

INSTITUTIONAL ACCREDITATION

Self - Study Report (SSR)

of



LOKMANYA TILAK COLLEGE OF ENGINEERING

Sector 4, Koparkhairane, Navi Mumbai, Maharashtra,

India – 400709



Submitted to:

**The Director
NAAC, Bangalore
Pin - 560072**

Lokmanya Tilak Jankalyan Shikshan Sansthaa's

LOKMANYA TILAK COLLEGE OF ENGINEERING

Approved by AICTE vide letter No. F-740-89-295 (E)/RC/94 Dt. 26-07-1994
Affiliated to University of Mumbai & Recognised by Govt. of Maharashtra
Courses Accredited by The National Board of Accreditation (NBA)



Shri. Satish Chaturvedi
Chairman

Dr. Vivek K. Yakkundi
Principal

LTCE/NAAC/ 0229 2017

Date: 11.04.2017

To,

The Director,
National Assessment and Accreditation Council,
P.O. Box no. 1075, Nagarbhavi,
Bangalore- 560072,
Karnataka, India

Subject :- Submission of Self Study Report (SSR) of Lokmanya Tilak College of Engineering, Koparkhairane, Navi Mumbai- 400 709.

Reference:- Track ID : MHCOGN27187

Sir,

We are pleased to submit the Self Study Report (SSR), Five hard copies and one soft copy (CD) of our institute to the **National Assessment and Accreditation Council, Bangalore**. The Self Study Report (SSR) has been prepared in accordance with the guidelines prescribed by **National Assessment and Accreditation Council** for the Accreditation of Affiliated College.

Sr. No.	Particular	Details
1	Name of the Institute	Lokmanya Tilak College of Engineering
2	Email- Id	principal.ltce@gmail.com
3	Website	www.ltce.ltjss.net
4	A & A Fee Demand Draft No. & Date	Demand Draft No. 304561 dated 22.03.2017 for a sum of Rs. 3,45,000/- { Including service tax @ 15% } of Allahabad Bank payable at Bangalore

This is for your information and necessary action.

Thanking You,


Dr. Vivek K. Yakkundi
Principal

PRINCIPAL
Lokmanya Tilak College of Engineering
Sector -4, Vikas Nagar, Koparkhairane
Navi Mumbai - 400 709.



NAAC COMMITTEE

NAAC Steering Committee		
Name of Member	Designation	
Dr. Vivek Sunnapwar	Director	
Dr. Vivek Yakkundi	Principal	
Dr. S. K. Shinde	Vice Principal	
Dr. Mrs. Sheeba P. S.	NAAC Coordinator	
Dr. S. D. Dalvi	NAAC Coordinator	
SSR Drafts Committee		
Dr. S. D. Dalvi Dr. Mrs. Sheeba P. S.	In-charge	Profile of the Affiliated / Constituent College
Dr. Mrs. Sheeba P. S. Prof. Prerana Shrivastava	In-charge Criterion I	Curricular Aspects
Dr. Mrs. Sheeba P. S. Dr. R. N. Duche	In-charge Criterion II	Teaching-Learning and Evaluation
Dr. Chandrababu D. Dr. J. J. Dange	In-charge Criterion III	Research, Consultancy and Extension
Dr. C. M. Wankhade Prof. N. P. Totare	In-charge Criterion IV	Infrastructure and Learning Resources
Dr. P. J. Nikumbh Prof. Anil Magare	In-charge Criterion V	Student Support and Progression
Dr. Vivek Yakkundi Dr. S. K. Shinde	In-charge Criterion VI	Governance, Leadership and Management
Dr. Mrs. K. H. Dhanawade Dr. S. D. Dalvi	In-charge Criterion VII	Innovations and Best Practices
Prof. Mrs. Geetha G. Dr. Mrs. Rashmi Rani	In-charge	Preface, Language Quality.
Departmental NAAC Coordinators		
Mechanical Engineering	Prof. Suchita Lokhande, Prof. Neha Pandit, Prof. Bhavesh Pasi	
Computer Engineering	Prof. Monika Mangala, Prof. Sanjivani Deokar	
Electronics and Telecommunication Engineering	Dr. Rajashree Rokade, Prof. V. S. Kshirsagar	
Electrical Engineering	Prof. Ninad Totre, Prof. Neelam Pinjari	
Electronics Engineering	Prof. Prerana Shrivastava, Dr. Shilpa Wakode	
First Year Engineering	Prof. Priya Tilak, Prof. Preethakumari, Dr. Renu Wasu, Dr. Rashmi Rani, Prof. Neelima Patil, Prof. Jaykumar Malwatkar	

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PREFACE

The Institute is pleased to present this Self Study Report (SSR) to the National Assessment and Accreditation Council, Bengaluru. Lokmanya Tilak College of Engineering is founded by a Nagpur-based trust known as Lokmanya Tilak JankalyanShikshanSanstha – LTJSS. The Sanstha was established in 1983, by Honourable Dr. Satish Chaturvedi. At present, there are 25 educational institutes run by the Sanstha in Nagpur. The Sanstha derives its philosophy from the magnanimous mathematician, educationist, social reformer Lokmanya Bal Gangadhar Tilak, who dedicated his life for the cause of Swaraj.

Lokmanya Tilak College of Engineering was established in 1994, approved by the All India Council for Technical Education, New Delhi, recognised by the Govt. of Maharashtra and is affiliated to the University of Mumbai. Within the span of 20 years of its inception, LTCE has grown leaps and bounds in terms of popular courses being offered at U.G., P.G. and Ph.D. level. Two of its branches viz., Mechanical and Electronics and Telecommunications have been prior accredited by NBA.

The Institute runs the Under-graduate Programmes in Mechanical Engineering, Computer Engineering, Electronics & Telecommunication Engineering, Electrical Engineering, Electronics Engineering, Post-graduate Programmes and Doctoral Programmes in Mechanical Engineering and Computer Engineering.

The faculty is encouraged to upgrade their qualifications with an emphasis on Research & Development, so that they become successful educators in maintaining sustainable quality of employable Engineers. The Institute has memberships of professional bodies like IEEE, ISTE, SAE, IETE, ASME, which help the faculty and students in their professional endeavours / goals. The Institute is well equipped with state of the art laboratories and library. Training and Placement Cell of the institute is successful in providing employment and internships to maximum students.

The Institute has produced several Gold Medalists in University of Mumbai. Apart from imparting quality education in classrooms and laboratories, the college also organises various seminars, symposia and workshops for the benefits of students, teachers and engineering fraternity. The National Level Conference and Tantrayyan- National Level Project Exhibition are two such annual events. The strength of the Institute is its proactive students who participate in various high profile international competitions. All the Engineering departments have students associations. The *Zephyr* is the Institute's sports, technical and cultural show, wherein students from across Navi Mumbai and Mumbai region participate. The college also runs an annual magazine *Catharsis*, where achievements of the Institute, students and faculty along with their creative work are published. Lokmanya Tilak College of Engineering stands steadfast in its mission of continuing efforts for the betterment of its students and society.

ABBREVIATIONS

AICTE	All India Council for Technical Education
ARC	Anti Ragging Committee
ATKT	Allowed to keep term
BE	Bachelor of Engineering
BOS	Board of Studies
CAFO	Chief Accounts and Finance Officer
CAP	Centralized Admission Process
CAT	Common Admission Test
CBCS	Choice-Based Credit System
CBGS	Credit Based Grading System
CESA	Computer Engineering Student Association
CET	Common Entrance Test
CO	Course Outcomes
CSIR	Council of Scientific and Industrial Research
DEO	District Educational Officer
DST	Department of Science and Technology
DTE	Directorate of Technical Education
EDC	Entrepreneurship Development Cell
EESA	Electronics Engineering Students Association
ELC	English Literature Club
ERP	Enterprise Resource Planning
ETSA	Electronics and Telecommunication Students Association
FDP	Faculty Development Program
FE	First Year Engineering
GATE	Graduate Aptitude Test in Engineering
GMAT	Graduate Management Aptitude Test
GR	Government Resolution
GRC	Grievances Redressal Committee
HOD	Head of the Department
IAC	Internal Academic Council
IQAC	Internal Quality Assurance Cell
IRG	Internal Revenue Generation
JEE	Joint Entrance Exam
LIC	Local Inquiry Committee

LMC	Local Management Committee
LTCE	Lokmanya Tilak College of Engineering
LTJSS	Lokmanya Tilak Jankalyan Shikshan Sanstha
MCA	Master of Computer Application
MESA	Mechanical Engineering Students Association
MODROB	Modernization and Removal of Obsolescence
NAAC	National Assessment And Accreditation Council
NBA	National Board of Accreditation
NCTE	National Council for Teacher Education
NPTEL	National Programme on Technology Enhanced Learning
NSS	National Service Scheme
OD	On Duty
OHP	Over Head Projector
PG	Post-Graduate
PO	Program Outcomes
PR	Practical
PSO	Program Specific Outcomes
QMS	Quality Management System
R&D	Research & Development
RC	Research Committee
RCS	Research Committee Structure
SAE	Society of Automotive Engineers
SCEE	Student Council of Electrical Engineering
SE	Second Year Engineering
T&P	Training and Placement
TE	Third Year Engineering
TEQIP	Technical Education Quality Improvement Programme
TFWS	Tuition Fees Waiver Scheme
TW	Term Work
UGC	University Grants Commission
UoM	University of Mumbai
USSC	University Staff Selection Committee
VAC	Value Added Course
WDC	Women Development Cell

EXECUTIVE SUMMARY**Criteria I**

Vision, Mission and Objectives of the college is communicated to stake holders through college website, brochures, notice boards, college magazines, lab journals, orientation programmes etc. The institute is affiliated to University of Mumbai and follows the curriculum prescribed by the university. The institute develops action plan in every semester for effective implementation of the syllabus. Academic flexibility is provided to the students by offering elective courses prescribed by the university. In addition to the prescribed curriculum, college provides additional skill oriented programmes by means of value added courses, seminars, workshops, industrial visits, internships etc. for enabling the students for better job opportunities. The institute takes care of gender equality and also inculcate ethical values and social responsibilities among faculties and students. Faculties of the institute actively participates in the syllabus revision meeting conducted by BOS of the university and gives suggestions for the curriculum. Few of the faculty members are working as BOS of the University.

Criteria II

Teaching learning process at LTCE provides better opportunity to students with diversified economic and social backgrounds as well as intellectual capability. Utilization of new as well as different teaching methods and aids facilitates students to learn and understand technological concepts in depth. Institute motivates students to gain technical knowledge through internships, workshops, industry projects, value added programs and professional training. Availability of open source study material, simulation softwares, etc. inculcates the innovative and research culture among the students. Students are actively participating in organizing technical events, conferences, project competitions, debates, etc. At the same time they are encouraged to participate in such activities conducted by other institutes and organizations. Students are exposed to latest technology development, commercial and global perspective, entrepreneur ability, competitive environment, etc. with these platforms.

Academic as well as personal counseling of students are done by concerned mentors. Slow learners identified in evaluation process are monitored separately to improve their academic performance by arranging remedial or extra classes. Teaching learning process is made effective by technologically enriching faculty members with the help of various training programs and higher studies. Attainment levels of learning outcomes of students are effectively mapped with systematic and rigorous evaluation processes. Outcomes of teaching learning process are the student's admission to higher studies in India and abroad, placement in reputed companies, establishing businesses and selection through competitive examinations.

Criteria III

Institute makes sincere effort to inculcate research culture by conducting workshops, faculty development program, training, internship programs, etc. Institute has research centers in mechanical engineering and computer engineering departments approved by university. The centers are well equipped by labs with computing facilities and with internet facility having access to online journals, and are open to all students irrespective of discipline. Institute has approved research guides for appropriate guidance to Ph.D candidates. All departments undertake the project from industries at undergraduate and post graduate levels. MoUs are signed with firms to develop the laboratories, to facilitate research/project/internship/training/practical session and give exposure to innovative tools and techniques. Institute has Entrepreneurs Development Cell for future entrepreneurs. Institute gives assistance to students for study in abroad, preparations for competitive exams such as GATE, GRE, etc. Institute also motivates students for national and international competitions such as ROBOCON, ROBOWAR, Car Racing (Formula SCHNELL Racing), BAJA, etc.

Criteria IV

The institute has infrastructure facilities as per the guidelines of AICTE. Facilities are upgraded with the provision of new courses and other requirement as per the provision of annual budget. There are total 177 rooms which include class rooms, laboratories, faculty room , common facility , canteen etc. There are five seminar halls and one Auditorium with ICT facility. Library is well equipped with various titles and number of volumes and multimedia room. Institute has ground of 1250Sq.M suitable for all outdoor games. Total 652 computers are available on campus with Internet connection and back up facility. Campus is WiFi enabled. All the departments has various licensed software's of total worth Rs 25 Lakhs and more. Campus and equipment maintenance is carried out through AMC and institute resources. A backup power facility of 125 KVA is available.

Criteria V

The students at the entry level are made familiar to the facilities, concessions, scholarships and opportunity to build their personality through proper counseling and orientation program. State and central government provides funds for certain category and the weaker section students for the reserved seats. Special provisions are available to the physical disabled students.

The support from the Management, Faculty and staff facilitates a conducive environment, enabling the students to participate in the academic, co-curricular, extra-curricular, exposure to industry, preparing them for higher studies and career building to the budding engineers. A student council is elected every year consisting of active managerial skills and talents to lead several events and make it successful. The Dean Student Affairs untiringly supports the student for all the activities, with motivation and guidance to students.

Regular career guidance, coaching and training is provided by the training and

placement cell, so that the student can face the competitive world. Coaching for competitive exams and preparing the students for interviews have improved our higher studies/employment scenario.

Several efforts to enhance the education through professional bodies and student centric clubs, committees, student councils, social activities, and due exposure to the outer world for students to work as individual or team can be seen from the achievements and awards. The women are given opportunity for women empowerment through women development cell. The student exhibit their talent, managerial skills and creativity through participation in curricular and co-curricular activities.

Criteria VI

Hon'ble Chairman and LTJSS team of stalwarts is dedicated to provide state of the art technical education to the budding engineers who are future leaders of India. LTCE vision, mission and quality policy are in line with that of sanstha.

Institute has academic excellence cell, feedback systems and various committees like local managing committee / internal academic council to monitor and evaluate the policies and plans. Management has stringent formats for faculty appraisals through which the performance is judged. At the same time management is liberal in giving appreciations and other incentives to performers. Academic audit is done to assess the performances.

Institute get annual budget for growth and development of departmental facilities under various heads, approved by our governing body and through government grants to generate revenues through research and consultancies.

Internal Quality Assurance Cell is established by the institute. QMS for faculty deals with aspects like, faculty recruitment process, Qualification upgradation, STTPs/Workshops/conferences/ FDPs, Academic review/Probationer's review, Student feedback, Train the trainer philosophy, Industry interaction for achieving required quality in teachers.

Similarly QMS for students deals with aspects like, Academic monitoring cell, CBGS / CBCGS examination systems of University of Mumbai, Parent teacher guardian mentoring, Weak student mentoring, Out of syllabus / extra mural learning, Attainment of COs, Alumni feedback / Exit feedback, Project based learning, Placements etc. For IQAC process, alumni, Professors from IIT's, University boards of studies, Industry stalwarts etc. supports the institute and also ensure alignment of requirements by regulatory bodies.

The communication to the stake holders is through college website, notices, through T&P blogs, Departmental blogs, google spreadsheets, presentations etc.

Criteria VII

The lush green area of the College is well maintained. The Institute has installed CFL/LED bulbs for conservation of energy at various places. The Institute also plans to install Solar Energy systems. Rain water harvesting system has been installed at various points in our College.

The institute has made numerous innovations which for smooth functioning of teaching-learning process, examinations, evaluations, administration, research and development etc.

The institute strengthens the support for student's extracurricular activities at national and international level as well as students' clubs and circles. Also the institute evaluate the student's performance on continuous basis.

SWOC ANALYSIS:**STRENGTHS**

- Adequate infrastructure as per the norms.
- State of art laboratories with latest equipments and softwares.
- Highly experienced and qualified faculty with excellent teaching skills.
- Well managed library with ample collection of books, e-books, e-journals etc.
- State of art auditorium and Department seminar halls with multimedia facility.
- Institute has a lush green campus.
- Conducive environment for growth of academics, research culture, social awareness, as well as sports and cultural activities.
- Skill development and personality development programmes for students.
- FDPs / STTPs / Workshops / Conferences for the benefit of faculties.
- Research publications by faculties and students.
- Curriculum enrichment by Value added courses, NPTEL video lectures, seminars, etc.
- ERP system for smooth functioning of administrative and academic activities.
- Demographic advantage due to prime location and good connectivity.
- Proximity of Thane Belapur industry belt.

WEAKNESS

- IPR and Patents.
- Student placement in core companies.
- Industry-Institute collaboration and consultancy.

OPPORTUNITIES

- Encourage the students for Entrepreneurship.
- MoUs with corporate and institutes of repute for mutual sharing.
- Incubation centres / centres of excellence for encouraging R and D, consultancy, cutting edge research, patents and start-ups.
- Inculcate research culture amongst faculty, increase research and development collaborations.
- Increase the companies visiting the campus for placements.
- Addition of new programs for PG and PhD.
- Industry Sponsored Laboratories.

CHALLENGES

- Decline in the quality of students admitted.
- Limited time available during academics for industrial training/internships.
- Changing trends in Engineering education.
- Industrial requirements according to change in technology for placements.
- Competition amongst other mushrooming and existing institutions in the area.

Profile of the Affiliated College**1. Name and address of the college:-**

Name :	LOKMANYA TILAK COLLEGE OF ENGINEERING	
Address :	SECTOR-4, PLOT NO.17, 18 and 19, KOPARKHAIRANE.	
City : Navi Mumbai	Pin : 400709	State : Maharashtra
Website :	www.ltce.in , www.ltce.ltjss.net	

a) For Communication:

Designation	Name	Telephone with STD code	Mobile	Fax	Email
Principal	Dr. Vivek K. Yakkundi	022 27541005, 27541006	9324622654	022- 27547793	principal.ltce@gmail.com
Vice Principal	Dr. Subhash K. Shinde		9594170066		skshinde@rediffmail.com
Steering Committee Co-ordinators	Dr. Sheeba P. S.		9987086081		naac.ltce@gmail.com
	Dr. S. D. Dalvi		9869012496		

3. Status of the of Institution:

- i. Affiliated College
- ii. Constituent College
- iii. 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

If yes specify the minority status (Religious/linguistic/ any other) and provide documentary evidence.

Linguistic Minority

6. Source of funding:

Government

Grant-in-aid

Self-financing

Any other

√

7.**a. Date of establishment of the college:** 26/07/1994**b. University to which the college is affiliated /or which governs the college**

UNIVERSITY OF MUMBAI , MAHARASHTRA

c. Details of UGC recognition:

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

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

Under Section/clause	Recognition/Approval details Institution/Department/ Programme	Day, Month and Year (dd-mm-yyyy)	Validity	Remarks
AICTE	742-89-4/RC/94	26/07/1994	---	Initial
AICTE	Western/1-2866111722/2016/E OA	30/04/2016	1 year	Current

(Enclosed 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	√

b. For its performance by any other governmental agency?

Yes	√
No	

By National Board of Accreditation in 2008-2009

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

Location *	Urban
Campus area in sq. mts.	10643.23
Built up area in sq. mts.	19202

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

- Auditorium/seminar complex with infrastructural facilities √
- Sports facilities
- Play ground √
- * Swimming pool NO

- * Gymnasium NO
- Hostel
 - * Boys’ hostel √
 - i. Number of hostels - 1
 - ii. Number of inmates - ---
 - iii. Facilities: Cot, Reading Table and Chair, TV, Hot Water, internet, etc.,
 - * Girls’ hostel No
 - i. Number of hostels:
 - ii. Number of inmates:
 - iii. Facilities:
 - * Working women’s hostel NA
 - i. Number of inmates:
 - ii. Facilities:
- Residential facilities for teaching and non-teaching staff (give numbers available - cadre wise) : No
 - Cafeteria -- √
 - Health centre – No

Facilities: First aid

Qualified doctor	Full time	<input type="checkbox"/>	Part-time	<input checked="" type="checkbox"/>
Qualified Nurse	Full time	<input type="checkbox"/>	Part-time	<input type="checkbox"/>

- Facilities like banking, post office, book shops: Available
- Transport facilities to cater to the needs of students and staff: : No
- Animal house : NA
- Biological waste disposal: External Agency
- Generator /other facility for management/regulation of electricity and voltage: Available
- Solid waste management facility: External Agency
- Waste water management: External Agency
- Water harvesting: Available

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

Sr. No.	Programme Level	Name of the Programme / Course	Duration	Entry Qualification	Medium of instruction	Sanctioned / approved Student Strength	No. of students admitted
1	Undergraduate 1 st Shift	B. E. Computer Engineering	4years	10+2/CET/JEE/AIIEEE	English	120	63
2	Undergraduate 1 st Shift	B. E. Electrical Engineering	4years	10+2/CET/JEE/AIIEEE	English	60	47
3	Undergraduate 1 st Shift	B. E. Electronics Engineering	4years	10+2/CET/JEE/AIIEEE	English	60	09
4	Undergraduate 1 st Shift	B. E. Electronics and Telecommunication Engineering	4years	10+2/CET/JEE/AIIEEE	English	60	50
5	Undergraduate 1 st Shift	B. E. Mechanical Engineering	4years	10+2/CET/JEE/AIIEEE	English	120	100
6	Undergraduate 1 st Shift DSE	B. E. Mechanical Engineering	3years	Diploma	English	60	63
7	Undergraduate 2 nd Shift	B. E. Electronics and Telecommunication Engineering	4years	10+2/CET/JEE/AIIEEE	English	60	22
8	Undergraduate 2 nd Shift	B. E. Mechanical Engineering	4years	10+2/CET/JEE/AIIEEE	English	60	51
Total							397
1	Postgraduate	Computer Engineering	2 years	BE/BTech	English	18	00
2	Postgraduate	Mechanical Engineering	2 years	BE/BTech	English	18	03
Total							03
1	Ph.D.	Computer Engineering	3 years	ME/MTech	English	10	02
2	Ph.D.	Mechanical Engineering	3 years	ME/MTech	English	15	04
Total						621	406

13. Does the college offer self-financed Programmes?

Yes	√	No	-----
-----	---	----	-------

If yes, how many? UG-8, PG-2, PhD-2, Total 12

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

Yes	√	No	---	Number	01, PhD (Computer Engg)
-----	---	----	-----	--------	-------------------------

15. List the departments: (respond if applicable only and do not list facilities like Library, Physical Education as departments, unless they are also offering academic degree awarding programmes. Similarly, do not list the departments offering common compulsory subjects for all the programmes like English, regional languages etc.)

Faculty	Department	UG	PG	Research
Engineering and Technology	Mechanical Engineering	√	√	√
Engineering and Technology	Computer Engineering	√	√	√
Engineering and Technology	Electrical Engineering	√		
Engineering and Technology	Electronics Engineering	√		
Engineering and Technology	Electronics and Telecommunication Engineering	√		

16. Number of Programmes offered under (Programme means a degree course like BA, BSc, MA, M. Com...)

a. annual system	Nil
b. semester system	10 (UG – 8, PG – 2)
c. trimester system	Nil

17. Number of Programmes with

a. Choice Based Credit System:	[10 (UG: 8 and PG: 2)]
b. Inter/Multidisciplinary Approach	[NO]
c. Any other (specify and provide details)	[NO]

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

Yes	–	No	√
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19. Does the college offer UG or PG programme in Physical Education?

Yes

No

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

Positions	Teaching faculty						Non-teaching Staff		Technical staff	
	Professor		Associate Professor		Assistant Professor					
	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F
Sanctioned by the UGC / University / State Government Recruited	19		37		162		22	13	43	10
Yet to recruit	12		35		14		-	-	-	-
Sanctioned by the Management/society or other authorized bodies Recruited	07	00	01	01	65	83	22	13	43	10
Yet to recruit	12		35		14		-	-	-	-

*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							
Ph.D.	07	00	01	01	02	07	18
M.Phil.	-	-	-	-	-	06	06
PG	-	-	-	-	30	55	85
Temporary teachers							
Ph.D.	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	01	01
PG					33	14	47
Part-time teachers Not Applicable							
Ph.D.	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	-	01	01

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	2013-14		2014-15		2015-16		2016-17	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	3	2	12	13	20	4	14	5
ST	0	0	0	0	2	1	0	1
OBC	15	3	23	3	23	5	38	10
General	389	109	234	100	232	39	256	57
Others/OC	3	1	4	3	69	18	12	1

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	356	3	NA	06	365
Students from other states of India	38	NA	NA	NA	NA
NRI students	NA	NA	NA	NA	NA
Foreign students	NA	NA	NA	NA	NA
Total	394	3	NA	06	403

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

UG	√	PG	00
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26. Unit Cost of Education

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

(a) Including the salary component

Rs.121571.93/-

(b) Excluding the salary component

Rs.60146.11 /-

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

UG	No	PG	No
----	----	----	----

28. Provide Teacher-student ratio for each of the programme/course offered: 1:15

29. Is the college applying for

Accreditation : Cycle 1

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

NA

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

32. Number of teaching days during the last academic year

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

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

IQAC: 13/07/2016

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

NA

35. Any other relevant data (not covered above) the college would like to include. (Do not include explanatory/descriptive information) : NIL

**CRITERIA-WISE
ANALYTICAL REPORT**

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 create technically competent and ethically responsible professionals capable of providing efficient solutions to the contemporary world.

Mission:

We aim to excel in our continual efforts, towards being one of the most recognized institutions, by:

- Providing a conducive environment comprising high-end infrastructure and state-of-the-art laboratory facilities wherein the students, faculty and staff can collectively enhance their technical potential.
- Encouraging innovation through research activities for the benefit of society.
- Developing competent professionals responsive to change in technology.

Objectives:

- To provide quality education for students to excel in their careers.
- To encourage the students with innovative ideas and motivate them to be entrepreneurs.
- To provide conducive environment for research activities.
- To promote co-curricular and extra-curricular activities for the overall development of the students.
- To inculcate social values and ethics among students and develop them to be socially responsible citizens.
- To strive for continuous improvements in every aspect.

Communication with stake holders:

Institute's vision, mission and objectives are communicated to stake holders through:

- Institute website
- Notice boards
- Laboratory Journals
- College Brochure
- College Magazine

- Orientation Programmes
- Department Bulletin

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 institute is affiliated to the University of Mumbai and follows the curriculum prescribed by the university in a systematic way:

- Before the start of every academic session, Principal along with the Director and Vice- Principal conducts an IAC meeting with Heads of all the Departments and finalize the Academic Calendar in alignment with the university schedule.
- Subjects are allocated to the faculty based on their subject expertise and interests well in advance.
- Time table for every semester is prepared by the respective Time Table coordinators of various departments in consultation with the HODs, and the load distribution is informed to the Principal.
- Teaching plan and the assignments for the semester are prepared by the respective subject in charge before the start of the new semester.
- Course Objectives and Course outcomes of the subjects in accordance with the university prescribed syllabus are decided by the respective subject in charge in consultation with the HOD.
- Course files are maintained by faculty members which contains Academic calendar, Individual timetable, Teaching plan, Assignments, Class test question papers, University question papers, question banks, Quiz, Performance details etc.
- Remedial classes are conducted for slow learners.
- In addition to traditional teaching methods, video lectures, NPTEL lectures, OHP, powerpoint presentations, projects, case studies, surveys etc are being conducted.
- Guest lectures are regularly arranged to bridge the gap in the prescribed curriculum.
- Feedback from the students are taken twice in a semester and it is analyzed by the HODs and corrective measures if any, are informed to the respective faculty.
- At the end of every semester course exit feedback for every subject is taken from the students to analyze their understanding of the subject.
- An IAC meeting is conducted at the end of the semester to conclude the academic session.

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?

The institute is affiliated to University of Mumbai. The university provides the entire course syllabus with course objectives and course outcomes for all the courses along with the weekly load distribution of theory and practicals. The evaluation schemes for each course is also provided in the syllabus. University regularly organizes orientation programmes for the newly introduced courses in the syllabus.

Support from institute:

The institute provides academic calendar to the faculty well in advance so as to plan their lectures in an effective manner. The institute provides various teaching aids such as LCDs/ OHPs and other infrastructure facilities to the faculty.

WiFi and internet facilities are provided for better teaching-learning process. The institute supports the faculty by procuring new instruments whenever there is a revision in syllabus, and also do arrangements for the maintainence of the instruments.

The institute provides support to the faculty by granting on duty leaves to attend seminars, workshops, STTPs, conferences, orientation programmes etc. to update their skills. The institute encourages faculty to conduct FDPs or workshops and provides partial financial support. The institute also motivates faculty to do higher education by providing with on duty/study leaves.

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

- The Teaching-Learning process adheres to the academic calendar prepared by the institute/departments. The subject in charge prepares the teaching plan and design the laboratory experiments. Faculty prepares assignments, test papers, quizzes and question banks covering the entire syllabus. In the first two weeks of the academic session only theory lectures are conducted so as to bring the students to academic track and cover adequate syllabus to conduct practicals.
- For effective delivery of the course content, in addition to the traditional way of teaching, faculty are encouraged to use OHP, powerpoint presentations, video lectures etc.
- Faculty are encouraged to attend orientation programmes, enrichment courses, workshops, seminars, FDPs etc. to update their skills and knowledge.
- Guest lectures, seminars, value added courses and industrial visits are arranged to enrich the curriculum.

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 is affiliated to University of Mumbai and the University revises the syllabus in every 5 years. Faculty of the institute actively takes part in designing of the curriculum. Few of the faculty members are working as Controller of Examinations and BOS of the University.
- Orientation programmes for the new courses are arranged by the institute in consultation with BOS of the University.
- Faculty work as question paper setters and examiners for the university exams.
- Training and Placement of the Institute interacts with industry personnel in arranging invited talks, training programs, and internships for students.
- In addition to this industrial visits are arranged by the departments for the respective students to make them aware of the industrial needs
- Faculty are encouraged to interact with research bodies and University of Mumbai for getting grants under various schemes.

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.

University revises the syllabus in every five years. Faculty of the institute actively participates in the syllabus revision meeting conducted by BOS of the university and gives suggestions for the curriculum. Feedback and suggestions from the students and faculty are also taken into consideration and informed to BOS.

Table 1.1: Contributions of staff members to the development of the curriculum

Sr. No.	Branch	Name of the Faculty	Position Held/ Nature of work or involvement with University
1		Dr.Vivek Sunnapwar	<ul style="list-style-type: none"> - Member, BOS - Member, LIC Committee(U.G, P.G and Ph.D) - Member, University selection committee - Examiner for Ph.D(RTM- Nagpur University, SGBAU Amravati University, University of Mumbai, Dr. Babasaheb Ambedkar

			Marathawad University- Aurangabad)
2	Mechanical Engineering	Dr.Vivek Yakkundi	- Member, LIC Committee - Member, Avishkar Judging Committee, Member USSC
3		Dr. Vilas B. Shinde	- Controller of Examination, University of Mumbai
4		Dr. A.D.Sarode	- Member, LIC Committee - Member, University selection committee
5		Dr. J.J.Dange	- Member, Result and Moderation committee
6		Mr. Vijoy kumar	- Joint Chief Conductor for University exam
7		Mr. Sunil Satav	- University selection committee(subject expert)
8		Mr. A.J. Parmar	- Joint Chief Conductor for University exam
9			Dr. Pravin J. Nikumbh
10	Computer Engineering		- Chairman, BOS in Computer Engineering under Faculty of Technology, University of Mumbai, from 1st July 2015 to till date. - Member of the Academic Council, University of Mumbai, from 1st July 2015 to till date. - Member of the Board of University Teaching and Research for the faculty of Technology University of Mumbai, from 1st July 2015 to till date. - Member of the Faculty of Technology University of Mumbai, from 1st July 2015 to till date - Member of the Research and Recognition Committee for the Board of Computer Engineering , University of Mumbai, from 1st July 2015
		Dr. Subhash Shinde	

			<p>to till date.</p> <ul style="list-style-type: none"> - Member of BOS in Information Technology under Faculty of Engineering Technology of Savitribai Phule Pune University, from 1st August 2015 to till date - Member of the BOS in Information Technology under the Faculty of Technology, University of Mumbai, 1st July 2014 to till date. - Member of the BOS in Computer Science, University of Mumbai, 1st July 2015 to till date. - Member BOS in Computer Science and Engineering at Government College of Engineering, Karad (Autonomous Technical Institute) Maharashtra , India from 1st September 2016 to till date. - Subject expert for University of Mumbai Staff selection committee (USSC) at various affiliated engineering college. - Chairman/member of Local Inquiry Committee (LIC) of University of Mumbai at various colleges for continuing and extension affiliation of BE, ME, MCA and Ph.D. program. - Member of Moderation committee of University of Mumbai in Computer Engineering and Information Technology branches at the semester (III to VI) from 2011 to till date. - Resource person for (FDP) orientation of subjects (DDB, DWM , Data Science etc..) for UG and PG at various college affiliated to University of Mumbai
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11	Dr. Anil Z. Chhangani	<ul style="list-style-type: none"> - Member of Local Inquiry Committee (LIC) - Member of University's fact finding committee. - Member of UGC committee for selection of faculty members - CAP coordinator for First year engineering and MCA - Syllabus committee member for M.E. and B.E.
12	Ms. Chitra T. Wasnik	<ul style="list-style-type: none"> - Member of Syllabus revision committee for M.E. - Senior Supervisor for University Exams - Attended orientation programs for UG and PG courses.
13	Mr. Rajendra D. Gawali	<ul style="list-style-type: none"> - Member of Syllabus revision committee for M.E. - Syllabus revision committee member for B.E. - Attended orientation programs for UG and PG courses
14	Ms. Monika Mangla	<ul style="list-style-type: none"> - Member of Syllabus Revision committee for UG and PG courses
15	Mr. Sanjay D. Naravadkar	<ul style="list-style-type: none"> - Member of syllabus revision committee.
16	Mr. Manish R.Umale	<ul style="list-style-type: none"> - CAP coordinator for university exam. - Member of Moderation Committee in university for BE result - Senior Supervisor for University Exams
17	Ms. Sonal A. Bankar	<ul style="list-style-type: none"> - Syllabus Revision Co-coordinator - Member of revaluation committee, Result preparation committee. - Senior Supervisor for University Exams - Attended orientation programs for UGcourse
18	Mrs. Kahkashan Siddavatam	<ul style="list-style-type: none"> - Member of Syllabus Revision committee
19	Mrs. Sulbha S. Yadav	<ul style="list-style-type: none"> - Member of revaluation committee, result preparation committee. - Senior Supervisor for University Exams

			- Attended orientation programs for UG course
20		Mrs. Jyoti S. More	- Member of Syllabus Revision committee
21		Mrs. Sheetal K. Dhamal	- Member of Syllabus revision committee - Attended orientation program for UG course
22		Ms. Shobha S. Lolge	- Attended orientation program for UG course
23		Ms. Chaitrali P. Chaudhari	- Member of revaluation committee - Attended orientation program for UG course
24		Ms. Smita S. Ambarkar	- Attended orientation program for UG course
25		Ms. Shikha P. Gupta	- Attended orientation program for UG course
26		Mr. Jayendra S. Jadhav	- CAP Coordinator for University Examination
27		Ms. Sanjivani T. Deokar	- CAP Co-ordinator
28		Ms. Rakhi Akhare	- Attended orientation program for UG course
29		Ms. Pranjali Gurnule	- Attended orientation program for UG course
30		Mr. Sudhakar Jadhav	- Member of Local Inquiry Committee (LIC). - Paper Setter for Computer/IT Engg at Amity University. - Attended orientation program for UG course - Attended orientation program for MCA - Senior Supervisor for University Exams - Coordinator for MCA
31		Ms. Kanchan Gawande	- Attended orientation program for UG course
32		Dr. R. N. Duche	- Syllabus Revision Committee member (UG and PG)
33		Dr. R. S. Dudhe	- Member of Syllabus Revision Committee

34	Electronics and Telecommunication Engineering	Dr. S. S. Chavan	<ul style="list-style-type: none"> - Chairman, BOS University of Mumbai - Member, Syllabus Revision Committee
35		Mrs. Rupali Sawant	<ul style="list-style-type: none"> - Senior Supervisor for University Exams
36		Mrs. Vandana Kobragade	<ul style="list-style-type: none"> - Senior Supervisor for University Exams
37		Mrs. Nandini C. Nag	<ul style="list-style-type: none"> - Senior Supervisor for University Exams - University CAP Coordinator
38	Electrical Engineering	Dr. C.M. Wankhade	<ul style="list-style-type: none"> - LIC Committee member - Syllabus Revision Committee Member
39		Mrs. S. Nema	<ul style="list-style-type: none"> - Result Moderation Committee - Joint Chief Conductor in FCRIT - Assessment Monitoring Committee
40		Mr. N. P. Totre	<ul style="list-style-type: none"> - Result Moderation Committee
41		Mrs. N. Pinjari	<ul style="list-style-type: none"> - Audit of Question paper and Answer paper at SPCE
42	Electronics Engineering	Dr. Sheeba P.S.	<ul style="list-style-type: none"> - Syllabus Revision Committee - Senior Supervisor for University Exams
43		Mrs. Prerana Shrivastava	<ul style="list-style-type: none"> - Syllabus Revision meeting - Senior Supervisor for University Exams
44		Mrs. Shilpa Joshi	<ul style="list-style-type: none"> - Senior Supervisor for University Exams
45		Mr. Nitin P. Jain	<ul style="list-style-type: none"> - Senior Supervisor for University Exams - Joint Chief Conductor in Rizvi College of Engineering
46		Mr. Prashant Ahire	<ul style="list-style-type: none"> - Syllabus Revision Committee
47		Dr. J.I. Sayyad	<ul style="list-style-type: none"> - Senior Supervisor for University Exams - Joint Chief Conductor for University Exams

48	First Year Engineering	Mrs. G. Geetha	<ul style="list-style-type: none"> - Subject Expert for USSC Interviews - Senior Supervisor for University Exams
49		Mrs. K. V. Nimi	<ul style="list-style-type: none"> - Syllabus revision Committee member - Joint Chief conductor during University Exam - Senior Supervisor for University Exams
50		Dr. Krishna Singhal	<ul style="list-style-type: none"> - Senior Supervisor for University Exams
51		Mrs. Priya Tilak	<ul style="list-style-type: none"> - Senior Supervisor for University Exams
52		Mrs. Dolly Boban	<ul style="list-style-type: none"> - Senior Supervisor for University Exams
53		Dr. Renu Wasu	<ul style="list-style-type: none"> - Senior Supervisor for University Exams

Note: In addition to this, most of the faculty members are working as question paper setter for University of Mumbai Exams for UG and PG programs.

