Mrs. S. N. Bhadoria	M.E., Ph.D. registered	Assistant Professor	Image processing	12	Nil
5	Mrs. D. Y. Sakhare	M.E., Ph.D. registered	Assistant Professor	Digital Systems	08	Nil
6	Mrs. S. R. Pawar	M.E.	Assistant Professor	Speech processing	11	Nil
7	Mrs. U. Y. Verma	M.E., Ph.D. registered	Assistant Professor	Digital Systems	13	Nil
8	Mr. S. A. Khandekar	M.E.	Assistant Professor	Digital systems	15	Nil
9	Mrs. S. K. Rudrawar	M.E.	Assistant Professor	VLSI & Embedded System	7.6	Nil
10	Mrs. V. S. Tapkir	M.E.	Assistant Professor	Microwave and antenna	6	Nil
11	Mrs. M. H. Chavaan	M.E.	Assistant Professor	Digital Systems	5.5	Nil
12	Mr. S. P. Shinde	M.E.	Assistant Professor	Microwave and antenna	1	Nil
13	Mr. H. R. Lodha	M.E.	Assistant Professor	VLSI & Embedded	5	Nil
14	Mr. M. M. Bhalekar	M.Tech.	Assistant Professor	Power Electronics & Drives	1	Nil

15	Mr. P. R. Ubare	M.Tech.	Assistant Professor	Automotive Electronics	1	Nil
16	Mr. A. V. Kulkarni	M.E.	Assistant Professor	Embedded System	11.5	Nil
17	Mr. A. B. Chavan	M.Tech.	Assistant Professor	Electronics Design & Techniques	0.95	Nil

**11. List of senior visiting faculty:**

1. Dr Vachaspati Mishra for year 2010-11 (ME-ETX, PPITM)

**12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty: Nil****13. Student -Teacher Ratio:**

Academic Year	2009-10	2010-11	2011-12	2012-13	2013-14
STR for UG	15	13.64	15	12.85	12.85
STR for PG	6	6	9	6	6

**14. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

	Sanctioned	Filled
Support Staff (Technical)	05	06
Administrative Staff	01	01

**15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG:**

Qualification	Ph.D.	PG
No. of Faculties	1	16

**16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received:**

S. No.	Academic Year	Total number of projects	Total Grants received	Funding Agency	Principal Investigators
1.	2013-14	02	2.75 Lakh	University of Pune	Mrs. D. Y. Sakhare, Mr. S. A. Pangaonkar

**17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received.**

Sr. No	Name Of Faculty	Funding Agency	Amount (Rs.)
1.	Dr. B. P. Patil	University of Pune (2009-10)	1.5 Lakh
2.	Prof. M.G. Wani	University of Pune (2009-10)	1.5 Lakh
3.	Prof. P. S. Kasliwal	University of Pune (2010-11)	50,000.
4.	Mr .B. K. Shiragapur	University of Pune (2010-11)	1 Lakh
5.	Mrs. D. Y. Sakhare	University of Pune (2013-14)	1 Lakh
6.	Mr. S. A. Pangaonkar	University of Pune (2013-14)	1.75 Lakh

**Total grants received: Rs 7.25 Lakh**

**18. Research Centre /facility recognized by the University:**

The approval for Research Center in Electronics Engineering is granted in 2010-11 by University of Pune. (Reference No. CA/3222 dated 11/8/2010)

**19. Publications:**

S. No.	Name of Faculty	Number of papers published in journals (national /international) by faculty and	Number of publications listed in International Database	Monographs	Chapter in Book	Books Edited / Reviewed	Books with ISBN/ISSN numbers with details of publishers	Citation Index	Impact factor	h-index
1	Dr. M. D. Goudar	16	--	2	--	--	--	15	1.06	3
2	Mrs. P. S. Kasliwal	12	--	1	--	--	--	8	0.2	1
3	Mrs. S. N. Bhadoria	10	--	--	--	--	--	28	--	3
4	Mr. S. A. Pangaonkar	4	--	--	--	--	--	--	--	--
5	Mrs. D. Y. Sakhare	4	4	--	--	--	--	--	--	1
6	Mr. M. M. Bhalekar	2	2	--	--	1	--	5	1	1
7	Mr. A. V. Kulkarni	1	--	--	--	1	--	--	--	--

**20. Areas of consultancy and income generated: Nil**

**21. Faculty as members in National committees / International Committees /Editorial Board:**

Sr. No.	Name of International Professional Society	Name of Members
1	ROBOCON	Mr. S. A. Pangaonkar, Mrs. P. S. Kasliwal

Sr. No.	Name of National Professional Society	Name of Members
1.	IEI	Dr. M. D. Goudar
2.	IETE	Dr. M. D. Goudar
3.	ISTE	Dr. M. D. Goudar
4.	ROBOCON	Dr. M. D. Goudar, Mrs. P. S. Kasliwal, Mr. S. A. Pangaonkar, Mrs. U. Y. Verma, Mr. S. A. Khandekar

**22. Student projects:**

Academic Year	2013-14	2012-13	2011-12	2010-11	2009-10
a) % of students who have done in-house / interdepartmental projects	92.8	92.8	85.7	86.3	94.4
b)% of students placed for projects in Industry/ Reasearch lab/ outside the institution	7.2	7.2	14.3	13.7	5.6

**23. Awards / Recognitions received by faculty and students:**

S. No.	Faculty / Student Name	Award / Recognition	Agency
1	Prof. D. Y. Sakhare	Departmental Best Teacher Award (2012-13)	Dept. of Electronics Engineering, MIT AOE, Pune
2	Prof. M. D. Goudar	Represented Indian Contingency for Electronics skill at World Skills International Competition 2013 held at Germany.	NSDC, India
3	Prof. S. A. Khandekar	Represented Indian Contingency for Mobile Robotics skill at World Skills International Competition 2013 held at Germany.	NSDC, India
4	Prof. S. A. Khandekar	Teacher of the Year 2011-12 Award	MIT AOE, Pune
5	Prof. S. A. Khandekar	Felicitatation in 2012 for selecting as Mentor to represent India at World Skills International Competition for Mobile Robotics.	FICCI, India
6	Mr. Prateek Sharma	Represented Indian Contingency as Team Member for Mobile Robotics skill at World Skills International Competition 2013 held at Germany.	NSDC, India
7	Mr. Ameya Patil	First Prize in SCICON 2014 for project presentation.	Engineering Sciences Department, MIT AOE, Pune

8	Mr. Prateek Sharma Mr. Ameya Patil	1 <sup>st</sup> in WSI National Level Competition - 2012 for Mobile Robotics	NSDC, India
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**24. List of eminent academicians and scientists / visitors to the department:**

Sr. No.	Name	Designation	Company/ Organization
1	Mr. Deepak Vyavahare	Director	Cisco Systems
2	Mr. Chandrashekar Dhamankar	GM, Technical	Forbes Marshall
3	Dr. Kavi Arya	Professor	IIT Bombay
4	Mr. Anant Malewar	Technical Director	Nex Robotics, Bombay
5	Mr. Gurjeet Singh	MD	Gill Instruments, Bangalore
6	Prof. G.S. Mani	Retd. Director & Dean	Institute of Armament Technology, DRDO, Pune
7	Mr. Rupesh Gupta	CEO	AVLON Technology, Pune

**25. Seminars/ Conferences/Workshops organized & the source of funding:**

Sr. No.	Workshop / Seminar / Conference	Faculty Coordinator	Year	Source of funding	Funds sanctioned
1	National Conference on Emerging trends in VLSI & Embedded System	Dr. S.S. Sonavane, Mr. M.D. Goudar	2009-10	RPS – University of Pune	1,25,000/-
2	Workshop on Arm 9 core & Embedded Linux	Mrs. P.S. Kasliwal	2010-11		50,000/-
3	National level workshop on Analog and Digital CMOS design using Microwind	Mrs. D.Y. Sakhare	2013-14		50,000/-

**26. Student profile programme/course wise:**

Name of the Course/ programme	Academic Year	Applications received	Selected	Enrolled		Pass percentage
				M*	F*	
UG - Electronics Engineering	2009-10	Admission process is governed by DTE, so the rules and regulation are followed as per DTE.	18	48	12	87%
	2010-11			47	13	93.10%
	2011-12			54	11	87.5%
	2012-13			56	8	84.62%
	2013-14			39	11	--
PG – VLSI & Embedded System	2009-10	53	18	4	14	94.44
	2010-11	37	18	4	14	72.22
	2011-12	25	18	7	11	11.76
	2012-13	18	18	7	11	44.44
	2013-14	Admission process is governed by DTE.		8	6	--
PhD – Electronics	2010-11	Admission process is governed by UoP		0	2	--
	2011-12			1	1	--



**27. Diversity of Students:**

Name of Course		% of students from the same state	% of students from other states	% of students from abroad
UG	2009-10	76.6%	23.7%	-
	2010-11	75%	25%	-
	2011-12	76.6%	23.3%	-
	2012-13	81.7%	18.3%	-
	2013-14	66.6%	16.6%	-
PG	2009-10	100 %	0 %	-
	2010-11	100 %	0 %	-
	2011-12	100 %	0 %	-
	2012-13	100 %	0 %	-
	2013-14	100 %	0 %	-
Ph.D.	2010-11	100 %	0 %	-
	2011-12	100 %	0 %	-

**28. Number of students who have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.**

Academic Year	2013-14	2012-13	2011-12	2010-11	2009-10
No. of Students	Results awaited	02	01	04	02

**29. Student progression:**

Student progression	Against % enrolled				
	2013-14*	2012-13	2011-12	2010-11	2009-10
UG to PG	03	07	09	07	05
PG to M.Phil.	NA	NA	NA	NA	NA
PG to Ph.D.	NIL	NIL	NIL	NIL	NIL
Ph.D. to Post-Doctoral	NIL	NIL	NIL	NIL	NIL
<b>Employed</b>					
• Campus selection	09	04	08	12	10
• Other than campus recruitment	CYG	09	06	06	06
Entrepreneurship/Self-employment	NIL	NIL	NIL	NIL	NIL

\* In-Progress

**30. Details of Infrastructural facilities:****a) Library**

Branch	No. of Titles	No. of Volumes
Electronics Engineering	305	305

**b) Internet facilities for Staff & Student**

Total no of faculties: 17

Faculties with Internet facilities: 17 (PC with Internet)

Internet facilities for students: 28 (PC with Internet)

**c) Class rooms with ICT facility**

Branch	No. of Class Rooms with ICT	Area of Class room
Electronics Engineering	2 (A106 & A107)	92.70 sq. m each

**d) Laboratories:**

Sr.No.	Number of labs	Details
1.	09	The labs in the department are well equipped with instruments like CRO, DSO, Logic analyzers, Function generators, FPGA –CPLD boards, ARM-PIC development boards, PCB fabrication unit , 3Phase Dual Converter , LCD Projectors, PEL Main Module, AC Drives, DC Power supply unit I/P-3 Phase 350 to 450V and licensed softwares like PSIM

**31. Number of students receiving financial assistance from college, university, government or other agencies:**

Academic Year	2013-14	2012-13	2011-12	2010-11	2009-10
No. of students	157	119	90	104	81

**32. Details on student enrichment programmes (special lectures / workshops /seminar) with external experts:**

S. No.	Name of Event	Date	Resource Person
1	Guest lecture on Electronic devices and circuits	04-09-13	Prof. Soojay Deshpande
2	Workshop on Embedded Linux	23-07-13	Ravishankar K M, Nagamahesh Gamidi
3	National level workshop on Analog and Digital CMOS design using Microwind	10-10-13 to 12-10-13	Mr. Vinay Sharama Ni2 logic pvt. ltd
4	Seminar on Solar Clan	5-7-2013 & 19-7-2013	Mr. Vasu Wadhawani, Mr. Nikhil Jain, ENELEK Power
5	Workshop on Solar Clan	27-7-2013 & 28-7-2013	Mr. Sumit Chajjar, Mr. Nikhil Jain, ENELEK Power
6	Guest lecture on Digital Electronics	12-09-13	Prof. Sunil Moon, PICT, Pune
7	Guest Lecture on MSP430- An Ultra Low Power MCU	16-09-13	Mr. Gurjeet Singh, MD, Gill Instruments, Bangalore.
8	Guest Lecture on Information security	13/2/2014	Mr. Yogesh Verma, Barclays Tech. Center of India, Pune
9	Guest lecture on Process & Automation	21/1/2014	Mr. Mrunal Pawar
10	MATLAB Applications in VLSI & EMBEDDED System Design	26/03/2014	Mr. Pratap SANAP, OTIS Software, Pune