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.

No. The institute is affiliated to University of Mumbai and the Curriculum development is purview of the university.

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

- The university provides the syllabus with evaluation schemes and course objectives for every course. Faculty follows the evaluation scheme mentioned in the syllabus for each course. The faculty in charge prepares the course outcomes of the respective courses.
- Faculty conducts lectures and practicals as per the timetable in alignment with the academic calendar.
- Assignments and quizzes are prepared by the concerned faculty taking into consideration the COs defined by the faculty and it is evaluated and graded accordingly.

- Performance of the students in laboratory experiments are timely assessed and graded according to the performance indicators.
- Depending on the evaluation scheme, two class tests for 40% and 80% syllabus are conducted per semester taking in to consideration the COs defined for each course to evaluate the students.
- The result analysis of the internal assessment is done and proper measures are incorporated to improve the performance by arranging

remedial classes for the weaker students and giving additional assignments/tasks to the brighter students.

- The faculty incharge maps the course outcome with the program outcomes to ensure the attainment of the curriculum.
- At the end of every semester course exit feedback is taken from the students and analyzed for proper measures. Faculty feedback is taken twice in a semester and analyzed for corrective measures and improvements.

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.

To achieve vision, mission and the objectives, the institute organizes various value added and skill development courses to enhance the knowledge of the students. Training and Placement Cell of the institute organizes various seminars, workshops, mock interviews and aptitude tests for grooming the students for placements. Language lab facility is provided to the students to enhance their communication skills. In addition, various seminars are conducted to inculcate social values and ethics among students and develop them to be socially responsible citizens. The details of the skill development programmes are given in **Table 1.3** and **Table 1.4**.

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

No

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

- **Range of Core / Elective options offered by the University and those opted by the college**

University of Mumbai provides a list of Elective courses for various programs and some of the electives are opted by the institute. The electives offered by the institute are given in the table:

Table 1.2: Elective options offered by the College

Sr. No.	Branch	Semester	Elective Subject
1	Mechanical Engineering	VII	<ul style="list-style-type: none"> - Supply Chain Management - Operational Research - Power Plant Engineering
		VIII	<ul style="list-style-type: none"> - Business Process and Re-engineering - Automobile Engg - Renewable Energy Sources
	Manufacturing Systems Engineering	I	<ul style="list-style-type: none"> - Advanced Material Science - Operation Research
		II	<ul style="list-style-type: none"> - Logistics And Supply chain Management - Research Methodology
2	Computer Engineering	VI	<ul style="list-style-type: none"> - Project Management - Foreign Language (German)
		VII	<ul style="list-style-type: none"> - Image Processing - Ecommerce
		VIII	<ul style="list-style-type: none"> - Digital Forensic - Big Data Analytics - Adhoc Wireless Networks - Human Computer Interaction
3	Electronics and Telecommunication Engineering	VI	<ul style="list-style-type: none"> - Radar Engineering
		VII	<ul style="list-style-type: none"> - Data Compression and Encryption - Neural Network and Fuzzy logic
		VIII	<ul style="list-style-type: none"> - Speech Processing - Telecommunication Network Management - Satellite communication
4	Electrical Engineering	VII	<ul style="list-style-type: none"> - High Voltage Engineering
		VIII	<ul style="list-style-type: none"> - Flexible AC Transmission

5	Electronics Engineering	VII	- Digital Image Processing
		VIII	- Industrial Robotics

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

Choice based credit system is under revision by the university in the current curriculum for UG. It is being implemented for FE in the year 2016-17. Choice based credit system is implemented in the current curriculum for PG.

- **Courses offered in modular form:**

The curriculum prescribed by the university is in modular form.

- **Credit transfer and accumulation facility:**

Provision for credit transfer and accumulation is possible only till the end of first year as per University of Mumbai rules and regulations.

- **Lateral and vertical mobility within and across programmes and courses:**

Provision for lateral mobility is possible only till the end of first year for the regular candidates and direct second year lateral entry for diploma students as per University of Mumbai rules and regulations. Vertical mobility within a programme is through electives offered by the departments.

- **Enrichment courses:**

Various enrichment programmes are organized at institute level and department level for the benefit of students. (Refer Table 1.4)

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.

Yes, all the programmes offered by the institute are self financed. All the programmes are affiliated to University of Mumbai and approved by AICTE.

The programmes offered by the institute are:

- BE in Mechanical Engineering
- BE in Computer Engineering
- BE in Electronics and Telecommunication Engineering
- BE in Electrical Engineering

- BE in Electronics Engineering
- ME in Mechanical Engineering
- ME in Computer Engineering
- Ph.D. in Mechanical Engineering
- Ph.D. in Computer Engineering

The admission is done by DTE of Govt. of Maharashtra through Central Admission Process.

The curriculum followed is as prescribed by University of Mumbai.

The fee is decided by the Shikshan Shulka Samiti of Maharashtra State.

The qualification and salary of the faculty are as per the norms of UGC and AICTE.

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

Yes, the institute provides additional skill oriented programmes for enabling the students for better job opportunities.

Table 1.3: Skill oriented programmes

Sr. No.	Branch	Skill Development Course	Year	No. of Participants
1	Mechanical Engineering	Seminar on GATE exam and opportunities for qualifiers	2016-17	150
2		One day workshop on Aeronautical and Aerospace	2016-17	275
3		National level 5 day workshop on Automobile Development Internship program	2016-17	230
4		Seminar on Designing and Manufacturing Integration	2016-17	225
5		Seminar on promotion on Abroad Education	2016-17	180
6		One day Workshop on IPR, Innovations and Project Writing	2016-17	260
7		Seminar on Virtual Reality	2016-17	250
8		National level 5 day workshop on Automobile Development Internship	2015-16	180

		program		
9		Seminar on Pnumatics-Industrial Applications(SMC pnumatics)	2015-16	100
10		Seminar on PIPING S/W	2015-16	150
11		National level 5 day workshop on Automobile Development Internship program	2015-16	250
12		Seminar on 3D Printing Technology	2015-16	180
13		GATE Classes	2015-16 2016-17	25 75
14		Energy Audit Exam Preparation course	2016-17	6
15	Computer Engineering	Practical Approach and Hands on training for Hadoop- Big Data	2016-17	50
16		Patent Drafting	2016-17	50
17		Virtual Reality	2016-17	126
18		Seminar on Abroad Education	2016-17	160
19		Software Asset Management	2016-17	134
20		Word press And Web site Designing	2015-16	150
21		Introduction to big data and Statistical Analysis on SAS	2015-16	20
22		Reasoning ability and Critical Thinking	2015-16	70
23		Talent Age-Android, Cloud Computing, Hadoop	2015-16	93
24		Ethical Hacking	2015-16	50
25		Big Data and Hadoop	2015-16	57
26		Cyber Security	2015-16	48
27		Software Testing	2015-16	34
28		Microsoft Dot Net	2015-16	43
29		Microsoft Dot Net	2014-15	29
30	Corporate Commando	2014-15	150	

31		Job Fair of CMC comp at LTCE	2014-15	300
32		Open Source Technology-Ubuntu	2014-15	43
33		Open Source Applications	2013-14	50
34		Workshop on Android	2013-14	40
35	Electronics and Telecommunication Engineering	Speech Processing	2016	59
36		Business Analytics	2016	80
37		Optical Communication Network	2016	140
38		Microsoft Certification	2016	45
39		Time Domain Analysis of Circuits	2016	90
40		Wireless Networks(Next Generation Wireless Technologies)	2016	56
41		Internet Security	2016	58
42		Latex	2016	85
43		Very Small Aperture Terminal	2016	58
44		Corporate Commando Program	2015	30
45		Electronic Circuit Design	2015	40
46		Matlab	2015	80
47		Electrical Engineering	Seminar for BE students by C. G. H. Aranha on Availability based Tariff and cable jointing and terminations	2017
48	Aptitude Test		2016	54
49	1 In 5 Robotics and Lab View Work Shop by Dalvik Apps		2016	30
50	Technical Seminar on "Power systems - Scope of Power System" by C.G.H.Aranha, Tata Power		2016	50
51	2-Day Workshop on Solar SQ by faculty of IITB		2016	41
52	3-Day Workshop by TAACT Thane		2016	16

53		Seminar on Nanotechnology, Nanoscience	2016	100
54		3 days workshop on PLC Programming, Automation and Application	2016	25
55		Aptitude Test	2015	65
56		2-Day Workshop for Intercollegiate students:- Quadcopter by IITB Ark Technosolutions and Helios	2015	68
57		Expert Talk- On Refrigeration and Air-Conditioning	2015	56
58		Seminar on “Advanced Control Systems - Need of Industry and DCS SYSTEM OVERVIEW.”	2013	15
59		Electronics Hacking and Home Automation	2016-17	51
60		Internship	2016-17	08
61		Career Day	2016-17	25
62		Network Security And Ethical Hacking	2015-16	77
63		Internship	2015-16	07
64	Electronics Engineering	Aptitude test preparation program	2015-16	11
65		Embedded System Using ARM Mbed	2015-16	32
66		Fabrication Process using Proteus	2014-15	74
67		Aptitude Test and MOCK Interview	2014-15	50
68		Internship	2014-15	13
69		Proteus	2013-14	47
70		VHDL Evaluation	2013-14	67
71		Latex: Document Preparation system	2013-14	63

- 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?**

The institute is affiliated to University of Mumbai and follows the syllabus prescribed by the University. However, the following efforts are made by the institute to supplement the University's curriculum:

- Eminent personalities from industries and institutes are invited to deliver expert lectures there by creating an awareness of the industrial needs among the students.
- Various workshops and seminars are organized on the latest technological trends for the benefit of the students.
- Value added courses are conducted to bridge the gap in the curriculum.
- NPTEL video lectures are conducted for better understanding of the curriculum.
- Students are encouraged to present and publish technical articles in National and International conferences, Journals etc. In addition, students are also motivated to participate in project competitions, Robocon, SAE, Team TT racing etc.
- Students are encouraged to undergo industrial internships and industrial visits during vacation periods.
- FDPs are organized for enhancing the technical skills of the faculty.
- Students are encouraged to participate in NSS and other social activities so as to enable them to be socially responsible citizens.
- To improve and enhance the communication skills, students are encouraged to be members of English Literature Club of the institute.
- Various activities are carried out under the professional bodies like ICSE, IEEE, ISTE, CSI, IETE, ISHARE etc.

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

- Students are encouraged to do final year projects in industries thereby giving them the exposure to the recent trends in industries.
- The institute organizes various training and skill development programmes by academicians and experts from industries to cater the needs of the industries.
- The institute organizes various value added courses to bridge the gap in

the curriculum to enable students to be competitive in employment market.

- Students are given training in various softwares so as to enhance global employment opportunities.
- Students are motivated to undergo internships in various industries to understand the industrial process.
- The Training and Placement Cell of the institute organizes various training programs to improve the aptitude skills and soft skills of the students. The T and P cell conducts mock interviews for the students to prepare them to face the interview boards during campus placements.
- Special emphasis is given on the development of the overall personality of the students through the conduction of various personality development programmes.
- Students are encouraged to participate and present their work in National level Project competitions and conferences so as to enable them to interact with the society and improve their presentation skills and team work.
- Alumni's are invited to interact with the students so as to create awareness about the current trends in industries.

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?

- The institute takes care of gender equality among both faculty and students. Girl students are given equal responsibilities as boys at various portfolios of student council and are encouraged to lead various student committees.
- Institute has rain water harvesting scheme to take care of climate and environment. Institute promotes tree plantation for green campus.
- In the First year of the program, a subject on Environmental Studies is included to make students aware of the importance of the environment.
- The institute has an NSS unit which organizes blood donation camp, book donation, clothes and toys distribution for the needy people and also takes part in cleaning the surroundings.
- Institute gives freedom to students and staffs to express their views and concerns. The institute has a women development cell which takes care of grievances of girl students and also organizes various events and seminars for the empowerment of girls. The institute has an anti-ragging and disciplinary committee which takes care of misconduct and maintaining discipline in the college.
- Every department is provided with a well-equipped seminar hall for audio-video visuals. Video lectures and NPTEL lectures are being conducted in these seminar halls. WiFi facility is also provided in the campus.
- Institute follows an ERP system for both faculty and students for daily

academic activities. Every student is provided with an ID in ERP so as to enable them to enter their academic details in it thereby reducing the use of paper which in turn contributes to save the environment. Faculty personal details as well as the academic activities such as teaching plan, teaching topic, time table, student's attendance etc. are maintained in ERP.

- The main Library of the institute which has a seating capacity of 200 is equipped with e-book facility and online access to several journals. Multimedia facility is also provided in the library.

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

- Moral and ethical values
- Employable and life skills
- Better career options
- Community orientation

Table 1.4: Value-added Courses/Enrichment Programmes

Sr. No.	Department	Resource Person	Topic	Year
1	Mechanical Engineering	Mr. Rishikesh Yadav	Shivaji Jayanti under Marathi WangmayaMandal	2015-16
2		Dr. K.H. Dhanawade	Essay writing, Painting, Sketching, speech on freedom fighter	2015-16
3		MarathiWangmaya Mandal	Ganesh Utsav	2015-16
4		Shahir Nandesh Umap	Rajyabhasha Divas	2015-16
5		Mr. Prakash More	Rajyabhasha Divas	2014-15
6		Mrs. Vijaya wad	Rajyabhasha Divas	2013-14
7	Computer Engineering	IFDE Infotech	Practical Approach and Hands on training for Hadoop- Big Data	2016-17
8		Mr. Rakesh Singh	Patent Drafting	2016-17
9		Mr. Ramya Gokhale	Virtual Reality	2016-17
10		Mr. Vinayak	Software Asset Management	2016-17
11		Mr. Karan Makharia	Word press and Web site Designing	2015-16
12		Mr. Amit	Talent Age-Android, Cloud	2015-16

			Computing, Hadoop	
13		Ms. Debina	Ethical Hacking	2015-16
14		Mr. Amit Agarwal	Big Data & Hadoop	2015-16
15		Microsoft	Cyber Security	2015-16
16		Dr. Krishnakant Mane	Open Source Technology- Ubuntu	2014-15
17		Mr. Swapnil Mohite	Open Source Applications	2013-14
18		Mr. Swapnil Mohite	Workshop on Android	2013-14
19		Mr. Tejas Samuel	Health and Happiness	2015-16
20		Ms. Pooja Welling Ms. Katja Freidal	Abroad Education	2016-17
21		Mr. Kunal Keshalini	Reasoning ability & Critical Thinking	2015-16
22		Syntel	Online Aptitude Test	2015-16
23		Infogen	Online Aptitude Test	2015-16
24		LTCE	Seminar T&P	2015-16
25		Mr. Nilesh Wadkar	Software Testing	2015-16
26		Mr. Rohit Lamba	Microsoft Dot Net	2015-16
27		Mr. Surendra Pal	Microsoft Dot Net	2014-15
28		Rozina Rana	Corporate Commando	2014-15
29		Mr. Anil Magare Mr. Sudhakar Jadhav	Job Fair of CMC comp at LTCE	2014-15
30		Training and Placement	Mock Group Discussion and Personal Interview	2014-15
31		Syntel	Syntel online placement test	2013-14
32	Electronics and Telecommunication Engineering	Mobile Communication Technology India pvt. Ltd.	LTE Performance Optimization	2016-17
33		Microsoft Ltd.	Network security	2016-17
34		Mobile comm. Technology India pvt. Ltd.	LTE Performance Optimization	2015-16
35		Mr. Bharath G. C.	Inspiring youth & entrepreneurship	2015-16

36		Mr. Bharath G. C.	Inspiring youth & entrepreneurship	2014-15
37	Electrical Engineering	Dr. Anjali Deshpande	Personality Lasts Longer	2017
38		Vijayshekhar Academy	GATE Entrance	2017
39		IMS Academy	MBA Entrance	2017 2016
40		IMS Academy	GRE Entrance	2017
41		Vidyalankar Academy	GATE Entrance	2017 2016 2015 2014
42		ITM Academy	MBA Entrance	2015 2014
43		ITM Academy	GRE Entrance	2015 2014
44		IBS Academy	MBA Entrance	2013
45		IBS Academy	GRE Entrance	2013
46			Mr. Karan Makharia	Electronics Hacking and Home Automation
47	Ms. Pooja Welling		Abroad Education	2016-17
48	Rev. Swami Amartyanandji		Importance of human values in life	2016-17
49	Rev. Pravrajika Divyanandapranaji		Control of Mind	2016-17
50	Training and Placement		Aptitude Test	2016-17
51	Mr. Sandeep Jethani, Director,ATS learning solution		Network Security And Ethical Hacking	2015-16
52	Rev. Swami Amartyanandji, Ramakrishna Mission		Who is the Good Student	2015-16
53	Mr. Sanjay Choudhary, Director, Electronics Study Centre		Need of Electronics in Industry	2015-16
54	Mr. Rajkumar Singh		Industrial Automation	2015-16

		from Industrial Automation Technologies	Technologies		
55	Electronics Engineering	Mr. Vishwas Lapalkar	Personality Development	2014-15	
56		Mrs. Nisha Chandak International HR trainer	Personality Branding	2014-15	
57		Swami Amartyananda, Ramakrishna Mission	Practical Approach to Overcome Mental Tension	2014-15	
58		Soumitra Khair , Ankit Choudhary	Fabrication Process using Proteus	2014-15	
59		Mr. Ankit Fadia	Ethical Hacking	2013-14	
60		Mr. Manpreet Sodi, HR Manager ENELEK	Solar Clan	2013-14	
61		Mr. Rohit Gupta	Proteus	2013-14	
62		Mr. Shirish Joshi	VHDL Evaluation	2013-14	
63		Dr. Sheeba P.S.	Latex	2013-14	
64		Mrs. Vandana Khobragade	Filter Design	2013-14	
65		Mr. Rohan P., ENELEK	Wireless Communication	2013-14	
66		Mr. Prasanna Pahade	Personality Development	2013-14	
67		Mr. Abhik Chatterjee	Appization	2013-14	
68		Dr. R.S. Dudhe	E-nose Development	2012-13	
69		Dr. K.K. Warhade	Future Generation Search Engine	2012-13	
70		Mr. Munnir Sayyad	Next Generation Networks	2012-13	
71		Mr. Ravisankar Peela	Goal Setting	2012-13	
72		First Year Engineering	Mr. Anil Magare	Placements and Future Prospects	2016-17
73			Mr. Sudip Nagarkar	Motivational Talk	2015-16
74			Ms. AkshataMahale	Image Building and Brand Management	2015-16

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

- In order to enrich the curriculum course exit feedback of every subject is taken at the end of every semester. Program exit feedback is taken from the final year students at the end of the program. The feedback so obtained is analysed for further improvement.

- Faculty feedback is taken twice in a semester on various teaching/learning aspects and it is analyzed for corrective measures.
- Feedback about the infrastructural facilities are taken from the final year students at the end of the program for improving the lab facilities, if any.
- Feedback is taken from the final year students and faculty for their suggestions in revision of the syllabus.
- Feedback from the parents are taken by interacting with them during Parent Teacher Meet.
- Feedback is taken from alumni for suggestions or improvements in the curriculum.

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

The institute monitors and evaluates the quality of enrichment programmes in the following ways:

- Feedback from students about the enrichment programme
- Innovative Projects
- Technical Paper Presentation
- Technical Quiz competition
- Alumni Feedback

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?

The institute is affiliated to University of Mumbai and the university revises the syllabus in every 5 years. Faculty of the institute actively takes part in designing of the curriculum. Few of the faculty members are working as BOS of the University.

Table 1.5: Contributions of the institution in the design and development of the curriculum

Sr. No.	Branch	Name of the Faculty	Nature of work or involvement with University
1	Mechanical	Dr.Vivek Sunnapwar	<ul style="list-style-type: none"> - Member, BOS Mechanical Engg., University of Mumbai - Member, Faculty of Technology(University of Mumbai) - Ph.D Paper setter
2		Dr.Vivek Yakkundi	<ul style="list-style-type: none"> - Syllabus revision (U.G and P.G) - ME & Ph.D paper setter

	Engineering		<ul style="list-style-type: none"> - Syllabus revision, CAMD - Syllabus revision, Manufacturing system <ul style="list-style-type: none"> o Engg.
3		Dr. Chandrababu D.	<ul style="list-style-type: none"> - Design of curriculum for UG and PG - Syllabus Revision Committee - Syllabus setting for KM & QRE subject
4		Dr. A.D. Sarode	<ul style="list-style-type: none"> - Syllabus setting for U.G and PG - Syllabus revision committee - Design of curriculum for UG and PG
5		Dr. J.J. Dange	<ul style="list-style-type: none"> - Design of curriculum for UG & .G
6		Dr. K.H. Dhanawade	<ul style="list-style-type: none"> - Syllabus Revision committee
7		Dr. S.D. Dalvi	<ul style="list-style-type: none"> - Syllabus Revision for PG – Energy system and management. - Ph.D paper setter
8		Mr. Sunil Satav	<ul style="list-style-type: none"> - Syllabus design of Mechanical Design Stream
9		Mr. Kashikar	<ul style="list-style-type: none"> - Design of Syllabus for M.E. (AQT) - Orientation program for PPE
10	Computer Engineering	Dr. S.K. Shinde	<ul style="list-style-type: none"> - Chairman, BOS, Computer Engineering, University of Mumbai - Orientation Program on Distributed Database - Orientation Program on Network Programming lab - Orientation Program on Data warehousing and Mining - Syllabus revision for PG, Computer and IT Engg.
		Dr. R. N. Duche	<ul style="list-style-type: none"> - Syllabus Revision Committee member (UG

11	Electronics and Telecommunication Engineering		& PG)
12		Dr. R. S. Dudhe	- Syllabus Revision Committee member
13		Dr. S. S. Chavan	- Chairman, BOS, Electronics and Telecommunication Engineering, University of Mumbai - Syllabus Revision Committee member
14	Electrical Engineering	Dr. C. M. Wankhade	- University Question Paper setter - Syllabus Revision Committee Member
15		Mrs. M. Kumari	- Syllabus Revision Committee Member and Domain Head- Electrical Engg
16		Mrs. S. Nema	- Syllabus Revision Committee Domain Head- Electrical Engg.
17		Mrs. Ujwala Tade	- Syllabus Revision Committee Member
18		Mrs. S. Kapse	- Syllabus Revision Committee Member-
19		Mrs. N. Pinjari	- Syllabus Revision Committee Member
20		Mr. N. Totre	- Syllabus Revision Committee Member
21		Dr. Sheeba P.S.	- Syllabus Revision Committee
22	Ms. Prerana Shrivastava	- Syllabus Revision	
23	Mr. Nitin P. Jain	- Syllabus Revision Committee - Joint Chief Conductor in Rizvi College of Engineering	
24	Mr. Prashant Ahire	- Syllabus Revision Committee	
25	Dr. J.I. Sayyad	- Joint Chief Conductor	

26	First Year Engineering	Mrs. K.V.Nimi	<ul style="list-style-type: none"> - Syllabus revision Committee member - Joint Chief conductor University of Mumbai Exam
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Note: In addition to this, most of the faculty members are working as question paper setter for University of Mumbai Exams for UG and PG programs.

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.

- Feedback from the final year students are taken for their suggestions in improving the curriculum and it is conveyed to the Chairman, BOS of the respective programmes of University of Mumbai.
- Feedback from alumni and faculty are also taken for their suggestions in syllabus revision.
- New laboratory experiments are introduced, FDPs and value added courses are conducted for curriculum enrichment.

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?)

Any other relevant information regarding curricular aspects which the college would like to include.

- Ph.D. Computer Engineering in Acadmic Year 2015-16.

CRITERION 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?

The admission process is done by DTE, Government of Maharashtra through Centralized Admission Process. Publicity and transparency of the admission process is ensured by advertising the notifications in newspapers and DTE website <http://www.dtemaharashtra.gov.in>. The seat allocation and the status of vacancies for various quotas in CAP rounds are displayed in DTE website for maintaining the transparency in admission process.

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.

The admission process is governed by DTE, Govt. of Maharashtra. The rules and regulations for the admission process are mentioned in DTE website and prospectus. Institutes with AICTE affiliation are eligible to take part in admission process.

The criteria adopted and process followed by DTE for UG admissions are:

- Publishing the notification regarding admission in newspapers and DTE website.
- Filling of the applications by eligible candidates.
- Displaying the merit list of the candidates based on their performance in JEE/CET entrance exams.
- Percentage of various seat quotas are decided by DTE from time to time. The allotment of seats under various quotas are through CAP process except for institute level/minority seat quota which is filled through institute process.
- Conducting CAP rounds to fill the vacancies on merit basis.
- Displaying the status of vacancies of programmes in various colleges after every CAP round in DTE website.
- Maximum of four CAP rounds are conducted by DTE.
- After every CAP round and confirmation of the seats, the candidates are reported to respective institutes.

Diploma candidates have a facility to take admission through lateral entry and 10% seats are allotted for them. The admission is on the basis of merit list. The admission process is centralized and it is governed by DTE, Govt. of Maharashtra.

Admission to PG programmes are also governed by the rules and regulations of DTE wherein GATE scores are considered for generating the merit list.

Admission to Ph.D. programmes are based on the rules and regulations of University of Mumbai.

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

The minimum and maximum percentage of marks for admission at entry level for each programmes offered by the college are given in Table 2.1.

Table 2.1: Minimum and maximum percentage of marks for admission

Program	Year of Admission	Minimum Score(CET/J EE)	Maximum Score(CET/J EE)	Minimum % of marks	Maximum % of marks
		FE		Direct SE	
Mechanical Engineering	2016-17	39	127	60%	84.29%
	2015-16	17.95	88.73	55.28%	84.08%
	2014-15	22.15	91.25	56.36%	81.73%
	2013-14	36	131	56.54%	80.56%
Computer Engineering	2016-17	37	107	60.41%	80.86%
	2015-16	20.29	86.9	48%	78.63%
	2014-15	18.46	82.31	51.1%	78.32%
	2013-14	44	122	53.4%	77.48%
Electronics & Telecommunication Engineering	2016-17	22	117	55.59%	80.18%
	2015-16	9.41	74.16	54.63%	78.35%
	2014-15	35.25	79.39	51.2%	81.66%
	2013-14	46	112	58.44%	81.43%
Electrical Engineering	2016-17	46	127	60.36%	88.34%
	2015-16	14.29	81.42	57.31%	87.1%
	2014-15	16.76	82.67	54.06%	85.47%
	2013-14	51	128	52.19%	85.52%
Electronics Engineering	2016-17	55	78	53.65%	76.27%
	2015-16	12.37	69.19	51.31%	69.12%
	2014-15	24.93	70.07	47.83%	79.49%
	2013-14	37	103	59.66%	76.91%

Even though the admission process is done by DTE and the vacant seats with respect to colleges are published in DTE website, the information regarding minimum and maximum marks of the admitted students in various colleges are not published in DTE website.

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

Yes.

The institute reviews the admission process and student profiles annually. Profiles of the students admitted for various programmes are statistically analyzed based on their geographical, economical, and social background.

Based on the analysis, future aspirants are counselled and proper guidance is provided for taking admission in the college.

2.1.5 Reflecting on the strategies adopted to increase/improve access for following categories of students, enumerate on how the admission policy of the institution and its student profiles demonstrate/reflect the National commitment to diversity and inclusion

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

The admission process is as per the rules and regulations of DTE, Govt. of Maharashtra.

- The institute follows the reservation policies of Govt. of Maharashtra for SC/ST/OBC candidates. Fee concession facility is provided to students from reserved categories.
- Seats are reserved for women candidates as per the reservation policy of Govt. of Maharashtra. College has a Women Development cell to empower the girl students and address their grievances.
- Provisions are made in the college to take care of the needs of differently abled students.
- For economically weaker students, 0.5% quota is provided by DTE under Tuition Fees Waiver Scheme (TFWS). In addition, college provides with a facility to pay the fees in installments. Also guidance is given to them for applying for various scholarships.

- The institute is a Hindi speaking minority institute. Minority quota is as per the Govt. of Maharashtra rules.
- Reservation for students from Jammu and Kashmir is as per DTE and Govt. of Maharashtra rules.
- Reservation of seats for dependents of Ex-servicemen (Defense quota) is as per DTE and Govt. of Maharashtra rules.

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

Table 2.2: Details for various programmes offered by the institute

UG Programmes	Year	Number of applications	Number of students admitted		Demand Ratio
			FE	DSE	
Mechanical Engineering	2016-17	As per DTE admissions	151	60	NA
	2015-16		167	60	
	2014-15		130	67	
	2013-14		181	60	
Computer Engineering	2016-17		114	40	
	2015-16		116	52	
	2014-15		98	41	
	2013-14		122	32	
Electronics & Telecommunication Engineering	2016-17		72	69	
	2015-16		64	66	
	2014-15		67	43	
	2013-14		131	50	
Electrical Engineering	2016-17		47	27	
	2015-16		48	30	
	2014-15		44	20	
	2013-14		58	12	
Electronics Engineering	2016-17	09	18		
	2015-16	18	12		
	2014-15	34	24		
	2013-14	51	26		

PG Programmes	Year	Number of applications	Number of students admitted	Demand Ratio
Mechanical Engineering	2016-17	As per DTE admissions	03	NA
	2015-16		04	
	2014-15		06	
	2013-14		09	
Computer Engineering	2016-17		00	
	2015-16		03	
	2014-15		08	
	2013-14		15	

Ph.D. Programme	Year	Number of applications	Number of students admitted	Demand Ratio
Mechanical Engineering	2016-17	12	04	0.33
	2015-16	18	04	0.22
Computer Engineering	2016-17	26	02	0.076
	2015-16	34	04	0.12

2.2 Catering to Student Diversity

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

The institute cater to the needs of differently -abled students in the following ways:

- Ramp is provided for easy movement.
- Railing is provided for every staircase.

- Lifts are provided with access from basement.
 - Specially designed washrooms are provided on the ground floor.
 - Wheel chair facility.
 - Permitted with extra time for Dyslexia students.
 - Permitted for writer during examinations as per UoM rules.
- Reservation quota during admission process for differently-abled students are according to the rules and regulations of Govt. of Maharashtra.

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.

Yes.

The institute organizes an orientation programme for the newly admitted students and their parents before the commencement of the academic term. During the orientation programme:

- Parents and students are briefed about the institute and the departments.
- FE incharges are introduced.
- Rules and regulations of the institute are informed.
- Facilities available in the institute are briefed.
- Evaluation schemes are explained.
- Exam schedules are informed.
- ATKT rules are explained to the students and their parents.
- Previous year toppers are felicitated to motivate the new students.

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

The strategies adopted by the institution to bridge the knowledge gap of the enrolled students are through the following ways:

- Expert/Guest Lectures
- Remedial Classes
- Workshops/Seminars
- Value Added Courses
- NPTEL video lectures
- Industry Internships
- Industry Visits
- Project Competitions
- Conferences

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

- The institute is a co-education college.
- Equal opportunity is given for male and female students/staffs.
- Girls students are empowered through WDC.
- Grievances and suggestions of the students are taken through dedicated grievances/suggestion boxes.
- A course on Environment education is in the first year curriculum. Also students are encouraged to take part in social activities through NSS.
- Antiragging and disciplinary committee ensures the friendly environment in the campus.

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

Institute identifies advanced learners on the basis of their exam results and their performance during lectures and practicals. The institute responds to the needs of advanced learners in the following ways:

- They are motivated to do innovative projects.
- They are encouraged to participate in Robocon, SAE, Team TT racing, project competitions, etc.
- They are motivated to present technical papers in Seminars and Conferences.
- Additional assignments/tasks are given to them.
- They are motivated to take leadership in various committees of the institute.
- They are motivated to attend Value Added Courses.
- They are encouraged to do self learning through NPTEL video lectures.
- Special coaching classes are arranged for GATE exam and they are motivated to appear for competitive exams.

In addition to these, the advanced learners are felicitated for their achievements.

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

The academic performances of the students are analyzed based on their performance in internal exams and End semester University exams. The institute use this data to improve the academic performance through following ways:

- Teacher Guardian Scheme is implemented in the institute wherein 15 to 20 students are assigned to a faculty member who acts as their mentor for the entire programme duration.

- Mentor regularly interacts with the students and monitors their academic performance and attendance.
- Remedial classes are arranged for students with poor academic performance.
- Parents are informed about their ward's performance and attendance.
- Students from economically weaker sections are supported by giving them the flexibility to pay the fees in installments.
- Students from the backward classes are provided with fee concession and scholarships as per the norms of Govt. of Maharashtra.
Students are counselled by the mentors, class advisors, subject faculty and HOD for improving their academic performance and attendance.

2.3 Teaching-Learning Process

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

The institute is affiliated to University of Mumbai and follows the curriculum prescribed by the university in a systematic way:

- Before the start of every academic session, Principal along with the Director and Vice- Principal conducts an IAC meeting with Heads of all the Departments and finalize the Academic Calendar in alignment with the university schedule.
- Subjects are allocated to the faculty based on their subject expertise and interests well in advance.
- Time table for every semester is prepared by the respective Time Table coordinators of various departments in consultation with the HODs and the load distribution is informed to the Principal.
- Teaching plan and the assignments for the semester are prepared by the respective subject in charge before the start of the new semester.
- Course Objectives and Course outcomes of the subjects in accordance with the university prescribed syllabus are decided by the respective subject in charge in consultation with the HOD.
- Course files are maintained by faculty members which contains Academic calendar, Individual timetable, Teaching plan, Assignments, Class test question papers, University question papers, question banks, Quiz, Performance details etc.
- Remedial classes are conducted for slow learners and additional assignments/tasks are given for advanced learners.
- In addition to traditional teaching methods, video lectures, NPTEL lectures, OHP, powerpoint presentations, projects, case studies, surveys etc are being conducted.
- Guest lectures are regularly arranged to bridge the gap in the prescribed curriculum.

- Assignments and quizzes are prepared by the concerned faculty taking into consideration the COs defined by the faculty and it is evaluated and graded accordingly.
- Performance of the students in laboratory experiments are timely assessed and graded according to the performance indicators.
- Depending on the evaluation scheme, two class tests for 40% and 80% syllabus are conducted per semester taking in to consideration the COs defined for each course to evaluate the students.
- Practical and oral exams are conducted as per the schedule and evaluated according to University blue print.
- Term work evaluation is based on the performance in laboratory, assignments, quiz, tutorials, mini projects and attendance.
- Feedback from the students are taken twice in a semester and it is analyzed by the HODs and corrective measures if any, are informed to the respective faculty.
- At the end of every semester course exit feedback for every subject is taken from the students to analyze their understanding of the subject. An IAC meeting is conducted at the end of the semester to conclude the academic session.

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

IQAC of the institute contribute to improve the quality of teaching learning process by following ways:

Through various committees and through and management interaction. The IQAC ensures better teaching learning process. The QMS for faculty and students are followed rigorously as described in criteria VI.

- Academic calendar is prepared in alignment with the University schedule. Curricular and extra-curricular activity dates, exam schedules and other activity dates are displayed in the academic calendar.
- Review of percentage of syllabus completion is taken every month and the reason for lagging /leading if any, is noted.
- Attendance percentage is displayed every month and parents are informed about their ward's poor attendance and remedial action is taken.
- Feedback from the students are taken twice in a semester and it is analyzed by the HODs and corrective measures if any, are informed to the respective faculty for further improvements.
- IQAC along with the internal exam squad members monitors the process of conduction of examinations and ensures the quality and smooth functioning of the exams.

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?

Student centered learning is more effective and enjoyable than teacher centered learning. Students are made to actively involve in the teaching-learning process.

- Interactive learning is through the involvement of students in question-answering sessions on the the topics taught, quizzes, debates and brain storming on the given topics.
- The CBGS and CBCS curriculum followed by UoM is student- centric and Choice Based Credit System gives the flexibility to students to select from wider range of interdisciplinary electives.
- Students are encouraged to ask and clear the doubts inside the classrooms itself so that other students are also benefitted.
- Collaborative learning is through group assignments, projects, industry internships, industry visits, project competitions, paper presentations etc.
- Independent learning is through NPTEL video lectures, laboratory experiments, assignments, problem solving in the class, value added courses, workshops, seminars etc.

Faculties are provided with all the facilities required for interactive, collaborative and independent learning such as:

- Well organized academic calendar with all the activity schedule.
- Class rooms with OHP/LCD facilities.
- Well equipped seminar halls with audio/video facility.
- Provision for conducting value added courses, FDPs, workshops, seminars etc.
- Library facility with access to online journals and e-books.
- Language lab to enhance the communication skills.
- Internet and WiFi facility.
- Support for organizing curricular and extra-curricular activities.

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

The institute nurture critical thinking, creativity and scientific temper among the students through following ways:

- Students are encouraged to do innovative projects which requires critical thinking.
- Motivate students to participate in project competitions.
- Conduct objective type quizzes which requires critical thinking and logical reasoning.
- Students are encouraged to do industry sponsored live projects.
- Conduct practicals in premises of industry.

- Motivate students to present and publish technical articles in conferences and journals to enhance their critical thinking capabilities and creativity.
- Motivate students to publish articles in college magazines, department level magazines/bulletins to exhibit their creativity.
- Motivate students to participate in National level and International level technical competitions like Robocon, SAE, Team TT racing etc. to enhance scientific temper.
- Arrange Value added courses, workshops and seminars to enhance their technical skills for life long learning.
- Various seminars are arranged through E-cell for motivating innovation and developing entrepreneur skills.

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.

The technologies and facilities used by the faculty for effective teaching are:

- In addition to traditional black board and chalk method of teaching, faculty uses OHPs, LCDs and white board.
- NPTEL video lectures are conducted in every department.
- Faculty uses open educational resources for the benefit of the students.
- Computers with internet connectivity and WiFi facility are available in every lab to gather information from internet resources.
- Laboratories are equipped with necessary softwares and instruments.
- Library is well equipped with text books, journals and e-learning facility such as e-books, online journals etc.
- Language laboratory is used for enhancing the communication skills.

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

- Faculty development programmes are regularly organized to enhance the knowledge of faculty.
- Faculty are encouraged to participate in STTPs, workshops, Seminars, Conferences, Orientation programmes etc., to update their knowledge.
- Value added courses, workshops and seminars are conducted for enhancing the skills and knowledge of students.
- Students are exposed to advanced level of knowledge through Industry internships and industry visits.
- Students are encouraged to participate and present papers in conferences so as to enable them to network with peers and update their knowledge.

- Students are encouraged to organize and participate in technical and project competitions to enhance their knowledge and upgrade their skills.

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

- Teacher Guardian Scheme is implemented in the institute wherein 15 to 20 students are assigned to a faculty member who acts as their mentor for the entire programme duration.
- Mentor regularly interacts with the students and monitor their academic performance and attendance.
- Remedial classes are arranged for students with poor academic performance.
- Parents are informed about their ward's performance and attendance.
- Guidance is provided to students from economically weaker sections to make them aware of various scholarship schemes.
- Students are counselled by the mentors, class advisors, subject faculty and HOD for improving their academic performance and attendance.
- Motivational lectures and seminars for guidance on higher education are arranged for the benefit of students.
- Training and Placement cell of the institute gives guidance on various career options.
- Societal, spiritual, yoga, art of living, stress management programs, etc. are arranged for the benefits of students.

2.3.8 Provide details of innovative teaching approaches/methods adopted by the faculty during the last four years? What are the efforts made by the institution to encourage the faculty to adopt new and innovative approaches and the impact of such innovative practices on student learning?

The innovative teaching approached/methods adopted by the faculty during the last four years are:

- Use of LCDs, OHPs, white boards etc.
- Conducting NPTEL video lectures.
- Use of open resource internet sources.
- Conduction of remedial lectures for slow learners.
- Providing question banks.
- Continuous assessment of laboratory experiments through performance indicators.
- Use of e-books and online journals provided by the library.
- Conducting Value added and skill development courses.
Institute encourages faculty to organize/participate FDPs,

STTPs, Workshops, Conferences etc.

Due to this innovative teaching methods, the teaching-learning process has become student-centric rather than teacher-centric.

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

Institute has a well-equipped library and the faculty members make use of it to augment the teaching-learning process:

- Library has very good collection of text books, reference books, journals etc.
- The main library of the institute has a seating capacity of 200 persons.
- The library is equipped with computers with internet and WiFi facility.
- Library has very good collection of e-books and access to online journals like IEEE, Springer, Science Direct etc.
- Library has collection of previous years University question papers.
- Library has adequate collection of competitive exam text books and non-technical books for personality development.
- A reading room is provided by the library to facilitate the needs of students and faculty.
- Library has reprographic facility.
- Library also subscribes to all the leading newspapers to inculcate newspaper reading habit among students and make them aware of the daily happenings around the world.
- In addition to central library, branch-wise reference books, text books, journals, project reports etc. are maintained in the department libraries.

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

Yes.

The institute faces challenges in completing the curriculum of students due to unexpected holidays and due to extra curricular activities. For tough subject like Mathematics, more time is required to make the students understand the concepts. To overcome this challenge institute organizes extra lectures and practicals after the college hours and on working Saturdays.

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

- The academic monitoring committee of the institute conducts a meeting before the start of every semester to plan the academic and extra-curricular activities.

- Review of percentage of syllabus completion is taken every month and the reason for lagging /leading if any, is noted.
- Result analysis of internal tests are done to evaluate the performance of the students.
- Student signatures are also taken for subject Teaching Plan on monthly basis to ensure that the topics are covered as per the teaching plan.
- Feedback from the students are taken twice in a semester and it is analyzed by the HODs and corrective measures if any, are informed to the respective faculty for further improvements.
- Course exit feedback and program exit feedbacks are taken to analyze the understanding capability of the students.

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

Table 2.3: Details of Human Resources

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
Ph.D.	7	--	1	1	2	7	18
M.Phil.	--	--	--	--	--	06	06
PG	--	--	--	--	30	55	85
Temporary teachers							
Ph.D.	--	--	--	--	--	--	--
M.Phil.	--	--	--	--	--	01	01
PG	--	--	--	--	33	14	47
Part-time teachers' PG	--	--	--	--	--	01	01

Institute follows the recruitment rules of University of Mumbai.

- The vacancies are identified based on student-teacher ratio and teaching load and informed to the University.
- Details regarding vacancies are advertised in leading newspapers after approval from the University.
- Screening of the applications are done on the basis of qualification/ experience and short listed candidates are called for the interview.
- Hon. Chairman of the institute, Principal and Expert USSC panel members appointed by the University conducts the interviews and select the right candidate.

Institute adopts various strategies for the retention of the faculty:

Faculty are given additional increments when they upgrade their qualification. Faculty are granted with ODs for attending FDPs, STTPs, Conferences, Workshops etc. Faculty are given partial financial support to organize technical events.

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.

- The institute recruits well qualified and experienced faculty through interviews conducted by experts of UGC panel appointed by University of Mumbai.
 - Well qualified senior faculty are appointed as Professors and Head of the departments.
 - The existing faculty are encouraged to upgrade their qualification.
 - Increments are given to the faculty when they upgrade their qualification.
 - Faculty are motivated to participate and organize FDPs, STTPs, Value added courses, Orientation programmes, Workshops, Seminars, Conferences etc. to upgrade their skills.
 - Expert lectures of eminent personalities from industries and other institutes are arranged for the benefit of students.
- Due to these efforts by the college, quality of the faculty are improved and majority of the faculty are enrolled for Ph.D. programmes.

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

Table 2.4: Staff Development Programmes

Academic Staff Development Programmes	
Number of faculty	nominated
Refresher courses	17
HRD programmes	08
Orientation programmes	108
Staff training conducted by the university	04
Staff training conducted by other institutions	80
Summer / winter schools, workshops, etc.	92

The strategies adopted by the institution in enhancing the teacher quality are:

- Motivating faculty to upgrade their qualification by granting study leaves/ODs.
 - Encouraging faculty to organize and participate in FDPs, STTPs, Workshops, Conferences etc.
 - Promoting research culture among faculty by motivating them to apply for research grants.
- 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

Use of LCDs/OHPs, PPTs, NPTEL video lectures, case studies, brain storming, online resources etc.

Handling new curriculum

Orientation programmes, FDPs, STTPs, workshops etc., purchase of new books, new lab equipments etc.

Content/knowledge management

Participate and publish articles in Conferences, journals, books etc.
Collaboration with industry experts, lab manuals, inter departmental faculty collaborations, project knowledge, etc.

Selection, development and use of enrichment materials

Library resources, e-books, e-journals, online open resources etc.

Assessment

Feedback from students, academic monitoring.

Cross cutting issues

Environment education, rain water harvesting, NSS activities, women empowerment, gender equality.

Audio Visual Aids/multimedia

College auditorium, department seminar halls, Language laboratory, Computers with internet/WiFi facility.

OER's

e-books, e-journals, online open resources, Swayam, NDL, etc.

Teaching learning material development, selection and use

Text books, e-resources, software tools, lab equipments, etc.

c) Percentage of faculty

- invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies

2016-17	2015-16	2014-15	2013-14
2.5%	3%	2.16%	2.5%

- participated in external Workshops / Seminars / Conferences recognized by national/ international professional bodies

2016-17	2015-16	2014-15	2013-14
45.61%	53.05%	43.19%	36.29%

- presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies

2016-17	2015-16	2014-15	2013-14
52.94%	58.33%	51.63%	45.12%

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.)

- Faculty are encouraged to upgrade their qualification by granting them with study leaves/ODs.
- Faculty are made aware of various research grants and motivates them to apply for grants on time.
- Faculty are motivated to present and publish papers in Conferences by providing them with ODs and they are also encouraged to publish Books and articles in Journals by providing them with increments.
- Faculty are given partial financial assistance to organize FDPs, Value added programs, STTPs, Workshops, Seminars etc.
- Faculty are provided with ODs to attend FDPs, Value added programs, STTPs, Workshops, Seminars, Conferences etc., organized by other institutes.
- Institute has MoUs with industries and other reputed institutes.

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.

Institute's culture and environment motivates faculty to excel in academic activities. Several faculty have received awards for presentation of their work in National/International Conferences. Few faculty are conferred with fellowship awards from professional bodies. Few faculty have won awards for State-level project competitions.

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

Yes, the institute has a system to evaluate the teachers.

- Feedback from the students are taken twice in a semester and it is analyzed by the HODs and corrective measures if any, are informed to the respective faculty for further improvements.
- Evaluation of teachers are also done by external peers from institutes under the same sanstha. They visit the institute and directly collect feedback from the students.
- Faculty under probation are evaluated by external peers through interviews and suggestions are informed to the faculty for improvements.

- Course exit feedback and program exit feedbacks are taken to analyze the effectiveness of teaching and understanding capability of the students.

2.5 Evaluation Process and Reforms

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

The institute is affiliated to University of Mumbai. The syllabus and the evaluation pattern of all the courses are published by the University from time to time and made available in the University website. The institute ensures that the stake holders are aware of the evaluation pattern by following means:

- During the orientation program of freshers, students and their parents are informed about the continuous evaluation process of the University.
- Students and parents are also informed about the evaluation process followed by the institute for Internal/Term work marks.
- During the introductory theory and practical hours, the subject faculty inform the students about the evaluation pattern of that subject and the practicals.
- Schedule for internal exams and tentative dates for University theory and practical exams are displayed in academic calendar.

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

- The University has introduced CBGS pattern for evaluation of UG and PG courses with effect from the academic year 2012-13 and the University has introduced CBCS pattern for evaluation of UG and PG courses with effect from the academic year 2016-17.
- University implemented online evaluation of answersheets for FE and BE.
- University has implemented the facility of photocopy, reverification and reevaluation of answer sheets.
- University implemented an online portal where faculty upload the marks obtained by the students.
- University introduced retests for students who were absent for the regular internal tests due to medical reasons but 75% of the total marks obtained will only be considered.

As the institute is affiliated to University of Mumbai, it follows the evaluation pattern prescribed by the University. However, certain reforms are initiated by the institute on its own:

- The question papers for internal tests are standardized by the departments taking in to consideration the COs defined for each course to evaluate the students.

- In addition to the two internal tests prescribed by the University, the institute conducts quizzes/objective type tests to evaluate the students.
- Continuous evaluation of practicals are done during practical hours using various performance indicators.

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?

Institute ensures the effective implementation of the evaluation reforms of the university in the following ways:

- Depending on the evaluation scheme, two class tests for 40% and 80% syllabus are conducted per semester taking in to consideration the CO nal tests are conducted independently by the departments and the Department Exam Coordinator ensures smooth conduction of the exams.
- The institute has a centralized Exam cell which takes care of the End Semester University Exams.
- Exam Chief Conductor along with Senior Supervisors and Junior Supervisors ensures smooth conduction of End Semester examinations.
- An IT incharge is appointed to take care of the online process of obtaining the question paper and for online CAP of UoM.
- Internal squad members make surprise visits to exam halls to check malpractices, if any and ensures proper discipline during exams.
- CAP coordinator of the institute ensures timely evaluation of answer sheets.
- The internal exam answer sheets are evaluated within 3 days of the conduction of tests and shown to the students for any discrepancy in evaluation and the marks are displayed.
- The practicals and oral exams are conducted as per University rules by the internal and external examiners.
- The marks obtained from the continuous evaluation of practicals, quizzes, assignments etc. are used to generate the internal term work marks of the students.

2.5.4 Provide details on the formative and summative assessment approaches adopted to measure student achievement. Cite a few examples which have positively impacted the system.

Formative assessment is done on the basis of performance of the students in class tests, assignments, tutorials, quizzes, case studies, seminars, attendance, industrial visits, mini projects, laboratory experiments

etc. Summative assessment is through End Semester University exams, Practicals/oral exams and project orals.

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.

- The internal assessment is done on the basis of performance in class tests, assignments, tutorials, quizzes, case studies, seminars, attendance, industrial visits, mini projects, laboratory experiments etc.
- To ensure transparency in the internal assessment, the answer sheets of class tests are shown to the students for any discrepancy in evaluation and the marks are displayed.
- Continuous evaluation of practicals are done through performance indicators which gives weightage to parameters like conceptual understanding, performance, justification of results, documentation, oral skills, lab ethics, punctuality etc.
- To ensure transparency, the marks obtained for internal term work assessment are shown to the students.

2.5.6 What are the graduate attributes specified by the college/ affiliating university? How does the college ensure the attainment of these by the students?

Graduate attributes specified by the college are in accordance with the Program outcomes defined by NBA:

- **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

- **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

The college ensure the attainment of these Graduate Attributes through direct and indirect assessment and mapping of COs with POs.

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

- For the redressal of grievances for college level internal exams, the answer sheets of class tests are shown to the students for any corrections in the marks.
- For theory exams conducted by the University, students can apply for photocopy and revaluation of answer sheets. Students can also put forth their grievances through the grievance cell of the University.

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?

Yes, the college have clearly stated learning outcomes in terms of vision, mission and objectives of the institute.

- The learning objectives and course outcomes of every courses are well defined.
- The vision, mission, objectives, POs and COs are displayed in college website, notice boards, laboratory journals, college brochure, college magazine, department bulletin, etc.
- In addition, the learning outcomes are communicated to stake holders during orientation programme and during introductory lecture and practicals.

2.6.2 Enumerate on how the institution monitors and communicates the progress and performance of students through the duration of thecourse/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.

Institute regularly monitors and communicates the progress and performance of the students through following ways:

- The internal class test and quiz marks are shown to the students and displayed on notice boards.
- The continuous evaluation of laboratory work is shown to the students during practical hours.
- The assignments are graded regularly.
- The term work marks are shown to the students during Term end submission.
- The End Semester University exam results are displayed on the notice boards and also uploaded in the Department blogs.
- The attendance of the students are displayed every month on the notice boards.
- The performance of the students are communicated to the parents during Parent-Teacher meet. Parents can also view the University results through Department blogs.
- Result analysis of the internal tests and end semester university exams are done to evaluate the performance and pass percentage of the students.

Table 2.5: Analysis of Student Results

Department	Year	SE		TE		BE	
		Sem 3	Sem 4	Sem 5	Sem 6	Sem 7	Sem 8
Mechanical Engineering	2016-17	51.03%	--	56%	--	Awaited	--
	2015-16	48.75%	32.85%	50.15%	33.65%	83.5%	90%
	2014-15	48.7%	39.8%	59.3%	44.3%	82.16%	70.6%
	2013-14	33.4%	24%	56.4%	39.5%	80.15%	74.4%
Computer Engineering	2016-17	42.66%	--	68.53%	--	Awaited	--
	2015-16	19.16%	50%	49.12%	74.84%	86.18%	93.38%
	2014-15	35.44%	47.43%	35.05%	73.61%	79.39%	96.99%
	2013-14	21.96%	40%	51.75%	56.52%	62.83%	99.18%
Electronics & Telecommunication Engineering	2016-17	32%	--	Awaited	--	Awaited	--
	2015-16	26.8%	38.23%	39.73%	54.42%	83.5%	89.83%
	2014-15	20.27%	33.1%	35%	45.8%	51.44%	77.3%
	2013-14	24%	17.68%	38.52%	54.01%	46.6%	88.98%
Electrical Engineering	2016-17	64%	--	70.51%	--	74.36%	--
	2015-16	58%	83.09%	62.96%	80.26%	81.81%	95%
	2014-15	42%	52.17%	51%	48.91%	61.72%	79.27%
	2013-14	41%	56%	51%	56.3%	52.11%	66.67%
Electronics Engineering	2016-17	34.21%	--	56.09%	--	Awaited	--
	2015-16	42.86%	59%	56.06%	56.72%	63.89%	79.17%
	2014-15	37.88%	61%	52.22%	45.97%	65%	80.52%
	2013-14	43.96%	37%	57.14%	68.83%	52.78%	79.17%

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

The following teaching, learning and assessment strategies of the institute facilitate the achievement of the intended learning outcomes:

- Academic calendar of the institute is finalized before the start of every academic session during the IAC meeting.
- Teaching plan and the assignments for the semester are prepared by the respective subject in charge before the start of the new semester and the Teaching plan is also uploaded in the ERP.

- Course Objectives and Course outcomes of the subjects in accordance with the university prescribed syllabus are decided by the respective subject in charge in consultation with the HOD.
- Course files are maintained by faculty members which contains Academic calendar, Individual timetable, Teaching plan, Assignments, Class test question papers, University question papers, question banks, Quiz, Performance details etc.
- In addition to traditional teaching methods, video lectures, NPTEL lectures, OHP, powerpoint presentations, projects, case studies, surveys, etc., are being conducted.
- Guest lectures are regularly arranged to bridge the gap in the prescribed curriculum.
- Students are encouraged to participate in Value added courses, workshops, seminars, industry internships, project competitions, paper presentations etc.
- Training and Placement cell of the institute organizes various seminars, workshops, mock interviews and aptitude tests for grooming the students for placements.
- Language lab facility is provided to the students to enhance their communication skills.
- Training on foreign language is provided for employment enhancement.
- In addition, various seminars are conducted to inculcate social values and ethics among students and develop them to be socially responsible citizens.
- The result analysis of the internal assessment is done and proper measures are incorporated to improve the performance by arranging remedial classes for the weaker students and giving additional assignments/tasks to the brighter students.
- Performance of the students in laboratory experiments are timely assessed and graded according to the performance indicators.
- The assessment of End Semester University exams is done through institute level CAP and University CAP.

2.6.4 What are the measures/initiatives taken up by the institution to enhance the social and economic relevance (student placements, entrepreneurship, innovation and research aptitude developed among students etc.) of the courses offered?

- The Training and Placement cell of the institute organizes various training programs to improve the aptitude skills and soft skills of the students. The T and P cell conducts mock interviews for the students to prepare them to face the interview boards during campus placements.
- Various seminars are arranged through E-cell for motivating innovation and developing entrepreneur skills.

- Special emphasis is given on the development of the overall personality of the students through the conduction of various personality development programmes.
- Students are encouraged to do innovative projects which are beneficial for the society.
- Students are encouraged to do final year projects in industries thereby giving them the exposure to the recent trends in industries.
- Motivate students to participate in National level and International level technical competitions like Robocon, SAE, Team TT racing etc. to enhance innovation and technical skills.
- Motivate students to present and publish technical articles in conferences and journals to enhance their critical thinking capabilities and research aptitude.
- Institute organizes National Level Conference and Project competition to develop innovation and research skills among students.
- Various seminars and activities are conducted to inculcate social values and ethics among students and develop them to be socially responsible citizens.
- Students are encouraged to do NSS activities like blood donations, orphanage/old age home visits, joy of giving, etc.

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

Student performance in class tests, assignments, quiz, practicals, end semester exams etc. are used as direct assessment tools to find the attainment of learning outcomes.

Course exit surveys, program exit surveys, alumni surveys, employer surveys, etc., are used as indirect assessment tool to find the attainment of learning outcomes.

The institute uses this analysis for continuous improvement to overcome the barriers. Some of the corrective measures implemented by the institute are: arranging remedial classes for slow learners, coaching for competitive exams like GATE, conducting value added courses, conducting quiz, providing question banks, NPTEL video lectures, etc.

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

- Academic monitoring is done every month to ensure that lectures are conducted as per teaching plan. The reasons for lagging/leading are also noted from the subject in charges and extra lectures are arranged if required.

- Result analysis of the internal class tests are done to analyze the performance of the students and their understanding of the subject. Slow learners are identified from the class test marks and remedial lectures are conducted.
- Result analysis of end semester exams ensures the achievement of learning outcomes.
- Institute monitors the achievement of learning outcomes also through quizzes, assignments, project work, orals, etc.
- Learning outcomes are also monitored through course exit feedbacks.

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. Any other relevant information regarding Teaching-Learning and Evaluation which the college would like to include.

Yes, the institution and individual teachers use assessment/ evaluation outcomes as an indicator for evaluating student performance, achievement of learning objectives and planning.

Teachers uses the internal class test marks, practical evaluation marks, assignment grades, quiz marks, etc., for evaluating student performance. Based on the performance of the students' slow learners are identified and appropriate remedial actions are taken. Advanced learners are given responsibility to lead various committees of college level and department level so as to enhance their leadership qualities.

For example, through the assessment of evaluation outcome, the topper of Department of Electronics Engineering, Master. Rohit Satle was identified and given the responsibility of heading EESA and through this platform he could develop his overall personality by leading and managing a team of students and gained his confidence level. As an outcome of this, he was placed in L&T Infotech through the first campus placement of the academic session 2015-16.

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION**3.1 Promotion of Research**

The institute's zest for promotion of Research could be observed through the continual efforts, towards being one of the most prestigious institutions by progressively obtaining the recognition as a Research Centre for Mechanical and Computer Engineering Stream.

Students are motivated to think in an innovative way by helping them to participate in the competitions like Design and development of Robots (ROBOCON), Formula Cars (SAE BAJA, SUPRA) etc, wherein students are supported not only in mentoring for innovative thinking but also groomed by providing the state of art infrastructure like workshops, LABS, High end computing facility with broadband high-speed internet.

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

Lokmanya Tilak College of Engineering is the first engineering college in Navi Mumbai recognized as research centre under University of Mumbai for PG and Ph.D. (Computer and Mechanical).

Table 3.1.1 (a): Research Center Information

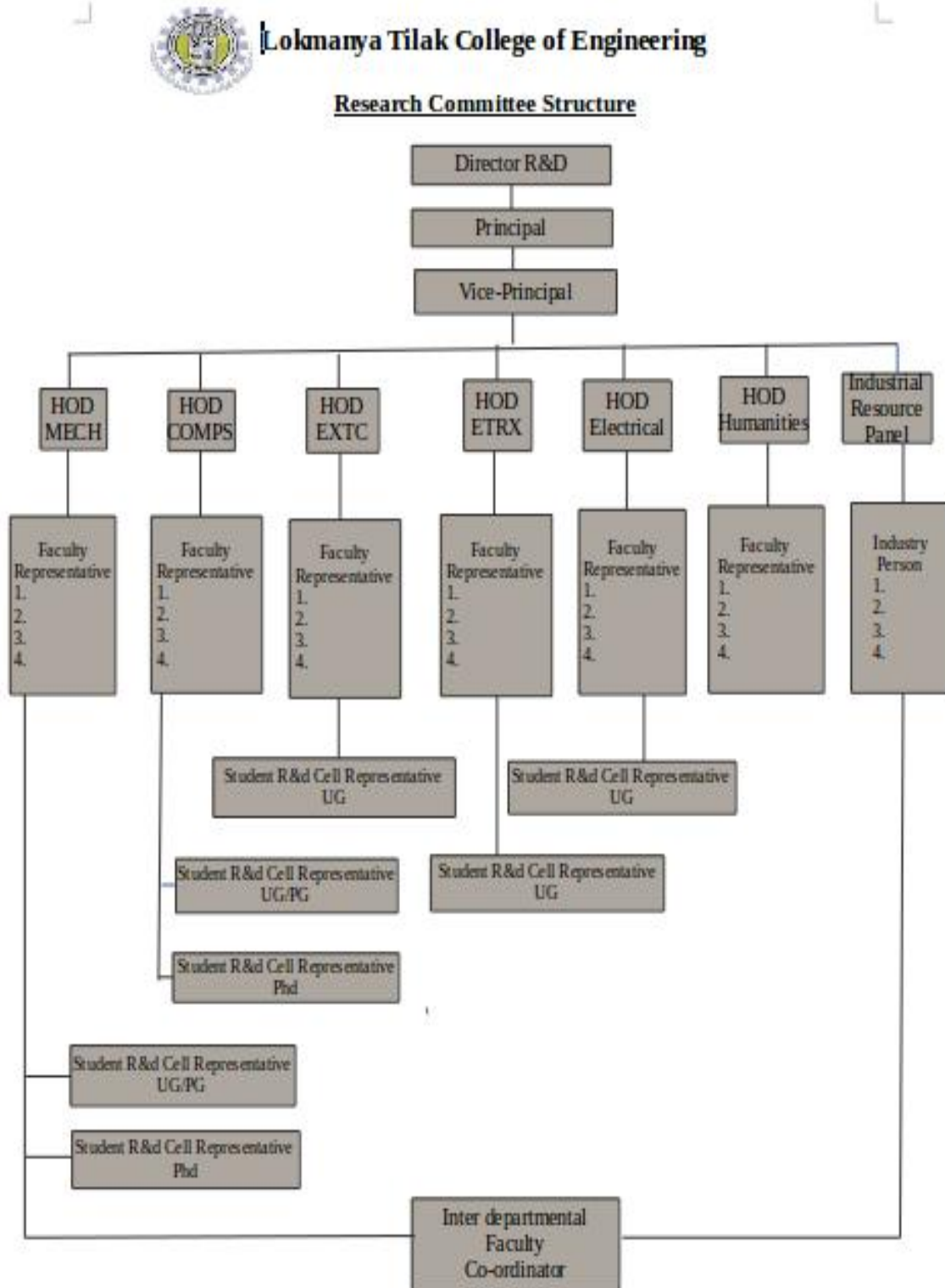
Sr. No.	Name of the Department	Affiliating University	Year of Affiliation	Letter No. With Date
01	Mechanical Engineering	University of Mumbai	2010	No. Th./8420, 30 July 2010
02	Computer Engineering	University of Mumbai	2013	Th/ICD/2015-16/4274,3 Sept,2015

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.

Quality research on the campus is ensured through a Research Committee which monitors, promotes and addresses the issues of research.

Institute is having dedicated Research Committee (RC). Research Committee Structure (RCS) has been established to promote innovative environment for research and smooth execution of research projects. It also plays an important role to collaborate institution with other research infrastructure of industries and premier academic institutions. It also helps to resolve research issues like critical examination of research proposals, on time availability of research infrastructure and funds.

The RC includes Director, Principal, Vice-Principal, all Heads of Department and senior researcher faculty, Industry Panel; Students cell involving UG/PG/Ph.D. Research committee structure of the institution is represented diagrammatically as shown below in figure.



Research Committee – Functions/recommendations:

- Potential and deserving faculty members are identified and ask to initiate research proposals in various domains.
- Identifies training needs of researchers and arranging to organise the same.
- Encourages the faculty members to apply for minor research projects.
- Assists the departments to apply for grants to organize seminars.
- Encourages the faculty members and students, to present research papers at State, National and International level seminars, conferences and reviewed International journals.
- Identifies emerging areas for student and society at large which may be evolved as research projects.
- Encourages the faculty and students to conduct seminars/workshop conferences in the college.
- To subscribe for National and International research journals.
- Inviting eminent researchers/academicians/Industry experts to mentor the students and staff for development of research environment.

Impact of Recommendations of the Research committee:

- The numbers of papers presented by students and faculty researcher have improved over the years.
- Timely submission of progress reports and utilisation of resources and thereby completion of project in time can be ensured.
- The numbers of Minor research proposals are improved over the years.
- Number of training programs are organised for the training of the researchers.
- The IEEE journals and Springer books access facility is made available to the researchers.
- Significant improvement may be observed in the number of eminent researchers / academicians / Industry experts visit to the institution for mentoring the students and staff for development of research environment.

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

The measures taken by the institution to facilitate smooth progress and implementation of research schemes/ projects are as follows:

Autonomy to the principal investigator:

The principal investigator provided with full freedom to choose the research project. He is empowered to select the student/staff from various departments of the institute based on their expertise and knowledge/skill in a specific research area. Principal investigator can propose the requirement of any research equipment/lab or collaborate with the nearby industrial resources. If required, investigator may identify and propose a new tie up with the industry under the

MoU. Principal investigator is motivated to apply different agencies such as universities, AICTE or any other agencies for funding.