**33. Teaching methods adopted to improve student learning:**

Following are the different teaching methods adopted in the department for better curriculum delivery, Black Board Method Interactive Teaching Board, Experiment Based Teaching ,Activity Based teaching ,Project Based Teaching ,Seminars , presentations, Self Study Guest Lectures by Academician, Guest Lectures by Industry persons, Industrial Visit, Open handed Experiments, Software Updatons, Workshops, Skill Enhancement, Projects (one-one interaction),Industrial Training

**34. Participation in Institutional Social Responsibility (ISR) and Extension activities:**

S.No.	Description about event
Junior Robocon	Junior Robocon is an initiative to introduce the Abu Asia Robocon fever from very young age. The Kids are keener to gain the knowledge of technology which is part of our present day. Keeping this in view we introduced the Robocon Junior from the age group of 6yrs to 15yrs.
IRO (Indian Robotic Olympiad)	Children from Pune and other cities gathered in the MIT AOE campus enthusiastic to compete for the 8 <sup>TH</sup> INDIAN ROBOT OLYMPIAD 2013. The completion is organized every year all over the country by the Stem Foundation in association with Techtronics Education. The regional competitions are followed by the Nationals. The winning teams at the Nationals compete at the international level in the WORLD ROBOT OLYMPIAD
WSI (world skill India)	The National Skill Development Corporation (NSDC), co-promoted by the Finance Ministry, spearheads the country's participation at the World Skills Competition. In this competition many countries across the world compete in a variety of skills ranging from welding to web designing. Mobile robotics is one of the World skills. National level selection for Mobile robotics skill was organized by Department of Electronics MITAOE, Alandi in July 2012.
Wizard	To motivate students to participate in extracurricular activity as it is also equally important from their personality development point of view.
EESOTSAV	The purpose of EESOSTSAV is to bring students from all disciplines of engineering in one cultural event which is cheerful as well as refreshing to young minds from their day-to-day academic activities.
Outreach program for robotics training	This program is mainly structured to give awareness of robotics basics in rural areas, so this encourages those students of remote locations who are not getting exposure.
Blood Donation Camp	Blood donation camps are arranged every year in association with various blood banks. The motive behind organizing the blood donation camp is to

	provide blood to the mankind in times of need.
NSS Camp	The main motive of NSS is to give creative and proper direction to students by way of social activities for strengthening the social awareness.

### 35. SWOC analysis of the department and Future plans

#### Strengths

- Good Interaction of faculty and students through counseling and mentorship programs.
- Exposure to the students for different add on modules to bridge the curriculum gap.
- Very good Involvement of maximum faculty and students in various extra curricular activities of repute (WSI, IRO, FLL, FTC).
- Good platform for students to develop their skills for overall development by organizing various Co curricular & extra curricular activities.
- Permanently affiliated by university of Pune.
- Proactive and dedicated faculty.
- Post Graduate and Doctorate Program.
- Professional development and communication skill classes for grooming the students for placement.

#### Weakness

- Diversified Infrastructure of department.
- No Consultancy.
- Less no. of faculty with PhD qualification.
- Input quality of students admitted to Electronics department is fair.
- Inadequate Industry Based software Platforms.
- Paper Publication in peer reviewed Indexed Journals is less.

#### Opportunities

- To get Research grant from apex funding agency.
- To increase the no. of placement of students in core Electronic Industries.
- To Place maximum students of the department.
- To involve stakeholders in important decision of department.
- To enhance Industry Institute Interaction by signing MOU.
- To motivate students for Higher education.
- To involve Stake holder's in curriculum development.

#### Challenges

- College location in rural area.
- Lack of autonomy in curriculum design at par with Industry requirement.

#### Future plans

- To Enhance Placement Opportunities for Students
- To improve the qualification of Faculty
- To enhance R&D activities and consultancy
- To enhance MOUs with industry.

- To improve participation of students at various events of National and international repute.
- To have PhD qualified faculty in the Dept.
- To increase R&D and consultancy work
- To have at least one research grant fund in each of the forefront area of the Dept.

## ELECTRONICS & TELECOMMUNICATION ENGINEERING

1. **Name of the Department** : Electronics & Telecommunication Engineering
2. **Year of Establishment** : 2000
3. **Names of Programs/ Courses offered:** UG in Electronics & Telecommunication Engg.
4. **Names of Interdisciplinary courses and the departments/units involved**

Names of Interdisciplinary course	Department
Engineering Mathematics III	Engineering Science
Soft Skills	Engineering Science

5. **Annual/ semester/choice based credit system (programme wise)** : Semester
6. **Participation of the department in the courses offered by other departments**

Course	Department
Electrical Technology	B.E.(Mechanical Engineering)
Mechatronics	B.E.(Mechanical Engineering)
Control Systems	B.E.(Electronics Engineering)
Signals & Systems	B.E.(Electronics Engineering)
Mini Project & Seminar	B.E.(Electronics Engineering)
Audio Video Engineering	B.E.(Electronics Engineering)
Wireless Sensor Network	M.E. (Electronics)
Digital CMOS Design	M.E. (Electronics)

7. **Courses in collaboration with other universities, industries, foreign institutions, etc.**

Sl. No.	Course	Period
1.	Certificate Course on “ <i>Industrial Automation</i> ”	Jan ~ Mar2014
2.	Certificate Course “ <i>Electronic Hardware Design</i> ”	July ~ Sept. 2013
3.	Certificate Course “ <i>Portable Antenna – Design, Simulation &amp; Implementation</i> ”	Jan ~ Mar2013
4.	Certificate Course “ <i>PLC &amp; SCADA</i> ”	Jan ~ Mar2013
5.	Add on Module “ <i>PLC Industrial Automation Concepts</i> ”	July 2012

**8. Details of courses / programmes discontinued (if any) with reasons :**

Nil

**9. Number of Teaching posts :**

	Sanctioned	Filled
Professor	1	--
Associate Prof.	3	1
Assistant Prof.	12	14

**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	No. of Ph.D. Students guided for the last 4 years
Prasheel V Suryawanshi	M.Tech (Instrumentation & Control)	Associate Prof. & Head	Control Systems	17.5	Nil
SukumarB Chougule	ME (Electronics)	Assistant Professor	Signal Processing	22.5	Nil
Bhairavi N Savant	M.Tech (Electronics)	Assistant Professor	Computer	13	Nil
Sandip S Lokhande	ME (Electrical)	Assistant Professor	Power System	16	Nil
Shubhangi M Mahamuni	ME (Electronics)	Assistant Professor	Wireless Comm.	11	Nil
Prachi R Rajarapolu	ME(Electronics)	Assistant Professor	Digital Systems	9.5	Nil
Smita S Kulkarni	ME (Electronics)	Assistant Professor	Digital Systems	11	Nil
Nutan V Bansode	ME (Electronics)	Assistant Professor	Signal Processing	6.5	Nil
Aniket D Gundecha	ME (E&TC)	Assistant Professor	VLSI & Embedded Sys.	6.5	Nil
Vinayak B Kulkarni	ME (Electronics)	Assistant Professor	Signal Processing	19	Nil
Sonali A Bhagwatkar	ME (Electronics)	Assistant Professor	VLSI & Embedded Sys.	7.5	Nil
Nishikant B Surwade	M.Tech (Electronics)	Assistant Professor	Image Processing	7	Nil
Smita S Pawar	ME (E&TC)	Assistant Professor	VLSI & Embedded Sys.	10.5	Nil

Satish S Kabra	ME (Electrical)	Assistant Professor	Power System	12	Nil
B Vaishali	ME (Electrical Control System)	Assistant Professor	Control System	5	Nil

11. List of senior visiting faculty : Nil

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty : Nil

13. Student -Teacher Ratio (programme wise) : 15:1

Student Teacher Ratio	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
	13.5:1	15.6:1	18.6:1	17.5:1	15:1

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

	Sanctioned	Filled
Academic Support staff (Technical)	7	7
Administrative Staff	4	4

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.

Qualifications	Teaching Faculty
with Ph.D	Nil
with PG	15

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received

a) National

Number of faculty with ongoing projects	Grant Received
02	27.19 Lakhs

b) International: Nil



**17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received**

<b>Sl. No.</b>	<b>Name of the coordinator</b>	<b>Scheme</b>	<b>Funding Agency</b>	<b>Grant Received</b>	<b>Year</b>
1	Prasheel V Suryawanshi	MODROBS	AICTE	15 Lakhs	2009-2010
2	Prasheel V Suryawanshi		DAE-BRNS	6.91	2010-2011
3	Prasheel V Suryawanshi		DAE-BRNS	24.39	2013-2014
4	ShubhangiMahamuni		RPS-UoP	2.8	2012-2013
5	PrachiRajapolu		RPS-UoP	0.75	2011-2012

**18. Research Centre /facility recognized by the University : Nil**

**19. Publications:**

Sl. No.	Name of the Faculty	No. of Papers published in peer reviewed journals	No. of publications listed in Int. Database	Mono-graphs	Chapters in Book	Books Edited	Books with ISBN in Int. DB	Citation Index	SNI P	SJR	Impact Factor (max.)	H-index Average
1	Prasheel V. Suryawanshi	18	18	--	--	--	--	3	--	--	1.4	1
2	Sukumar B. Chougule	04	04	--	--	--	--	7	0.37	0.16	0.16	1
3	Shubhangi M. Mahamuni	06	06	--	01	--	--	3	--	--	0.821	1
4	Prachi R. Rajarapollu	07	07	--	--	--	--	2	--	--	--	2
5	Smita S. Kulkarni	05	05	--	--	--	--	--	--	--	1.4	--
6	Aniket D. Gundecha	05	05	--	--	--	--	--	--	--	0.572	--
7	Sonali A. Bhagwatkar	02	02	--	--	--	--	--	--	--	--	--
8	Smita Pawar	02	02	--	--	--	--	--	--	--	--	--

**20. Areas of consultancy and income generated : Nil****21. Faculty as members in**

Faculty as members in	National committees	International committees
	10	10

**22. Student projects**

- a) **Percentage of students who have done in-house projects including inter departmental/programme :**

Academic Year	Percentage of Students who have done in house projects
2013-14	90
2012-13	90
2011-12	90
2010-11	90
2009-10	90

- b) **Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies:**

Academic Year	Percentage of students placed for projects in organizations outside the institution
2013-14	10
2012-13	10
2011-12	10
2010-11	10
2009-10	10

**Awards / Recognitions received by faculty and students****Faculty:**

Sl.No.	Faculty	Achievement
1.	Shubhangi M. Mahamuni	Best Paper Award – National Conference @ SAIT Indore
2.	Prasheel V. Suryawanshi	Award for Outstanding Achievement
3.	Shubhangi M. Mahamuni	Award for Outstanding Achievement

**Students:**

Sl.No.	Student	Achievement
1.	Gudu Kumar	Certified LabVIEW Associate Developer (CLAD) from National Instruments, US
2.	AjitChoudhary	
3.	Ankush Gandhi	
4.	PriyankaSrivastava	
5.	OnkarSuram	Represented INDIA at World Skills Competition @ Leipzig, Germany

**23. List of eminent academicians and scientists / visitors to the department**

Sl. No.	Name of the Visitor	Designation	Organization	Purpose of Visit
1.	M. Y. Dixit	Scientific Officer	BARC Mumbai	Exposure to research at BARC
2.	RajanShringarpure	Managing Director	VISHAY Components	Exposure to research in industry
3.	Dr. S. E. Talole	Scientist - G	DRDO Pune	Exposure to research at DRDO
4.	Prof. S. B. Phadke	Scientist - H	DRDO Pune	Exposure to research at DRDO
5.	Dr. G. N. Pandey	Scientific Officer	BARC Mumbai	Review of Research Project
6.	C. P. Kulkarni	Scientific Officer	BARC Mumbai	Exposure to research at BARC

**24. Seminars/ Conferences/Workshops organized & the source of funding**

Sl. No.	Programs Organized	National / International	Source of Funding
1.	STTP on ASIC Design	National	Institute

2.	Relevance of Research in Teaching-Learning Process	National	Institute
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### 25. Student profile programme/course wise:

Name of the Course/programme	Academic Year	Applications received	Selected	Enrolled		Pass percentage
				*M	*F	
BE (Electronics and Telecommunication Engineering)	2009-2010	As the admission process it is governed by DTE. As the rules and regulation are followed as per DTE		50	10	87.3%
	2010-2011			50	11	85.7%
	2011-2012			52	12	54.16%
	2012-2013			47	17	84.41%
	2013-2014			75	30	NA

\*M = Male \*F = Female

### 26. Diversity of Students

Name of the Course	Academic Year	% of students from the same state	% of students from other states	% of students from abroad
BE (Electronics and Telecommunication Engineering)	2009-2010	78.3	21.6	NIL
	2010-2011	83.3	16.6	NIL
	2011-2012	71.6	28.3	NIL
	2012-2013	75	25	NIL
	2013-2014	74.1	13.3	NIL

### 27. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?

Exam	Nos.				
	2009-10	2010-11	2011-12	2012-13	2013-14
GATE	2	2	2	4	8
Defense	1	NIL	NIL	NIL	NIL
CAT	2	NIL	NIL	1	2
MBA-CET	3	2	2	1	1

**28. Student progression**

Student progression	Against % enrolled				
	2009-10	2010-11	2011-12	2012-13	2013-14
UG to PG	5	5	10	10	
Employed					
Campus selection	25	20	20	10	22
Other than campus recruitment	50	50	50	50	
Entrepreneurship/Self-employment	1	1	1	1	1

**29. Details of Infrastructural facilities**

- a) Library
  - Titles : 234, Volumes : 239, Project Reports : 273
- b) Internet facilities for Staff & Students : 18 MBPS broad band leased line
- c) Class rooms with ICT facility : 02
- d) Laboratories

Sl. No.	Name of the Lab.	Room No.	Facilities
1	Signal Processing	A103	CCS, DSP boards
2	Communication	A202	Antenna setup, Microwave setup
3	Advanced Communication	A110	OFC setup
4	Embedded Systems	A109	Keil, Linux server, ARM boards
5	Instrumentation & Control	A003	Inverted Pendulum
6	System Simulation	D106	FPGA boards
7	Project	A107	Multisim
8	Hybrid Electronics	D105	Test & Measuring Instruments

**30. Number of students receiving financial assistance from college, university, government or other agencies**

Agency	No. of students received financial assistance				
	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
College	NIL	NIL	NIL	NIL	02
University	NIL	NIL	NIL	NIL	NIL
Government	113	108	113	121	142
Other agencies	NIL	NIL	NIL	NIL	NIL

**31. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts**

Special Lectures / workshops	Topic	Day and Date	Attendees
Lecture	Nyquist Stability Criterion	Monday, 3 <sup>rd</sup> Mar. 2014	TE and BE students
Lecture	Cloud Computing	Thursday, 13 <sup>th</sup> Feb. 2014	TE and BE students
Lecture	Recent Trends in Soft Computing : ANN and Fuzzy	Wednesday, 29 <sup>th</sup> Jan. 2014	BE Students
Lecture	Digital Television Broadcast Technologies	Monday, 27 <sup>th</sup> Jan. 2014	BE Students
Lecture	Optical Networks-Migration to DWDM	Thursday, 16 <sup>th</sup> Jan. 2014	TE and BE Students
Lecture	Industry Challenges & Attitude Not Aptitude That Matters	Monday 20 <sup>th</sup> Jan. 2014	SE Students
Lecture	BJT High Frequency Model	Friday, 4 <sup>th</sup> Sept. 2013	SE Students
Lecture	System Design with PIC controller	Monday, 29 <sup>th</sup> July 2013	TE students

Workshop	LaTeX	13 <sup>th</sup> and 14 <sup>th</sup> March 2014	TE Students
Workshop	Workshop on VHDL Programming	13 <sup>th</sup> Sep. 2013	SE Students
Workshop	PIC16F8XX Controllers	31 <sup>st</sup> Aug. and 1 <sup>st</sup> Sep. 2013	TEstudents
Workshop	Electronic Product Design	24 <sup>th</sup> to 26 <sup>th</sup> Aug. 2013	TEstudents
Workshop	Digital Image Processing using MATLAB	23 <sup>th</sup> and 24 <sup>th</sup> Aug. 2013	BEstudents
Workshop	ATMEL AVR Controller	2 <sup>nd</sup> and 3 <sup>rd</sup> Aug. 2013	TEstudents
Certificate Course	Industrial Automation	Jan to March 2014	TE and BE students

### 32. Teaching methods adopted to improve student learning

- Organizing Seminars, Technical Quizzes, and Model making contests.
- Development of student support material for poor learners and enthusiastic learners.
- Encouraging Mini Projects as a part project method of teaching.
- Formulation of cooperative learning groups to improve peer group interaction.
- Organizing coaching classes for Placement.
- Support of Add-on-courses to reinforce theoretical learning.
- Power point presentations/Video lectures/OHPs are arranged to the students by the concerned faculty.
- Tutorial classes are conducted to improve the problem solving skills
- Conducting class tests after completion of prescribed syllabus
- Assignment are given to students based on the need of the topic
- Arranging Industrial Visits
- Arranging workshops/guest lecturers to students by eminent personalities from academic institutions and Industry to enhance the knowledge of student

### 33. Participation in Institutional Social Responsibility (ISR) and Extension activities

- Blood donation camps



- Spiritual awareness and dissemination in the local neighbourhood
- Donation drives for orphanages
- Environment consciousness in festive celebrations
- Personality development and talent hunt programs
- Cleanliness drive in local villages through NSS
- Health awareness programs

### **34. SWOC analysis of the department and Future plans**

#### **Strengths:**

- Vibrant and inclusive teaching-learning process
- Qualified, experienced and committed faculty with good retention
- Devoted technical and administrative supporting staff
- Accredited by NBA-AICTE; two times
- ISO 9001:2008 Certified
- Spacious, state of art laboratories with facilities for research
- Active participation of faculty in research activities
- Research funding to the tune of Rs. 52 lakhs
- Student Projects
- Good number of publications

#### **Weaknesses:**

- Lack of Industrial research and consultancy
- Lack of residential facilities for staff
- Lack of industry exposure
- Interaction with professional bodies

#### **Opportunities:**

- Skill-set required by the local, national and global industry
- Alumni interaction for student development
- Amicable management with generous attitude in the form of special pays and incentives

#### **Challenges:**

- Faculty retention
- External funding for research
- Rapid changes in technology and time bound learning and training skills for the faculty

#### **Future Plans:**

- To establish an interdisciplinary PG program in the department
- Enhancing industry institute interface for live projects by students and faculty, industrial internships for students and industrial training for faculty

- Enhancement of faculty qualifications
- Improvement in student placement
- External funded research projects with collaboration of government and private organizations
- Establishing MoUs with national/international, academic/research organizations
- Initiate faculty development programs, continuing education programs in current topics of interest to industry and academia

## INFORMATION TECHNOLOGY

1. **Name of the Department:** Information Technology
2. **Year of Establishment:** 2006
3. **Names of Programmes/Courses offered (UG,PG, M.Phil. , Ph.D., Integrated Masters, Integrated Phd. etc.) :** Under Graduate (UG)
4. **Names of Interdisciplinary Courses and the departments/units involved:** NIL
5. **Annual/ semester/ choice based credit system (programme wise) :**  
UG: Semester based
6. **Participation of the department in the courses offered by other departments:** NIL
7. **Courses in Collaboration with other universities, industries, foreign institutions, etc.**

Sr.No.	Course Name	In Collaboration with Industry
1	Add on course on Oracle	A-Plus Education Solutions Pvt. Ltd.
2	Add on Course on Industry Practices in Core Java Programming	Persistent India Pvt. Ltd., Pune
3	Add on Course on .Net	Synechron Technologies, Pvt. Ltd., Pune
4	Add on Course on Ethical Hacking	Seed Infotech Pvt. Ltd., Pune
5	Add on course on Business Intelligence	Opine Group Pune
6	Add on Course on CCNA	CISCO Academy

8. **Details of courses/programmes discontinued (if any) with reasons:** NIL
9. **Number of Teaching Posts**

	Sanctioned	Filled
Professors	1	1
Associate Professors	4	0
Assistant Professors	7	14

10. **Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./PhD./M.Phil. etc.)**

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for last 4 years
Prof. S.M. Bhagat	M.E. (Comp)	Professor and Head	Networking	24	NIL

	uter)				
Mr. B.C. Bhokse	M.E.(E TX) Pursuin g	Assistant Professor	Image Processing	9	NIL
Mrs. P.P. Chaudhari	M.E. (Comp uter)	Assistant Professor	Database, NLP	9	NIL
Mrs. J.A. Patil	M.Tech (C.S.E. )	Assistant Professor	Networking	11	NIL
Mrs. R.S. Yekkele	M.Tech (C.S.E. )	Assistant Professor	Image Processing	4	NIL
Mr. A.S. Sonawane	M.E.(C SE-IT)	Assistant Professor	Networking	2	NIL
Mrs. C.H. Nemade	M.E. (CSE)	Assistant Professor	Data Mining	6	NIL
Mr. R.S. Birhade	M.E.(C SE-IT)	Assistant Professor	Image Processing	2	NIL
Mrs. S.G. Mandlik	M.E. (Comp uter) Pursuin g	Lecturer	Networking	7	NIL
Mr. A.S. Choudhary	M.E.(C SE-IT)	Assistant Professor	Networking	2	NIL
Mrs. K Uma Maheswari	M.Tech (IT)	Assistant Professor	Networking	6	NIL
Mr. S.C. Shiravale	M.E.(I T)	Assistant Professor	Networking	14	NIL
Mr. S.S. Mhamane	M.E. (CSE)	Assistant Professor	Database	2	NIL
Mr. P.P. Choudhary	M.Tech (IT)	Assistant Professor	Data Mining	6 months	NIL
Mr. V.G. Mankar	M.E.(C SE/IT)	Assistant Professor	Cloud Computing	10	NIL

**11. List of senior visiting faculty**

Sr. No.	Name of Faculty	Subject Taught
1.	Mr. Kedar Tokekar	Java Programming
2	Mr. Bipin Kulkarni	Ethical Hacking
3	Mr. Anand Kolharkar	Business Intelligence
4	Prof. Anant Bapat	Communication Skill

**12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty : NIL****13. Student Teacher Ratio (Programme wise)**

Sr. No.	Year	Student Teacher Ratio
1	2009-2010	13.8
2	2010-2011	14.08
3	2011-2012	14.50
4	2012-2013	14.77
5	2013-2014	14.14

**14. Number of academic support staff (technical) and administrative staff; sanctioned and filled**

Designation	Sanctioned	Filled
Technical Assistant		1
Laboratory Assistant		3
Assistant		1

**15. Qualifications of teaching faculty with DSc/ D.Litt/PhD/MPhil/PG.**

Sr. No.	Qualification	Number of Faculty
1	PhD	0
2	PG	13
3	UG	2

**16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received. :**

Number of Faculty	Funded By	Amount (in Rs.)
1	RPS	1,40,000/-

**17. Departmental Projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received.**

Sr. No.	Name of Faculty	Funded By & Year	Amount (in Rs.)
1	Prof. S. M. Bhagat	RPS(2013-14)	1,40,000/-
2	Prof. A. R. Shinkar	RPS (2008-09)	1,00,000/-

**18. Research Centre/facility recognized by the University. : NIL****19. Publications:****a) Publication per Faculty**

Sr. No.	Name of Faculty	No. of Publications
1	Prof. S. M. Bhagat	07
2	Mr. B. C. Bhokse	07
3	Mrs. P. P. Chaudhari	02
4	Mrs. J. A. Patil	04
5	Mr. A.S. Sonawane	01
6	Mrs. C.H. Nemade	02
7	Mrs. S.G. Mandlik	01
8	Mr. A.S. Choudhary	01
9	Mrs. K Uma Maheswari	01
10	Mr. S.C. Shiravale	03
11	Mr. S.S. Mhamane	05

**b) Number of papers published in peer reviewed journals (national / international) by faculty and students**

Sr. No.	IT Department Yearwise	No. of Papers published in peer reviewed journals Faculty /Student	No. of publications listed in International DB	Monographs	Chapters In Book	Books Edited	Books with ISBN In international Database	Citation Index	SN IP	SJ R	Impact Factor	H-index Average
1	2013-2014	2	1	-	-	-	-	0	-	-	0.821	
2	2012-2013	10						Min=1 Max=3			0.821	1 & 2
3	2011-2012	5						Min=1 Max=2			0.821	1 & 2

4	2010-2011											
5	2009-2010											

**20. Areas of consultancy and income generated: NIL**

**21. Faculty as member in**

**a) National committees**

Sr. No.	Name of Faculty	Name of Committee
1	Prof. S. M. Bhagat	Incharge Registration, Printing and WebSite Committee (National Robotic contest)
2	Mr. B. C. Bhokse	Member Registration, Printing and WebSite Committee (National Robotic contest)
3	Mrs. P. P. Chaudhari	Member Registration Committee (National Robotic contest)
4	Mr. A. S. Sonawane	Member Registration, Printing and WebSite Committee (National Robotic contest)
5	Mr. A. S. Choudhary	Member Registration Committee (National Robotic contest)
6	Mr. R. S. Birhade	Member Registration Committee (National Robotic contest)