Timely availability or release of resources:

The institute provides the resources available for the research work and as per the need of the faculty during its execution. The fund received from funding agencies is deposited into the institute bank account under the separate heads and this fund will be directly transfer as per the requirement placed by the principal investigator in time to time.

Adequate infrastructure and human resources:

The adequate availability of softwares, hardwares and manpower will be made available in the institute and allocation is done by the principal investigator,

Time-off, reduced teaching load, special leave etc. to teachers

- Faculty members undertaken research projects are facilitated with comfortable work atmosphere by special leaves granted for completion of research work.
- Facilitated assistance for paper presentation in national and international conference.
- Providing the facility to avail the travel grant.

Support in terms of technology and information needs

- Institute provides all the state of art infrastructure like workshops, Laboratories, High end computing facility with broadband high-speed internet and advanced softwares.
- Researches can avail facilities in different organisation such as IIT (Bombay), L&T, VJTI etc.
- In cases we make MOU with organisation for collaboration researchers.

Any Other

- We are in collaboration with VJTI in sharing expertise, manpower required for research.

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

- Institute motivate students and teachers in developing scientific temper , Expertise to do research in advanced environment in research culture
- Students are encouraged to participate in competitive activities like BAJA, ROBOCON to nurture research and implementation of new ideas.
- Encouraging and motivating students to actively participate in workshops, seminars, national and international conferences for global exposure.
- We conduct various activities such as project exhibition, quiz, etc. For brain storming among the students.
- We promote the students to interact with premier institute like IIT in the

form of visits, certification programs, NPTEL etc.

- We conduct industrial visits, study tours every year.
- Staff members are motivated to file patent as a culmination of research works.
- Students are encouraged to participate in external competition in university like AVISHKAR.
- Students and staff are motivated to take the memberships of different professional bodies such as ISHRAE, IEEE, CSI, ISTE, etc.

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.

Every Department of the institute have some experts in their own field, In addition to this, many faculty of the various departments are guiding students for their research. The proactive mechanism is also adapted by college to facilitate smooth implementation of research. Faculty involvement in Research Areas mentioned in Table 3.1.7. Institute is having Technical collaboration projects as listed in table 3.1.5.

Table 3.1.5 Individual/Collaborative Research Project

Sr. No	Title of Project	Sponsoring Agency	Name of Researcher	Year
1	Failure Analysis of Spinning Machine Roller/Mangle.	INDOCO Ltd., Ichalkaranji	Dr. Dalvi S D, Dr. Chandrababu D	2015-16
2	Cost Optimization in Assembly Substation Layout	Knorr-Bremse, Pune	Dr. Dalvi S D, Dr. Chandrababu D, Prof. Vijoy Kumar	2015-16
3	Repairing of Blow Counter and Digital Flow Meter	Rockprocess Eqp, Thane	Dr. S D Dalvi	2011
4	Design and Fabrication of Advance Pneumatic System in Cement Bulker	AMPL, Mahape	Dr. S D Dalvi, Prof Sunil Satao, Dr. B T Patil	2012-13
5	Modification in Vertical Slotting Machine	S H Mech Pvt Ltd	Dr. S D Dalvi, Prof Sunil Satao, Dr. B T Patil	2013
6	Design of Multi component Economical Rolling Machine	Hitesh Mechanicals	Dr. S D Dalvi, Prof Sunil Satao, Dr. B T Patil	2011-12

7	Design Modification in Screw Flight Manufacturing Machine	Flow Tech Eqp PL	Dr. S D Dalvi	2014-15
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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.

Numbers of workshops are carried by different departments of the institute. The main purpose of organising a workshop is to make student aware of what is going in the industry and to provide some practical experience and knowledge. It also helps in motivating the student as well as faculty to conduct the programme.

Table 3.1.6: Workshop/Training Programmes

Department of Mechanical Engineering					
Sr. No.	Workshop/ training programmes	Conducted By	From	To	No. of Attendees
1	Seminar on piping engineering software	Mrs. Shanmogham and Mr. Nadar Hussain	02/03/15	02/03/15	170
2	Seminar on Condition Monitoring Initiative for enhancing manufacturing supply chain reliability	Mr. Murari P. Shrivastava (MD IRD Mechanysis LTD.)	20/03/15	20/03/15	180
3	Seminar on 3D Printing Technology	Mr. Chetan Hon	09/03/15	09/03/15	220
4	Seminar on Thermal Engineering and its Relivant Applications	Prof. Vasant Jog (Vice Principal GVAIET, Shelu	13/03/15	13/03/15	250
5	MECHTALENT compitition	Dr. Joseph Rodrigue and Prof. Savita Gole	16/03/15	17/03/15	120
6	Project Exhibition and Fairwell Program-2015	Prof. N.M.Pampattiwar Dr. H.S.Dhanawade	23/04/15	23/04/15	320
7	Seminar on 3D Printing Technology	Mr. Chetan Hon	20/08/15	20/08/15	180
8	National level 5 day workshop- Automobile	EZINITH Education	06/01/16	10/01/16	250

	Development Internship Program				
9	Seminar on PIPING ENGINEERING SOFTWARE	Mrs. Shanmogham and Mr. Nadar Hussain	02/03/16	02/03/16	150
10	Seminar on Pneumatics-Industrial Applications	Vishal Biradkar (SMC pneumatics)	08/03/16	08/03/16	100
11	Seminar on Training and placement	Prof. Anil Magre (TPO-LTCE)	16/03/16	16/03/16	200
12	Project Exhibition and Fairwell Program- 2016	Dr. H.S.Dhanawade Dr. Ajay Kumar Dr. Vijay Kumar	27/04/16	27/04/16	300
13	National level 5 day workshop- Automobile Development Internship Program	EZINITH Education	18/06/16	22/06/16	180
14	Seminar on Virtual Reality	Aditya Prmji and Magdaleena Hammarn (FUSION FINLAND)	14/07/16	14/07/16	250
15	IPR, Innovations and Project Writing (One day workshop)	Adv. Anand Mahurkar	28/07/16	28/07/16	260
16	Seminar on promotion on Abroad Education	Miss. Pooja Welling (Mission Career)	09/08/16	09/08/16	180
17	Awareness program about Society of Automotive Engineering	SAE LTCE CLUB	09/08/16	09/08/16	290
18	Teacher's day program	MESA students	03/09/16	03/09/16	
19	Seminar on Designing and Manufacturing Integration	Pranjwal Banjan (CAD CAM GURU)	20/09/16	20/09/16	225
20	National level 5 day workshop- Automobile Development Internship Program	EZINITH Education	07/01/17	12/01/17	230
21	One day workshop on Aeronautical and Aerospace	KYTE AEROSPACE	24/01/17	24/01/17	275

22	Seminar on GATE exam. and opportunities for qualifiers	Vijay Shekhar Academy	30/01/17	30/01/17	150
Department of Computer Engineering					
Sr. No	Workshop/ Training programmes	Conducted By	From	To	No. of Attendees
1	Practical Approach and Hands on training for Hadoop- Big Data	Mr. Manish Jain IFDE Infotech	2016	2017	50
2	Patent Drafting	Mr. Rakesh Singh Ex. Deputy Controller, patent office Mumbai.	2016	2017	50
3	Virtual Reality	Mr. Ramya Gokhale Virtual Reality	2016	2017	126
4	Seminar on Abroad Education	Ms. Pooja Welling Ms. Katja freidal Mission Career	2016	2017	160
5	Software Asset Management	Mr. Vinayak AVIN- SAM	2016	2017	134
6	Word press And Web site Designing	Mr. Karan Makharia, Gate Tutorial	2015	2016	150
7	Introduction to big data and Statistical Analysis on SAS	Mr. Nilesh Redekar VESIN	2015	2016	20
8	Reasoning ability and Critical Thinking	Mr. Kunal Keshalini ,Software Developer- Rakuten Japan	2015	2016	70
9	Talent Age-Android, Cloud Computing, Hadoop	Mr. Amit ,Manipal University	2015	2016	93
10	Ethical Hacking	Ms. Debina, Quik	2015	2016	50
11	Big Data and Hadoop	Mr. Amit Agarwal, CSI	2015	2016	57
12	Cyber Security	Microsoft, ATS Leaming	2015	2016	48
13	Software Testing	Mr. Nilesh Wadkar, Optimiser	2015	2016	34
14	Microsoft Dot Net	Mr. Rohit Lamba, Mr. G.Narendra,	2015	2016	43

		Microsoft IT Academy			
15	Microsoft Dot Net	Mr. Surendra Pal, Mr. G.Narendra, Microsoft IT Academy	2014	2015	29
16	Corporate Commando	Rozina Rana, Rozina Rana	2014	2015	150
17	Job Fair of CMC comp at LTCE	Mr. Anil Magare Mr. Sudhakar, CMC , LTCE	2014	2015	300
18	Open Source Technology-Ubuntu	Dr. Krishnakant Mane, IIT-Mumbai	2014	2015	43
19	Open Source Applications	Mr. Swapnil Mohite, Red Logic pvt ltd	2013	2014	50
20	Workshop on Android	Mr. Swapnil Mohite, Red Logic pvt ltd	2013	2014	40

Department of Electronics and Telecommunication Engineering

Sr.No	Workshop/ Training programmes	Conducted By	From	To	No. of Attendees
1	Cyber and Mobile security	Microsoft pvt.ltd.	28/07/16	30/07/16	31
2	LTE Performance Optimization	Mobile comm. Technology India pvt. Ltd.	2015	2016	20
3	LTE Performance Optimization	Mobile comm. Technology India pvt. Ltd.	2016	2017	21

Department of Electrical Engineering

Sr. No.	Workshop/ Training programmes	Conducted By	From	To	No. of Attendees
1	1 In 5 Robotics and Lab View Work Shop by Dalvik Apps	Dalvik Apps	10th Aug 2016	11th Aug 2016	30
2	2-Day Workshop for Intercollegiate students:- Quadcopter by IITB Ark Technosolutions and Helios	Ark Technosolutions and Helios, IITB	24th Jan 2015	25th Jan 2015	68
3	2-Day Workshop SE,	IITB	9th March	10th	41

	TE Students:- Solar SQ		2016	March 2016	
4	3-Day Workshop for BE students by TAACT Thane	TAACT Thane	10th March 2016	12th March 2016	16
5	Seminar on Nanotechnology, Nanoscience for SE, TE, BE students by Mr. Sanjay Kemkar, Director, IMATRIX	Mr. Sanjay Kemkar, Director, IMATRIX	4th Oct 2016	4th Oct 2016	100
6	Seminar for TE, BE and IEEE branch students	C. G. H. Aranha, Tata Power Consultancy	20th Feb 2016	20th Feb 2016	60
7	Seminar for BE students by on Availability based Tariff and cable jointing and terminations	C. G. H. Aranha, Tata Power Consultancy	24th Jan 2017	24th Jan 2017	53
8	Tantragyan 13 Project exhibition/paper presentation competition	Inter-Departmental Experts	12th March 2013	12th March 2013	78 grps
9	Tantragyan 14 Project exhibition/paper presentation competition	Inter-Departmental Experts	14th March 2014	14th March 2014	187 grps
10	Tantragyan 15 Project exhibition/paper presentation competition	Inter-Departmental Experts	6th April 2015	6th April 2015	85 grps
11	Tantragyan 16 Project exhibition/paper presentation competition	Inter-Departmental Experts	12 th april 2016	12 th april 2016	50 grps
12	Tantragyan 17 Project exhibition/paper presentation competition	Inter-Departmental Experts	30th March 2017	30th March 2017	
Department of Electronics Engineering					
Sr.	Workshop/	Conducted By	From	To	No. of

No.	Training programmes				Attendees
1	Electronics Hacking and Home Automation	Mr. Karan Makhija Mr. Kshitij Dandekar	30/09/16	01/10/16	51
2	Industrial Automation Technologies	Mr. Rajkumar Singh	23/02/16	23/02/16	45
3	Embedded System Using ARM Mbed	Dr. Jonathan Joshi (CEO Eduvance), Mr. Ganesh Gore (CTO, Eduvance) and Ms. Zalak Dave (Sr. Tech. Lead, Eduvance)	31/10/15	31/10/15	30
4	Network security and Ethical Hacking	Mr. Sandeep Jethani, Director ATS Learning Solution, Mumbai	07/08/15	07/08/15	77
5	Appization	Mr. Abhik Chatterjee (LTCE Alumni), CEO, DEED FOOTERS, Innovation Lead, Reliance Communication	21/03/14	21/03/14	50
6	Wireless Communication	Mr. Manpreet Sodi, Enelek Pvt. Ltd.	30/01/14	30/01/14	115
7	Evaluation of VHDL Programming on ADM (VHDL) kits	Mr. Shirish Joshi, Director, ADM	25/09/13	25/09/13	67
8	Solar Clan	Mr. Rohan. P. Enelek Pvt. Ltd. Incubated with IIT Bombay	12/08/13	12/08/13	52

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

Faculty involvement in research work in their respective technical domains as cited in the table below

Sr. No.	Name of the Faculty	Designation	Research area
Department of Mechanical Engineering			
1	Dr. Vivek Sunnapwar	Director	World Class Manufacturing

2	Dr. Vivek Yakkundi	Principal	Automobile and Manufacturing
3	Dr. Chandrababu D.	Professor	Non-conventional Energy, Knowledge management
4	Dr. A. D. Sarode	Professor	Supply chain System
5	Dr. J.J. Dange	Professor	CAD/CAM/CAE
6	Dr. S. D. Dalvi	Asst. Professor	Energy Conservation and Efficiency
7	Prof. Vijoy Kumar	Asst. Professor	Thermal Engineering
8	Prof. Sunil Satav	Asst. Professor	Lean manufacturing
9	Prof. V.S. Bhaskarwar	Asst. Professor	Non-conventional Energy Sources
11	Dr.Dhanawade Kavita	Asst. Professor	Thermal Engineering
12	Prof. Ajay Kashikar	Asst. Professor	Automobile Engineering
13	Prof. M.S. Bhadane	Asst. Professor	Fluid mechanics/ Hydraulics
14	Prof. Archana Darandale	Asst. Professor	Mechatronics
15	Dr. Nilesh Ghongade	Asst. Professor	CAD/CAM
16	Prof. Shweta Matey	Asst. Professor	Industrial Engineering
Department of Computer Engineering			
17	Dr. S. K. Shinde	Professor	Data Mining and Computer Network
18	Dr. P. J. Nikumbh	Professor	Wireless Technology
19	Dr. A. Z. Chhangani	Asst. Professor	System Security
20	Prof. Chitra Wasnik	Asst. Professor	Control systems
21	Prof. Rajendra D. Gawali	Asst. Professor	Database, Algorithms
22	Prof. Jyoti S. More	Asst. Professor	Computer Networks
Department of Electronics and Telecommunication Engineering			
23	Dr. Ravindra Duche	Professor	Wireless Sensor Networks andVLSI
24	Dr.Rajeshree Rokade	Assistant Professor	Image processing
25	Ms.Rupali Sawant	Assistant Professor	Cognitive radio Network
26	Mr. Nitin Deotale	Assistant Professor	Antenna andWirelessNetwork
27	Ms.Nandini Nag	Assistant Professor	Signal Processing
28	Ms.Vandana Khobragade	Assistant Professor	Image processing
29	Ms.Pranita Pote	Assistant Professor	Antenna Communication
30	Ms. Gitimayi Sahoo	Assistant Professor	Wireless Communication
31	Mr.Devidas Chikhale	Assistant Professor	Wireless Communication

Department of Electrical Engineering			
32	C. M. Wankhade	Professor	Genetic Algorithm, Optimal Power Flow
33	Neelam Pinjari	Asst. Professor	Wireless Power Transmission
34	R.Sonune	Asst. Professor	Interconnected Power System
35	Nutan Attarde	Asst. Professor	Information system
36	S. Kpase	Asst. Professor	Transmission system devices
37	Shruti Nema	Asst. Professor	Integrated Circuit
Department of Electronics Engineering			
38	Dr. Sheeba P. S.	Associate Professor	Control System, Optimization
39	Ms. Prerna Shrivastava	Asst. Professor	Wireless sensor networks
40	Ms. Shilpa Joshi	Asst. Professor	Digital Image Processing
41	Dr. Shilpa Wakode	Asst. Professor	Video Image Processing, Digital Image Processing
42	Mr. N. P. Jain	Asst. Professor	Digital System Design
43	Ms. Trupti Harhare	Asst. Professor	Speech Processing
44	Ms. Savitha Devaraj	Asst. Professor	VLSI Design
45	Ms. Vaishali Ramtekkar	Asst. Professor	Embedded Systems and Networking
46	Ms. Swati Chaudhary	Asst. Professor	Digital Image Processing
47	Mrs. Neeta P. Gargote	Asst. Professor	Digital Image Processing
48	Mr. Prashant Ahire	Asst. Professor	Digital Image Processing

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

- Institute welcomes eminent researchers from IIT, BARC, and Industries for interacting with students and faculty under different technical activities like ISHRAE, project/paper presentation and competition, TANTRAGYAN project competitions, paper presentations, etc.
- The details of the above said activities are as given below:

The Researchers of Eminence

1. Mr. Jayarajan K.

Outstanding Scientist and Head, Tele-Manipulator Section, Bhabha Atomic Research Centre, Mumbai, having awards and Major Professional Recognitions, INS Medal-2006; Homi Bhabha Science and Technology Award-2006; DAE Group Achievement Awards in 2009, 2010 and 2012.

His areas of Interest are Remote Handling, Robotics, Mechanical Design, Teletherapy, Mobile Robots, Teleoperation, Master Slave Manipulators, Nuclear Industry, Radiation Safety, Hot Cell Design, Mechanisms, and Telepresence.

Remarkable contribution in Consultancy projects like Remote Handling, Robotics, Robot Kinematics, Robot Path Planning, Teleoperation, Master Slave Manipulator, and Servo Manipulator.

2. Dr. Rakesh Mote

He is an assistant professor at IIT Bombay. He has completed his Ph.D from Nanyang Technological University Singapore (2011). He also registered his affiliation at National Centre for Aerospace Innovation and Research (NCAIR). It's a privilege for us to have him with us to motivate our students of Ph.D mechanical and computer to help them to improve their quality of project and research.

3. Dr. Pradeep Dixit

He is an assistant professor at IIT Bombay. He has completed his Ph.D from Nanyang Technological University Singapore (2008). He also registered his affiliation at National Centre for Aerospace Innovation and Research (NCAIR). It's a privilege for us to have him with us to motivate our students of Ph.D mechanical and computer to help them to improve their quality of project and research.

4. Dr. Bernard Menzes

He is a Professor at K.R.School of Information Technology, Indian Institute of Technology Bombay. He has completed his Ph.D from University of Texas at Austin and M.S. (Electrical and Computer Engineering) from University of Notre Dame. His area of research are Network and Database Security, Algorithms and Software for Centralized Supply Chain Management, Object-oriented Software and Smart E-Business and Forecasting. He is a member of Selection Committee for Ph.D candidates and assesses Annual Progress Seminar of Ph.D research scholars in Computer Engineering

5. Dr. Surya Darbha

He is an Associate Professor at Indian Institute of Technology Bombay. He has completed his Ph.D from Mississippi State University (MSU), USA. His area of research are Geosemantics, knowledge-based systems, image information mining, cloud computing-based Geocomputations, Geospatial standards, Interoperability, sensor webs, Critical Infrastructure Protection, Remote sensing and Bio-physical variables retrieval from remote sensing data. He is a member of Selection Committee for Ph.D candidates and assesses Annual Progress Seminar of Ph.D research scholars in Computer Engineering.

Table 3.1.8: List of eminent person visited the institute

Sr. No	List of Eminent Persons Visited the Institute	Specialization
1	Mr. Karan Makhija Mr. Kshitij Dandekar	Hacking and Home Automation
2	Mr. Rajkumar Singh	Industrial Automation
3	Dr. Jonathan Joshi (CEO Eduvance), Mr. Ganesh Gore (CTO, Eduvance) and Ms. Zalak Dave (Sr. Tech. Lead, Eduvance), Mr. Sandeep Jethani, Director ATS Learning Solution, Mumbai	Embedded System
4	Mr. Sandeep Jethani, Director ATS Learning Solution, Mumbai	Network security, Ethical Hacking
5	Mr. Abhik Chatterjee (LTCE Alumni), CEO, DEED FOOTERS, Innovation Lead, Reliance Communication	Appization
6	Mr. Abhik Chatterjee (LTCE Alumni), CEO, DEED FOOTERS, Innovation Lead, Reliance Communication	Wireless Communication
7	Mr. Shirish Joshi, Director, ADM	VHDL, ADM
8	Mr. Rohan. P. Enelek Pvt. Ltd. Incubated with IIT Bombay	Solar Energy Utilization
9	Mr. Sanjay Kemkar, Director, IMATRIX	Nanotechnology, Nanoscience
10	Mrs. Shanmogham and Mr. Nadar Hussain	Piping Engineering
11	Mr. Murari P. Shrivastava (MD IRD Mechanysis LTD.)	supply chain management
12	Mr. Chetan Hon	3D Printing Technology
13	Mr. Vishal Biradkar (SMC pneumatics)	Pneumatics
14	Mr. aditya Prmji and Miss Magdaleena Hammarn (FUSION FINLAND)	Virtual Reality
15	Adv. Anand Mahurkar	IPR, Innovations and Project Writing
16	Miss. Pooja Welling (Mission Career)	Abroad Education
17	Pranjwal Banjan (CAD CAM GURU)	Designing and Manufacturing Integration
18	Vijay Shekhar	GATE examinations
19	Mr. Nilesh Redekar, Mr. Pranjali Mule	Trainer VESIN
20	Mr. Karan Makharia	Trainer Gate Tutorial
21	Mr. Kunal Keshalini	Software Developer- Rakuten Japan
22	Mr. Rakesh Singh (Ex. Deputy controller, patent office, Mumbai Senior patent Associate)	Patent Drafting

23	Mr. Ramya Gokhale	Virtual Reality
24	Ms. Pooja Welling and Ms. Katja Freidal	Mission - Career abroad
25	Mr. Tejas Samuel	Art of living
26	Mr. Vinayak	Trainer :AVIN-SAM
27	Ms. Debina	Trainer:Quik Technologies
28	Mr. Amit Agarwal	Trainer:CSI
29	Mr. Nilesh Wadkar	Trainer:Optimiser
30	Mr. Manish Jain	Corporate Trainer :IFDE Infotech

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?

N.A.

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)

- E Cell student project for development of portal for industry and institute.
- Various activities and initiatives are undertaken by institute for creating awareness and transfer of research outcome to students.
- The esteemed mentors for entrepreneur are invited for motivating the students.
- Institute regularly announces development in researches, various competition, paper presentation, opportunities in its premises.
- Project developments are reviewed periodically by experts.
- Students/Faculty are motivated to communicate with the society in Computer awareness program, ethical hacking and security, digital India programs.

3.2 Resource Mobilization for Research

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

For details of budget allocation and utilization, refer Table 4.4.1

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?

- Institute provides seed money to the faculty for research projects (as per the assessment of research committee). For Fabricating Experimental setup of heat transfer and refrigeration and air-conditioning, Institute provides seed money for staff research work.

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

- Institute provided financial assistance to the student's research projects as per the assessment of research committee. Student's initiative such as SAE, ROBOCON, BAJA projects made for competitions were given assistance for last four years.
- Specials purchases for research projects are done for consumable, books, hardware, software based on project merits.

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

- Different disciplines are inter linked to resolve major challenges in the projects and research committee consist of all disciplines will ensure the interaction among themselves for smooth functioning and execution of inter departmental projects.
- There are subjects such as Environmental Engineering, Renewable Energy Resources, Robotics, Control System, Mechatronics and Image Processing have wide interdisciplinary scopes for project. One of such project is energy auditing of whole campus by mechanical and electrical engineering.

Table: 3.2.4 interdisciplinary research

Nature of the Project	Duration		Research Area	Name and Details of the funding Agency	Total grant received Till date
	From	To			
Interdisciplinary Projects (ROBOCON)	Aug-2014	03/15	Pneumatic Design, PCB Design for fabrication, control loop system, Embeded system	LTCEand Self funded	3.4 Lac.
	08/15	03/16	Embedded system, Artificial inter., P/D Design, System integration	LTCEand Self funded	3 Lac.
	08/16		Machine learning, PCB Design for fabrication, control loop system	LTCE and Self funded	3 Lac.

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

- The integrated IT and laboratory of all students irrespective of their departments are kept open beyond office hours as per project needs. The utilisation of research labs are as follows:

Table: 3.2.5 Optimal use of various equipments

Sr No	Name of the lab	Equipments/Softwares identified As Tools for execution of research	Total cost of lab (INR)
1	Simulation Lab	MATLAB, P-SIMULATOR, H-SIMULATOR, EAGLE, GSPICEUI, KICAD, QUCS	4,95,755
2	CAD/CAM Lab	DELL VOSTRO 470 MODEL, *PROCESSOR-INTEL® PENTIUM(R) CPU G3260 @ 3.30GHZ × 2, (DUAL CORE) *HDD-500GB, RAM-4GB DDR-III, *MONITOR-17" LCD COLOR(BENQ), *DELL KEYBOARD and MOUSE, *CABINET-6 USB PORT and HDMI PORT, INTEGRATED ETHERNET 10/100/1000MBPS	31,41,545
3	Advanced Manufacturing Lab	FMS SETUP,CNC MACHINE,ASSEMBLY STATION	55,38,549
4	Advance Computing Lab (PG)		5,86,500
5	Database lab	DELL VOSTRO 270 SFF MODEL, *PROCESSOR-INTEL®	4,66,400
6	Digital Electronics and Communication	PENTIUM(R) CPU G2030 @ 3.00GHZ × 2, (DUAL CORE) *HDD-500GB, RAM-2GB DDR-III	4,24,000
7	Computer Network Lab	*MONITOR-17" LCD COLOR, *DELL KEYBOARD and MOUSE, *CABINET-8 USB PORT and HDMI	4,66,400
8	Research Laboratory	PORT,INTEGRATED ETHERNET 10/100/1000MBPS	1,53,000
9	System Software Lab		5,10,000
10	Microprocessor and Embedded Lab		5,86,500
11	Web Engineering Lab		5,10,000
12	Algorithm and Data Structure		5,10,000

	Lab		
13	AI and soft Computing Lab		5,10,000
14	Software Engineering Lab		5,10,000
15	Computer Graphics and Multimedia Lab		5,10,000
16	Research and Development Lab	MATLAB, XILINX, MICROWIND, NS2, TEXTSTUDIO, EMULATAOR 8086, LT SPICE	7,81,552
17	Control System lab	DSO, TONGUE TESTER, LCR METER, PLC	7,64,654
18	Power Electronics	DSO, SENSOR NODE, CRO DEMONSTRATION KIT, PSIM SOFTWARE	14,76,024
19	Electrical Machines Lab	3 PH TRANSFORMERS, IGBT INVETER FED V/F PWM SCHEME FOR SPEED CONTROL OF 3 PH INDUCTION MOTOR	9,33,222
20	Computer lab	MATLAB, COMPUTERS	23,21,574
21	Basic Electronics	CRO, POWER SUPPLIES, TESTING EQUIPMENTS	9,90,468

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.

- Institute has received grant from AICTE under MODROB for setting up automated assembly station costing 9 Lakhs in advance manufacturing lab of mechanical department.
- Larsen and Toubro had set up switch gear and protection lab for electrical students.
- Institute has received grant from AICTE under MODROB which was used for setting up the Satellite Lab in Electronics and telecommunication department which accounted to 5 lakhs.

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

Institute has received grants for various schemes of university as Minor Research Grant and Major Research Grant as listed below. This motivates the faculty and students in research in latest technology.

Table 3.2.7 Minor Research Grant

Branch	Duration		Title of project	Funding Agency	Total Funding (INR)
	From	To			
Mechanical Engineering	2012	2013	Application of CAD for modelling and analysis of artificial joints	UoM	20,000
	2012	2013	Forced convection heat transfer through extended surfaces with square perforation.		30,000
	2012	2013	Limb alignment analysis in total knee replacement		25,000
	2015	2016	Design an experimental analysis of automotive muffler for noise attenuation		40,000
	2015	2016	Analysis and evaluation of bone porosity and its effect on Fracture		40,000
	2015	2016	Experimental analysis of wire mesh fining on horizontal surface by mixed flow heat transfer		40,000
	2016	2017	Design and fabrication of SMOG consuming machine		30,000
	2016	2017	Design and development of customized surgical guide for Parkinson disease		25,000
	2016	2017	Measurement of drag force using a spring mass system		25,000
	2016	2017	Design and fabrication of cold rolling mill		25,000
	2016	2017	Design and Development of novel, transformable wheel chair for transfer of patient to the bed		30,000
	2016	2017	Design and fabrication of single cylinder flexible dumping		25,000
2016	2017	Performance enhancement of	25,000		

			domestic air conditioning system using PCM with modified evaporator design		
	2016	2017	Design and development of AQUA CLEANUP to remove floating debris		25,000
Computer Engineering	2013	2014	A Novel Approach for securing Wi-Fi Network in Educational Institutes		25,000
	2013	2014	Reality Mining using Wi-Fi		30,000
	2013	2014	Multicast Routing in Network Coding.		30,000
	2016	2017	Revolution of Thermal Image processing in Electrical and fire safety (577)		30,000
	2016	2017	Smart Lighting for better health(576)		20,000
	2016	2017	Internet of Things for Monitoring Pipe Leakage Detection of Water Distribution Network(574)		20,000
Electronics and Telecommunication Engineering	2016	2017	Implementation of MIMO		30,000
	2016	2017	Vehicular adhoc networkimg		34,000
	2016	2017	vehicle tracking using GSM/GPRS		30,000
	2016	2017	Impact of environmental parameter on propogation		20,000
	2016	2017	Mobile traffic offloading		20,000
	2016	2017	Automated identification of retinal disease		25,000
	2016	2017	Development of image processing related embedded product with face and iris detection and recognition functionality with IOT and wireless IOT features.		24,000
	2014	2015	IRIS recognition based security system using optimized feature vectors and classifiers		30,000
Electrical Engineering	2011	2012	Pulse Width Modulated Voltage Source Inverter for		25,000

			Hybrid Electric Vehicle		
	2011	2012	Optimal Reactive Power Dispatch in agivem Power System		15,000
	2012	2013	Implementation of routing protocol for Wireless sensor network		10,000
	2015	2016	Reactive Power Dispatch Scheme in Power System		24,000
	2016	2017	Air core generator		15,000
	2016	2017	Modulation of power system performance		30,000
Electronics Engineering	2016	2017	Real Time Water Quality Measurement System Based on GSM		25,000
	2016	2017	A Novel approach for silent haunt technology using vehicular adhoc networks for smart cities.		25,000
	2016	2017	Design and Implementation of an VOI based intelligent garbage monitoring system for urban cities		25,000

Table 3.2.7: Major Research Grant

Branch	Duration		Title of Project	Name of Faculty	Funding Agency	Total Funding (INR)
	From	To				
Mechanical Engineering	2012	2013	Comparative evaluaton of fatigue assesment techniques on Forged Steel Crankshaft of Single cylinder diesel engine (ASME)	Dr. Vivek Sunnapwar	DST	85,480
	2012	2013	Analysis and evaluation in limb allignment in total knee replacement	Dr.Nilesh Ghongde	DST	1,00,000
	2013	2014	Experimental and CFD investigations of heat transfer in helical coils for the development of	Dr. S.S Pawar (PI) Dr. Vivek Sunnapwar (Co-PI) Dr.	DST	80,000

			correlations for newtonian and non newtonian fluids in transient state-space conditions	vivek Yakkundi (Co-PI)		
	2012	2013	Paper presentation at ICPEE, Phuket	Dr. S.D. Dalvi	DST	62,800

Table 3.2.7: Industry Sponsored projects

Branch	Duration		Title of Project
	From	To	
Mechanical Engineering	2014	2015	Design and Fabrication of special purpose conveyor
	2014	2015	Design of multipurpose Mini cultivator
	2014	2015	Design and Fabrication of superheater
	2014	2015	Heat transfer and pressure drop at pebble bed
	2014	2015	Automation of thrust bearing manufacturing
	2014	2015	Modifying a slitting machine for a non- woven fabric
	2014	2015	Fabrication analysis and demonstration of hybrid transmission of vehicle
	2016	2017	Design and development of softwares For pressure vessel design using Solid work/ CATIA
	2016	2017	Automatic feed mechanism for Press machine
	2016	2017	Cold Rolling Mill
	2016	2017	Design and development of manually Operated hydraulic pump
	2016	2017	Equipment optimization of manufacturing Components by More up time of CNC
	2016	2017	Optimization in manufacturing Process of splitter shoe/guide Plate by DMAIC problem solving Methodology
	2016	2017	Fault analysis of pulverized coal mills and designing, development of Database for its proactive diagnosis
	2016	2017	Design and development of component in Pharmaceutical packaging industry
	2016	2017	Analysis of casting defect using any one SQC tools
2016	2017	Cost Reduction of Modelled Case Circuit Breaker at L and T	
2016	2017	Design and Fabrication of Chassis and Steering Mechanism of 4-wheeler	

	2016	2017	Design and Fabrication of Chassis and Steering Mechanism of 4-wheeler
	2016	2017	Time study of neo wheels by using Analytical process
	2016	2017	ABC analysis on process control
	2016	2017	Pneumatic Wire Forming Machine
	2016	2017	Machine Development (Plastic Rolling Machine)
	2016	2017	To counter the problems related to the process planning
	2016	2017	Design and Development and testing of external furnace applied to packed boiler
	2016	2017	ABC analysis on quality control
	2016	2017	Optimization of machine condition during working process and minimize the maintenance work using preventive maintenance technique
Computer Engineering	2014	2015	Ecommerce Enhancement
	2014	2015	Recruitment Tracking Sytem
	2014	2015	E-Learning Portal
	2014	2015	Server Side Alert System that will trigger email to authority when data is expired.
	2014	2015	File Synchronization and Cataloging Tool
	2014	2015	E-CRM (Software Project Management and Progress tracking) for Samarth Insulators
	2015	2016	Simplified Version of the CVSS 2.0 for Development Team and End Users
	2016	2017	Interview Management System With Real Time and Optimized Search and Analytic Capability
	2016	2017	POS for Restaurant Management System
Electronics Engineering	2012	2013	Tune of Flight Measurement for Ultrasonic Testing
	2012	2013	Face Recognition using Video
	2012	2013	High speed Multichannel (8 channel) data acquisition system for gamma imaging device
	2012	2013	Installation and Programming of OCLAN
	2012	2013	Gesture Recognition and its Applications in Human Computer Interaction
	2012	2013	Video Retrieval Based on Gestures
	2012	2013	Design of Solar Street Light
	2012	2013	Aircraft Asset Management
	2012	2013	Military Surveillance Robot

	2012	2013	Cold Calibration of Bimetal Relay
	2012	2013	Building Automation with Solar Power System using PLC and SCADA
	2013	2014	Water Distribution Management and Security System
	2013	2014	Integrated Building Management
	2013	2014	GPS Autocruz control for Car Security System
	2013	2014	Gesture Controlled Robot
	2013	2014	Military Surveillance and Deployment Robot
	2013	2014	Design of Virtual Speed Breaker System
	2013	2014	Power Saver System
	2013	2014	Automation Using Siemen's PLC
	2013	2014	Remote Read out of Radiation Monitoring
	2013	2014	Design of Power Transformer Controlled Panel using Digital Techniques
	2014	2015	Conveyor application using PLC and SINAMICS V20 Drive
	2014	2015	RF Impedance Matching
	2014	2015	GPS + Zigbee based train authentication system live location tracking on googlemap.
	2014	2015	Smart Bag
	2014	2015	Solar intensity based tracker
	2014	2015	Home Automation System
	2014	2015	Remote Monitoring and Controlling of saw welding
	2014	2015	Spy Robot
	2014	2015	Paint Emulsion Manufacturing
	2014	2015	Bank Locker Security System

3.3 Research Facilities

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

The Institute has more than 500 high end computers as well as numerically controlled machines for research by the faculty and students. High speed internet based connectivity is available for the faculty and the students in the laboratories and auxiliary areas like administration section, library, etc. Orientation programs are organized for improving and enhancing thesis writing. Students are availing of the facilities for accessing relevant websites and completing projects research to support their projects in the curriculum. Computer labs with statistical software

are provided. Software's and various research tools like modeling, drafting, simulation, and analysis are available for students.