**b) International Committees**

Sr. No.	Name of Faculty	Name of Committee
1	Prof. S. M. Bhagat	Incharge Registration, Printing and WebSite Committee (Inter National Robotic contest)
2	Mr. B. C. Bhokse	Member Registration, Printing and WebSite Committee (Inter National Robotic contest)
3	Mrs. P. P. Chaudhari	Member Registration Committee (Inter National Robotic contest)
4	Mr. A. S. Sonawane	Member Registration, Printing and WebSite Committee (Inter National Robotic contest)
5	Mr. A. S. Choudhary	Member Registration Committee (Inter National Robotic contest)
6	Mr. R. S. Birhade	Member Registration Committee (Inter National Robotic contest)

**c) Editorial Boards**

Sr. No.	Name of Faculty	Name of Committee
1	Prof. S. M. Bhagat	NBA Expert Committee Chair (Shortlisted)
2	Prof. S. M. Bhagat	Chairman Board of Studies Information Technology (University of Pune)
3	Prof. S. M. Bhagat	Member Board of Studies Information Technology (University of Pune)
4	Prof. S. M. Bhagat	Member Local Inquiry Committee University of Pune
5	Prof. S. M. Bhagat	Member Selection Committee University of Pune.
6	Prof. S. M. Bhagat	Reviewer of PGCON, Board of Studies Computer

**22. Student projects****a) Percentage of students who have done in-house projects including inter departmental/ programme**

Student Project	2009-10	2010-11	2011-12	2012-13	2013-14
Percentage of students who have done in-house projects including inter departmental/ programme	86%	78%	100%	100%	100%

**b) Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/ Industry/ other agencies.**

Student Project	2009-10	2010-11	2011-12	2012-13	2013-14
Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/ Industry/ other agencies.	14%	22%	0%	0%	0%

**23. Awards/ Recognitions received by faculty and students**

Sr. No.	Name of Faculty/ Student	Awards/Recognition Received	Event	Awarded By
1	Mr. Vivek Gupta, Mr. Arjun Varrier	Second position	SciCon Project Exhibition	Engineering Science Department MIT Academy



				of Engineering.
2	Mr. Ketan Gaikwad and Mr. Karthik Ranpise	<b>Second position</b>	<b>Enterpr enurshi p Summit 2013</b>	IIT Bombay
3	Mr. Arjun Varrier, Mr. Omkar Gokhale Mr. Anurag Ahirrao	First	<b>Nationa l Level Compet ition on Mobile Applica tion Develop ment</b>	<b>Nuture Talent Academy and CSI.</b>
4	Mr. Nishant Kumar and Mr. Malhar Kulkarni	<b>Third Position</b>	<b>Nationa l Level Compet ition on Mobile Applica tion Develop ment</b>	<b>Nuture Talent Academy and CSI.</b>
5	Mr. Rohit Deshmukh and Mr. Mahesh Chaudhari	First Position	<b>C- Progra mming Contest</b>	MITAOE
6	Mr. Kalpesh Ahire	MAESTRO	NIL	MITAOE
7	Mr.B.C.Bhokse	Teacher of the Year	NIL	MITAOE
8	Mr. Vivek Gupta	<b>Google Student Ambassador</b>	NIL	NIL
9	Mr. Rushikesh Nere	<b>Best Young Poet</b>	NIL	Asian Poetic Association
10	Mr. Fanil Choksi	<b>Best Cadet</b>	NIL	Chief Minister of Maharashtra Government.
11	Ms. Rupali Pathare	<b>Gold Medal (3 km walking)</b>	ZEST	COEP, Pune
12	Ms. Rupali Pathare	<b>Gold Medal (1000 m</b>	ZEST	COEP, Pune

		running)		
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#### 24. List of eminent academicians and scientists/visitors to the department.

Sr. No.	Name of Person	Purpose
1	Dr. Parag Kulkarni (Eklat Solutions Pvt. Ltd.)	Guest Lecture on Artificial Intelligence
2	Mr. Deepal Patil (Amazon India Pvt. Ltd.)	Expert Talk Series
3	Mr. Pramod Chaudhari (IBM India Pvt. Ltd.)	Expert Talk Series
4	Mr. Rakesh Gotecha (IBM India Pvt. Ltd.)	Expert Talk Series
5	Dr. Sachin Lodha (TCS)	Expert Talk Series
6	Mr. Anad Bodke (Quick Heal Pvt. Ltd.)	Expert Talk Series
7	Mr. G. Viswanath (Akandum Pvt. Ltd.)	Conducted FDP on "Web Security"
8	Dr. Sachin Deshmukh (COEP, Pune)	Guest Lecture on "Database Management System"
9	Mr. Girish Palshikar (TCS)	Speaker: "Data Mining Techniques and Warehouse Applications"
10	Mrs. Arti Deshpande (Mukesh Patel Institute of Management & Technology, Mumbai)	Speaker: "Data Mining Techniques and Warehouse Applications"
11	Mrs. Pallavi N. H. (Mukesh Patel Institute of Management & Technology, Mumbai)	Speaker: "Data Mining Techniques and Warehouse Applications"
12	Dr. R. S. Bichkar (G. S. Rasoni)	Speaker: "Data Mining Techniques and Warehouse Applications"
13	Dr. S. S. Sane (KKWagh COE, Nashik)	Speaker: "Data Mining Techniques and Warehouse Applications"
14	Mr. Anand Kolharkar (Opine Group)	Speaker: "Business Intelligence"
15	Mr. Abhijit Baji (John Deere)	Speaker: "Business Intelligence"
16	Mr. Ram Krishna Reddy	Speaker: "Ubiquitous Computing and Technologies"
17	Mr. Mahesh Karwa	Speaker: "Ubiquitous Computing and Technologies"
18	Mr. Piyush Bhaliwad	Speaker: "Ubiquitous Computing and Technologies"
19	Mr. Ashish Ranjan	Guest Lecture on "Big Data

		Analytics”
20	Mr. Digambar Patil	Guest Lecture on “Cloud Computing”
21	Mr. Pravin Kulkarni	Guest Lecture on “Smart Grids”
22	Mr. Subhah Mali	Guest Lecture on “Infrastructure Management Services”
23	Mrs. Sushmita Limaye	Guest Lecture on “Role of Social media in social Cause”

## 25. Seminars/Conferences/Workshops organized and the source of funding

### a) National

Sr.No.	Name of Conference/Workshop	Funded By	Amount
1	Ubiquitous Computing and Technologies	University of Pune	25,000/-
2	Business Intelligence	University of Pune	50,000/-

### b) International

NIL

## 26. Student profile programme/course wise:

Name of the Course/programme	Year	Applications received	Selected	Enrolled		Pass percentage
				M*	F*	
Information Technology	2009 – 2010	Admission process in the State is governed by Director Technical Education; Institute follows the rules, regulations & guidelines set up by state government body		47	13	92%
	2010 – 2011			46	15	83%
	2011 – 2012			43	15	90%
	2012 – 2013			40	24	93.94%
	2013 – 2014			32	25	--

\*M = Male \*F = Female

## 27. Diversity of Students

Name of the Course	Year	% of students from the same state	% of students from other States	% of students from abroad
Information Technology	2009 – 2010	73.3	26.6	NIL
	2010 – 2011	81.6	18.3	NIL
	2011 – 2012	73.3	23.3	NIL
	2012 – 2013	73.4	26.6	NIL
	2013 – 2014	80	15	NIL

**28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.?**

Sr.No	Type of Exam	No. of Student Qualified				
		2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
1.	GRE	NIL	NIL	NIL	NIL	1
2.	GMAT	NIL	NIL	NIL	NIL	1

**29. Student progression**

Sr. No.	Academic Year	Campus Placement	Off campus Placement	Higher Study	% of Students going for higher studies
1	2013-2014	23	NIL	NIL	NIL
2	2012-2013	12	04	05	10 %
3	2011-2012	23	08	07	15 %
4	2010-2011	11	05	03	12 %
5	2009-2010	12	02	05	22 %

**30. Details of Infrastructural facilities**

**a) Library**

- Number of Titles = 176
- Number of Volumes = 231
- Number of Journals = 18
- Number of Technical Magazines = 03

**b) Internet facilities for Staff & Students**

Internet facility with a speed of 50 mbps is available for all faculty, staff and students.

**c) Class rooms with ICT facility : 04**

**d) Laboratories : 08** (All Laboratories are equipped with highly configured machines with UPS backup)

**31. Number of students receiving financial assistance from college, university, government or other agencies.**

Year	Govt. of Maharashtra	College (Merit Scholarship)
2013-2014	141	1
2012-2013	140	NIL
2011-2012	139	NIL
2010-2011	109	NIL
2009-2010	80	NIL

**32. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts.**

<b>Sr. No.</b>	<b>Name of Program</b>	<b>Expert</b>	<b>Date</b>
1	Guest Lecture on 'Cloud Computing'	Mr. Digambar Patil	07 March 2014
2	Guest Lecture on 'Role of Social Media in Social Cause'	Mrs. Sushmita Limaye, IBM India Pune	04 March 2014
3	Guest Lecture on 'Infrastructure Management Services'	Mr. Subhash Mali, Mphasis, Pune	17 February 2014
4	Guest Lecture on "Big Data Analytics"	Mr. Ashish Ranjan	25 February 2014
5	Guest Lecture on 'Smart Grids'	Mr. Pravin Kulkarni, IBM	24 January 2014
6	Add on Course on 'Business Intelligence'	Mr Jagadish Rapade, Opine Group	10 January 2014
7	Add on Course on 'Ethical Hacking'	Mr Bipin Kulkarni, SEED Infotech	10 January 2014
8	GATE Demo Class	Mr Vaibhav and Mr Kiran IIT KGP Mr Virendra ISM Dhanbad	23 August 2013
9	Guest Lecture on "Evaluation Process in Placement"	Mr. Karwa, Hire on Dot	22 August 2013
10	Entrepreneur workshop on mobile application development	Mr. Animesh Jaipurkar, CEO Leaf Flow	12-13 August 2013
11	Add on Course on 'Business Intelligence'	Mr. Anand Kolharkar, Opine Group, Pune	19 July 2013
12	Expert Talk Series	Mrs. Neelu Shringi, Amdocs India Pvt. Ltd., Mr. Rajesh Nikam, Quick Heal Pvt. Ltd., Mr. Mahesh Karwa, Yardi Software, Pune, Mr. Anand Kolharkar, Opine	06 July 2013

		Group, Pune Mr. Shailesh Ghatpande, Opine Group, Pune	
13	Seminar through WebEx on “Turing Machine”	Dr. D B Pathak	29 June 2013
14	Guest Lecture on “NS2”	Mr. Vaibhav Khatavkar, Assistant Professor, COEP, Pune	19 March 2013
15	Guest Lecture on “HADOOP”	Mr. Kiran Bhakre, Wipro Technologies, Pune	16 March 2013
16	Workshop on Business Intelligence	Mr. Anand Kolarkar, Ms.Iravati, Ms.Shailja, Ms. Mitalee, Mr. Vishwnath	16-17 March 2013
17	Workshop on ubiquitous computing and techonologies	Mr. Ram Krishna Reddy, Hyderabad, Mr. Piyush Bhatewara, Mr. Mahesh Karwa	10-11 March 2013
18	Guest Lecture on “System Software Programming”	Mrs. Vidya Deshpande, MIT, Pune	23 January 2013
19	Add On Course on ‘Industry Practices in Core JAVA Programming”	Mr. Kedar Tokekar Trainer at Persistent	22 December 2012
20	Add On Course on “Oracle Certified Associate”	Mr. Jayandra SW Engg. at Barclays India Pvt. Ltd.	21 December 2012
21	Guest Lecture on “Data Ware House”	Dr. Sachin Deshpande, COEP, Pune	10 September 2012
22	Wokshop on Ethical Hacking	G. Vishwanath	24-25 August 2012
23	Addon Course on “Dot Net”	Mr.Uttareshwar Choudhari	22 July 2012
24	Expert Talk Series	Mr. Deepak Patil, Cognizant Pvt. Ltd. Mr. Pramod Chaudhari, IBM,	14 July 2012

		Mr. Rakesh Gotecha, IBM, Mr. Anand Bodke, MacAfee Pvt. Ltd. Dr. Sachin Lodha, TCS	
25	Guest Lecture on “How Social Media can benefits students to create professional brand”	Mr. Prasant Naidu, Pune	09 February 2012
26	V-Sat Inaugural Session (Virtual Learning)	Professional from Purple Leap	03 February 2012
27	Introduction on Qualnet	Mr.Sandeep Tyagi,Qualnet	11 October 2011
28	Guest Lecture on Artificial Intelligence	Dr.Parag Kulkarni	26 August 2011
29	Guest Lecture on “Importance of CSI membership”	Computer Society of India	23 August 2011
30	Spoken Linux Tutorial	Miss.Trupti More, IIT Bombay	August 2011
31	OMNET++ Workshop	Mr.Jagdish Rapade	29-30 January 2011
32	Guest Lecture on “Mind Mapping”	Mr. Pushkaraj Kolatkhar	30 July 2010
33	Guest Lecture on “Service Oriented Architecture”	Mr. Deepak Patil, Cognizant, Pune	06 February 2009
34	IBM DB2 Workshop	Experts from IBM	
35	TIVOLI Workshop	Experts from IBM	
36	SPARK Workshop	Experts from IBM	

### 33. Teaching methods adopted to improve student learning

Following techniques and technologies are adopted by the faculty:

1. PowerPoint Presentations
2. NPTEL video
3. Webinars
4. Web Portal for e-learning

### 34. Participation in Institutional Social Responsibility (ISR) and Extension activities.

Following are some activities conducted by the department:

1. NSS camp
2. Blood Donation Camp
3. Outreach Programs
4. Some students are the members of Ignited Minds group.

**35. SWOC analysis of the department and Future plans.**

- **Strengths of Department:**
  1. Good Results
  2. Good Placements
  3. Excellent Infrastructure
  4. Good Industrial Relationship
- **Weakness of Department:**
  1. Entry level student input to the department is not satisfactory.
  2. Less number of PhD faculty in Department.
  3. Consultancy work need to be improved.
- **Opportunities:**
  1. To become rank one IT department in University of Pune.
  2. Because Pune is IT hub there is an opportunity to enhance Industry relation.
- **Challenges:**
  1. To recruit more PhD faculty.
  2. To make department self sustainable.
  3. To make student skills industry compatible
- **Future Plans of Department:**
  1. To start PG programme and Research center in Information Technology.
  2. Develop research lab in Networking and Database domain.
  3. Involvement of well known IT Industry in curriculum delivery.
  4. Collaboration with Foreign University for faculty exchange programme.
  5. Fetching more research funds from various apex bodies.



**MECHANICAL ENGINEERING**

1. **Name of the department** : Mechanical Engineering
2. **Year of Establishment** : 2006
3. **Names of Programmes / Courses offered (UG, PG, M.Phil, Ph.D, Integrated Masters; Integrated Ph.D., etc.):** BE (Mechanical)
4. **Names of Interdisciplinary courses and the departments/units involved:**

Sr. No.	Course	Department
1	Electrical Technology	Electronics
2	Mechatronics	ENTC
3	M III	Basic Engg Science
4	CS	Basic Engg Science

5. **Annual/ semester/choice based credit system (programme wise):**  
Nil
6. **Participation of the department in the courses offered by other departments:** Nil
7. **Courses in collaboration with other universities, industries, foreign institutions, etc.:** Nil
8. **Details of courses/programmes discontinued (if any) with reasons:**  
Nil
9. **Number of Teaching posts**

	Sanctioned	Filled
Professor	1	2
Associate Professor	2	Nil
Assistant Professor	13	16

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	No. of Ph.D. Students guided for the last 4 years
Prof Dr Y J Bhalerao	Ph.D.(Mechanical Engineering),Post Ph.D (Appearing)	Professor & Principal	Heat Power	15	02
Prof N Murali	M Tech	Assistant Professor & HOD	Metallurgy	36	NA
Prof Dr M L Kulkarni	Ph.D.(Mechanical Engineering)	Professor	CAD/CAM & Micromachining	18	04
Prof N B Totla	ME	Assistant Professor	Heat Power	16	NA

Prof A J Joshi	M.Tech Ph.D (Thesis submitted)	Assistant Professor	Design Engineering	11	NA
Prof M M Charde	ME	Assistant Professor	Design Engineering	8.9	NA
Prof D B Panchal	M.Tech	Assistant Professor	(CAD/CAM)	3.7	NA
Prof P B Chaudhari	ME Appearing	Assistant Professor	(Design Engineering)	7	NA
Prof V P Desai	ME	Assistant Professor	(Heat Power)	5.5	NA
Prof Bhavana M M	ME	Assistant Professor	(Design Engineering)	7	NA
Prof A M Malge	ME	Assistant Professor	(Design Engineering)	11.6	NA
Prof B B Dome	ME	Assistant Professor	(Design Engineering)	20	NA
Prof A B Mane	M.Tech	Assistant Professor	(Tech. &Dev.)	3.9	NA
Prof V N Deshmukh	M.Tech	Assistant Professor	(CAD/CAM)	7	NA
Prof B S Padekar	M Tech, Ph.D (Result awaited)	Assistant Professor	(Mech Design Engg)	12	NA
Prof. S. B. Powar	M. Tech	Assistant Professor	Thermal System Design	2	NA
Prof. P. P. Kothmire	ME	Assistant Professor	Thermal Engineering	06	NA
Prof. R.R. Bendale	M. Tech	Assistant Professor	Machine Design	34	NA

**11. List of senior visiting faculty:** Nil

**12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty:** Nil

**13. Student -Teacher Ratio (programme wise):**

Year	Student -Teacher Ratio
2009-10	16
2010-11	16.46
2011-12	19.77
2012-13	16.86
2013-14	16.66

**14. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

	<b>Sanctioned</b>	<b>Filled</b>
Academic Support Staff (technical)	As per University of Pune, no guide lines are given.	06
Administrative Staff	As per University of Pune, no guide lines are given	03

**15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.**

**PhD: 2, PG: 16**

**16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received :**

<b>Sr. No</b>	<b>Name Of Faculty Member</b>	<b>Name Of Research Project Undertaken</b>	<b>Amount as Seed Money</b>	<b>Total Cost of the Project</b>
<b>1</b>	Dr. Y. J. Bhalerao	Thermal analysis of face and shoulder combined grinding process.	Rs. 7.0 lakh	Rs. 30 lakh

**17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received:**

<b>Sr. No.</b>	<b>Name of Faculty</b>	<b>Research awards received by the faculty</b>	<b>Recognition received from reputed professional bodies and agencies, nationally and internationally</b>	<b>Incentives given for receiving state, national and international recognitions for research contributions.</b>
<b>1.</b>	Dr. Y. J. Bhalerao	Young Scientist Award of DST under FASTTRACK Research scheme.	Got recognition for award 30,00,000 Rs/- from DST	Providing resources for writing research proposals for various funding agencies

**18. Research Centre /facility recognized by the University : Nil**

**19. Publications:**

**a) Publication per faculty:**

Sr. No.	Faculty Name	No. of Papers published in peer reviewed journals Faculty /Student	No. of publications listed in International DB	Mono-graphs	Chapters In Book	Books Edited	Books with ISBN In international Database	Citation Index	SNIP	SJR	Impact Factor	H-index Average
1	Dr. Y. J. Bhalerao	06	04	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2	Dr. M.L. Kulkarni	04	03	Nil	Nil	Nil	01	Nil	Nil	Nil	Nil	Nil
3	Dr. M. T. Bhoite	04	03	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
4	Prof. N. B. Totla	08	07	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
5	Prof. P. B. Chaudhari	02	01	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
6	Prof. P. S. Bhambar	02	01	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
7	Prof. B. S. Padekar	01	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
8	Prof. A. J. Joshi	05	5	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
9	Prof. Mane A. B.	01	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

10	Prof. V. N. Deshmukh	01	01	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11	Prof. V. P. Desai	02	02	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
12	Prof. N. D. Patil	02	02	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

**20. Areas of consultancy and income generated: Nil**

**21. Faculty as members in**

**a) National committees b) International Committees c) Editorial Boards:**

Sr. No.	Name of faculty	Event	National/ International
1	Dr. Y. J. Bhalerao	Robocon	National & International
2	Prof. N. B. Totla		National & International
3	Prof. N. Murali		National & International
4	Prof. P. B. Chaudhari		National
5	Dr. M. L. Kulkarni		National
6	Prof. M. M. Charde		National & International
7	Prof. A. M. Malge		National & International

**22. Student projects**

**a) Percentage of students who have done in-house projects including inter departmental/programme:**

% of Students who have done in house projects:

Sr. No.	Academic Year	Students in house project	Total Students	%
1	2009-10	44	44	100
2	2010-11	47	63	74.60
3	2011-12	56	68	82.35
4	2012-13	75	75	100
5	2013-14	75	83	90.36

% of Students who have done in house projects under industry sponsorship:

Sr No	Academic Year	%Students in project	Total Students	%
1	2009-10	NIL	44	0

2	2010-11	16	63	25.3
3	2011-12	12	68	17.64
4	2012-13	NIL	75	0
5	2013-14	8	83	9.64

**b) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/other agencies:**

Nature Of Project	Duration Year From To	Title Of The Project	Name Of Funding Agency	Total Grant		Total Grant Received till date
				Sanctioned	Received	
Minor Projects	Nil					
Major Projects	Nil					
Interdisciplinary Projects						
	2009-10	Nil	Nil	Nil	Nil	Nil
	2010-11	Development of Monitoring System for CNC Gear Hobbing Machine	Premier Automobiles Ltd.	Industry Sponsored		Prototype is submitted to department
		Resistor Straightening Mechanism for Resistor Welding Machine	Vishay Components India Pvt. Ltd. Pune	Industry Sponsored		Prototype is submitted to department
		Design & Manufacturing of Scissor Lift on an Assembly Line	Spicer Ltd. Pune	Industry Sponsored		Prototype is submitted to department
		Prototype development of half torodial continuously variable	Jai Ganesh Enterprises, Pune	Industry Sponsored		Prototype is submitted to department

		transmission			
		Design & Development of an Engine Starting System for an Unmanned Aerial Vehicle	Defense Research & Development Organization, R&DE (E) Dighi, Pune	Industry Sponsored	Prototype is submitted to department
	2011-12	Experimental demonstration of mechanically adjustable speed drive	Tirupti Engineers, Bhosari Pune	Industry Sponsored	Prototype is submitted to department
		Automation of Capillary Straightening Process	InvenysAppliance Controls India Pvt. Ltd. Pune	Industry Sponsored	Prototype is submitted to department
		Multi-Axes welding machine	Shubham Engineers, Talwade, Pune	Industry Sponsored	Prototype is submitted to department
	2012-13	Nil	Nil	Nil	Nil
Students Research Projects		Mini scale Modeling of Gyroscopic Effect with Application to Sheep Steering.	Manufacturing assistance	Nil	Prototype is submitted to department
		Analysis for critical radius of insulation for a cylinder.	Manufacturing assistance	Nil	Prototype is submitted to department

	2013-14	Performance Analysis of 4-Stroke Single Cylinder SI Engine by Pre-heating Gasoline and Injecting 50% volume/volume Water-Methanol Mixture in Carburetor	Manufacturing assistance	Nil	Prototype is submitted to department
		Analysis of Air Jet Refrigeration	Self and Manufacturing assistance from college workshop	Nil	Prototype is submitted to department
		Thermal Conductivity Determination By Lagged Pipe Apparatus	Manufacturing assistance	Nil	Prototype is submitted to department
		Natural Convection Characteristics in Vertical Cylinder	Nil	Nil	Prototype is submitted to department
Any Other(Specify), grants to conduct Training and Seminars ,Conferences	Nil	Nil	Nil	Nil	Nil



**23. Awards / Recognitions received by faculty and students 2013-2014**

Sr No	Faculty/Student	Award
1	Dr Prof M L Kulkarni	Best Teacher Award in the department
2	BAJA Team	Won 50,000 Rs cash award for developing vehicle with best ergonomics and aesthetics.

**24. List of eminent academicians and scientists / visitors to the department:**

Sr. No.	Name	Designation	Company/ Organization	Purpose
01	Mr. John Sinclair	Deputy Dean	University of Northampton	Collaboration agreement
02	Dr. Vitthal Bandal	Assoc. Prof.	G.C.O.E. Pune	Consultancy work
03	Dr.S. Karnika	Senior Manager	Bharat Forge	Department Advisory Board
04	Mr. Arvind Paranjpe	Asst. Gen. Manager	Tata Power	Guest Lecture
05	Prof. Paul D. Oskwan	Head of Mechanical & Aerospace	University of Cincinnati	Collaboration

**25. Seminars/ Conferences/Workshops organized & the source of funding**

Sr. No.	Name of Seminars/ Conferences/Workshops	National/ International	Funding Agency
01	Faculty Development Program- Entrepreneur Development.	National	National School of Technical and Entrepreneurship Development Board.
02	Faculty Development program for faculty and staff	National	Self Financing

**26. Student profile programme/course wise:**

Name of the Course/ programme	Academic Year	Applications received	Selected	Enrolled		Pass percentage
				M*	F*	
Mechanical	2009-10	As the admission process, it is governed by DTE. All the rules and regulations are followed as per DTE		51	9	73
	2010-11			53	8	93.75
	2011-12			47	17	86.44
	2012-13			53	11	82.66
	2013-14			110	16	-

\*M = Male \*F = Female

**27. Diversity of students:**

Academic Year	% of students from the same state	% of students from other States	% of students from abroad
2009-10	83.3	16.6	-
2010-11	78.3	21.6	-
2011-12	80	20	-
2012-13	76.6	23.4	-
2013 – 2014	93.3%	6.6%	-

**28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc. ?:**

Academic Year	NET	SLET	GATE	Civil services	Defense services	Remark
2012-13			01			
2013 – 2014	Nil	Nil	41	Nil	Nil	Result awaited

**29. Student progression:**

Student Progression	Year	%
UG to PG	2009-10	2.5
	2010-11	2
	2011-12	2
	2012-13	1.5
PG to M.Phil.	NA	
PG to Ph.D.	Nil	

Employed • Campus selection	2009-10	16
	2010-11	28
	2011-12	16
	2012-13	19
• Other than campus recruitment	2009-10	20
	2010-11	19
	2011-12	29
	2012-13	3

### 30. Details of Infrastructural facilities

#### a) Library:

Particulars	Titles	Volumes
Books	112	115
Journals(Specify number of journals and names if subscribed by departments not by central library)	18	18
Magazines (Specify number of journals and names if subscribed by departments not by central library)	5	5

#### b) Internet facilities for Staff & Students

Individual Internet connection for faculty: Total No of Connections = 16

Central Internet facility for students at institute level.