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?

- As mentioned earlier the institute has research committee which prepares the plan based on the inputs of the senior competent faculty members within the domain for up gradation and creation of infrastructure for research.
- This has resulted in getting funded research and consultancy project which leads to substantial increases in research publication.

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

Yes.

Institution has received special grants from AICTE and industry.

Table 3.3.3: Special Grant/Finance

Sr. No.	Name of funding agency	Department	Research facility developed at institute	Fund granted(INR)
1	Larsen and Toubro Ltd	Electrical	Switch gear and protection lab	5,00,000
2	AICTE	Mechanical	Automation assembly station in advanced manufacturing lab	9,00,000
3	MODROB	Electronics and telecommunication	Satellite lab	5,00,000

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

The institute being in close vicinity of IIT (Bombay), BARC, RELIANCE and other institutes like VJTI the students /staff can access library and other labs as additional outside infrastructure for research. Outside research lab facility identified and Associated with the lab of Chistiani Sharpline Pvt.Ltd., for providing hands on experience to all students in the field of Mechatronics and Automation.

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

The library provides excellent ambiance for studying. The library can accommodate about 200 students at a time. Central library is open from 08.30 AM to 06.00 PM hours daily during normal working days. However during examinations and preparation days, the library is open from 08.00 AM to 08.00 PM on all days. The institute library has a collection of textbooks, reference books like handbooks, dictionaries, encyclopaedias, manuals, directories etc. on various subjects. Library has procured a collection of 10000+ e-books from Springer Publication.

The library collection includes books on competitive examinations like UPSC, GATE, IES; personality development; management and communication skills.

The collection also includes 75 Indian print journals, bound volumes of back-dated journals, and magazines. Library subscribes to 13 news papers in three different languages.

Library subscribes to Science Direct database (275 international e-journals) and IEEE ASPP+POP database (299 international e-journals). The college central library has a collection of NPTEL educational videos DVDs. The college also has an NPTEL Centre. The library has a membership of National Digital Library, a repository of learning resources. Library has a multimedia room with 10 terminals which provide internet facility to all the students and staff along with headphones and web cams. Access to e-books and e-journals are provided through IP address. Therefore students and teacher can access the same from any PC which is a part of college intranet.

Library use open source software to maintain its records with the help of bar-code. It also provides OPAC to facilitate online catalogue searching.

Students are provided with the book bank facility. University examination question paper of all subjects for previous five years is available in the central library. Scanned copies of question papers are made available since Dec 2016. Old project reports of students are maintained in the departmental libraries which are referred regularly by students of the departments.

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.

NA

3.4 Research Publications and Awards

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

- **Patents obtained and filed (process and product).**

Table 3.4.1: Patents

Sr. No.	Name of the staff	Patents obtained and filed	Year
1	Dr. Vivek Sunnapawar	Solar cooker with trackable parabolic dish :	2011-12

		772/mum/2011	
2	Dr. Vivek Sunnapawar	A nano composite of alumina with improved mechnaical properties for commercial products : 3463/mum/2013	2013-14
3	Dr. Vivek yakkundi	Solar helmet patent no : in 286364	2015-16
4	Dr. Vivek yakkundi	Helmet hvac patent no : in 286362	2015-16
5	Dr. Jayesh J. Dange	Design application no. 283864 for mobile phone cover in class 03-01 is filed, having filing receipt bearing no. 7462	2015-16
6	Dr. Santhosh D. Dalvi	Energy meter for electricity metering and monitoring and method thereof : 3426/mum/2015 a	2015-16

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

Students/faculty have conducted projects in various aspects of industries which include survey of small and medium scale industries in Thane-Belapur industrial estate. For eg., Survey for wastage disposal, learning effectiveness in manufacturing industries.

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?

Yes.

Institute conducts national level conference for faculty and students every year. The proceeding of the conference is published in International Journal of Advance Engineering and Innovative Technology (IJAEIT) with an ISBN Number 978-93-5258-253-2.

National Conference on “Emerging Technology for Innovative India”, was oragnised by the institute and punlished selected papers in International Journal of Advance Engineering and Innovative Technology Vol-3, Issue – 1 (ISSN: 2348 - 7208)

Publication Policies

- Submitted papers will be reviewed by Technical Committees of the Institute.
- All submitted articles should report original, previously unpublished research results, experimental or theoretical, and will be peer-reviewed.
- Articles submitted for the conference should meet these criteria and must not be under consideration for publication elsewhere.
- Manuscripts should follow the style of the IEEE template and are subject to both review and editing.

Table 3.4.2: Composition of Editorial Board

Sr. No.	Name of the Faculty	Editorial Committee for NLC
1.	Dr. Avinash D. Sarode	Editor in Chief
2.	Dr. P.J. Nikumbh	Editor
3.	Dr. P.S. Sheeba	Editor
4.	Dr. R. N. Duche	Editor
5.	Dr. Chandrababu D.	Editor
6.	Dr. J.J. Dange	Editor
7.	Dr. Renu Wasu	Editor
8.	Dr. C.M. Wankhade	Editor
9.	Dr. Kavitha Dhanawade	Editor
10.	Dr. Shilpa Wakode	Editor
11.	Prof. Ninad Totare	Reviewer
12.	Prof. S.D. Narwadkar	Reviewer
13.	Prof. Ajay Kashikar	Reviewer
14.	Prof. Supriya Sonsurkar	Reviewer
15.	Prof. Jayendra Jadhav	Reviewer
16.	Prof. Sunil Satao	Reviewer
17.	Dr. Anil Z. Chhangani	Reviewer
18.	Mr. Rajendra D. Gawali	Reviewer
19.	Ms. Rupali Sawant	Reviewer
20.	Mrs. Vandana Khobragade	Reviewer
21.	Mrs. Dolly Boban	Reviewer

3.4.3 Give details of publications by the faculty and students (Table)

- Publication per faculty
Refer annexure I
- Number of papers published by faculty and students in peer reviewed journals (national / international)
Refer annexure II
- Number of publications listed in International Database (for Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- Chapter in Books
- Books Edited
- Books with ISBN/ISSN numbers with details of publishers

Table 3.4.3.(a): Chapter in Books

Sr. No.	Name of the faculty	Name book	Chapter in books	Associated Database	Books with ISBN/ISSN Numbers	Year
1	Dr. Vivek Sunnapwar	Supply Chain Management Under Fuzziness	Fuzzy-AHP Approach to Improve Effectiveness of Supply Chain	Pages35-59 PublisherSpringer Berlin Heidelberg		2014
2	Dr. Vivek Yakkundi	Analyzing Supplier Selection with Lean Philosophy : Case Study , Supplier Quality Lambert Academic	Analyzing Supplier Selection with Lean Philosophy	Publisher , Germany	978-3-659-83532-2	2016
3	Dr. Avinash Sarode	Supply Chain Management Under Fuzziness	Fuzzy-AHP Approach to Improve Effectiveness of Supply Chain	Pages35-59 PublisherSpringer Berlin Heidelberg		2014
4	Jyoti More	A scalable Data Mining Model for Social Media Influencer Identification	Communications in Computer and Information Science	Springer, 625-631		2016

Table 3.4.3(b): Books with ISBN/ISSN numbers with details of publishers

Sr. No.	Name of the faculty	Name book	Books with ISBN/ISSN Numbers	Year
Department of Computer Engineering				
1	Dr. S. K. Shinde	Data Mining and Business Intelligence	DreamTech-wiley publication , 9789351197188	2015
2		Advanced Database Management System	Wiley-Dreamtech Publication	2014
3		Structured Programming Approach	Wiley-Dreamtech Publication	2013
4	Dr. Pravin Nikumbh	Product-Mix Analysis using Soft Computing: An Eclectic Solution	Lambert Academic Publishing ,Germany , 978-3-659-22388-4	2012

Department of Electronics and Telecommunication Engineering				
1	Prof. Mohd Farhan	Analog Electronics II	978-9-383-35208-1	2013
2		Discrete Electronics Circuit	978-9-383-35209-8	2014
3		Satellite communication	978-9-383-35205-0	2014
4		Electronic devices and circuits	978-9-383-35219-7	2015
5		Satellite communication and networks	978-9-383-35211-1	2016
Department of Applied Mathematics				
1	Mrs. K. V. Nimi	Applied Mathematics II	978-81-924-2746-1	2013
2		Applied Mathematics I	978-93-8335-242-5	2016
3	Mrs. Ratnakumari K.V.S	Applied Mathematics II	978-81-924-2746-1	2013
4		Applied Mathematics I	978-93-8335-242-5	2016

- (Citation Index, SNIP, SJR, Impact factor table, h-index)
(Refer Appendix for above details).

3.4.4 Provide details (if any) of (Table)

- **research awards received by the faculty**
- **recognition received by the faculty from reputed professional bodies and agencies, nationally and internationally**

The faculty has received the research awards and recognition as tabulated below:

Table 3.4.4: Research Awards

Sr. No.	Name of the Faculty	Research Awards Received	Recognition Received
1	Dr. Vivek Sunnapwar	P. V. Ramarao Memorial Award For outstanding contribution in Industrial Engineering	Indian Institution of Industrial Engineering for the contribution in growth of Industrial Engineering
2		Devi Thadani Award	Indian Institution of Industrial Engineering for the contribution in

			growth of Industrial Engineering
3	Dr. Vivek Yakkundi	Fellowship of IIIE	--
4	Dr. Avinash Sarode	Fellowship of IIIE	--
5	Dr. S.S. Pawar	UoM Avishkar (2013) for research project titled as "CFD analysis in Helical Coils"	--
6	Dr. Nilesh Ghongade	UoM Avishkar (2013) for research project titled as "Limb Alignment and Analysis in TKR"	--
7	Dr. S.D. Dalvi	UoM Avishkar (2014) for research project titled as "Energy Conservation Analysis in Mumbai Mega City"	--
8	Dr. Sheeba P. S.	Best paper award in "International Conference on Advances in Control and Optimization of Dynamic Systems", 2007	Nomination for International Scientist of the year 2009, International Biographical centre of cambridge, England
9		3rd best project award for BE student project in 4th National Level conference on "Emerging Technology for Innovative India, 2016"	--
10	Ms. Prerana Shrivastava	Best paper award in IEEE International Conference on Advanced Computing Technologies, ICACT, September 2013	--
11		Best paper award in IEEE International Conference on Contour on computing Technologies, March 2010	--
12		Awarded the best Ph. D. Work during Ph. D. Collquia at International Conference on Emerging Trends in Engineering and Technology ICETET, December 2013	--
13	Dr. Shilpa Wakode	Best Paper Award in International Conference on Contours of Computing Technology organized by B.G.I.T., Mumbai in association with Springer and IEEE Bombay Section 13-14 Mar 2010.	--
14		Best Paper Award in INCOMM-10,	--

		IEEE National conference on Recent Trends in Instrumentation, Communication and Microelectronics organized by S.V.I.T.S., Indore on 9-10 April 2010.	
15	Ms.Nandini Nag	Best papers in signal processing session	Best paper award 2017
16	Dr. R. N. Duche	Avishkar at Ph.D. level in Mumbai University	Avishkar 2014
17		Best downloaded paper	IEEE sensor Journal 2013
18	Ms. Jyoti More	Awarded Gold Medal for securing first position in M. Tech. Computer	
19	Ms. Jyoti More	Awarded Silver Medal for securing II position for project presentation (AVISHKAR) at University level	

3.5 Consultancy

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

The institute has industry institute interaction cell, which bridges the curriculum and technology application

Table: 3.5.1 Consultancy details

Sr. No.	Branch Namez	Nature of Consultancy	Order Reference Number	Cost of the Project (INR)	Duration	
					From	To
1	Mechanical	Energy audit(RSPL,Chhatisgarh)	SCPL-PR-475-010815	300000/-	2015	2016
2		Energy audit in TPTPL, Rayong	SCPL-AL-103-140814	500000/-	2013	2014
3		Energy audit	SPCE-EA-MTNL-120611	400000/-	2011	2012
4	Electrical	Kalyan Dombivali Municipal Corporation	WO No:KDMC/CE/104 dated 04.06.2012.	36,000/-	2012	2013
5			Contd.	36,000/-	2013	2014

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

The consultancy promotional policy of the institution is as following:

- Training and Placement Cell and alumni facilitate institute to develop contact with the industries to promote consultancy activities.
- Based on the available faculty expertise, problems of industrial systems and process in areas of design, control and optimization are identified for consultancy work.
- College and the industries formally signing of MoUs clearly mentioning the conditions of sharing expertise, manpower, facility, revenue etc. in order to safeguard any legal issues in later phases.
- Encourage students and faculty to undergo industrial training in vacation periods for better exposure.
- Revenue sharing will be done as 30:70 among institute and directly involved staff in the consultancy project.

List of consultancies for last four years are same as Table 3.5.1

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

The institute encourages the staff to utilize their expertise and details are given in Table: 3.5.1

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

Revenue generated during the last four years Rs.12,72,000 (Refer Table: 3.5.1)

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?

We have a policy of sharing the income generated through consultancy among staff involved (70%) and institute (30%).

3.6 Extension Activities and Institutional Social Responsibility (ISR)

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

- Donation of needy items such as food, fruits, notebook, clothes etc.
- Tree plantation
- Cattle feeding
- Swach Bharat Abhiyan

- Yogathon – 2016
“YOGATHON – 2016”, the yoga workshop was conducted on 16th – 21st June 2016 for college faculty and staff.

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

Institute has created the position of Dean Student affairs, a professor grade faculty to monitor the student activities and their involvements in social and cultural activities. He coordinates college annual function, exhibition of automobiles, poster competition, tree plantation, clean drive movement in public places (railway station, hospital premises, bus stop) etc. to foster leadership qualities, event management, personality development etc in students.

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

Stake holders such students, parents, faculty members, industries and alumni are the core element of education system through which the overall performance and quality of institution is reviewed through feedbacks. In order to address these issues, following steps are undertaken at the institute level:

- Feedback form/formats are designed for the stakeholders. This includes alumni feedback, student feedback, and course exit survey.
- Feedback is also collected from companies. This feedback is discussed in meeting of training and placement cell.
- Student feedback for the respective course is conducted in each semester.
- At the end of the academic programme an exit survey is conducted for the final year students.

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.

- Students from our institute reach out to the villagers and their children through camps as well as for educational activities.
- EDC is a student organisation that inculcates entrepreneurship skills and drives interested students in starting their own ventures.

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?

- Institute have established NSS units, staffs and students participated in various social activities locally.
- College have a policy for those students involving NSS will be given some academic enhancement of attendance and internal assessments. They will

be provided certificates of merit and given wide publicity

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?

Table 3.6.6: Blood Donation Details

Year	No. of students donated blood	No. of staff donated blood	Total donors
Oct 2016	123	11	134
Oct 2015	93	12	105
Oct 2014	101	10	111
Oct 2013	94	13	107

- Institute engages faculty and its students for community network to learn ethical values, social responsibilities and good citizenship among the students.
- Institute conducts :-
 - Blood donation camp (Refer Table 3.6.6)
 - Marathi literature promotion events : Marathi Wangmaya Mandal has setup in the institution which is involved in celebration of different cultural festivals like Ganesh Utsav and Holi to let the students to understand various cultures in India
 - Cyber security awareness program
 - Events management through Zephyr annual gathering
 - NSS
 - Medical check up
 - Announcing research developments through bulleting Yoga camp
 - Survey was conducted in waste management techniques, energy management and effectiveness of learning in manufacturing industries. Paper was presented for the results as the outcome of those surveys

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.

Community outreach health programs for prevention, detection, screening, management of diseases and rehabilitation by cost effective interventions.

Outreach camps enables student to understand problem of rural areas as they directly interact with villagers. This helps students how to mentor, which lead to development of leadership skills and team work. Faculty members are also the part of this system for guiding and participating in the activities which leads to

increase in interaction between students and faculty. This interaction further helps to create the healthy relationship between students and faculty.

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?

Extended activities of community / institution networking resulted in

- Blood donation camp on Chairman's birthday every year.
- Visit to old age home and orphanage.
- Women awareness regarding dowry abolishment and female foeticide.
- Importance of voting in democratic system.
- Environment protection awareness programs.
- Yoga camp
- Promotion through women development cell
 - Installation of grievance/suggestion box at various locations.
 - Visit to a NGO named as Abhilasha(for women empowerment)
- Confidence building of first year student through Anti ragging cell.
- Meditation programme to understand stress management effectively.

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.

The institute conducts exams for GATE, UPSC, PSU, etc jointly in collaboration with TCS. Also participates in various academic activities which include curricular and co curricular activities outside the campus along with VJTI.

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.

TCS has awarded certificate for smooth functioning of the activities which are carried out in collaboration with them.

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.

- The Training and Placement Cell, Entrepreneur Cell and alumni association maintains relationship with industries or institutions through signing of MoUs
- Developed laboratories in industrial collaboration.

- Projects for final year, ME and research students.
- Curriculum development by industries (Wipro- Mission 10X, ISHRAE)
- Research centre got software and training for design and development (Godrej)
- Industrial practical sessions for all Second Year Mechanical students in Automation (Christani Sharpline).
- Industrial Training in vacations for undergraduates and staff
- Funding and facilitating Students projects in reputed industries
- Placements and exposure to organizations of HVAC through ISRAE

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.

Table 3.7.2: MoU List

Sr. No.	Name of the party involved in MoU	Date of signing	Signing Authority	Claims/benefits from institute	involved Claims/benefits to party	Activities executed Through MoUs
Department of Mechanical Engineering						
1	LTCE and SENERGY SYSTEMS	2015-16	Director (SENERGY), director (LTCE)	UG,PG Projects, paper publication and presentations, training, seminar, recruit UG and PG students	Research project, Consultancy, Faculty Development , Developing center of Excellence	Training, Seminar, Recruitment
2	LTCE and CHRISTIANI SHARPLINE	2016-2017	Director(SHARPLIN), principal (LTCE)	Industrial visits, expert lectures, identify corporate training areas Internship, Software Training.		Industrial visit, Expert Lecture, Software Training, Project.
3	LTCE and SARASWATI COLLEGE OF ENGINEERING	23/11/2015	Principal (LTCE), Principal(Saraswati College of Engineering)	Academic and research Cooperation	Sharing of knowledge and expertise	Students attending various seminars and competition
4	LTCE and GEOMETRIC LIMITED	05/11/15	Head- product and Technologies(geometric), Deputy manager – Legal (geometric)	Infrastructure of systems, LCD projector etc.	Active pursuit in improving DFMPPro Enhancing this	Training Stackup, free of cost certification course

			Principal (ltce) Mechanical Hod (LTCE)		Technology	
5	LTCE and KNORR BREMSE	2016-17	Director, Principal (LTCE)	Internships, Recruitment UG and PG projects	PG projects	ME Project
6	LTCE andGUPTA MECHANIC ALS PVT LTD	2016-17	Director, Principal (LTCE)	Recruitment, UG projects	UG projects	UG Projects
7	LTCE and SIEMENS/AD CC LTD	2016-17	Director, Principal (LTCE)	Internships and Training	Internship	Internships and Training
Department of Computer Engineering						
1	LTCE and TCS	05/12/12	Director, Principal (LTCE)	Internship,Project, Software Training	Internship	Project, Software Training
2	LTCE and MICROSOFT	13/09/13	Director, Principal (LTCE)	Internship,Project, Software Training	Internship	Project, Software Training
Department of Electronics and Telecommunication Engineering						
1	LTCE and MOBICOMM LTD	20/06/2016	Director, Principal (LTCE)	Funding, Training	Practical Knowlwdge	Workshop and Drive Test
2	LTCE andSolacecare sol pvt ltd	18/02/2017	Director, Principal (LTCE)	Funding and employment	Internship and Training	Training
Department of Electrical Department Engineering						
1	LTCE andLandT	2005-06	Director, Principal (LTCE)	Students Benefit	Protecti on Lab Compon ents	Practical Performanc e

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.

- L & T has established switch gear and protection lab in institute which give latest technology in the required field.
- Job junction conducted by ISHRAE in the institute in which many students got selected in different companies in HVAC field.

- Mission 10X programme sponsored by Wipro for training the staffs in effective teaching.

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

Please refer to table no 3.1.8 for list of eminent scientist who visited the institute.

Institute conducts NLC for faculty/students every year the proceedings of the conference are published in International Journal of Advance Engineering and Innovative Technology (IJAEIT) with an ISBN code.

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

a) Curriculumdevelopment/enrichment

Faculties have actively participated in curriculum development/syllabus revision of University of Mumbai.

b) Internship/On-the-jobtraining

c) Summerplacement

Kindly refer Appendix for Internship and summer placement records.

d) Faculty-exchangeandprofessionaldevelopment

Faculties are resource persons for conducting various professional development programmes outside the institute and university.

e) Research

NIL

f) Consultancy

Refer Table no 3.5

g) Extension

NIL

h) Publication

Refer Table 3.5.1

i) StudentPlacement

Student placement carried out through Infosys Campus Connect Programme (from 24/02/2006) through collaboration.

j) Twinningprogrammes

NIL

K) Introduction of new courses

NIL

l) Studentexchange

NIL

m) Anyother

3.7.6 Detail on the systematic efforts of the institution in planning, establishing and implementing the initiatives of the linkages/collaborations. Any other relevant information regarding Research, Consultancy and Extension which the college would like to include:

Systematic efforts are taken up by the Research committee (R.C) by conducting number of brainstorming session to make systematic efforts in

- Identifying the areas where improvement is required as a facility to conduct the research.
- Identify the resources/ infrastructure outside the institute either in other academic/ research centre or industries
- Interns approached them with a proposal to get collaborated through MoU for executing the research projects.
- Identifying the funding agencies such as AICTE/ University, DST etc for financial assistance.
- Identifying and inviting the outside eminent resource person for expediting and contributing to the research work.
- Identifying the resources people for upliftment of inside researchers through training of advance tools/ software's

The MoU's as collaboration for execution of research activities are included in Table 3.6.9 and 3.1.8

CRITERION 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 policy of the Institution for creation and enhancement of infrastructure that facilitate effective teaching and learning is as follows,

- All the physical facilities are as per the AICTE and University of Mumbai norms.
- Facilities are upgraded in infrastructure as new courses and additional intake is introduced.
- Laboratory equipments are added as per the requirement of curriculum.
- Library resources are upgraded regularly in terms of number of titles and volumes.
- Titles and number of volumes requirement is also provided by the subject in charges.
- Internet connectivity is provided to all computers to enhance the access to resources.
- The institute has different facilities like IT resources, departmental laboratory equipments, library resources, sports ground, hostel, first aid room, reprographic facility, canteen and gymnasium.
- Each department has classrooms, seminar hall and tutorial rooms. Seminar hall is equipped with audio and video facility.
- A computer is provided to faculty.
- All the departments have a separate computer lab.
- All the facilities are upgraded as per the requirement of curriculum.
- Central Auditorium is equipped with all ICT facilities.

4.1.2 Detail the facilities available for,

a) Curricular and co-curricular activities – classrooms, technology enabled learning spaces, seminar halls, tutorial spaces, laboratories, botanical garden, Animal house, specialized facilities and equipment for teaching, learning and research etc.

- As a part of co-curricular activities, paper presentation contest, quiz contests, project exhibitions and other competitions are organized in the institution and students are encouraged to participate in such events.
- Industrial visits are arranged for students to get acquainted with the industrial environment and latest technology.
- Guest lecturers of subject experts, entrepreneurs are arranged for the motivation of the students and enhance their learning skills
- Every year a Technical Festival Tech Zephyr is conducted which includes various technical and skill development activities.
- Training programmes in area of personality and soft skill development are

also arranged from various professional trainers.

Table 4.1.2.1 Detail of various facilities available in each department

Department	Facilities Available							
	Class Rooms	Seminar Hall	Tutorial Rooms	Laboratories	Technology Enabled-learning Space	Teaching Equipment	Any Addition Facility for Research, Teaching, Learning	Computers With Internet
Mechanical	11	01	3	22	Seminar Hall/ Laboratories	OHP (02), Projector (02), Charts (53), Prototype models (41)	PG Lab, FMS Lab	181
Computer	6	01	4	12		4 (Projectors+ Screen), Audio Systems	1 Research Laboratory	237
Electronics and Telecommunication	04	01	01	10		LCD Projector-(02) Projector(01) White Board(10)	Research Laboratory	50
Electrical	03	01	01	08		LCD Projector(01), Screen, OHP(02)		45
Electronics	03	01	01	08		White board, OHP, LCD Projector	Simulation Lab	45
First Year Engineering	07	01	01	06		Physics; Chemistry; Language Lab MATLAB/ SCI LAB (shared)	OHP	

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

Sports:

Out Door Games

- Institute has a large grass ground of area 1250Sq M, suitable for all outdoor sports.
- Ground is protected by boundary wall and surrounded with good plantation.
- Annual Sports event i.e., Sports Zephyr is conducted every year with different sports activities

Indoor Games

- Institute also has facility of large open stilt area and additional rooms for various indoor games.
- There is a provision of Gymkhana.

Auditorium

- Indoor auditorium is available with all ICT facilities with a seating capacity of 350.

NSS Activity

Institute has NSS Chapter. Students participate in various NSS activities. Activities include social welfare, plantation of trees, providing basic education to the poor local children, blood donation camp and one week field camp to nearest village. Field camp is meant for making them aware about field level problems and their solutions.

Cultural Activity

Annual cultural festival Cult Zephyr is conducted every year. Students participate in various activities to enhance their cultural skills. The institute conducts the cultural activities like Independence Day Celebration, Republic Day Celebration, Ganesh Festival, Navratri Celebration, Marathi Bhasha Divas, Farewell to final year students and Fresher's welcome etc.

Public speaking

Activities like Leadership Skill development, Group Quiz, Debate and Group discussions are conducted to enhance public speaking skills.

Communication skills development

Work shop and training programmes are arranged on soft skill development by internal and external experts and Training and Placement cell. Department of Communication Skill is actively involved with various departments in conduction of programmes.

Health and Hygiene

- Water purification and drinking facility is available in the college campus on each floor.
- The institute has housekeeping staff for regular services required

- First-aid facility is available in every department.
- A open and closed talk is arranged for male and female students through mentors /doctors.
- A Canteen Committee monitors the quality of food and hygiene on regular basis.

Yoga

- Faculty were deputed for NSS Yoga Programmes Conducted by University of Mumbai in 2016.
- Yoga programme is conducted for the benefit of students and faculty. program with the help of reputed yoga practitioners.
- Art of Living courses are conducted for students as well as for staff.
- All above activities are conducted in infrastructural facilities or open spaces.

Any Other

Canteen is located at ground floor. For the uninterrupted power supply a stand by 125 KVA /100 KW generators is available.

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).

- Infrastructure, at present, is as per the norms of AICTE, and University Of Mumbai and Director of Technical Education Maharashtra.
- The Institute was started in 1994 with, Mechanical, Electronics and Computer engineering programme.
- In 1995 Electrical and Electronics and Telecommunication programme in 2001 was introduced.
- The post graduate course in Mechanical and Computer Engineering was stated in the year 2007-08 and 2011-12 respectively.
- The institute is a recognized research center for perusing Ph.D in Mechanical and Computer engineering since 2009-10 and 2015-16 respectively.
- All the facilities in terms of space, number of rooms and laboratory equipment is upgraded as per the requirement of curriculum and norms.
- The Institute had made provisions for future expansion in anticipation of this academic growth. Sufficient area is marked for future growth assuming still higher academic growth in future.
- The institute has additional instructional area to accommodate new programs.

The details of amount spent is given in Table 4.4.1 and Master Plan is given in Appendix.

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

- A ramp is provided at appropriate entrance locations.
- Necessary provisions are made in washrooms.
- Laboratories have adequate area so that physically challenged students will not find it difficult to move around.
- At the time of examination additional time is given as per university guidelines.
- Writer for examination is allowed as per university guidelines.
- There is provision of Lift in each building to ensure the smooth passage of all students.

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

- Hostel Facility – Accommodation available-YES
- Recreational facilities, gymnasium, yoga center, etc.-YES
- Computer facility including access to Internet in hostel-YES
- Facilities for medical emergencies-YES
- Library facility in the hostels-NO
- Internet and Wi-Fi facility-YES
- Recreational facility-common room with audio-visual-NO
- Equipment-NO

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?**On campus and off Campus Facility**

- A talk is arranged for students and staff to make them aware about health care.
- First-aid medical box is available in each department.
- Hospitals are available at a distance of few hundred meters.
- Institute is located in the heart of city, so quick transport facility is available in case of emergency.
- Students and staff are made aware for First Aid Medical Help and situation handling in case of emergency.
- In laboratory students are made aware about the hazardous effect of electrical, mechanical and chemical energy that may arise if not handled properly.

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 Center, Canteen, recreational spaces for staff and students, safe drinking water facility, auditorium, etc.

Institute has made the provision of space for various common activities required on the campus. They are as follows

Table No 4.1.7.1 Common Facilities and Location

Sr. No.	Description	Location
1	Women's Development Cell	Room No A-401
2	Career Guidance	Room No A- 408
3	Placement Unit	Room No A- 408
4	Girls Common Room	Room No C-210
5	Boys Common Room	Room No A-516
6	Auditorium	Room No A-510
7	Canteen	Ground Floor C-006
8	IQAC Cell	Ground Floor A-001
9	Grievance Redressal Unit	Room No A-401
10	Drinking Water	On each Floor of Building

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?

Library has an advisory committee. As per guidelines received from the Executive Director (standing order LTJSS/ED/Coordinators/LTCE/2006/014 dated 20-04-2006) the Library Committee is composed of faculty in-charge of all departmental libraries as ex-officio members of the committee and the Librarian as member secretary of the same. The committee is chaired by one of the committee member deputed by Principal. The committee works on following guidelines –

- The committee shall not involve in day to day operation of the library.
- It will approve books, number of copies to be procured in the library.
- It will approve journals, periodicals and magazines.
- It will frame policies for making improvements in the library services.
- It will estimate the number of books required for each program and therefore for each course as per norms.
- It will explore possibilities of e-journals and its subscription.
- It will take feedback from users regarding facilities.
- It will monitor utility of handbooks, reference books and journals.
- It will ensure proper upkeep and adequacy of reading space for first year students.
- It will ensure procurement of educational CDs for each program / course.

Committee Responsibilities

1. To frame the library policies and to suggest means of integrating these policies with the teaching program;
2. Advise and assist the Library Staff in the selection and weeding / de-selection process
3. Assist in allocating funds budgeted for the library;
4. Seek the cooperation of the faculty in planning toward the integration of library services with the instructional program;
5. Stimulate the students of the college to optimize the use of library materials;
6. Assist and advise the library staff in assessment of the effectiveness of the library and assist the staff in implementing changes resulting from assessment;
7. Study the needs of the library and recommend ways of improving the book collection, its accessibility, and its use; and
8. Consider such other matters pertaining to the library.

4.2.2 Provide details of the following:

- Total area of the library (in Sq. Mts.) : 653.68
- Total seating capacity : 200
- Working hours – On working days: 8:30 am to 6 pm
Before and during examination days: 8:30 to 6 pm ; Reading room open till 9 pm.
- **Layout of the library:**

At the entrance of the library there is baggage counter on left hand side and Librarian's cabin on the right side. Next to the cabin is the circulation counter. Next to the counter is a reading room area for 36 users followed by a multi-media room for accessing e-resources. It has seating capacity for 30 users and includes 10 computers with Internet connectivity.

Users are allowed to avail Internet access on their personal laptops too. On the left hand side next to the baggage counter there is a reading room section for 44 users. Periodicals are displayed along this reading section which is very prominently visible as soon as user enters the library. The section includes relaxing corner for light reading like news papers and magazine.

Next to periodicals section along the left side of the center passage is the print books collection arranged using Dewey Decimal Classification. There used to be a separate reference section, but it was observed that it remains un- utilized by the users. Therefore, the first rack at the beginning of each row is utilized to display reference books related to the subject for which the books in that row belongs to. The response is observed positive.

At the end of the book stack area there is another reading room section having seating capacity of 40 users. A corner of this section is reserved for faculty (10

seats). The library has a provision for drinking water and refreshing rooms; pantry and store area. A separate reading room on the same floor belongs to the library where 60 students can study at a time.

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.

Table No. 4.2.3 Amount spent on procuring new books, journals and e-resources during the last four years.

Library Holdings	2016-17		2015-16		2014-15		2013-14		2012-13	
	No	Total cost	No	Total cost	No	Total cost	No	Total cost	No	Total cost
Text book	125	63094	1395+ 10141	253582 5	1519	41168 2	589	199220	363	135092
Journals / Periodicals	81	217115	59	163630					83+1 5	882526
E- Resources	338 + 299	163597 2	338	495477	Delnet	11500	Delnet	16500	Indes t	

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 : NO
- Federated searching tools to search articles in multiple databases : NO
- Library Website : NO
- In-house/remote access to e-publications : In-house access
- Library automation : YES
- Total number of computers for public access : 11
- Total numbers of printers for public access : 1
- Internet band width/ speed : 2mbps
- Institutional Repository : NO
- Content management system for E-learning : NO
- Participation in Resource sharing networks/consortia (like In-flibnet) : INDEST

4.2.5 Provide details on the following items:

- Average number of walk-ins : 170/ day
- Average number of books issued/returned : 80 /day
- Ratio of library books to students enrolled : 17.2 per student

- Average number of books added during last three years :
- Average number of login to opac (OPAC) : 20 (Open Access)
- Average number of login to e-resources : 2675/ month
- Average number of e-resources downloaded/printed : 2104/ month
- Number of information literacy trainings organized : As per requirement
- Details of “weeding out” of books and other materials: No books weeded out yet. The Weeding policy is prepared. And the first lot of books to be weeded is under process.

4.2.6 Give details of the specialized services provided by the library

- Manuscripts : NIL
- Reference : 2500+
- Reprography : YES
- ILL (Inter Library Loan Service) : NO
- Information deployment and notification: YES
- Download : YES
- Printing : YES
- Reading list/ Bibliography compilation : NO
- In-house/remote access to e-resources : In-house
- User Orientation and awareness : As per requirement
- Assistance in searching Databases : YES
- INFLIBNET/IUC facilities : INDEST

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

Library has an open access to all the users. Library staff helps students and faculty to search books and information using OPAC, personal assistance is given to help them locate required books, recalls books if issued for a longer time to particular user and made it available to the needy. An orientation is arranged from time to time for library users about using e-books and e-journals.

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

Library staff provides help to them.

4.2.9 Does the library get the feedback from its users? If yes, how is it analyzed and used for improving the library services. (What strategies are deployed by the Library to collect feedback from users? How is the feedback analyzed and used for further improvement of the library services?)

Library has predestinated feedback forms which are kept on the circulation counter and open to fill-up by any user as per their wish. When students passes out from the college he asked to fill-up this form compulsorily. The collected data is entered in excel sheet and is presented in front of library committee for review and discussion.

4.3 IT Infrastructure

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

- enabled-(Refer Table No 4.3.1)
- Licensed software-(Refer Table No 4.3.1)
- Number of nodes/ computers with Internet facility-(Refer Table No 4.3.1) Number of computers with Configuration (provide actual number with exact configuration of each available system)- 652 (Refer Table No 4.3.1)
- Computer-student ratio:- Average 1:4
- Stand alone facility:- UPS is provided to various computer in each department for back up facility
- LAN facility- (Refer Table No 4.3.1)
- Wifi facility:- Entire campus is WiFi

Table 4.3.1 Computer Details

Sr. No.	Particular	Configuration	Nodes
1	Number of computers with Configuration (provide actual number with exact Configuration of each available system)	DELL Vostro270s, Intel® Pentium(R) CPU G2030 @ 3.00GHz × 2, RAM-4 GB DDR-III, SATA HDD-500 GB, Monitor Dell-18.5", USB Keyboard & Mouse	167
		DELL Vostro3902, Intel® Pentium(R) CPU G3260 @ 3.00GHz × 2, RAM-4 GB DDR-III, SATA HDD-500 GB, Monitor Benq-17", and Dell-17", USB Keyboard & Mouse	329
		ACER-IE3976, Intel® Pentium(R) CPU G3250 @ 3.00GHz × 2, RAM-4 GB DDR-III, SATA HDD-500 GB, Monitor Acer LCD-	100

		18.5", USB Keyboard & Mouse	
		ACER-IE3979. Intel® Pentium(R) CPU G3250 @ 3.00GHz × 2, RAM-2 GB DDR-III, SATA HDD-500 GB, Monitor Acer LCD- 18.5", USB Keyboard & Mouse	16
		ASUS-M11AD, Intel® Pentium(R) CPU Core I3-4150 @ 3.50GHz × 2, RAM-4 GB DDR-III, SATA HDD-500 GB, Monitor Benq-17", USB Keyboard & Mouse	14
		ASUS-K30AD, Intel® Pentium(R) CPU G3240 @ 3.00GHz × 2, RAM-4 GB DDR-III, SATA HDD-500 GB, Monitor Benq-17", USB Keyboard & Mouse	18
		Intel DG41WV Intel® Dual core 3.00GHz × 2, RAM-4 GB DDR-III, SATA HDD-500 GB, Monitor Benq-17", USB Keyboard & Mouse	2
		Intel 915GAVL Intel® Pentium(R) 4 CPU 2.66GHz × 2, RAM-2 GB DDR-II, SATA HDD-360 GB,	6

		Monitor Dell-18.5", PS2 Keyboard & Mouse	
2	LAN facility (LAN configuration, Speed and type of LAN connections.)	CAT 6 Cable 10GBASE-T, Used in Lan Connectivity, Internet Speed with Service Provider- ISP- 1) Airtel-10MBPS, 2) TATA-30MBPS - All Lease Lines	
3	Wi-Fi facility (speed, configuration and If any other details you can provide)	Aruba AP 205 Wifi Router used with MTNL-10MBPS,	50 Routers in Campus
4	Number of nodes/ computers with Internet facility		647
5	Total Computer		652

Licensed Softwares

Department of Mechanical Engineering			
Software category	Name and details of the software	No. Of users	Cost of the software (rs.) (lakhs)
Mechanical S/W	Ideas 12 nx series ug -5nx	04	3.404 Lakhs
	Autodesk inventor series 7.0	01	0.47 Lakhs
	Ansys 11.0 Cfd	50 25	26 Lakhs
	Autocad 2008	20	2.6 Lakhs
	Pro engineer 4.0	5	4.5 Lakhs
	Ptc creo	50	5.25 Lakhs

Department of Computer Engineering			
Software Category	Name and details of the software	No. Of users	Cost of the software (rs.)
Operating System	1) sco unix rel. 5.0	01	109520/-
	2) windows 3.11 for workgroup	01	1650/-
	3) windows nt server 4.0	05	19500/-
	4) windows nt workstation 4.0	01	5500/-
	5) novell netware 5.1	100	113400/-
	6) windows 95	01	2300/-
	7)novell netware 5.1	05	27000/-
	Red hat linux ver.-9.0	01	6500/-
	Ms windows 2003 server	25	28000/-
TOTAL USERS		140	313370/-
COMPILER	Cobol – 85, unix version	01	40000/-
	2) borland c++, win. Version	01	6500/-
	3) turbo c++ (under dos)	01	2300/-
	4) visual c++ 5.0	01	2920/-
	5) turbo c/c++ suite (qty.-04)	04	10800/-
	6) turbo assembler ver 5.0	01	4200/-
TOTAL USERS		09	66720 /-
APPLICATION SOFTWARE	1)nashot antivirus	01	10000/-
	2)visual basic 5.0	01	2920/-
	3)visual foxpro ver 8.0	01	3700/-
	Ms office xp(prof.)	05	27020/-
	Ms visual studio.net 2003(prof)	05	15750/-
	Norton antivirus multi user	05	7250/-
	Box server edition		
	Norton antivirus desktop 2004 (qty.-04)	04	6600/-

	Adobe kit ver 7.0	01	20100/-
	Macromedia web design studio mx 1.1	01	10000/-
TOTAL USERS		24	103340/-
Database software	Oracle 7.0 workgroup (sql)	01	63825/-
	Sybase sql	01	23455/-
	Power builder 5.0	01	9900/-
	Oracle 9i std. Edition	05	55500/-
TOTAL USERS		08	152680/-

Department of Electronics and Telecommunication Engineering		
Software	NO. OF USERS	COST OF THE SOFTWARE(Rs.)
COMMSIM 7 (5 user) purchase in 2005	15	25000
Micro Wind (5 user)purchase in 2008	05	350000
B2 Spice AID V5 Professional for windows (5 user)purchase in 2008	05	225000
Matlab	50	450000
Simulink	20	

Department of Electrical Engineering			
Software Category	Name and details of the software	No. Of users	Cost of the software (rs.)
Electrical S/W	MATLAB SOFTWARE	05	
	i)License no.1 (266343)		
	a)MATLAB (1 user)		43,844.00
	b) Simulink		43,844.00
	c) MATLAB compiler		54,226.00
	d)Sim power system		54,226.00
	ii) Liecense no.2(266344)		
	a) MATLAB (1 user)		43,844.00
	b) Simulink		43,844.00
	c) Filter design toolbox		21,691.00
	d) Signal processing toolbox		18,228.00
	iii) Liecense no.4(266346)		
	a) MATLAB (1 user)		43,844.00
	b) Simulink		43,844.00
	c)control system toolbox		21,691.00
	iv) liecense no. 5(266347)		
	a) MATLAB (1 user)		43,844.00
	b) Simulink		43,844.00
	iv) liecense no. 6(266348)		
	a) MATLAB (1 user)		43,844.00
b) Simulink	43,844.00		
TOTAL COST		6,08,502.00	

Department of Electronics Engineering			
Software Category	Name and details of the software	No. Of users	Cost of the software (rs.)
Application Software	Matlab	05	6,70,552.50/-
	Active HDL 6.1 with Simplicity Pro	05	1,80,000.00/-
	Multisim	05	98,000.00/-
	Ultiboard	05	98,000.00/-
	Orcad	01	1,26,883.00/-
	Microwind	05	3,85,000.00/-
	Active HDL Upgraded version	10	3,31,500.00/-

Library
1. "Library management system in 2002 at Rs. 50000/- 2. SOUL Version 1 from INFLIBNET, UGC in 2004 for Rs. 20000/- 3. SoftLib Ver 5.0 in 2008 at Rs.15000/-

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

Following facilities are made available to faculty and students.

- Every department has a separate computer lab with Internet connection
- Desktop computers are provided to faculty with Internet facility to enhance the teaching learning process.
- Classrooms are provided with Internet connection/WIFI
- WiFi Network is available on the campus.

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

- Institute has three separate lines for Internet connection with the speed of 50MBPS.
- 652 computers are connected to the Internet.

- WIFI facility is available in entire campus. Institute has implemented ERP facility. It has its own server and WEB Server.
- ERP has various modules like Academic, Administration, Leave Sanction, Asset Management and Student System. Faculty upload their teaching plan, syllabus, teaching content, PPT, notes etc through ERP.
- In future many new modules will be rolled and can be accessed through mobile.

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

The institute has policy for provision of annual budget in various areas for procurement, up gradation, deployment and maintenance. The details are given in appendix.

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?

- Computers are provided to faculty and each department has separate computer lab with Internet connection
- Students and faculty use these computers for accessing various WEB Tools, NPTEL Lecture Series. This helps to enhance the learning skill beyond the classroom.
- Students are encouraged to register and avail the facilities of Digital India like National Digital Library, National scholarship Portal, Digital Locker, and Open Source Software's
- Class rooms have provision of Internet/WiFi.
- Institute has implemented ERP facility. It has its own server and WEB Server.
- ERP has various modules like Academic, Administration, Leave sanction, Asset management and Student System. Faculty uploads their teaching plan, syllabus, teaching content, PPT, notes through ERP.
- In library a separate Multimedia Room is provided with computers and Internet connection and reprographic facility.
- There is a collection of CD in various areas of software's and learning resources. Library has subscription for IEEE and Springer. Springer Subscription can be accessed in campus from any computer.

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 center of teaching learning process and render the role of a facilitator for the teacher.

- Learning activities and technologies are deployed in our college is through ERP System for students and Faculty.
- In this portal subject teacher is providing study material in the area of Syllabus, Teaching Plan,
- All the students can communicate and interact with faculty through email.
- Students and faculty use NPTEL lecture series and Digital Library resources.

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?

- Students and faculty are encouraged to avail the various facilities of National Knowledge Network.
- Students are encouraged to register and avail the facilities of Digital India like National Digital Library, National Scholarship Portal, Digital Locker and various APPs

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 Budget for maintenance is then sanctioned by the central office.
- The utilization of allocated budget and progress is monitored by the college authority.

Table 4.4.1: Budget allocation and utilization

	Facilities	Amount Allocated	Amount Spent
2015-16	Building	10000000	9139092.00
	Furniture	5000000	6346913.00
	Equipment	2500000	710020.00
	Computer	12500000	13752058.00
	Vehicles	7500000	7423720.00
	Any other	150000000	138594077.12
2014-15	Building	10000000	9437576.00
	Furniture	2500000	1045041.00
	Equipment	2500000	176000.00
	Computer	5000000	1305817.00
	Vehicles	7500000	7952399.00
	Any other	10000000	111132739.55
2013-14	Building	15000000	155994972.00

	Furniture	3500000	3468129.00
	Equipment	2500000	2194465.00
	Computer	5000000	5038497.00
	Vehicles	5000000	7736361.00
	Any other	150000000	148538368.28
2012-13	Building	5000000	418590.00
	Furniture	3000000	3320148.00
	Equipment	1000000	680422.00
	Computer	500000	585139.00
	Vehicles	5000000	5463341.00
	Any other	120000000	127273479.48

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

- There exist a maintenance section and in charge which looks after development and maintenance of infrastructure.
- This team looks after the daily maintenance of civil works, furniture repairs, civil work etc.
- There is a Faculty/staff In charge with responsibility of overall electric works, which also has a team of electricians working under him to look after electrical maintenance.
- Every department has laboratory in charges and staff assigned to look after maintenance of equipment.
- Computer Maintenance request is placed through ERP and handled by maintenance in charges. The maintenance of rest of the facilities is carried out through the AMC as per requirement.
- Typically, the AMC is provided in the area of maintenance of Water Coolers, Water Purifiers, Air Conditioner, Computers, Internet and WiFi Facility and House Keeping.

Table No. 4.4.2.1 List of areas in which AMC is availed for Maintenance and up keeping the infrastructure.

Year	List the areas in which AMC is availed for maintenance and upkeep of the infrastructure,
2016-17	House Keeping , Security Services, lift, A/Cs and water purifiers
2015-16	
2014-15	
2013-14	

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

- Equipment is calibrated annually, if required.
- Manual of equipment usually gives suggestions for calibration frequency and is adhered to.
- The department takes up maintenance and repair of the instruments in regular manner.
- The mechanical, electronic devices, electrical devices are calibrated by professionals as per requirement.
- Lab assistants are trained to handle the maintenance and calibration.

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 laboratory assistants keep a strict vigil over the smooth working of the sensitive equipments in their respective laboratories and get them repaired as required.
- AMC is placed for voltage sensitive equipments like reprographic facility and critical high cost equipment in department laboratories as required.
- Diesel Generator and UPS backup is provided for continuity of supply during power failure.
- During shortage of water supply (especially in summer), provision of water supply is made through tankers.

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?**

Yes.

Institute publishes prospectus every year to be distributed to newly admitted students at the start of the academic year. The prospectus is organized in order to provide complete information regarding the Vision and Mission of the Institute, constituted administrative and academic members, State of the Art Infrastructure, courses conducted, admission procedure and placement details for the year. The information regarding co-curricular and extracurricular activities in Tech-Zephyr, Cult-Zephyr and Sports-Zephyr, Robocon Club, BAJA etc., as well as all Departmental activities are published every year. The vision and commitment of the Management, supporting the cause of education to benefit even the bottom of the society, can be envisioned through its competence and excellence in rising above, various institutes in our vicinity.

A college magazine '*Catharsis*' is published every year by our magazine section through the magazine committee consisting of faculty and students. The magazine records the events, articles, contributions by faculty and students during the whole year. The talents and creativity of the faculty and student's community working in harmony is presented here. The English Literature Club and Marathi Vangmay club spreads the cultural knowledge, and conduct various competitions and cultural events throughout the year. Several magazines and newsletters of different departments also publicize the departmental activities and events, encouraging student participation to tap their potentials.

The college also updates the academic and administrative activities of the institute on its website periodically. The student's events and achievements are represented in the website covering various academic, technical, co-curricular, extracurricular activities. The active Training and Placement cell's interaction with the industry, acknowledges our presence at the global and national level.

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 makes aware of several Institutional/freeship scholarships at the beginning of the year to brilliant and needy students. Financial aids from various sources are made available and processed through the institute.

Table 5.1: GOI Scholarship/ freeship for SC/ST/OBC/SBC/NT/DT/VJNT

Sr. No.	Department	Academic Year	Number of students benefited	Amount received in Rs.	Sponsoring Agencies
1	Mechanical Engineering	2016-17	Proposal Submitted to RO DTE	-	GOI Scholarship EBC
2		2015-16	32 94	27, 24, 961.00 51, 26,732.00	
3		2014-15	14 64	12, 28,167.00 31, 94, 097.00	
4		2013-14	22 47	14, 73, 309.00 22, 46, 991.00	
5	Computer Engineering	2016-17	Proposal Submitted to RO DTE		
6		2015-16	13 50	8, 75, 476.00 27, 09, 472.00	
7		2014-15	6 39	3, 77, 426.00 19, 53, 420.00	
8		2013-14	7 16	3, 77, 331.00 7, 24, 893.50	
9	Electronics and Tele-communication Engineering	2016-17	Proposal Submitted to RO DTE		
10		2015-16	21 47	18, 68, 065.00 25, 84, 996.00	
11		2014-15	8 35	6, 11, 649.00 18, 59, 148.00	
12		2013-14	11 14	7, 73, 985.00 6, 22, 778.00	
13	Electrical Engineering	2016-17	Proposal Submitted to RO DTE		
14		2015-16	17 32	13, 21, 060.00 17, 29, 836.00	
15		2014-15	7 14	6, 37, 540.00 6, 95,302.00	
16		2013-14	7 9	5, 20, 047.00 4, 25, 252.00	
17	Electronics Engineering	2016-17	Proposal Submitted to RO DTE		
18		2015-16	6 15	6, 22, 048.00 8, 18, 376.00	
19		2014-15	1 12	1, 15, 985.00 6, 09, 065.00	
20		2013-14	6 10	5, 71, 857.00 4, 72, 685.00	

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

The state government provides various financial schemes to students belonging to the economically weaker section and in the reserved category. Students also avail

the Tuition Fee Waiver Scheme, approved through the DTE admission process, wherein students do not have to pay fees for the whole course based on set criteria. Besides this the students under different categories are given fee concession as per the state government policy. The institute take all necessary precautions and renders full assistance to students for application and approval process. On approval from the concerned office of the government, the students are reimbursed the fee for that academic year. The institute is recognized as Hindi Minority Institute, for admission to hindi speaking community.

Table No.5.2: Financial Assistance from state government, central government and national agencies

Sr. No.	Department	Category	State/Central Government	% of Students Receiving Financial Assistance (Based on Quota allocated)			
				2016-17	2015-16	2014-15	2013-14
1	Mechanical Engineering	SC/ST/OBC/SBC/NT/VJNT/EWS	Central	67.34	65.3	28.71	44.89
		EBC	State	13.56	61.5	35.55	26.25
2	Computer Engineering	SC/ST/OBC/SBC/NT/VJNT/EWS	Central	12.24	26.53	12.24	14.28
		EBC	State	11.66	41.66	32.50	13.33
3	Electronics and Telecommunication Engineering	SC/ST/OBC/SBC/NT/VJNT/EWS	Central	13.33	63.26	16.32	22.04
		EBC	State	12.03	40.60	22.84	13.80
4	Electrical Engineering	SC/ST/OBC/SBC/NT/VJNT/EWS	Central	30.61	34.69	14.28	14.28
		EBC	State	13.33	53.33	23.33	15.00
5	Electronics Engineering	SC/ST/OBC/SBC/NT/VJNT/EWS	Central	4.08	12.24	2.04	12.24
		EBC	State	1.66	25.00	20.00	16.66

5.1.4 What are the specific support services/facilities available for

- Students from SC/ST, OBC and economically weaker sections
- Students with physical disabilities
- Overseas students
- Students to participate in various competitions/National and International
- Medical assistance to students: health centre, health insurance etc.
- Organizing coaching classes for competitive exams

- **Skill development (spoken English, computer literacy, etc.,)**
- **Support for “slow learners”**
- **Exposures of students to other institution of higher learning/ corporate/business house etc.**
- **Publication of student magazines**

Students from SC/ST, OBC and economically weaker sections

Students from the SC/ST, VJ/NT, OBC and economically backward class have seats reserved for each course with varying percentage as per the government norms, given time to time. The students are given additional assistance in form of book bank for the backward category. They are given more number books for study, in addition to the regular norms of the library. Additional attention is given to students from the vernacular background. Senior faculty are told to conduct the class in first year level. The students are assisted for the Term Fee Waiver scheme as well for the needy students including the open category.

Physical Disability

The institute is well equipped with ramps, lifts and wheelchairs designed for friendly access to all facility. Special seating arrangement for the physically handicapped students can be made on requests for a writer during examinations. Extra time of 20 minutes, 3% grace marks for failing students, relaxation in attendance and writer or interpreter if requested for the examination with prior permission. As per the government norm 3% of seats are allocated for admission.

Overseas Students:

No seats are available in this category.

Students to participate in various competitions/National and International

The institute takes efforts to motivate students for participation in various competitions. The students showcase their talents by participating in various competitions. They have won several awards/prizes at the inter college, university and state level competitions. Management is proud of the students' performance and are glad to always bestow their support in the interest of the students and the institute.

		2013-14	National Level Project competition at LTCE”Tech zypher-2013” National level Conference(NLC)-2014 at LTCE	1st prize 1 st prize
4	Electrical Engineering	2015-16	Tantrayyan National Level Project Competition	-
		2014-15	Tantrayyan National Level Project Competition	First prize
		2013-14	Tantrayyan National Level Project Competition	First prize
5	Electronics Engineering	2015-16	National Level Conference, LTCE, Navi Mumbai	3rd Prize
		2014-15	National Robotic Contest 2015, MIT, Pune	23 rd Rank, National Robotic Contest 2015

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

The Institute has an arrangement for health services available in the ground floor for all faculty, students and staff for preliminary consultation and medication. Institute also has the MoU signed with Mathadi Hospital in the neighbourhood. First Aid Boxes are deployed in each department. Institute has medical insurance for all students.

A special consulting room is provided for faculty and staff of the college. Physician is called by the Institute as on when required.

- **Organizing coaching classes for competitive exams**

In this competitive environment, in academics and industry students pursue/prepare for competitive examinations. Institute has in place a T&P Cell. Some departments have initiated the coaching for students for GATE examination. The trend to move towards higher studies abroad, competitive exams and jobs in private companies, the students are given coaching. Students register with the T&P cell, and a series of lectures are arranged. Besides coaching, mock interviews are conducted by representatives from the industry for the students. Also, the cell has initiatives to hold a “Career Guidance Day” for the benefit of the students.

Seminars regarding abroad higher education in US, Germany and Australia are conducted for student awareness. The initiatives of the Department and T& P Cell are listed as below:

Table 5.4: Coaching classes for competitive exams

Sr. No.	Academic Year	Competitive exams	Number of Students	Type	Remark
1	2016-17	GATE	48 42	Coaching	Departments of Mechanical Electronics and Telecommunication Engineering
2	2016-17	Aptitude Training	143	Coaching	All Depts.

- Skill development (spoken English, computer literacy, etc.,)

Table 5.5: Skills development

Sr. No.	Academic Year	Department	Skill Type	Facility provided	Duration
1	2016-17	Mechanical	Interview	MOCK Interview by T&P cell	1 Day
			Seminar on GATE exam. and opportunities for qualifiers	Workshop (Vijay Shekhar Academy)	1 Day
			Workshop on Aeronautical and Aerospace	Workshop (Kyte Aerospace)	1 Day
			Seminar on Designing and Manufacturing Integration	Workshop (Pranjwal Banjan (CAD CAM GURU))	1 Day
			Awareness program about Society of Automotive Engineering	Workshop (SAE LTCE CLUB)	1 Day
			Seminar on promotion on Abroad Education	Workshop (Ms. Pooja Welling (Mission Career))	1 Day
			IPR, Innovations and Project Writing (One day workshop)	Workshop (Adv. Anand Mahurkar)	1 Day
			Seminar on Virtual Reality	Workshop (Aditya Premji and Magdalena Hammarn (FUSION FINLAND))	1 Day
			National level 5 day workshop- Automobile Development Internship Program	Workshop (EZINITH Education)	5 Days
	2015-16		Seminar on Training and placement	By T&P Cell	1 Day
			Seminar on Pneumatics-Industrial Applications	Workshop (Vishal Biradkar (SMC Pneumatics))	1 Day
			Seminar on PIPING ENGINEERING SOFTWARE	Workshop (Mrs. Shanmogham and	1 Day

			National level 5 day workshop-Automobile Development Internship Program Seminar on 3D Printing Technology MECH-TALENT competition Seminar on Thermal Engineering and its Relevant Applications	Mr. Nadar Hussain) Workshop (EZINITH Education) Workshop (Mr. Chetan Hon) Workshop (Dr. Joseph Rodrigue and Prof. Savita Gole) Workshop (Prof. Vasant Jog (Vice Principal GVAIET, Shelu)	5 Days 1 Day 1 Day 1 Day
	2014-15		Seminar on Piping Engineering Software. Seminar on Condition Monitoring Initiative for enhancing manufacturing supply chain reliability 2 Week course on Piping Design 2 Week Course on Computational Fluid Dynamics	Workshop (Mrs. Shanmogham and Mr. Nadar Hussain) Workshop (Mr. Murari P. Shrivastava (MD IRD Mechagnosis LTD.)) Workshop Workshop (Dr Dattatraye Parle , Infosys)	1 Day 1 Day 2 Weeks (50 Hrs) 2 Weeks (50 Hrs)
	2013-14		Integrated Envoyage Pre-summit workshop by IIT Bombay Expert Talk on Automation technology One day workshop on Industrial Automation	-Workshop (Mr.Vaibhav Gupta) -Seminar by TAACT (Nashik) Prolific Systems and Technologies Pvt. Ltd	01 Day 3 Hrs 01 Day
2	2016-17 2015-16 2014-15	ALL Departments	Group Discussion	MOCK Interviews by T & P cell	15 Days

	2013-14				
3	2016-17 2015-16 2014-15 2013-14	ALL Departments	Interview Techniques	MOCK Interviews by T & P cell	15 Days
4	2016-17 2015-16 2014-15	Computer Engineering	Foreign Language Foreign Language Web Design IoT .Net programming Wordpress And Website Designing Patent Drafting Introduction to big data and Statistical Analysis on SAS Talent Age-Android, Cloud Computing, Hadoop Virtual Reality Seminar on Abroad Education Software Asset Management Ethical Hacking Big Data and Hadoop Cyber Security Software Testing Online aptitude test .Net programming	German (Elective) German (Elective) Workshop Workshop Microsoft Workshop Workshop Workshop Workshop Workshop Seminar Seminar Workshop Workshop Workshop Workshop Seminar Workshop Seminar Workshop Seminar Microsoft	1 Semester 1 Semester 1 Day 2 Days 3 months 2 Day 1 day 1 day 1 day 1 day 2 hours 2 hours 1 day 1 day 1 day 1 day 2 hours 1 day 1 Day 3 months
5	2016-17 2015-16 2014-15 2013-14	Communicat ion Skills	Spoken English	Language Lab.	4 Months
6	2016-17	Electrical	Speech on importance on soft skills in Engineering Advanced training program on “5 in one Robotics training	Workshop Workshop in computer lab equipped with	1 Day 2 Days

			program and Lab view	windows software	
7	2016-17	Electronics and Telecommunication Engineering	Microsoft Certification	Expert from industry and Computer lab equipped with required softwares	1 Day
			RF and IOT workshop	Expert from IIT bombay and Computer lab equipped with required softwares	3 days
			Expert lecture on OCN	Expert from industry	3Hrs
			Expert lecture on Business analytics	Expert from industry	3Hrs
	2015-16		Matlab workshop	Expert Faculty and Computer lab equipped with required softwares	1 Day
			Latex workshop	Expert Faculty and Computer lab equipped with required softwares	1 Day
			Corporate Commando Program	Guest Lectures	1 Day
			Network Simulator 2 workshop	Expert Faculty Computer lab equipped with required softwares	1Day
			SATCOM Seminar	Expert from Tata Nelco Pvt. Ltd.	3 hrs
	2014-15		Matlab workshop	Expert Faculty and Computer lab equipped with required softwares	1 Day
2013-14	Matlab workshop	Expert Faculty and Computer lab equipped with required softwares	1 Day		
8	2016-17	Electronics Engineering	Embedded programming using Arduino	Student Development Program	1 Day
	2015-16		1. Industrial Skill Development	4 Guest Lectures	8 Hrs
			2. Stress Management	Guest Lecture	2 Hrs
	2014-15		Interview Aptitude Test	Mock Interviews Test conducted per month	1 Day 1 Hr
			Personality Development	Guest Lecture	2 Hrs
	Stress Management	Guest Lecture	2 Hrs		
	2013-14		Technical Skill Development	9 Guest Lectures	18 Hrs

- **Support for “slow learners”**

The performance of the student during the course is considered through the result analysis. Besides, the unit tests, online quizzes, term work and the semester end exams, and tight monitoring of attendance the student's performance is taken into consideration. Mentors and Class Advisors counsel the students regarding their performance and schedule additional lectures/practicals. Dropout students are given extra attention, allowing them to attend the regular classes and personal coaching, doubts are cleared thus enabling students to cope up with other students.

Extra remedial classes are conducted on Saturdays and during 4pm – 6pm on weekdays for slow learners. Remedial classes conducted in Departments where students are called for one-to-one coaching and extra assignments are given for solving at home. In addition, the students are asked to solve university papers of earlier years.

The retest is allowed in certain circumstances where the students are not able to attend for medical reasons with prior permission from the Principal.

- **Exposures of students to other institution of higher learning/ corporate/business house etc.**

Students are given utmost care to develop their personality through interaction with other institutions for gaining better experience, leadership and management skills. They are exposed to industries and professional organizations, to learn the skills and management principles.

With the constant effort of all faculty/staff and management support, several activities are promoted as listed below:

Industrial Visits: As a part of the curriculum all students are required to visit different Industries. Industrial visits are arranged on regular basis by our active T & P cell, which provides the necessary guidance and documentation for the departments in arranging the industrial visits.

Internships: Students are encouraged for internships/inplant trainings during winter and Summer vacations. Guidance and documentation support is provided by T & P cell.

Industry project: Every year students studying in the final year told do projects are given support by T & P cell in searching project in different companies. The

Conferences: Students who are inclined to research are encouraged to write research papers for conferences by college faculty members. LTCE organizes National Level Conference each year to facilitate students' and faculty of college.

Competitions: Students are also encouraged to participate in different Industry organized competitions such as technical paper/Project Competition, quiz competitions, Coding competitions, etc

Industry-Job Fairs: Job fairs are regularly arranged by T & P cell to give industry networking and placement opportunity to students. Following fairs are recently arranged.

- Hindustan Times Job Fair participated by 32 companies on 4/7/2015
- Times of India -Ascent Job Fair participated by 15 companies on 31/10/2015
- ISHRAE Job Fair participated by 19 companies on 20/10/2016
- **Publication of student magazines**

LTCE College Magazine '*Catharsis*' is published annually, around March-April each academic year to incorporate the year-round achievements and activities of the students and staff of the college.

The chief patrons are the College Management and the Administrators. The editorial board consists of various faculty of the college as well as students. The Editor-in-Chief along with his/her team belong to the Student Council of the college, and there are about 25 students every year who form the various teams of curating, editing, logistics and designing the magazine.

MECHLIVE Newsletter is a departmental (Mechanical) newsletter published once every semester, incorporating various activities, achievements and advancements in the Department of Mechanical Engineering. The contents of the magazine include brief description about value added courses offered to students and Industrial collaboration. It also provides a bird's eye view about the faculty achievements as well as achievements by students wrt their involvement in competitions and their final year projects. Names of toppers in each semester are also published along with their score.

Prof. Sunil Satav is the Editor, along with Dr. Chandrababu D. acting as the Editor in Chief, Head, Department of Mechanical Engineering.

TELEIOS is a departmental magazine published once in a year giving a platform for the students for their creative minds, publishing their various technical and non-technical articles. The magazine also includes the summary of important events happened during the year. Names of toppers in each semester are also published along with their score.

Prof. Pranita Potey is the Editor, along with Dr. Ravindra Duche acting as the Editor in Chief, Head, EXTC Department.

Department of Electronics Engineering publishes EESA magazine, an annual basis which includes information regarding all the technical and non-technical upgradation programs organized, achievements of students and faculty and some informative articles.

EESA magazine provides a platform to students to showcase their talent and to get appreciated.

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 Entrepreneurship Development Cell and around 130 student members are actively involved in it. Cell is headed by Dean Placement and Entrepreneurship Development.

The Entrepreneurship Cell at LTCE is a place for all those who have passion to start their own business in future. Ecell aims at promoting the Entrepreneurial spirit of young students. The Cell has initiated several activities through workshop, webinars and seminars. Start-ups projects are given to interested students, and through participation in PAN India competitions. The cell is responsible to educate and inspire the students, provide them with new and clearer perspectives, creating opportunities, networking, implementation of creativity, entrepreneur skills and competence, social responsibilities and self motivation. It regularly conducts events such as entrepreneurship development workshops, webinars, and seminars on ‘Start-ups @ LTCE’. It also gives out live projects from startups to interested students. E Cell members actively participate in pan India competitions. In all, it is the cherished dream of the Entrepreneurship Cell to harness managerial talent in its right spirit.

Some recent activities are:

Recent Activities by Ecell:

- Seminar by an experienced entrepreneur Mrs. Archana Karfa on 29/8/2016
- E-summit in collaboration with Zoomstart at LTCE on 13/2/2017
- Impact on students:
- Inspiration
- New and clearer perspective
- More opportunities
- Networking
- Promote entrepreneurial competences in various sets of activities
- Implement creative ways
- Promoting entrepreneurship and working on the topic using entrepreneurship as part of active citizenship

5.1.6 Enumerate the policies and strategies of the institution which promote participation of students in extracurricular and co-curricular activities such as sports, games, Quiz competitions,debate and discussions, cultural activities etc.

The Institute consistently strives to provide facilities to student for their personality development through various college level, inter college and University or National level events. The Institute has Dean Student’s Affair who looks after the student centric activities. The Institute has a well constituted student council elected/ selected each year, which is responsible to conduct, organizing, sponsorship of events, branding of the Institute. The sports in-charge

is given all the responsibility to arrange, conduct, budgeting and sponsorship, purchase, and certification to all participants.

Faculty in-charge is appointed every year for sports, technical, cultural and magazine committee. A student council member is elected/selected each year for sports. Event heads are responsible for the smooth conduction of the events (students).

Besides the sports, technical events and cultural events are being conducted. Each Event Head prepares a list of events, budget, sponsorship, and schedule for all the events. The institute receives a sizable amount of sponsorship and budget from the management to support all events.

The students are encouraged by our Management, Faculty and Staff to participate in various events to show their skills, talents and knowledge. The institute reserves special funds for the extra-curricular and co-curricular activities. The students have flexibility in the attendance, re-tests, and are required to fulfill all requirements for attendance through extra lectures and practicals. The institute supports the students to participate in sports and provide them with sports uniform and sports kit to the teams or individual. The institute encourages boys and girls equally to participate in sports.