#### c) Class rooms with ICT facility

Total no of classroom with ICT= 03

Facility available: - 1 LCD Projector per classroom

1 portable OHP

#### d) Laboratories

**Total no. of Laboratory: 15**

**Major facility:** Universal testing machine, Rockwell Brinell hardness, Pelton Turbine, Francis turbine, hydraulic Trainer, Pneumatic trainer, Centrifugal Blower, two stage reciprocating compressor, vane pump test rig, Gear pump test rig, Computerized variable compression ratio diesel engine test rig, four stroke diesel engine test rig, MPFI petrol engine test rig, VIB lab, Epicyclic gear test rig

### 31. Number of students receiving financial assistance from college, university, government or other agencies:

Sr No	Year	Financial Assistance gender wise data		Total
		*M	*F	
1	2009-10	219	20	239
2	2010-11	254	21	275
3	2011-12	291	30	321

4	2012-13	272	27	299
5	2013-14	334	45	379

\*M = Male \*F = Female

**32. Details on student enrichment programmes (special lectures / workshops /seminar) with external experts:**

**Add On Courses**

Sr. No.	Name of Course	Resource Person	Duration	Target Audience
1	Ansys- Structural, Thermal & Couple Field	Mr. Datta Parle	24/08/2013 to 31/03/2014	TE & BE Students

**Guest Lectures**

Sr. No.	Name of the Event	Resource Person	Dates	Type of the Event	Target Audience
1	Guest Lecture on “ RAC”	Prof. Dr S. N. Sapali	24/01/2014	Guest Lecture	TE Students
2	Guest Lecture on “ Power plants “	Mr. A.D. Paranjape	28/01/2014	Guest Lecture	TE/ BE Students
3	Guest Lecture on “GD &T”	Mr. Ashish Pithe	13/02/2014	Guest Lecture	TE Students

**33. Teaching methods adopted to improve student learning.**

Following practices are adopted for improving teaching learning process.

1. Use of e-mails for interaction with students for solving their queries, acceptance of assignment, communicating information about events and competitions etc.
2. Use of social networking sites for interacting with outside world.
3. Use of social networking sites to enhance knowledge about educational domain. Also many a time I have been declared as top influencer of the week.
4. Use of PPT where ever appropriate.
5. Use of learning material on NPTEL is promoted.
6. The tools and techniques for self learning are imbibed among students by conducting ad-on- courses.
7. Instant feedback of student about their understanding is obtained in class room by using objective type questions.
8. Student is made aware of industrial requirement during lecture itself, also attempts are made to clarify the same by using case studies.

9. Relevant research papers are used (where ever possible) to teach beyond syllabus, also the same papers are provided to students for reference and study.
10. Particularly for final year students, attempts are made to implement the concepts learned by them through project.
11. Training sessions are arranged for faculties for mutual improvement.
12. Accessible to any of the student for guidance on their queries.

#### **34. Participation in Institutional Social Responsibility (ISR) and Extension activities**

Department participates in Institutional Social Responsibility (ISR) and Extension activities by conducting following programmes.

- Organizing NSS Camps
- Helping Anand Gram (Orphanage) by donating food, study material etc, on 15<sup>th</sup> August and 26<sup>th</sup> January.
- By involving students in Blood Donation Camps
- Free PUC Check up
- Celebrating Teachers Day
- Celebrating festivals like Shivjayanti
- By involving students in National Festival celebration Republic and Independence day

#### **Social activity taken up in the department**

<b>Sr . No</b>	<b>Name of Student</b>	<b>Class (FE/SE/TE/BE)</b>	<b>Academic Year</b>	<b>Activity</b>	<b>Place</b>	<b>Date</b>
01	All Mech Students	SE, TE, BE	2013-14	Donation to Anandgram	Anandgram , Alandi	15/08/13
02	All Mech Students	SE, TE, BE	2013-14	Donation to VikasAnath Ashram	Chikhali	15/08/13
03	All Mech Students	SE, TE, BE	2013-14	Donation to Anandgram	Anandgram , Alandi	26/01/14

#### **35. SWOC analysis of the department and Future plans.**

##### **Strengths:**

- 1) Good infrastructure in terms of classrooms, laboratory facilities.
- 2) Adequate qualified faculties covering all aspects of mechanical Eng- Heat power, CAD/CAM, Manufacturing, Design, Materials, etc.
- 3) Profile of Faculties-
  - a) Two Doctorates
  - b) 16 Postgraduates
  - c) Out of 16 Faculties, 2 have nearly completed their PhD and two have registered for their PhD

- 4) Focus Areas of Dept- Automobile Eng, Heat Power, CAD/CAM.
- 5) Key Student Activities-
  - i) Students have won the BAJA Raftar at the national event for Rs 1.5 lakh Rs held under SAE Banner.
  - ii) Students have won the BAJA at national event (Rs 0.5 lacs) for best Design & Ergonomics.
- 6) Academic Performance- Very healthy Pass Percentage of Final Year BE Students for last three Years 2010-11 - 94%;2011-12- 81%;2012-13- 83%.
- 7) Industry / Institute Interaction- This activity is done regularly in terms of Guest lecture, Industrial visits, Industrial Training etc.
- 8) Specialized Courses- Department has identified Syllabus-Gap in the courses which have to be delivered so as to make students more employable.
- 9) Social Responsibilities- Students are encouraged through Student's Association for social work in orphanages.
- 10) Grants/Funds for R&D: Received 30 lakhs DST grant for R & D work in department.

**Weakness:**

- 1) Improvement required in R&D work in dept.
- 2) Consultancy work to be enhanced.
- 3) MOU's to be strengthened.

**Opportunities:**

- 1) Flexibility in offering professional courses to meet industry needs.
- 2) Strengthening Industry-Institute interaction.
- 3) Attracting better quality of students during admissions.
- 4) Improving the employability of students.
- 5) Better & improved funding from industry/research centers.
- 6) Improve the confidence of all stakeholders(Students/Parents/industry/alumni)

**Challenges:**

- 1) Widening the industry base for employment.
- 2) Expanding the infrastructure to meet the growing requirements of the stakeholders.
- 3) Increasing the intake in department to meet the growing needs of the society.
- 4) Getting Quality Faculty & retaining them for development of dept.

**Future Plans:**

- 1) Center of excellence in Automobile engineering
- 2) Center of excellence in CAD/CAM.
- 3) Upgrading lab facilities in field of Design, Heat power, CAD/CAM to PG standards.

- 4) Strengthening alumni interaction for department development.
- 5) Increasing industrial sponsored projects.
- 6) Focus on research grants from government bodies to be maintained.
- 7) Encouraging more faculties from current strength to register for Ph.D

**ENGINEERING SCIENCES**

1. **Name of the Department:** Department of Engineering Sciences
2. **Year of Establishment:** 2005
3. **Names of Programs/Courses offered:** Nil
4. **Names of Interdisciplinary courses and the departments/involved**

Sl.No	Course	Department
1	Basic Electrical Engineering	Department of Electronics and Telecommunication
2	Engineering Mechanics	Department of Civil Engineering
3	Basic Electronics Engineering	/Department of Electronics
4	Engineering Graphics I /II	Department of Mechanical Engineering
5	Fundamental of Programming Language	Department of Computer Engineering
6	Fundamental of Programming Language	Department of Information Technology

5. **Annual/ semester/choice based credit system (programme wise):** This pattern is not followed in Engineering Sciences Department
6. **Participation of the department in the courses offered by other department :**

Course	Department
Engineering Mathematics III	SE (Electronics and Telecommunication)
	SE (Electronics Engineering)
	SE (Mechanical Engineering)
	SE (Computer Engineering)
	SE (Information Technology)
	SE ( Chemical Engineering)
Soft skills and Communication Skills	SE/TE/BE (Electronics and Telecommunication)
	SE/TE/BE (Electronics Engineering)
	SE /TE/BE (Mechanical Engineering)
	SE /TE/BE (Computer Engineering)
	SE/TE/BE (Information Technology)
	SE/TE/BE (Chemical Engineering)

7. **Courses in collaboration with other universities, industries, foreign institutes, etc :** NA



8. **Details of courses / programmes discontinued (if any) with reason :**

NA

9. **Number of Teaching posts :**

	<b>Sanctioned</b>	<b>Filled</b>
Professor	1	1
Associate Prof.	1	1
Assistant Prof.	10 (Engg Sci) 5 (Civil Engineering)	10 (Engg Sci) 5 (Civil Engineering)

10. **Faculty profile with name, qualification, designation, specialization, (D.Sc./ D. Litt./Ph.D/ M.phil. etc.)**

<b>Name</b>	<b>Qualification</b>	<b>Designation</b>	<b>Specialization</b>	<b>No. of Years of Experience</b>	<b>No of Ph.D Students guided for the last 4 years</b>
Dr. Shamkant M Khairnar	Ph.D. (Engg. Mathematics)	Professor and Head	Geometric functions theory and image processing	23.9	6
Dr. Thange Tukaram Govind	Ph D (Mathematics)	Assistant Professor	Mathematical Analysis	06	Nil
Mr. Satish G. Gajbhiv	M.Sc. (NET)	Assistant Professor	Integral Transforms	10.3	Nil
Asha Abhilash	M.Phil (Mathematics)	Assistant Professor	Operation Research	5.3	Nil
Mrs. Rupali A Deshmukh.	NET M.Phil	Assistant Professor	Mathematics	2.3	Nil
Shaikh Azhar Riyazoddin	M.Sc. (Mathematics) NET	Assistant Professor	Mathematics	3.2	Nil
Manisha Pansare	M.Sc.	Lecturer	Mathematics	1.5	Nil

Dr. Arika M. Kotha	Ph.D (Chemistry)	Associate. Professor &FE Coordinator	Polymer Science	10	Nil
Mr. Amol Madhav Kapse	M.Sc.(Chemistry)	Assistant Professor	Inorganic Chem),	7.2	Nil
Dr. Puja Verma	Ph.D (Physics)	Assistant Professor	Microwave Electronics	8	Nil
Mr. Manish Khare	M.Sc.(Physics), NET	Assistant Professor	Advanced Electronics	8	Nil
Mr. Amit C. Hiray	M.Phil	Assistant Professor	CALL	8	Nil
Mr. Hussain Shaikh	M.A. (English)	Assistant Professor	Language	3.6	Nil
Mrs. Mary George	MBA (HR)	Lecturer	HR	2	Nil
Mr. Sharad Sunkar	M.A. MSW	Adjunct prof.	Professional Training	9	Nil
Col. Anand Bapat	MBA (HR)	Adjunct prof.	Professional Training	5	Nil
Satyavathi Nath	ME ( Civil Engineering)	Assistant Professor & Head	Water Resources	5	Nil
Vijay K Pingale	M.E( Civil Engineering)	Assistant Professor	Structural Engineering	8.5	Nil
Swapna P. Kulkarni	M.E (Civil Engineering)	Assistant Professor	Building Science and Technology	5.6	Nil
Renu Koshy	M.E (Civil Engineering)	Assistant Professor	Construction Management	3	Nil
Preeti V. Ramkar	M.E (Civil Engineering)	Assistant Professor	Hydraulics	1.5	Nil

Vaishali Girge	BE (Civil Engineering)	Lecturer	NA	2	Nil
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11. **List of senior visiting faculty :** NA  
 12. **Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty :** NA  
 13. **Student-Teacher Ratio (programme wise) :**