Table 5.6: Participation and Achievements of students in sports, co-curricular and extracurricular events

Sr. No.	Type of Activity	Year	Level of Participation	Remarks
1	Handball	2016-2017	Inter-University (Girls)	3rd Prize by Mumbai University Teamat West Zone Inter-University Women's Handball Tournament 2016-2017 held at Jaipur
2	Cricket (Open /Box)	2015-2016	Inter-College	Winners at ICT Matunga, Mumbai
		2015-2016	Inter-College	Winners at SIES College, Nerul, Navi Mumbai
		2015-2016	Inter-College	Winners at Bharati Vidyapeeth, Navi Mumbai
		2015-2016	Inter-College	Winners Team-Aat Sterling College, Seawood, Navi Mumbai
		2015-2016	Inter-College	Runner Up Team-B at Sterling College, Seawood, Navi Mumbai
		2014-2015	Inter-College	Winners at ICT Matunga, Mumbai
		2013-2014	Inter-College	Winner at Sainath College, Vashi, Navi Mumbai

3	Football	2015-2016	National	Winners Team-A at ICT Matunga, Mumbai
		2015-2016	National	Runner Up Team- B at ICT Matunga, Mumbai
		2015-2016	Inter-College	Runner Up at SIES College, Nerul, Navi Mumbai
		2014-2015	Inter-College	Winners at ICT Matunga, Mumbai
		2014-2015	Inter-College	Runner Up at Somaiya College, Vidyavihar, Mumbai
		2014-2015	Inter-College	Runner Up at Sterling College, Seawood, Navi Mumbai
		2013-2014	Inter-College	Runner Up at Sterling College, Seawood, Navi Mumbai
		2013-2014	Inter-College	Runner Up at Sterling College, Seawood, Navi Mumbai
		2013-2014	Inter-College(Girls)	Runner Up at Pillai's Engg, Panvel
4	Volleyball	2013-2014	Inter-College(Girls)	Runner Up at SIES College, Nerul, Navi Mumbai
5	Swimming	2016-2017	University Level	Silver Medal in 4 x 50m freestyle relayin 100m to at State Level Aquatic Meet organised by University of Mumbai
		2016-2017	University Level	Bronze Medal in 4 x 50m Medley relayin 100m to at State Level Aquatic Meet organised by University of Mumbai
		2015-2016	State Level	Bronze Medal in 100m breaststroke at State Level Aquatic Meet organised by University of Mumbai
		2015-2016	State Level	Silver Medal in 4 x 50m freestyle relayin 100m to LTCETeam breaststroke at State Level Aquatic Meet organised by University of Mumbai
		2014-2015	State Level	Silver Medal in 50m breaststroke at State Level Aquatic Meet

				organised by University of Mumbai
		2014-2015	State Level	Silver Medal in 100m breaststroke at State Level Aquatic Meet organised by University of Mumbai
		2013-2014	State Level	Gold Medal in 200m breaststroke at State Level Aquatic Meet organised by University of Mumbai
		2013-2014	State Level	Gold Medal in 100m breaststroke at State Level Aquatic Meet organised by University of Mumbai
		2013-2014	State Level	Gold Medal in 50m breaststroke at State Level Aquatic Meet organised by University of Mumbai
6	Robocon	2015-2016	National	Best Economical Robot Award in ABU (Asia Pacific Contest 2016, Pune) at Robocon National Contest 2016 organised by MIT Academy of Engineering, Pune.
7	Group Dance	2016-17	Inter-College	KJ Somaiya College Winner
		2015-16		KJ Somaiya College Winner
		2014-15		KJ Somaiya College Winner
		2013-14		Shah and Anchor College Winner
8	Fashion Show	2016-17		SNDT College Winner
		2015-16		SNDT College Winner
		2014-15		SNDT College Winner
		2013-14		SNDT College Winner

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.

For further progression of student towards higher education the Institute proactively taking steps to inform and educate the students for competitive exams. Regarding the entrance tests such as GRE, GATE and MBA in our University or abroad information dissemination about opportunities and in form of seminars and lectures are provided to students.

Table 5.7: Coaching given to students for GRE/GATE/MBA

Sr. No.	Department	Year	GRE		GATE		MBA	
			Appeared	Qualified	Appeared	Qualified	Appeared	Qualified
1	Mechanical Engineering	2016-17	22	22	30	Awaiting	5	Awaiting
		2015-16	13	13	12	10	8	8
		2014-15	12	12	2	2	1	1
		2013-14	16	16	1	1	1	1
2	Computer Engineering	2016-17			40	Awaited	-	-
		2015-16	15	15	3	1	-	.0
		2014-15	15	12	-	-	-	-
		2013-14	14	12	-	-	-	-
3	Electronics and Communication Engineering	2016-17	05	-	46	-	08	-
		2015-16	04	04	01	-	15	15
		2014-15	08	08	02	-	15	15
		2013-14	08	08	02	-	04	04
4	Electrical Engineering	2016-17	5	5	40	Awaited	-	-
		2015-16	3	3	25	-	-	-
		2014-15	3	3	-	-	-	-
		2013-14	3	3	-	-	-	-
5	Electronics Engineering	2016-17	2	2	15	Awaited	1	1
		2015-16	7	7	4	4	4	4
		2014-15	2	2	-	-	4	4
		2013-14	1	1	-	-	-	-

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

At first year level, students' academic and personal issues of concern are well looked after by the class advisor/mentors. The critical cases are handled by first year incharges. Parents meetings are called regular during the year. This way the students realize their responsibilities at the early stage itself. Induction program in the beginning of the year make them familiar with the process of teaching-learning process, which makes the student self sufficient. Mentoring system is followed by all departments from the second year onwards. The students are given guidance for career, personal, besides academic issues. A special arrangement also, is made available to the students to deal with psychosocial issues arising in cases like single parenting, bread earner in the family etc.

- 1. Academic Counseling:** Done by the respective subject teachers, class teacher and HODs.

Department of Mechanical Engineering:

In Department of Mechanical Engineering, each faculty is assigned 6 students from each year. The faculty maintains their academic records with them till they complete their bachelor's degree. The concerned faculty member conducts a monthly check on the updates and progress with respect to students assigned to him / her. The mentor is also responsible to provide counseling to the student and provide guidance regarding personal and academic issues.

Department of Computer Engineering:

In Computer Engineering department, faculties are divided into groups size of 8 (eight) mentors. Then each group of 8 mentors, students size of 20-22 are enrolled in an academic year, from the students admitted in first year and second. These groups are allocated to a group of eight mentors. The mentors allocated to the students will council same group of students for three years i.e. the same set of students will be monitored and counselled till they have passed the course. The meetings of mentorship are conducted every month, in which students meet their mentors for academic and personal issues. The students who have less attendance and who have missed their internal tests are paid special attention from mentor's side. Even the students with many issues are asked to call parents for parents-mentor meetings.

Department of Electronics and Telecommunication Engineering

In Department of Electronics and Telecommunication Engineering, each faculty is assigned with 20 number of students under the mentoring process. The role of the mentor is to nurture the students and guide them for any issues they are coming across. To maintain a continuous interaction between mentor and students meeting is held between them thrice a semester.

Department of Electrical Engineering

For the teacher-guardian scheme of Electrical Engineering department, one faculty is assigned as mentor for around 25 students. The mentor maintains their academic and extracurricular records. During each semester mentor interacts twice with the student individually to provide guidance for academic issues. The mentor keeps track on their improvements and counsels them accordingly.

Department of Electronics Engineering

In the Department of Electronics Engineering, under teacher-guardian scheme, one faculty is assigned as mentor for every 15-20 students. The mentor maintains their academic and extracurricular records. During each semester mentor interact with the student individually twice to provide guidance for academic issues. The mentor keeps track on their improvements and counsels them accordingly.

2. Psycho-social Counseling: Students with personal/family problems if any, are given counseling and support by a professional counselor.

3. Personal Counselling: 15-20 Students are allocated to each faculty member for mentoring and these students are personally counseled by these faculty.

4. Career Counseling: The Training and Placement Cell guides the students in respect of their career prospects

Career guidance in following areas is available at Training and Placement Cell. Students are taking the benefit of this facility.

- MBA (India/abroad)
- MS/ ME/ MTech /Careers in Research
- MPSC/UPSC/ Careers in Defense
- Different National/ International Scholarships
- Bank-Education loan for Higher studies
- Special counseling to the students who are not getting placement

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 well established and structured Training and Placement(T & P) Cell which systematically provides career guidance and placement activities for the Students. This cell has Dean Placement and Entrepreneurship Development and a Full-time Training and Placement officer who are supported with 3 faculty and student coordinators from each department in its activities.

Career counseling is done by cell and special counseling hours are reserved in every day.

- The T & P Cell organizes/conducts
- Campus recruitment for all students of final year
- Soft skill Employability training to students with external experts
- Aptitude test preparation training
- Industry-Institute Interaction meetings
- Guest Lectures from Resource Persons from
- Industry to deliver current knowledge to students
- Industrial visits, In-plant training/ Internships and Industry projects for students to impart practical knowledge and industry practices
- Career Guidance Sessions by Experts Mock Group Discussion and Mock Interview.
- Organising Seminars on entrance related to higher education

Career Guidance is given on

- MBA (India/abroad)
- MS/ ME/ MTech /Careers in Research
- MPSC/UPSC/ Careers in Defense
- Different National/ International Scholarships
- Bank-Education loan for Higher studies

Facility to conduct Campus recruitments in the campus

- One central and 4 mini Air-conditioned halls to conduct pre-placement talks and other programmes.
- Computer Labs to conduct online tests and classrooms to conduct other tests.
- Labs and conference rooms to conduct group discussions
- Interview cabins

Table 5.8: Placement data

Sr. No	Department/ Programme	Academic Year	No. of placements	No. of Eligible (above 60%)	% of eligible placed	Main Recruiters
1	Mechanical Engineering	2016-17*	3	80	4%	Sanmar Group, Godrej, LandT Ltd, Nikhil comfort, Mahindra and Mahindra, Wasan Group, Cocacola, Reliance Retail, Instakart, , CAV Aero, XL dynamics, ELex India, Absolute
		2015-16	47	58	81%	
		2014-15	20	61	33%	
		2013-14	5	56	9%	

						Surveyor, Synergy Consultant, Cyber Marine, Cimpres Vistaprint, etc
2	Computer Engineering	2016-17*	3	64	5%	Infosys, TCS, Syntel, LandT Infotech, Acrotrend, ATOS, Reliance Jio, Zeus Learning, Hexaware, Reliance Communication, Mindcraft, CSC, Polaris, Allerin, Paramatrix, Bitwise Solution, Infogain (Bluestar Infotech), Rein Labs, Orient Technologies, etc
		2015-16	41	50	82%	
		2014-15	32	24	100%	
		2013-14	23	52	45%	
3	Electronics and Communication Engineering	2016-17*	0	44	0%	Infosys, TCS, LandT Infotech, Syntel, Zeus Learning, Hexaware, Reliance Jio, Reliance Communication, Mindcraft, CSC, Polaris, Rein Labs, , Orient Technologies,
		2015-16	38	19	100%	
		2014-15	31	26	100%	
		2013-14	14	35	40%	
4	Electrical Engineering	2016-17*	3	31	10%	Torrent Power, LandT Ltd, Godrej, Energy System, A-eberle, Hettich, Wimco Ltd, KEC International, Avery India, Nikhil Comfort, Syntel, Indus Tower, Infosys, TCS, Reliance Retail, Cocacola,
		2015-16	22	26	85%	
		2014-15	8	18	45%	
		2013-14	3	19	16%	
5	Electronics Engineering	2016-17*	0	27	0%	Infosys, TCS, LandT Infotech, Syntel, Zeus Learning, Hexaware, Reliance Communication, Mindcraft, CSC, Polaris, Rein Labs, Orient Technologies, Orange Business Solutions, etc
		2015-16	23	24	96%	
		2014-15	26	32	81%	
		2013-14	6	29	21%	

* Placement in progress

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.

The grievance cell is established in collaboration with the Women's Development cell (WDC), which is active and meets the objectives for student harassment, grievances and anti ragging issues efficiently. The details of the activities are picturized in the following section.

Grievance redressal Committee:

Management Representative: Dr. Vivek Sunnapwar (Director)

College Head: Dr. Vivek Yakkundi (Principal)

Police Inspector: Mr. Wilson Cyril

Social worker: Mr. Pasha Khan

Faculty members of WDC:

Prof. Shruti Nema (In-Charge)	Department of Electrical Engineering
Dr. Kavita Dhanawade	Department of Mechanical Engineering
Prof. Shweta Mate	Department of Mechanical Engineering
Prof. Chitra Wasnik	Department of Computer Engineering
Prof. Pranita Pote	Department of EXTC Engineering
Prof. Savitha Devraj	Department of Electronics Engineering
Prof. K.V.Nimi	Department of Mathematics
Dr. Rashmi Rani	Department of Communication Skills

Student Members of WDC

- Siddhi Choudhari -(LR)
- Gnancy Godker - (Co-LR)
- Sanjana Kamat - (Co-LR)

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

Lokmanya Tilak College of Engineering has Women Development Cell(WDC), which includes both faculty and students as members. Grievances/Issues mainly related women including sexual harassments are addressed by WDC. WDC enables individual accused to express feelings by initiating and pursuing the

grievance procedure in accordance with the rules and regulations of the College. 'WDC' enquires and analyses the nature and pattern of the grievances in a strictly confidential manner. Emphasis on procedural fairness has been given with a view to "the right to be heard and right to be treated without bias". From many years, no sexual harassment related grievances were received by WDC. Grievances otherwise received were forwarded to the higher authorities for immediate redressal. In all such cases prompt action were taken and the matter sorted out.

5.1.12 Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?

Yes.

The constituted committee comprises of the Director, Principal, Vice Principal, Heads of Departments, Registrar and Librarian. Round the clock, the security personnel are in vigilance of the campus arena, connected by the surveillance system with a close knit CCTV. Security personnel are deployed 24/7 in the campus for effective vigilance.

Table 5.9: Anti-Ragging Committee

Sr. No.	Name	Designation	Contact Details	Email Details
1	Dr. Vivek Sunnapwar	Director (RandA)	9821221952	vivek.sunnapwar@gmail.com
2	Dr. Vivek Yakkundi	Principal	9324622654	principal.ltce@gmail.com
3	Dr. Subhash Shinde	Vice Principal	9594170066	skshinde@rediffmail.com
4	Dr. Avinash Sarode	Dean Students Affairs	9819936185	avinashsarode@gmail.com
6	Dr. Chandrababu	Member	9322263938	chandrabd@gmail.com
7	Dr. Pravin Nikumbh	Member	9892425233	pjnikumbh@rediffmail.com
8	Dr. Ravindra Duche	Member	9987546141	ravindrduche@gmail.com
9	Dr. C. M. Wankhede	Member	7506834199	cmwankhade@yahoo.co.in
10	Dr. Sheeba P. S	Member	9987086081	sheebaps@gmail.com
11	Mrs. Dolly Boban	Member	9323649721	dollyboban@yahoo.co.in
12	Mrs.Ratna Kumari	Member	9833040232	kratna158@gmail.com
13	Mr.Anil Yadav	Member	9819261340	asyadav2007@gmail.com
14	Mrs.Chitra Chitale	Member	9819577760	library.ltce@ltjss.net

15	Mr. Wilson Cyril	Member	9967837467	wilson_c@indiatimes.com
16	Mr. Pasha Khan	Member	9820025737	kapasha_68@gmail.com

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

The Students welfare Schemes are student-centric and for the benefit of the students. The facilities provided are as given below:

- Students are allowed to pay the tuition fees in installments.
- Book Bank facility is provided for SC/ST and EWS.
- Students are funded for projects that are sent to State/National/International level competition.
- Accidental and Medical Insurance cover for students

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

ALTEA [Association of Lokmanya Tilak College of Engineering Alumni (Reg No. - MAH/1032/08 Thane)] is established in the year 2008 for maintaining liaison with Alumni all over the world and to involve them with the development of the Institute. One faculty coordinator along with dept coordinators works for ALTEA cell.

The foremost responsibilities of ALTEA:

- Create the list of the alumni of respective department right from the first batch.
- Plan, implement and promote alumni programs that support the ALTEA strategic Plan
- Ensure accurate and complete alumni database records including their contact, biographical and career information
- Establish and build relationships with a wide range of alumni as well as local, regional, National and International Alumni Chapter
- Educate graduating students about alumni benefits and engage them in programs
- Partner with various offices of the Institute to spearhead the introduction of alumni involvement in the growth and continued leadership of the college.
- Collaborate closely with Industries and enable increased support from alumni, and provide platforms and programs for such support

Alumni meet arranged by ALTEA on.

- 6th March 2010

- 17th April 2011
- 20th February 2016

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.

Table 5.10: Higher Education and Employment data

Sr. No.	Department	% of students going for Higher Education		% of students going for Employment	Campus Recruitment
		Year	Students		
1	Mechanical Engineering	2016-17	53/292 (18.2%)	03/292(1%)	Yes
		2015-16	19/293 (6.5%)	47/293 (16%)	Yes
		2014-15	15/292 (5%)	20/292(6.8%)	Yes
		2013-14	18/257 (7%)	05/257 (1.9%)	Yes
2	Computer Engineering	2016-17	08/162(4.93%)	5%	Yes
		2015-16	16/160(10%)	82	Yes
		2014-15	15/144(10.41%)	100%	Yes
		2013-14	13/180(7.22%)	45%	Yes
3	Electronics and Telecommunication Engineering	2016-17	-	-	
		2015-16	16%	33.05%	Yes
		2014-15	16%	22.46%	Yes
		2013-14	9.1%	10.68%	Yes
4	Electrical Engineering	2016-17	--	08	Yes
		2015-16	03/82 (3.6%)	22/82 (26.82)	Yes
		2014-15	04/68 (5.88%)	12/68 (17.64 %)	Yes
		2013-14	03/69 (4.34%)	10/69 (14.49%)	Yes
5	Electronics Engineering	2016-17	-	-	Yes
		2015-16	3/72 (4%)	27/72 (37.5%)	Yes
		2014-15	8/83 (10%)	59/83 (71%)	Yes
		2015-16	11/72 (11%)	51/72 (71%)	Yes

5.2.2 Provide details of the programme wise pass percentage and completion rate for the last four years (course 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.

Table 5.11: Percentage passing and completion of the programme.

Sr. No.	Programme/Course	Year	% Passing Current Year	% Completion Current Year
1	Mechanical Engineering	2016-17	--	--
		2015-16	92%	59%
		2014-15	70.6%	48%
		2013-14	74.4%	56%
2	Computer Engineering	2016-17	-	-
		2015-16	93.38%	87.50%
		2014-15	96.99%	47.91%
		2013-14	99.18%	42.77%
3	Electronics and Communication Engineering	2016-17	-	-
		2015-16	91%	52.9%
		2014-15	79.2%	57.1%
		2013-14	90%	55%
4	Electrical Engineering	2016-17	--	
		2015-16	91.00%	93.5%
		2014-15	79.00%	84.49%
		2013-14	67.00%	87.39%
5	Electronics Engineering	2016-17	-	-
		2015-16	79.17%	61.90%
		2014-15	80.52%	62.85%
		2013-14	79.17%	50%

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

The institution has a well established and structured Training and Placement (T & P) Cell which systematically provides career guidance and placement activities for the Students. This cell has Dean Placement and Entrepreneurship Development and a Full-time Training and Placement officer who are supported with 3 faculty and student coordinators from each department in its activities. Career counseling is done by cell and special counseling hours are reserved in every day. Apart from this cell regularly involved in following activities.

- Career / higher studies related seminars
- Placement preparation and soft skills workshops
- Sending students for Internship and Industry projects
- Arranging Industrial visits
- Value Added Courses
- GATE Coaching
- Careers abroad seminars

5.2.4 Enumerate the special support provided to students who are at risk of failure and dropout?

A large number of students who perceive the professional course are quite focussed, still they may fall short of score to be promoted to above sections. Such students are given counseling by the mentors and the subject teachers and remedial lectures are conducted. Students are supported and guided both in co-curricular and extracurricular activities. The mentors of the class discuss with each and every student individually and supports them in all the possible ways to enrich their academic performance. The mentors contact the parents and educates them, if required about their wards performance, and the academic programmes of the college as well as the support system and the monitor system the student and parents. The mentors always keep a check on the attendance of the student, the marks/grads obtained in the internals and externals examinations, and regarding his/her candidature in the campus placement and provides remedial coaching.

Weak students are identified and remedial classes are given for slow learners who at the risk of dropout apart from class work. Faculty give extra assignments and guides them. Question Bank for the subject is prepared by faculty and given to these students. University question papers are solved by faculty before commencement of final examinations. Some students find it difficult to cope up with the program come for counseling and accordingly they are guided for their future course of work.

There are occasions when the student opts for back out of the program. A systematic process is followed to counsel the student through their parent/guardians before they decide to back out from the program.

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.**

Our college's football team, cricket team, kabaddi team, volleyball team, basketball team participate in various colleges sports festivals. Also, there are some individuals who participated for badminton, swimming etc.

FACILITIES:

As far as facilities are concerned, we are provided with sports cell, table tennis table, carom boards, and a ground which is capable of hosting major events like football, cricket, kabaddi, volleyball. A sports instructor, who is a faculty in-charge of sport handles the events at college level, university level and National level. Annually two weeks in the even semester are exclusively reserved for sports, cultural and technical events. Besides this, the other events are conducted round the year.

Extra-curricular, cultural, sports and games forms the part of the student personality development. The range of these activities are listed below:

Table 5.12: Sports and Events Data

Indoor Games	Outdoor Games	Cultural Events	Technical Events
Carrom Chess Table Tennis Pool Snooker Neon Cricket Neon Football	Cricket Football Volleyball Throw ball Throw ball Box Cricket Kabaddi Foot Volley Basketball Tug-of-war Trekking (Club)	Solo Singing Solo Dance Group Dance Fashion Show Poster Making Mehendi Face Painting Rangoli Tattoo making T-Shirt Making Treasure Hunt Photography Slow bike racing Twister LAN Gaming	Auto Expo Mech Mantra Laser Tag LAN Gaming No2 Paintball Circuit Mounting Neon Cricket Neon Football IPL Auction Robo Maze Robo Hurdle Robo Fifa Robo Loop Robo Lap Tech Quiz

5.3.2 Furnish the details of major student achievements in co-curricular, extracurricular and cultural activities at different levels: University / State / Inter-College / National / International, etc. for the previous four years.

Table 5.13: Students Achievements

Sr. No.	Department	Level of Activity/Year (Inter-College/University/State/Inter-College)	Name of student and Achievement	Category
1	Mechanical Engineering	Shah and Anchor college 2013	Rahul Maity, Kaustubh Phatak, Mukesh Dharmaraj, Anuj Malkar (Winners)	Robowars
		Shah and Anchor college 2013	Prasad Pawar, Viraj Vaity, Tanmay, Prathamesh Jadhav (Runner up)	Robowars
		D J sanghavi college 2014	Rahul Maity, Kaustubh Phatak, Mukesh Dharmaraj, Anuj Malkar (Runner up)	Robowars

		Shah and Anchor college 2014	Rahul Maity, Kaustubh Phatak, Mukesh Dharmaraj, Anuj Malkar (Runner up)	Robowars
		Mumbai University Intercollegiate Sports and Tournament 2014	Soham Mhatre (2 Gold medal)	50m and 100 m BreastStroke
		VJTI Enthusia 2014	Soham Mhatre (Gold)	50m,100m,200 m Breaststroke
		Mumbai University 2015	Soham Mhatre (Silver)	50 m BreastStroke
		VJTI Enthusia 2015	Soham Mhatre (Gold)	50m,100m breaststroke,100 m freestyle
		Mumbai University 2016	Soham Mhatre (Silver)	4 x 50 m Freestyle relay
		Mumbai University Swimming Competition 2016	Abhijeet Shantaram Zinjad (2nd Prize)	Freestyle Relay
		Mumbai University Swimming Competition 2016	Abhijeet Shantaram Zinjad (3rd prize)	Medley Relay
2	Computer Engineering	Inter-College/ 2017	Rohit Suresh Malge, 2nd prize	Fashion show
		Inter-College/ 2015	Ragi Rajeevan Nair, 1st prize	Poster Making
		Inter-College/ 2015	Ragi Rajeevan Nair, 1st Prize	Rangoli
		Inter-College/ 2015	Ragi Rajeevan Nair, 2nd Prize	Graffiti
		Inter-College/2016	Ragi Rajeevan Nair, 2nd Prize	Graffiti

	Inter-College/2016	Ragi Rajeevan Nair, 2nd Prize	Tattoo Making
	Inter-College/2014	Harshada Vyankatesh Kulkarni, 2nd Prize	Solo Singing
	Inter-College/	Rashmi Devi Mohanlal Gautam, 1st Prize	TPP
	Inter-College/2015	Shetty Shivani Diwakar, 1st Prize	ThrowBall
	Inter-College/2016	Swati Subhash Upadhyay, 2nd prize	Mehandi
	Inter-College/2016	Swati Subhash Upadhyay, 2nd prize	Sketches in College Magazine
	Inter-College/2016	Mihirkumar N. Panchal, Winner	Table Tennis
	Inter-College/2016	Nishtha AnupKumar Chourasia, WINNER	Football
	Inter-College/2016	Nishtha AnupKumar Chourasia, WINNER	Throwball
	Inter-College/2016	Nishtha AnupKumar Chourasia, WINNER	Girls' cricket
	Inter-College/2016	Pragati D. Gunai, Winner	Badminton
	Inter-College/2016	Pranita D. Aradhye, Runner Up	Badminton
	Inter-College/2016	Priyanka Y. Nikam, Winner	Girls' cricket
	Inter-College/2016	Priyanka Y. Nikam, Winner	Girls Kabaddi
	Inter-College/2017	Tanya S. Upadhyay, Runner Up	Fashion Show
	Inter-College/2016	Lalit Kargutkar, Runner UP	Football
	Inter-College/2015	Mahesh Jadhav, Winner	Kabaddi

		Inter-College/2016	Neel D. Dolas, Runner UP	Football
		Inter-College/2015	Omprakash Shewale, Runner Up	Football
		Inter-College/2016	Omprakash Shewale, Runner Up	Football
		Inter-College/2016	Raj Ramesh Bopche, Winner	Volleyball
		Inter-College/2016	Quadeer Shaikh, 1 st Prize	Code Wars
		Inter-College/2016	Vivek Salunkhe, 1 st Prize	Vines Competition
		Inter-College/	Prasad Tikare, 2nd prize	Collage making
		Inter-College/2016	Rutuja D. Talekar, Winner	Dance Competition
		Inter-College/2016	Rutuja D. Talekar, 2nd Prize	Solo singing
		Inter-College/	Shrutika R. Dongre, 1st prize	TECH Debate Competition
		Inter-College/2016	Badal Balasaheb Patil, 1st Prize	Vines Competition
		Inter-College/2016	Gurvir Singh Tarlok Singh Bhogal, 1st Prize	Vines Competition
		Inter-College/	Mihir Vilas More, winner	Mannequin Challenge
		Inter-College/2016	Kishor S. patil, 1st prize	Vines Competition
		Inter-College/2016	Pawan V. Kamath, 1st Prize	Sudoku Competition
		Inter-College/2016	Pawan V. Kamath, Runner Up	Badminton Mixed Doubles
		Inter-College/2016	Shubham Pawar, 1 st prize	ROBOCON
		Inter-College/2016	Vivek Salunkhe, 1 st Prize	Vines Competition

		Inter-College/2016	Kesarkar Kshitija Ananda, Certificate Of Appreciation	Rangoli
		Inter-College/2016	Rutuja Ajit Nadgouda, Runner Up	Inter College Throwball
		Inter-College/2015	Rutuja Ajit Nadgouda, Winner	Football
		Inter-College/2016	Rutuja Ajit Nadgouda, Winner	Football
		Inter-College/2016	Rutuja Ajit Nadgouda, Winner	Cricket
		Inter-College/2016	Rutuja Ajit Nadgouda, Winner	Wall Painting
		Inter-College/2015	Rutuja Ajit Nadgouda, Runner Up	Graphitti
3	Electronics and Telecommunication Engineering	Inter-College/2013	Tahoor Hamdulay, winner	Open Cricket Tournament
		Inter-College/2013	Tahoor Hamdulay, Runner up	Box Cricket Tournament
		Inter-College/2013	Muthukrshnan	Solo signing
		Inter-College/2013	Paresh Dandekar	Box Cricket Tournament
		Inter-College/2013	Vikas Shetty	Box Cricket Tournament
		Inter-College/2013	Vikas Shetty	Open Cricket Tournament
		Inter-College/2014	Vinaya Chaparla, First Prize	Table Tennis
		Inter-College/2014	Sunita Singh	Badminton
		Inter-College/2015	Swathi Pillai	Throwball
		Inter-College/2015	Vikas Shetty, Third Prize	Table Tennis

		Inter-College/2015	Vogita Jadhav	Throwball, Second prize
		Inter-College/2016	Nikhil Durafe, First Prize	Essay Writing
4	Electrical Engineering	Inter-College/2014	Vaibhav Pawaskar- winner 1 st	Volleyball
		Inter-College/2014	Atharv Deshpande - 3 rank	Technical Paper presentation
		Inter-College/2014, state level	Atharv Deshpande - 2nd position	Technical Paper presentation
		Inter-College/2014, state level	Atharv Deshpande - winner 1st prize	Technical Paper presentation
		Inter-College/2014	Prasad Gawade, winner 1st prize	Cricket
		State level /2015	Atharv Deshpande - winner 1st prize	Quiz competition, state level
		Inter college competition/ 2015	Prasad Gawade, 1st rank	Poster competition
		State level/ 2015	Atharv Deshpande -3rd rank	Technical Paper presentation
		State level/2015	Atharv Deshpande -3rd rank	Technical Paper presentation
		Inter college/2015	Omkar Bhat- winner 1st prize	Quiz competition, state level
		Inter college/2015, state level	Omkar Bhat- winner 1st rank	Technical project exhibition competition
		Inter-College/2015	Vaibhav Pawaskar	IEEE

		Inter-College/2015	Saroj Shinde	Robotics w/s
		Inter-College/2015	Saroj Shinde	Student Volunteer
		Inter-College/2015	Saroj Shinde	Creative member
		Inter-College/2015	Saroj Shinde, 2nd position	Chess
		Inter-College/2015	Saroj Shinde	Publicity, Creativity member
		Inter-College/2015	Abhishek Kumar Tiwari	Student volunteer
		Inter-College/2016	Vaibhav Pawaskar	Solar Training Programme
		Inter-College/2016	Vaibhav Pawaskar	General Secretary
		Inter-College/2016	Vaibhav Pawaskar	Finance Incharge(Tantr agyan)
		Inter-College/2016	Vaibhav Pawaskar	Advance techniques in Renewable energy system
		Inter-College/2016	Saroj Shinde, Ist position	Chess
		Inter-College/2016	Saroj Shinde	Co-Finance Incharge(Tantr agyan)
		Inter-College/2016	Saroj Shinde	Co-Finance Secretary (Tantr agyan)
		Inter-College/2016	Abhishek Kumar Tiwari	Avishkar
		Inter-College/2016	Abhishek Kumar Tiwari	Publicity team member(Tantra

				gyan)
		Inter-College/2016	Abhishek Kumar Tiwari	Management team
5	Electronics Engineering	Inter-College/2015	Yash Manian,Smit Modi, Tanmay Chandak,National robotic Contest 2015,MIT Pune	23 rd rank
		Inter college 2016	Shewta Ingavale, Robotics Contest-2017,MIT Pune.	3 rd prize
		Inter College 2016	Sharjil Ghawte,Rohan Patil Box Cricket SIES Navi Mumbai	1 st Prize
		Inter College 2016	Sharjil Ghawte,Rohan Patil Box Cricket Bharti Vidyapeeth CoE Navi Mumbai	2 nd Prize
		Inter College 2016	Sharjil Ghawte,Rohan Patil Box Cricket Institute of Chemical Engg.Mumbai-19	2 nd Prize
		Inter college 2016	Yash Manian,Smit Modi,Tanmay Chandak National level Conference-2016	3 rd Prize
		Inter college 2017	Prashant Ajabe,National Robotics Contest-2017,MIT Pune.	35 th Rank
		Inter college 2017	Pravin Birajdar,Shweta Kalyankar,Amruta Gholap,Vidula Zanje, Innovation Project Competitions Avishkar-2017, F.C.R.I.T,Nav Mumbai	2 nd Prize
		Inter College 2017	Pravin Birajdar,Shweta Kalyankar,Amruta Gholap, Vidula Zanje, Innovation Project Competitions, SIES,Nav Mumbai	2 nd Prize

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?

Employers are our main stakeholders, the progress of which is, reflected by the alumni students. Alumni meets are arranged periodically by the Alumni Committee, inviting the past students to share their experiences, suggestion and motivate the students to foresee their goals. The feedback on the the alumni current employment and advances in the industry are most valuable to the institute. Their suggestions are acknowledged by making necessary changes and development of the institute.

The employer feedback is most important as to know the skills and advances in the industry, help the departments and university in the design of syllabus through the syllabus review process.

5.3.4 How does the college involve and encourage students to publish materials like catalogues, wall magazines, college magazine, and other material? List the publications/ materials brought out by the students during the previous four academic sessions.

The college magazine committee is constituted as part of the LTCE Student Council. Interviews are held and suitable candidates are selected as Editor in chief, Assistant Editors, PR and Logistics and Designing Head who work on preparing Annual College magazine, ‘*Catharsis*’, for the college. The students are encouraged to publish articles, poems and sketches. It’s a year round activity in which with the help of posters and also with digital content creation, students as well as faculty members are informed well in advance about the publication. Students are encouraged to contribute original articles and poems in English, Hindi and Marathi. Every year the Best article, Best Poem, Best sketch, and Best Design are awarded, and the winning design is selected as the Cover page of the Magazine. Creative work included in the magazine comprises of original sketches and photography. Every year a section of the magazine comprises of the theme that was selected for that year. The theme of *Catharsis* 2016-17 is ‘Transforming Society- Small steps, Big change’.

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

Yes.

Student council is constituted as per the University norms every year, through a properly set procedure. A committee consisting of the Director, Principal, Vice-Principal, Deans, Heads and previous student council member, duly form a new council of students. The Dr. Avinash Sarode, Dean of Student affairs is looking after all the process of the student council.