Year	Student Teacher Ratio	
	Sem-I	Sem-II
2009-10	13:1	11:1
2010-11	11:1	12:1
2011-12	11:1	14:1
2012-13	14:1	12:1
2013-14	12:1	11:1

14. **Number of academic support staff (technical) and administrative staff; sanctioned and filled**

	Sanctioned	Filled
Academic Support staff (Technical)	2	2

15. **Qualifications of teaching faculty with DSc/D.litt/ Ph.D/ M.Phil/PG**

Qualifications	Teaching Faculty
With Ph.D	4
With M.Phil	3
With PG	5 (Engg. Sci) 5 (Civil)

16. **Number of faculty with ongoing projects from a) National b) International funding agencies and grants received**  
 a) **National:** Nil  
 b) **International:** Nil

**17. Department Projects funded by DST – FIST; UGC, DBT, ICSSR, etc and total grants received:**

<b>Sl.NO.</b>	<b>Name of the Coordinator</b>	<b>Funding Agence</b>	<b>Grant Received</b>	<b>Duration</b>
1	Prof. Dr. S. M. Khairnar	DST	Rs 840000/-	3 Years
		DAE	Rs 240000/-	3 Years
		RPS(UoP)	Rs 150000/-	2 Years
		RPS(UoP)	Rs 120000/-	2 Years
2	Prof. Dr. Arika Kotha	RPS, UoP	Rs.2,00,000/-	2 Years
3	Prof. Dr. Nanda Haram	RPS, UoP	Rs 1,50,000/-	2 Years

**18. Research Centre / facility recognized by the University: Nil**

## 19. Publications

Sl. NO	Name of Faculty	No. of Papers published in peer reviewed journals	No. of Publications listed in Int. Database	Monographs	Chapters in Book	Books Edited	Books with ISBN in Int. DB	Citation Index	SNIP	SJR	Impact Factor (max)	H-index Average
1	Dr. Shamkant Khairnar	49	49	Nil	Nil	Nil	Nil	12	Nil	Nil	1.20	1.5
2	Dr. Arika Kota	9	7	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
3	Dr. Puja Verma	7	3	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
4	Dr. Tukarma Thange	6	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
5	Mr. Amit Hiray	3	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
6	Mrs. Swapna Kulkarni	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
7	Mrs. Preeti Ramkar	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
8	Mrs. Vaishali Girge	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

20. **Areas of consultancy and income generated:** Nil  
 21. **Faculty as members in a) National Committee b) International Committee c) Editorial Boards, etc.:**

- a) **National Committee :** Nil  
 b) **International Committee :** Nil  
 c) **Editorial Boards: Prof. Dr. S.M. Khairnar** is Principal Editor in 6 journals, Associate Editor in 3 journals and Reviewer in 28 journals.

**22. Students Projects**

- a) Percentage of students who have done in-house projects including inter departmental/ programme : Nil  
 b) Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/other agencies : Nil

**23. Awards/ Recognitions received by faculty and students:**

Name of the Faculty	Awards
Mr. Amit Hiray	Best Teacher of the Institute
Mrs. Asha Abhilasha	Best Teacher of the Department

**24. List of eminent academicians and scientists / visitors to the department :**

Sl.No	Name of the Visitor	Designation	Organization	Purpose of Visit
1	Dr. R.C. Pathak	Brigadier	DRDO	Exposure to the research at DRDO
2	Dr. T. P. Shrinivasan	Scientist -F	ISRO	Exposure to the research at ISRO
3	Dr. Sulabha Kulkarni	UGC-Scientist	IISER	Exposure to the research at IISER

**25. Seminars / Conferences/ Workshops organized & the source of funding**

Academic Year	Program Organized	National/International	Source of Funding
2009-2010	NCEAM (National Conference on Engineering Applications of Mathematics)	National	Institute
2011-2012	Relevance of research in teaching learning process	National	Institute
2011-2012	Innovation	State	UoP
2012-2013	NCEAM(National Conference on Engineering Applications of Mathematics)	National	Institute

## 26. Student profile programme/Course Wise :

Name of the Course/Programme	Academic Year	Application Received	Selected	Enrolled		Pass Percentage
				*M	*F	
FE (All Branches)	2009-10	The admission process is governed by DTE.		339	80	67.1%
	2010-11			279	145	82.3%
	2011-12			308	118	76.1%
	2012-13			289	145	84.1%
	2013-14			371	132	88.5%

27. Diversity of the students: NA

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil Services and defense services. – NA

29. Student Progression.-(NA)

## 30. Details of Infrastructural Facility

- Library-NA
- Internet facilities for staff and students: 18 MBPS broad band leased line
- Class rooms with ICT facility: 04
- Laboratories

Sl. No.	Name of the Lab	Room No.	Area (sq.mt.)	Total Investment(Rs)
1	Physics Lab	D-104	71.4	Rs 6,12838/-
2	Chemistry Lab	A-005	92.27	Rs 12,26,250/-
3	Civil Lab	B-001	50.32	Rs. 2,80,540/-

31. Number of students receiving financial assistance from college, university, government or other agencies: The data is available with core Engineering Departments.

## 32. Details on student enrichment programmes (special lectures /workshops / seminar) with external experts

Special lectures /workshops etc	Topic	Day and Date	Attendance
Lecture	Nanoscience	22 <sup>nd</sup> Feb, 2014	FE to BE
Lecture	Geometry	21 <sup>st</sup> March,2014	FE

**33. Teaching methods adopted to improve student learning**

- Arrangement of guest lecturers / workshops to enhance the knowledge of the students.
- Tutorial classes problem solving sessions are conducted to create the interest and enhance the analytical ability of the students.
- Class test is conducted every month to evaluate the progress of the student
- Students are given assignment based on the need of the topic
- Organizing Seminars, Technical Quizzes, and Model making contests.
- Provide the support material in the form of notes, handouts and books for the poor learner and enthusiastic learner
- Forming the groups for the discussion based study

**34. Participation in Institutional Social Responsibility (ISR) and Extension activities: Nil****35. SWOC analysis of the department and Future plans****Strengths**

- Qualified , dedicated , committed faculty members
- Well equipped labs
- Research Projects worth Rs 20 lakhs
- Efficient Technical staff
- Publications in Peer Revived Journals

**Weakness**

- Multidisciplinary research
- Collaborations with Industry and research organization
- Lack of involvement of students in research

**Challenges**

- Syllabi at par with industry
- Fill up the gap between existing and advanced knowledge.
- Multidisciplinary research
- E-learning
- Teaching with conventional method
- Interaction with outside world

**Future Plans**

- Research collaboration with national and international organization
- Fetching research projects from major funding agencies
- Maximum faculty in the department with research aptitude
- Publications on multidisciplinary research
- Developing e-learning center.
- Research based teaching learning process



## **8. DECLARATION BY THE HEAD OF THE INSTITUTION**

I certify that the data included in this 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 tear visit

Signature of the Head of the institution

Place: Alandi (D)

Date: 10/04/2014

## Certificate of Compliance

This is to certify that **MIT Academy of Engineering** fulfils all norms

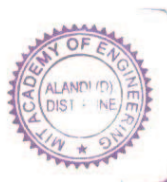
1. Stipulated by the affiliating University and/or
2. Regulatory Council/Body [such as UGC, NCTE, AICTE, MCI, DCI, BCI, etc.] and
3. The affiliation and recognition is valid as on date.

It is noted that NAAC's accreditation, if granted, shall stand cancelled automatically, once the institution loses its University affiliation or Recognition by the Regulatory Council, as the case may be.

In case the undertaking submitted by the institution is found to be false then the accreditation given by NAAC is liable to be withdrawn. It is also agreeable that the undertaking given to NAAC will be displayed on the college website.

**Date:** 11<sup>th</sup> Feb 2014

**Place:** Alandi (D), Pune



  
Dr. Yogesh J. Bhalerao

**Principal**  
**PRINCIPAL**  
MIT Academy of Engineering  
Alandi (D), Pune-412 105.

(ID No. PU/ENGG/134/1999)

## 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/3611

Date : 20/02/2014

### TO WHOME IT MAY CONCERN

This is to certify that MIT Academy of Engineering, Alandi (D), Pune-412 105 is affiliated to the University of Pune, since 1999 and the following courses are taught in the said college as per approval.

Courses	Duration of the Course	Affiliation(Permanent / Temporary )	Validity Period
Chemical Engineering	4 Year	Permanent	From 2013-14
Computer Engineering	4 Year	Permanent	From 2012-13
Electronics Engineering	4 Year	Permanent	From 2012-13
Electronics and Telecommunication Engineering	4 Year	Permanent	From 2012-13
Information Technology	4 Year	Permanent	From 2013-14
Mechanical Engineering	4 Year	Permanent	From 2013-14
Master of Engineering (computer)	2 Year	Temporary	Upto 2012-13
Master of Engineering (Electronics VLSI Embedded Systems)	2 Year	Temporary	Upto 2012-13

  
 Director  
 B.C.U.D.



Ph. 23236351, 23232701, 23237721  
23234116, 23235733, 23232317  
23236735, 23239437, 23239627

Extension No. 413 (CPP-I Colleges)  
UGC Website: [www.ugc.ac.in](http://www.ugc.ac.in)

F. No. 8-239/2013 (CPP-I/C)

The Registrar,  
University of Pune  
Ganeshkhind, Pune – 411 007  
**Maharashtra**



विश्वविद्यालय अनुदान आयोग  
बहादुरशाह जफर मार्ग  
नई दिल्ली-110 002  
UNIVERSITY GRANTS COMMISSION  
BAHADURSHAH ZAFAR MARG  
NEW DELHI-110 002

January, 2014

7 JAN 2014

**Sub:** Recognition of College under Section 2 (f) & 12 (B) of the UGC Act, 1956.

Sir,

I am directed to refer to the letter no. 8036-8037/B.D/2013-14 dated 22.10.2013 received from the Principal, MIT Academy of Engineering, Alandi, Pune – 412 105, Maharashtra on the above subject and to say that it is noted that the following College is **un-aided/self financed** and **permanently** affiliated to **University of Pune, Ganeshkhind, Pune**, I am further to say that the name of the following college has been included in the list of colleges prepared under Section 2 (f) & 12 (B) of the UGC Act, 1956 under the head '**Non-Government, self financed** Colleges teaching upto **Bachelor's Degree**':-

Name of the College	Year of Establishment	Remarks
MIT Academy of Engineering, Alandi, Pune – 412 105, Maharashtra.	1999	The College is now declared fit to receive Central assistance in terms of Rules framed under Section 12 (B) of the UGC Act, 1956. However, the College, being a self financing & unaided, would be eligible to receive UGC's support only in respect of teachers & students related schemes as per the decision of the Commission dated 8 <sup>th</sup> July 2011.

The Indemnity Bond and the other supporting documents submitted in respect of the above College have been accepted by the University Grants Commission.

Yours faithfully,

*A Kumar*  
(Ajay Kumar)  
Education Officer

Copy to:-

1. The Principal, MIT Academy of Engineering, Alandi, Pune – 412 105, Maharashtra.
2. The Secretary, Government of India, Ministry of Human Resource Development, Department of Secondary & Higher Education, Shastri Bhawan, New Delhi - 110 001.
3. The Principal Secretary, Tech. & Higher Education Deptt., Government of Maharashtra, Mantralaya, Annexe Building, Mumbai – 400 032, (Maharashtra).
4. The Deputy Secretary, UGC, Western Regional Office (WRO), Ganeshkhind, Poona – 411 007, (Maharashtra).
5. Publication Officer (UGC-Website), New Delhi.
6. Section Officer (FD-III Section), UGC, New Delhi.
7. Guard file.

*Sunita*  
(Sunita Khanna)  
Section Officer

156  
11/1/14

SS  
for records.  
*[Signature]*



# Certificate of Registration

This certifies that the Quality Management System of

## MIT ACADEMY OF ENGINEERING

Dehu Phata, Alandi (D), Tal. Khed,  
Pune, Maharashtra - 412 105, India.

has been assessed by NSF-ISR and found to be in conformance to the following standards(s):

### ISO 9001:2008

#### Scope of Registration:

Imparting Education Leading to Graduation in the Disciplines of Electronics and Telecommunication Engineering, Computer Engineering, Electronics Engineering, Chemical Engineering, Mechanical Engineering, Information Technology and Post-graduation in the disciplines of Master of Business Administration and Master of Computer Applications

Exclusion: 7.3, 7.5.2



Certificate Number:  
12241  
Certificate Issue Date:  
12/10/2012  
Registration Date:  
09/11/2009  
Expiration Date\*:  
10/17/2015

Carl Blazik,  
Vice President Technical Operations,  
NSF-ISR, Ltd.

### NSF International Strategic Registrations

789 North Dixboro Road, Ann Arbor, Michigan 48105 | (888) NSF-9000 | [www.nsf-isr.org](http://www.nsf-isr.org)

Authorized Registration and/or Accreditation Marks. This certificate is property of NSF-ISR and must be returned upon request.  
\*Company is audited for conformance at regular intervals. To verify registrations call (888) NSF-9000 or visit our web site at [www.nsf-isr.org](http://www.nsf-isr.org)



**BOARD OF ACCREDITATION**

NBCC Block, East Tower, 4th Floor, Okhla Industrial Estate  
 Pragati Vihar, New Delhi-110 003  
 Tel: +91 (11) 2610 0020, 2428 0644 Telex: +91 (11) 2400 0000

**NBA**  
 NATIONAL BOARD OF ACCREDITATION

File No. 30-125/2010-NBA Date: 07.12.2013

To

The Principal/Director  
 MAER Maharashtra Academy of Engineering,  
 Andri, Pune-412105, M.S. 1503

Sub: Accreditation status of programmes applied by MAER Maharashtra Academy of Engineering, Andri, Pune-412105, M.S.

Dear Sir/Madam

This has reference to your application dated 08.11.2013 seeking accreditation of National Board of Accreditation to UG Programmes offered by your institution.

2. An Expert Team conducted an on-site evaluation of the programmes during 22-03-2013 to 24-03-2013. The report submitted by the Expert Team was considered by the Engineering Accreditation Evaluation Committee (EAEC) at its meeting held on 23.08.2013. The Sub-Committee of Academic Advisory Committee on Engineering considered the recommendation of EAEC at its meeting held on 06.11.2013. The Executive Committee of the National Board of Accreditation considered the recommendations of the Sub-Committee of Academic Advisory Committee on Engineering at its meeting held on 06.11.2013. The Executive Committee approved the accreditation status of the programmes as given in the table below.

Sl. No.	Name of the Programmes (UG)	Accreditation Status	Period of validity w.e.f. 08.11.2013	Remarks
(1)	(2)	(3)	(4)	(5)
i)	Chemical Engineering	Provisionally Accredited	3 years	Accreditation Status awarded is valid till the programme has the approval of the Competent Authority in the period given in Col '4', whichever is earlier.
ii)	Computer Engineering	Provisionally Accredited	2 years	
iii)	Electronics Engineering	Provisionally Accredited	3 years	
iv)	Electronics & Tele Communication	Provisionally Accredited	2 years	

3. The accreditation status awarded to the programmes as indicated in the above table does not imply that the accreditation has been granted to MAER Maharashtra Academy of Engineering, Andri, Pune, M.S. as a whole. As such the institution should nowhere alongwith its name including on its letter head etc., write that it is accredited by NBA because it is programme accreditation and not institution accreditation. If such an instance comes to NBA's notice, this will be viewed seriously. Complete name of the programme(s) accredited, level of programmes (UG or PG as the case may be) and the period of validity of accreditation, as well as the date from which the accreditation is effective, should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

4. The accreditation status of the above programmes is subject to change on periodic review, if needed by the NBA. It is desired that the relevant information in respect of accredited programmes as indicated in the table in paragraph 2, appears on the website and information bulletin of your institution.

HOD (Chem)  
 2013/12/16

Admission

5. The accreditation status awarded to the programmes as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organisational structure etc.) the same are required to be communicated to the NBA, with an appropriate explanatory note.

6. Copies of the Consensus/Decision Report submitted by the Chairman of the Expert Team along with the detailed reports submitted by the Expert Team which visited your institution for the programmes evaluated are enclosed for reference and to take necessary action to welcome the observations, if any, pointed out by the Expert Team.

7. If the institution is not satisfied with the decision of NBA, it may appeal within thirty days of receipt of the communication giving reasons for the same and by paying the requisite fee.

Yours faithfully,  
  
 (Dr. Anil Kumar Nayak)  
 Member Secretary

Note: Under Para 3.4.4 of Chapter 3 of the Manual of Accreditation, 2013, it is provided that the applications for accreditation received in an academic year will be considered in next academic year. Therefore, the institute may apply if it so desires, in the academic year 2014-15 for full accreditation of the professionally accredited programme(s) in order to have continuity of accreditation.

- Encs: 1. Copy of Report of Chairman of the Expert Team  
 2. Copies of Expert Reports of the Expert Team.

Copy to:

1. The Secretary,  
 Higher & Technical Education & Employment Department  
 Govt. of Maharashtra, Yamina, Bldg,  
 Mumbai-400 032

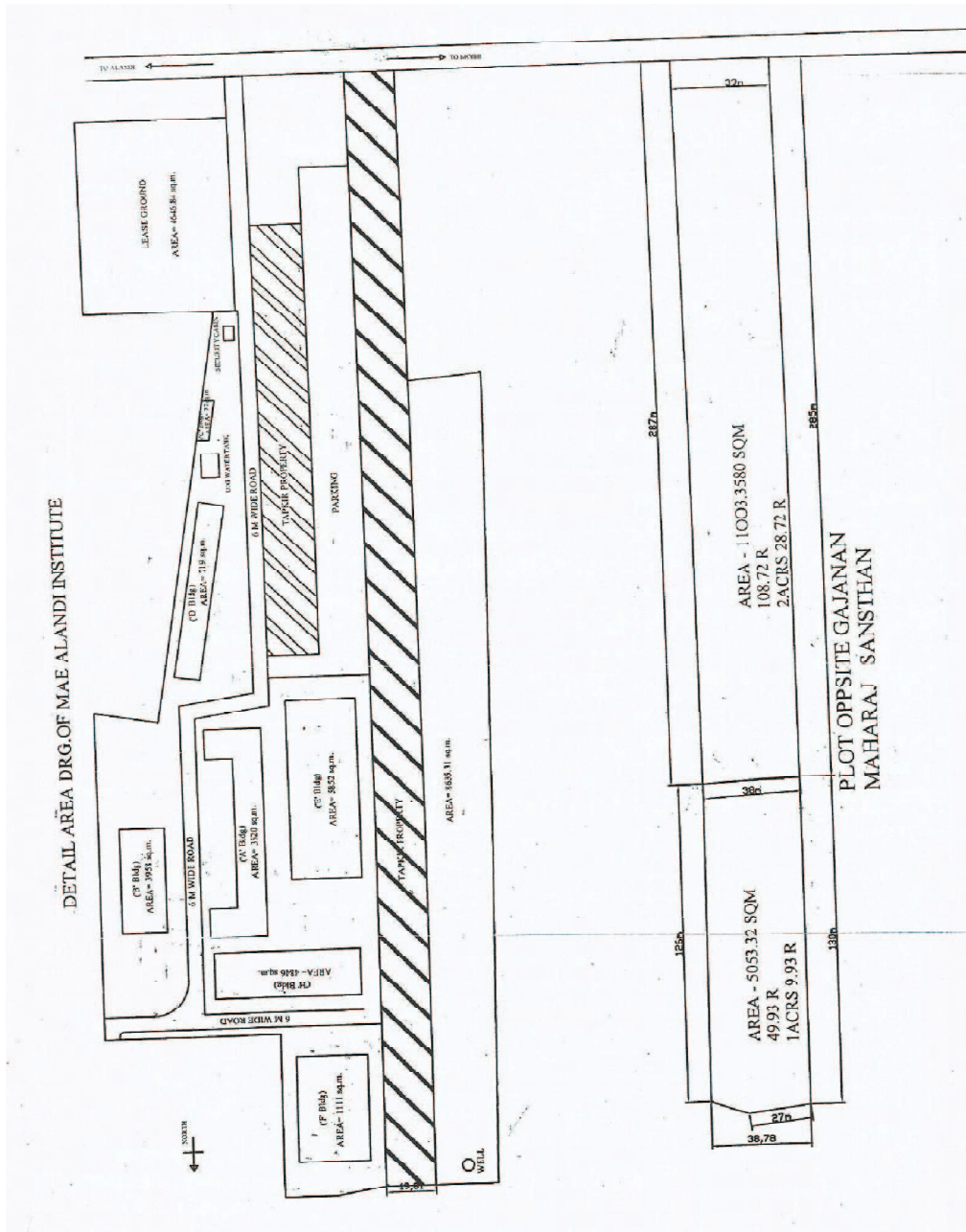
2. The Director,  
 Directorate of Technical Education  
 Govt. of Maharashtra  
 3, Marapdikha Marg,  
 Mumbai-400 071 (MS)

3. The Registrar,  
 University of Pune,  
 Gandhinagar  
 Pune-411 007

4. Accreditation File


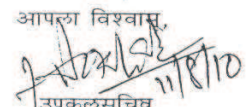
5. Master accreditation file of the State

### Master Plan of the Institution





## RESEARCH CENTER RECOGNITION LETTER

<p>दूरध्वनी क्रमांक : ०२०-२५६९१२३३ २५६०१२५७ २५६०१२५८ २५६०१२५९</p>	<p>पुणे विद्यापीठ</p> 	<p>शैक्षणिक विभाग गणेशखिंड, पुणे-४११००७. टेलिग्राफ : 'युनिपुणे' फॅक्स : ०२०-२५६९१२३३ वेबसाइट : www.unipune.ernet.in इ-मेल : dyracademic@unipune.ernet.in</p>
संदर्भ क्र. <u>अरि/३२२२</u>	दिनांक : <u>११/८/२०१०</u>	
<p>प्रति, मा. संचालक, माईस पुणेचे, महाराष्ट्र अॅकेडमी ऑफ इंजिनिअरिंग, देहुफाटा आळंदी, पुणे-४१२ १०५.</p>		
<p>विषय:- संशोधन संस्थेच्या नव्याने मान्यतेबाबत ...</p>		
<p>महोदय,</p> <p>उपरोक्त विषयानुसार आपल्या महाविद्यालयातील शैक्षणिक वर्ष २०१०-११ते पासून इलेक्ट्रॉनिक्स इंजिनिअरिंग या विषयातील पीएच.डी. संशोधन संस्थेच्या नव्याने मान्यतेच्या अहवालातील अटी व शर्तीची पूर्तता सहा महिन्यांच्या आत पूर्ण करण्याच्या तसेच दर सहा महिन्यांचा प्रोग्रेस रिपोर्ट देण्याच्या अटीवर परवानगी देण्यात येत आहे.</p> <p>याचबरोबर गणित या विषयातील पीएच.डी. संशोधन संस्थेस मान्यता देण्यात येत नाही कृपया याची नोंद घेण्यात यावी</p>		
<p>कळावे,</p>		
सोबत -अहवाल	००७	<p>आपला विश्वास,  उपकुलसचिव (शैक्षणिक विभाग)</p>
<p>Head : <u>EX, RLD, ELTC</u></p> <p style="text-align: center;"><u>B</u></p>		
<p>C:\Documents and Settings\Administrator\My Documents\Newase\M.Letter.docx.DhiwarPC</p>		
<p><u>SO</u> <u>15/8/10</u></p>		

**RESEARCH GUIDE RECOGNITION LETTER****University of Pune**

Telephone Nos : 25601258/1259  
E-mail : boards@unipune.ac.in  
Telegraph : 'UNIPUNE'  
Fax No. : 25691233

ACADEMIC SECTION  
Ganeshkhind, PUNE-411 007

Ref. No. : BUTR/Engg./114/ 258

Date : 24/02/2014

To

Dr. Goudar Mahesh Devendragouda  
MIT, Academy of Engineering,  
Alandi (D), Pune 412 105

**Subject : Recognition as a Ph.D Guide.**

Sir,

Please refer to your application for Recognition as a Post Graduate Teacher (By Papers) & Ph.D Guide of this University, I am directed to inform you that the University authorities have been pleased to recognize you as a Ph.D Guide of University of Pune, under the provision of Section 36A of the Maharashtra Universities Act, 1994.

*The details of your recognition are as under :*

1. You have been recognized for guiding maximum eight (8) Ph.D.students including all universities in the subject of **Electronics & Telecommunication** for a period of eight (8) years with effect from **11/11/2013 to 10/11/2021**.

I am further directed to inform you that, if you are not a full-time teacher in the University Department/Affiliated College / Institute recognized by the University of Pune, you shall be required to apply again for recognition giving the details of your previous recognition and independent research work, publications etc., for considering the question of grant of continuation of recognition to you. Needless to say that the recognition granted to you is always subject to the terms and conditions prescribed by the University, from time to time, in this behalf.

Please contact this office within fifteen days for correction in the approval letter if any.

Thanking you,

Yours Sincerely,

For **Director**  
**(BCUD)**

**Copy fwcs to :**

1. The Dean, Faculty of Engineering.
2. The Principal, MIT, Academy of Engineering, Alandi (D), Pune-412 105
3. The Assistant Registrar (Admissions), University of Pune, Pune-411 007.