Selection Procedure:

The set criteria for the selection of council is followed based on their academics and managing abilities. Students are the interviewed by the committee, to select the student council members. The Student council members for the academic year 2016-17 are as follows:

Students Council:

General Secretary: Mr. Shubham Mahajan

Cultural Secretary: Mr. Debo Haldar

Technical Secretary: Mr. Albin Abraham

Sports Secretary: Mr. Rohan Kokate

Ladies Representative: Ms. Siddhi Choudhary

Activities of Student Council:s

The activities of the student council are diverse in nature; comprising of the Sports, Cultural and Technical programs held during the year. Wide variety of sports activities are supported, for participation at the Inter-college, university and state level competitions. Some talented individual students

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

- **Computer Society of India(CSI)**

CSI is a professional body for the computer and IT, is a largest body in the nation and is also linked with the IEEE Society. The Institutional membership, since 2011 encourages various activities such as workshops, seminars, CSI conducted National and International Conferences and Industry Fair every year. Student Chapter with a large number of members conduct several programs like workshops, technical events and projects. There are more than 100 student members, actively participating in the CSI activities.

- **ISHRAE**

Indian Society of Heating Refrigeration Engineer, Local Chapter was formed in 2007 under the guidance of Dr. Kavita Dhanawade. Under ISHRAE Industrial visit have been conducted and student get the opportunity to apply for funding for their project (only for ISHRAE member). Last year JOB JUNCTION was conducted at LTCE, in which numerous job offers were given to final year students.

- **SAE Club**

TEAM TT RACING is the student design team from LTCE under the guidance of Prof. Ajay Kashikar, which functions under the SAE LTCE COLLEGIATE CLUB and represents the institute at National and International Off-road Motorsport competitions.

- **Aero Club**

Aero club is student venture of LTCE. Aero club is a society of engineering students who design, fabricate and test RC (Remote Control) Aircraft and Buggies.

- **MESA**

MESA (Mechanical Engineering Students Association) of LTCE is one of the very active association of student formed in 2007, which is always keeping the

student and faculty updated by conducting various seminars, workshops and lectures from industrial experts in the college premises.

- **SCEE**

Student Council of Electrical Engineering (SCEE) provides platform to the students to show their talent in organizing and participating in various activities. SCEE provides a platform to students to add some more positive angles to their personalities so that they can become better human beings. It also enhances their technical skills through guest lectures, seminars and workshops from experts. SCEE always have been focused on offering many opportunities for academic and professional development, both individually and collectively to the students of the department.

- **EESA**

Electronics Department has a student activity forum(Electronics Engineers Students Association) which has been formed with the view to promote various activities like guest lectures, seminars and workshops from experts.EESA provides a platform for the students to showcase their technical talent thereby enhancing their overall personality

- **IETE Student Forum (ISF)**

ISF organizes various event for the students.It provides the platform to explore their idea and got the chance to interact and boost their confidence. We make them introduce to the modern technologies as well as the various resource person and experts in the field of engineering.Every year students of ISF celebrates TELEIOS andfounder's day (1st Feb).

- **ETSA**

Electronics and Telecommunication Engg Students Association (ETSA) is our departmental committee which contribute in conducting various technical and non-technical events in the department. Student working under ETSA conducts various competition and organizes department level program like Teacher's day, farewell to final year various sports activities etc.

- **ELC**

English literature club (ELC) of LTCE promotes activities to enhance Communication Skills. Club motivates students to improve and practice their English skills which are necessary for career development in engineering world.

- **WDC**

WDC ofLTCE has a group of passionate feminist stalwarts, out with a gender lens. WDC has earned the reputation of being liberal space. WDC finds its true power in initiating conversations on pressing social issues, student's grievances, to disciplinary framework for students.

- **NSS**

NSS unit of college is mainly involved into activities which will enhance students' social skills and make them perfect person to live in the society. NSS normally conducts different social activities like Blood Donation Camp, Tree Plantation Camp and Book Donation Camps.

5.3.7 How does the institution network and collaborate with the alumni and former faculty of the institution.

LTCE has Alumni Association which constantly in touch with Alumni and update them about academic and other happenings in the college. With the help of this association departments invite Alumni to conduct in Seminars, Guidance sessions to share their knowledge and experience with the students. Alumni also helps T & P cell in arranging placements, internships and industry projects for the students. Student council also take help of Alumni to arrange different extra curricular activities in the college.

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

Lokmanya Tilak Janakalyan Shikshan Sanstha (LTJSS), Nagpur, is registered under the Societies Registration Act 1860 vide registration No. Maharashtra 340/83 (NAG) dated 16-08-1983. The Society is also registered under Bombay Public Trust Act 1950 (Clause No. 29 of Bombay Public Trust Act 1950) vide registration No. F. 3788 dated 19-12-1983.

LTJSS is recognized as one of the progressive educational institutions in Vidarbha region. The Sanstha established in 1983, presently runs 31 educational institutions. The Sanstha derives its philosophy from the magnanimous mathematician, educationist, social reformer Lokmanya Bal Gangadhar Tilak, who dedicated his life for the cause of Swaraj. The Sanstha makes a modest attempt to observe his ideology of new system of education for the youth to manifest the dream of modern India through value based education. The educational institutions of the sanstha have been progressing with objectives to create facilities for achieving advanced academic and professional competence. The establishment of the pre-primary schools, colleges, training centre synonymous with the locality reveals the visionary approach. Today, when one looks into the educational system in totality, the most precise observation is how the Sanstha cares for education of girls and that of children of slum-dwellers. The Sanstha runs pre-primary and primary schools, high schools in slums, training centre and schools exclusively for women.

LTJSS acquired a remarkable recognition in the educational scenario of the city for imbibing with a sense of self-discipline, self-confidence, and self-motivated accomplishment to more than 18,000 students through 31 institutions from the pre-primary level to the higher professional education stage. It comprises 11 primary schools, 3 high schools, 6 Engineering colleges, 2 D.Ed. Colleges, College of Physical Education, Industrial Training Centre, a Polytechnic, Pharmacy institute, 2 Architecture colleges, 3 International Schools, and Management Institute.

The LTJSS has created an impressive infrastructure in a span of 32 years in terms of land and buildings. It owns land in MIDC area, Nandanwan, Bagadganj, Sonegaon, Minimatnagar, Laxminagar, and Shivangaon - the populated localities as well as commercial or educational hubs of the city as well as in Navi Mumbai. Presently the Sanstha has created an extensive and beautiful educational environment in terms of elegant buildings, well-equipped workshops, rich libraries, number of hostel buildings with all the amenities for boys and girls studying in various institutions. The total built up area of existing structures admeasures around 20.0 lakh sq.ft. In addition, it provides an efficient transport system with number of buses plying from various parts of the city to the college campuses. The Sanstha has a swimming pool, a huge indoor stadium, gymnasium and beautiful lawns in its institutions.

Details of its Promoters including their Background:

The founder of Sanstha is Dr Shri Satish Chaturvedi who did his L.L.B., M.A. in Political Science, Hindi Literature and Modern History from Nagpur University. He has a distinction of receiving Gold Medal in History. He has also earned Ph.D. and D.Litt. degrees. He was MLA for 6 tenures i.e. 30 years, Hon'ble Minister of Textile, Ex Servicemen welfare and Employment and Self Employment Department in Govt. of Maharashtra. He is a rare visionary, fully devoted for the cause of development of the society by rendering service from pre-primary stage to higher professional education. The innovative intellect in him always perceives how educational vitality is to be implanted to cherish the valued human resource to face challenges in socio-economic development of our country. Dr Shri Satish Chaturvediji with his determination, perfect judicious approach towards the changing society and with the support of dedicated doctrine of his spouse Smt. Abhaji developed the Sanstha from its scanty stage into a large spectrum.

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.

Lokmanya Tilak College of Engineering (LTCE), Navi Mumbai was established in the year 1994 under the aegis of an educational trust , LTJSS – a renowned educational society of central India . LTJSS stands for –‘An immortal philosophy and ode to excellence’.

We have vision, mission clearly defined for our Sanstha as well as institute i.e. for LTJSS and LTCE which are as follows.

Vision, Mission and Quality Policy of LTJSS:**Vision:**

To create technically competent and ethically responsible professionals capable of providing efficient solutions to the contemporary world.

Mission:

We aim to excel in our continual efforts towards being one of the most recognized institutions by

- Providing a conducive environment comprising high end infrastructure and state of the art laboratory facilities wherein the students, faculty and staff can collectively enhance their technical potential.
- Encouraging innovation through research activities for the benefit of society.
- Developing competent professionals responsive to change in technology.

Quality Policy:

To impart value added business relevant education through empowerment.

Vision and Mission of LTCE:**Vision:**

To create technically competent and ethically responsible professionals capable of providing efficient solutions to the contemporary world.

Mission:

- To provide conducive environment comprising high-end infrastructure and state-of-the-art laboratory facilities wherein the students, faculty and staff can collectively enhance their technical potential.
- To encourage innovation through research activities for the benefit of society.
- To develop competent professionals responsive to change in technology.

We ensure that our students are groomed, nurtured properly to make them competent enough with their qualification acceptable worldwide. To accomplish our vision and mission we have all support mechanisms in place. We have qualified faculty, adequate library facilities, computational facilities, labs etc to impart quality education.

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

Our Hon'ble Chairman Dr Satishji Chaturvedi , an educationist par excellence cherishes the sanstha as the live entity of his intellectual aspirations and continual innovations. He is known for his highly skilled technical and entrepreneurial approach, by the virtue of which he searches for constant innovation , showing no signs of faltering in his resolve while exploring higher levels of education and focus on placements. He firmly believes in values of integrity , transparency and candidness . He also believes in creating collegial work culture based on merit, producing Engineers who are well educated, highly networked, tech-savvy and capable of addressing global issues. According to him India needs stalwart hands of young technocrats to lead the world from the front with their brainstorming intellect. Our Hon'ble chairman aims at contributing in the huge tide of technological march of the country towards Kalam vision of 2020.

Our quality policy is supported by learning objectives, which are again derived from graduate attributes.

- Students should be able to apply knowledge of maths, science and engineering to solve complex engineering problems in their field of specialization .They should be able to identify the science, maths phenomenon for solving particular engineering problem and demonstrate it.

- Students should be able to identify and formulate the engineering problem using scientifically proven methods of optimization. They should demonstrate that the methods are derived from governing principles.
- Students should be able to design components, systems, processes and solutions for complex engineering problems ensuring proper integration for the application of public health and safety.
- Students should be able to carry out investigations of complex problems through design of experiments, analysis and its interpretations leading to optimal formulation of problem.
- Students should be conversant with modern tools of design, drafting, analysis, simulations, statistical and IT related for modelling of complex engineering problem and also prediction .
- Students should ensure that their research is being translated to utilities in terms of health safety , legal and cultural issues as a gesture of giving back to the society .
- Students while being cautious about environment protection and sustainability should adhere to professional ethics and norms of engineering.
- Students should demonstrate their ability to perform individually as well as a team as the condition warrants with articulate communication and expression.
- Students should be able to manage projects and finances as a part of judging techno-commercial viability.
- Students should inculcate the trait of lifelong learning to update themselves on the state of the art in their fields, technological evolutions and also improve the learning curve.

Role of Principal:

- As a head of the Institute Principal is supposed to adhere to the policies framed by the management in carrying out day to day admin functions, admissions, faculty and nonteaching staff recruitments and encourage faculty development.
- He has to comply with the requirements of the regulatory authorities such as AICTE, DTE, Govt of Maharashtra, University of Mumbai, SWD, AISHE and Others as the situation warrants.
- He appoints Deans and other coordinators for smooth functioning in terms of academics, research and placements.
- He appoints student council, constitute anti ragging committee, grievance redressal committee for student welfare.
- He motivates faculty to apply for various grants such as AICTE / DST / University etc. by giving proper guidance.
- He ensures that academic ambience and safety prevail on the campus.

Role of Dean Academics:

- To ensure that the academic standards are improved by following a benchmark and best practices.
- To ensure that academic calendars and timetables are adhered to by all concerned.
- To monitor timetable schedules.
- To take student feedback and report to Principal.
- To ensure that the faculty maintains course files.
- To ensure that books, computers, software and lab facilities are made available.
- To ensure that the tests, term work, orals and practical are performed as per scheme.

Role of Dean Student Affairs

- To look into welfare of students on all fronts.
- To form student council and other student committees.
- To organize Technical, Sports, and Cultural festivals.
- To coordinate student activities other than mentioned.

Role of Dean Placements and Entrepreneurship Development

- To register companies for placements and Contact HR of companies.
- To appoint department-wise T and P coordinators.
- To appoint Student coordinators.
- To guide T and P officer in day to day activities.
- To establish MoUs with companies, Incubation centres, Centre of Excellence for ED.
- To conduct EEP (Employability Enhancement Programme) religiously.

Role of Heads of the Department

- Allocates subjects to faculty according to their expertise.
- To delegate time tables to faculty.
- To assign various portfolios to faculty and staff members.
- To monitor academics, discipline, etc.
- To get the lab and other academic requirements approved.
- To ensure teamwork with cordial relations.
- To connect with all students and understand their problems.

Role of Faculty

- To engage lectures as per prescribed teaching load.
- To ensure one to one connect with students.
- To ensure counselling in academics and personal issues.
- To mentor the students for holistic development.

6.1.3 What is the involvement of the leadership in ensuring the policy statements and action plans for fulfilment of the stated mission?

As mentioned earlier, our management is committed to comply with all our action plans and extends support for the same. Our academic achievements are testimony to our quality policies which are supported by the management.

- We have a very good state of the art infrastructure, which is more than specified by AICTE. We have 35 classrooms, 17 tutorial rooms, 5 seminar halls with LCD projectors and 1 auditorium.
- All our 5 Engineering Departments are equipped with 52 laboratories with latest equipments. We also have research labs for PG, where the cutting edge researches are done.
- We have a spacious library having area of 540 sq-m, about 38,000 books, 10,000 e-books, 75 Indian Journals, 275 online international journals. About 200 students can be made seated in the space. The library also has a multimedia room with 10 computers.
- Our Institute advertises for faculty recruitment every year and appoints qualified teachers as per AICTE norms.
- Our Training and Placement cell constantly strives for registration of new companies for placements and MOUs.

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?

As mentioned earlier our main motto is to produce competent engineers who are capable of catering to the needs of the society keeping in mind the ethical aspects. As such following areas of interest are monitored by our management.

- **Teaching Learning Process:** This is the priority agenda of ours. To improve teaching learning process we take utmost care in recruiting the right people. The screening / filtering of faculty is done by our management with full involvement. Our management also encourages up gradation of qualification by sponsoring the faculty for Ph.D. courses. Secondly we also work at the grass root level i.e. the student level, who is our important stake holders. We ensure that there is proper connect between faculty and students. We take feedback from students and other stake holders about the existing faculty and infrastructure. This feedback is analysed by our management and corrective actions are initiated to fill in loopholes. Thus our main policy is taken care of.
- **Academic Excellence:** We continuously strive for excellence and to achieve that we focus on areas like lab facilities, library facilities, computational facilities and faculty. As mentioned above we recruit faculty and cadre as per AICTE norms so as to have a proper mix of teachers i.e. Senior qualified and juniors. When it comes to infrastructure our management does not compromise on quality. We are already once accredited therefore sincerely believe in the philosophy of beyond norms

.All our lab purchases / software purchases / library purchases / computer purchases are done centrally by our sanstha situated at Nagpur. We have a team of Deans, Directors in the purchase committee which offers us with state of the art equipments and other facilities. Thus at operational level we are having adequate support .We get our budget approved annually for the purpose.

- **Training and Placement:** Results and placements are the edifices of any professional engineering institute on which its reputation depends. For improving placements we are having a big network of companies which visit us annually .For enhancing the placements we conduct HR meets, job fairs in the companies for which our management is liberal. We also have employee enhancement scheme wherein the students are groomed for English language, foreign language, core engineering and aptitude .Our sanstha has a fully fledged team for this exercise.
- **Local Managing Committee:** Our duly constituted LMC takes stock of all academic decisions taken. The LMC structure consists of our management, principal who is member secretary by default, teachers, nonteaching staff etc. All major policy decisions taken in the meeting are reviewed annually about their completion / compliance.
- **Feedbacks :** We take student feedback during the course , exit feedback and industry feedback for introspection of our strengths and weaknesses

6.1.5 Give details of the academic leadership provided to the faculty by the top management?

Our management always believes in empowerment of our faculty through various schemes. Our teachers are encouraged to attend STTPs/ Workshops / Conferences etc to upgrade their knowledge. Any research endeavours to that effect such as publications, patents etc are encouraged and supported wherever found competent. We also have a budget for arranging guest lecturers in the field of specialisations .The faculty are also encouraged to take memberships of various professional bodies. Thus we ensure that our teachers are competent enough to groom students.

6.1.6 How does the college groom leadership at various levels?

When it comes to grooming of leaderships at various levels, our HR is always at work . We identify strengths of our faculty and nonteaching staff and they are accordingly given a portfolio to handle. The following members have been identified and given responsibilities as given below.

Sr. No.	Designation	Responsibility	Name of the Person
1	Director(R andA)	Overall improvement in Research and Academics	Dr. Vivek K. Sunnapwar

2	Principal	Overall administration and academics	Dr. Vivek .K.Yakkundi
3	Vice Principal	Administration , ERP and academics	Dr. Subhash .K.Shinde
4	Registrar	Administration , Administration , Liasion with Regulatory authorities, House keeping , Security .	Mr. Anil . S. Yadav
5	CAFO	Accounts and Finance	Mrs. I. K. Singh
6	Dean Academics	Academic Monitoring, Research Proposals	Dr. Subhash . K. Shinde
8	Dean Student Affairs	Student council , Technical and annual festival , sports , Conference etc.	Dr. Avinash .D.Sarode
9	Dean Placements and EDC	Networking , MoUs with companies	Dr. Jayesh .J.Dange
10	HOD Mechanical Engineering	<ul style="list-style-type: none"> • Allocates subjects to faculty according to their expertise. • To delegate time tables to faculty. • To assign various portfolios to faculty and staff members. • To monitor academics, discipline, etc. • To get the lab and other academic requirements approved. • To ensure teamwork with cordial relations. • To connect with all students and understand their problems. 	Dr. Chandrababu D.
11	HOD Computers Engineering		Dr. P. J. Nikumbh
12	HOD, Electronics and Telecommunications Engineering		Dr. R. N. Duche
13	HOD Electrical Engineering		Dr. C. M. Wankhade
14	HOD Electronics Engineering		Dr. Sheeba P. S.
15	HOD Maths		Mrs. K. V. Nimy
16	HOD Physics		Mrs. Priya Tilak
17	HOD Chemistry		Mrs. Dolly Boban
18	HOD, Communication Skills		Mrs. Geetha. G.
19	Training and Placement Officer	Annual placements, campus pools, etc.	Mr Anil E.Magare
20	Workshop Superintendent	Workshop practicals FE / SE, Purchase of consumables.	Mr. Bennur Srinivasa

21	Examination Coordinator	Conduct of exams semester-wise, results, revaluation and post processing etc.	Mr.Vinod Bhaskarwar
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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?

Eventhough our Governing Body takes major policy decisions, it firmly believes in decentralization and empowerment down the line so that the implementation becomes easy and it also enables better control. Our Governing Body is as given below.

Sr. No.	Name and Address of the Members	Designation	Qualifications
01	Dr. Satish Jhaulal Chaturvedi	Chairman	D.Litt Ph.D. (History) M.A.(Political Sc.), M.A. (History), Gold Medallist M.A. (Hindi Literature), L.L.B.
02	Smt. Abha Satish Chaturvedi,	Secretary	B.A.
03	Shri. Dushyant Satish Chaturvedi	Director, GB	B.Com.
04	Shri. Girish Jahulal Choube	Member	B.A. , L.L.B.
05	Shri. Ajay Kumar T. Choube	Member	B.Sc.
06	Smt. Pallavi Samir Chaturvedi	Member	B.Com.
07	Smt. Abha Ajay Choube,	Member	B.A.
08	Smt. SharadUpendranathPande,	Member	B.A,
09	Shri. Samir S. Chaturvedi	Member	B.Com.
10	Smt. Shobha A. Chaturvedi	Member	B.A.
11	Smt. Sheetal D. Chaturvedi	Member	MBA

Local Managing Committee (LMC) structure is as given below

Sr. No.	Name	Designation	LMC Designation
01	Dr. Shri. Satish Jhaulal Chaturvedi	Chairman	Chairman
02	Smt. Abha Satish Chaturvedi,	Secretary	Secretary
03	Shri. Dushyant Satish Chaturvedi	Director, GB	Director, GB
04	Shri. Abhijit Deshmukh	Director, LTJSS	Director, LTJSS
05	Dr. V. K. Sunnapwar	Director, (R and A)	Member
06	Dr. V.K.Yakkundi	Principal	Member
07	Dr. S. K.Shinde	Vice Principal	Member
08	Shri Anil Yadav	Registrar	Member
09	Smt. I. K. Singh	CAFO	Member
10	Dr. Sarode Avinash	Professor	Member
11	Shri. Bennur Srinivasa	Workshop Supdt	Member
12	Shri. Razzak Subhedar	Lab Assistant	Member

The decentralization of authority in our institute is as given in the organization hierarchy. When the Governing Body takes decision, it is communicated either in the LMC for further implementation or it is announced to all faculty.

6.1.8 Does the college promote a culture of participative management? If ‘yes’, indicate the levels of participative management?

Yes.

LTCE firmly believes in empowering groups of faculty, students etc to air their ideas and take decisions favourable to the institute. As such we have various committees, groups to discuss, brain storm on various problems and arrive at optimal solutions. We have the following committees formed to make the environment democratic.

- Local Managing Committee (LMC)
- Internal Academic Council (IAC)
- Women Development Cell (WDC)
- Anti Ragging Committee

- Greivance Redressal Committee
- Student Council
- NSS
- Marathi WangmayMandal
- Hindi Sahitya Sangh
- English Literaure Club.

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.

LTCE has a formally stated quality policy as defined earlier i.e. to impart value added business relevant education through empowerment in the market driven environment and also QMS for faculty and QMS for students which are also described earlier.

The quality policy, QMS for faculty and QMS for students are derived from vision, mission statements, which are in turn based on graduate attributes.

All these are driven by the established mechanisms and committees and are translated into meaningful outcomes.

These are consistently deployed for achieving quality and also based on real time requirements, the necessary amendments / reforms are done.

6.2.2 Does the Institute have a perspective plan for development? If so, give the aspects considered for inclusion in the plan.

Yes.

LTCE has well planned perspective plan for development in terms of short term goals and long term goals. Actually our perspective plan for growth and development depends on the policies of regulatory authorities, namely AICTE, DTE and University of Mumbai. However, our roadmap for next 10 years is as given below.

1.Short term goals

- Improved teaching learning methods.
- Improved results through rigorous academics
- Improved Infrastructure: State of the art labs, ICT facilities, Library with e-books, multimedia, online journals to foster research activities.
- To provide skill development and personality development to students.

- To conduct FDPs / STTPs / Workshops / Conferences in the benefit of faculty.
- To encourage qualification upgradation of faculty.
- To increase the companies visiting the campus for placements
- To enhance overall personality of students by conducting seminars and training on presentation skills, foreign language, Aptitude / soft skills, etc.
- To conduct training for GATE / GRE / UPSC / MPSC / IAS / MBA etc
- To increase entrepreneurs, EDC cell organizes various activities.
- Fetch AICTE / DST / UGC / BRNS and other research grants.

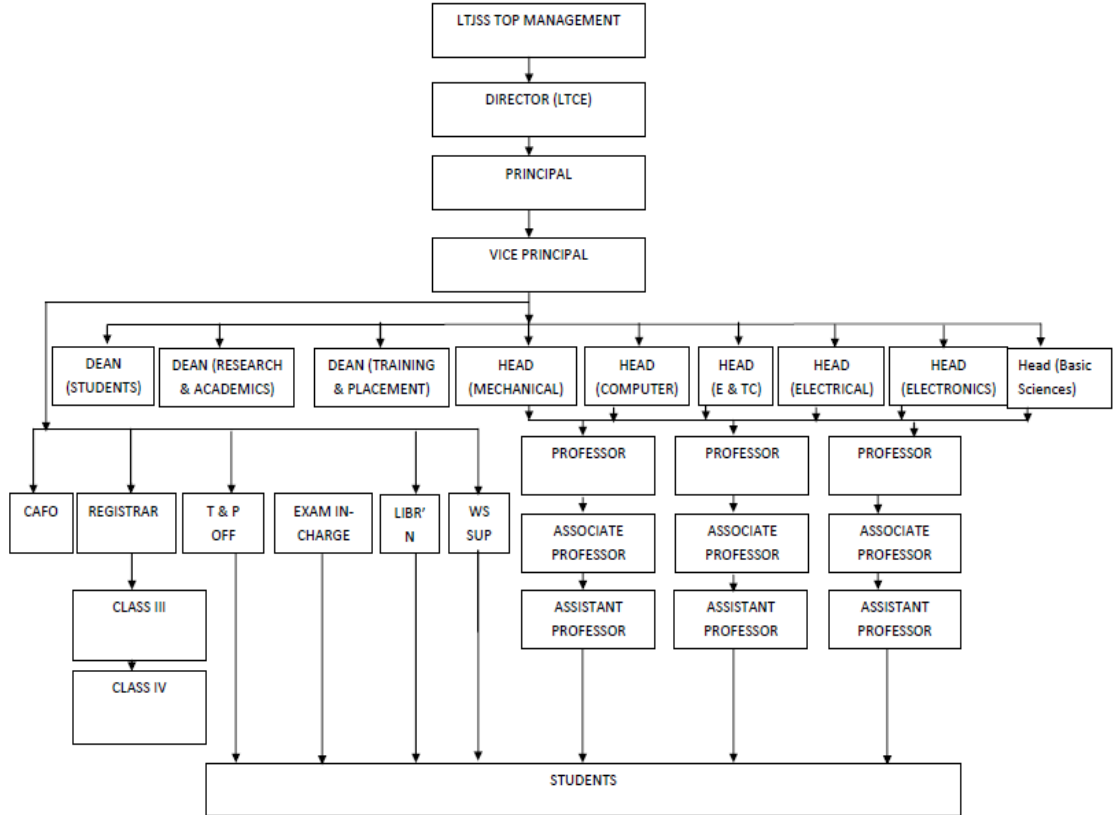
2. Long term goals

- To get NBA re-accredited.
- To get permanent University affiliation thereafter.
- To get UGC 2f and 12b certifications.
- To get good ranking by standard ranking agencies.
- To get MoUs with corporate and institutes of repute for mutual sharing
- To get PG and Ph.D. courses in other branches like Electronic Engineering, Electronics and Telecommunications and Electrical Engineering.
- To encourage and motivate all the current faculty to upgrade their qualifications.
- To inculcate research culture amongst faculty, increase research and development collaborations.
- To have incubation centres / centres of excellence for encouraging R and D, Consultancy, Cutting edge research, patents and start-ups.
- To follow best practices through benchmarking for academics and research.

6.2.3 Describe the internal organizational structure and decision making processes.

All important policy decisions are taken by our governing body, the structure of the same is as given in 6.1.7.

Also our other decisions in terms of academics and research activities are taken by authorities as shown in the organization hierarchy chart as shown.



6.2.4 Give a broad description of the quality improvement strategies of the institution for each of the following

- Teaching and Learning
- Research and Development
- Community engagement
- Human resource management
- Industry interaction

- **Teaching and Learning:** We follow University of Mumbai calendar for the term as per which we are supposed to plan academics for 15 weeks, which include internal tests, extra lectures submissions etc. Our academic monitoring cell ensures lectures and practical are conducted as per the timetable. For making the teaching learning effective we ensure proper connect with students by various arrangement like class advisor, teacher guardian, counsellor at institute level etc. We follow CBGS / CBCGS systems of examination conducted by University of Mumbai, which are student centric in terms of choice of subjects. In this system the continuous appraisal of the student performance is possible. Also this system enables the students to improve .We have various schemes of faculty development by which they can enhance their teaching skills .We encourage up gradation of qualification. We also have a system of feedbacks like student

feedback, industry feedback, course and program exit feedback from which we improve on our resources and faculty. Our teachers engage extra lectures, remedial lectures, seminars, workshops, conferences which are platforms for students to improve their skills. We give exposure of project based learning to students through projects like SAE MINIBAJA , SUPRA , ROBOCON , TEXAS Instruments project competition etc .We have seminar halls and auditorium with state of the art facilities to impart education . We also encourage culture of research, patents, RandD, Consultancy etc. which add value to the faculty as well as students.

- **Research and Development:** It is our vision and quality policy to inculcate research culture amongst our faculty as well as students. For achieving the goals, we are continuously striving to get R and D Projects, Consultancies from Govt., Semi-Govt, PSUs, and MNCs etc. in which faculty and students are involved. Our faculty is encouraged to pursue Ph.D. and other courses to upgrade their knowledge. We have a full fledged research centre in Mechanical Engineering and Computer Engineering.
- **Community Engagement:** While we excel in academics we are also meeting social obligations as a gesture of returning to the society. We conduct various activities like blood donation, free medical check-ups, clothes / fruits distribution, visits to NGOs, etc. We also have NSS unit in our institute through which we conduct student activities like cleaning, plantation etc.
- **Human Resource Management:** We are governed by AICTE norms for faculty recruitment. The appointments are also approved by the University of Mumbai. We have a transparent process of advertising in national news papers and the selection is done by constituting a committee as per the quorum prescribed by the University. Our management is personally present during all interviews. Subsequent to selection of candidates and approval from University, the candidates are given additional portfolio's suiting their expertise. Similarly, non-teaching staff is also selected purely on merit basis as per the qualification requirements.
- **Industry Interaction:** In order to bridge academia-industry gap we approach various industry with following purpose and it is vice versa also.
 - Mutual sharing – lectures / seminars / visits
 - Internships
 - Live Projects to students
 - MOUs for joint research
 - Placements

- Training to faculty
- HR Meets / Job fairs
- Industry representatives on Internal Academic Council

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?

We have our own ERP system which helps us for efficient administration. Our ERP has all details of faculty performance in terms of academics, research and other portfolio's given to them. Our faculty is supposed to upload the relevant certificates, supporting documents as a proof of their achievements. The compiled reports are visible to our top management team, which comprises of Directors and Deans of LTJSS. The ERP also has leave, vacation records of faculty, students' record and daily academic monitoring.

Apart from our ERP, we have a system of feedbacks which are as under

- Student feedback
- Alumni feedback
- Industry feedback
- Course exit / Programme exit feedback
- Parent's feedback
- Suggestion box

Based on the above feedbacks and suggestions received we take corrective actions to complete the loop.

6.2.6 How does the management encourage and support involvement of the staff in improving the effectiveness and efficiency of the institutional processes?

As discussed earlier our management believes in the philosophy of education through empowerment and therefore believes in involvement of faculty and also nonteaching staff in decision making. Our Local Managing Committee has an involvement of teachers and supporting nonteaching staff as well. For empowering our faculty and nonteaching staff we have the following facilities which we offer

- Sponsoring for PG / Ph.D.
- Provision of study leave and flexibility during the course
- Sponsoring the faculty for attending conferences / workshops / STTPs / FDPs
- Encouraging faculty for RandD, Consultancy, Patents.
- Training the Trainer facility
- Workshops like maintenance of equipments / handling of electrical / safety etc to non teaching staff
- Lab incharges are authorized for recommendation for upgradation

6.2.7 Enumerate the resolutions made by the Management Council in the last year and the status of implementation of such resolutions .

The following resolutions were made last year.

- DA for the faculty was revised to 113 % wef September 2016
- It was resolved that the institute will apply for NAAC – The process was initiated last year and final approval of management was sought in January 2017.
- It was also resolved that the institute will go for NBA in the near future. The departments, accordingly maintain records.
- It was resolved that the intake of research centres in Mechanical and Computer Engineering be increased. Accordingly, proposals have been submitted to the University of Mumbai.
- It was resolved that value-added courses be conducted for students with 30: 70 revenue model – Various courses have been conducted by Departments of Mechanical Engineering, Electronics and Telecommunication Engineering, Electronics Engineering, and Computer Engineering successfully.
- It was thought necessary to resolve that the institute signs technical MOUs with companies and institutes of repute. Many MOUs have been signed for mutual sharing of facilities and expertise. We have also signed MOU with VJTI under Margadarshan scheme of AICTE, wherein VJTI is mentor institute and we are mentee institute for mutual sharing.
- It was resolved that the Ph.D. course for Computer Engineering and Mechanical Engineering candidates be conducted by our own faculty and experts from outside. Accordingly, we have completed two batches successfully.
- It was resolved that the eligible candidates be sponsored for Ph.D. in research centres of UoM. Accordingly, 7 faculty were sponsored in 2016-17.
- As usual it was resolved that the faculty who have completed Ph.D. be retained. Accordingly, the advertisement is being released for faculty recruitments for making cadre ratio as well as making up of head count as per AICTE.
- It was resolved that the student achievers in academics be awarded. Accordingly, the semester wise toppers and subject toppers are felicitated every year.
- It was resolved that all lab requirements would be completed / upgraded as per the revised syllabus – The purchase process has initiated and 50 licenses of PTC Creo and 50 users MATLAB, 20 Seats of Simulink have been purchased. All our purchases are done under the supervision of Dean, Planning, LTJSS.

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 University gives academic autonomy to the deserving institutes based on fulfilling certain criteria. However, the institute must qualify for it through following stages.

- NAAC / NBA
- Permanent Affiliation
- Autonomy.

We are gearing up for the process.

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?

The institute has various committees and mechanisms to address grievances /complaints from various stake holders like, girls' / boys' students, faculty, non-teaching staff etc. The following committees are active in dealing with problems.

- Antiragging committee: We have a full-fledged committee with 6 members whose list is displayed with contacts on website and also on college notice boards. It also mentions toll free number given by AICTE. At the time of admission, we take parent and student undertaking as per UGC guidelines, the warning board is also displayed in the college premises.
- Grievance redressal committee: We also have a grievance redressal committee comprising Director, Principal, Vice Principal, Registrar etc. to look into and sort out grievances. In addition, we can have access to the Ombudsman appointed by the University.
- Women's Development Cell: We have a duly constituted women's development cell, which deals with women welfare and also grievances.
- Suggestion Box: We have installed suggestion box which is accessible to all stake holders.

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 analysing student feedback on institutional performance? If 'yes' what was the outcome and response of the institution to such an effort?

Yes.

Our LTJSS team conducts the exercise of student feedback every year. The faculty feedback is taken subject wise and student feedback for infrastructure is also taken. For feedback, we have 5-point scale.

Based on the faculty feedback the probationers and regular faculty are counselled for the lacunae. For the infrastructure feedback, the student suggestions are taken seriously and improvements are done accordingly in the areas of academics and also welfare.

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?

- Since PG is the minimum qualification required as per sixth pay recommendations, we encourage our faculty to pursue Ph.D. and post doctoral researches.
- The faculty are given flexibility to adjust their teaching load for attending the course work of Ph.D.
- The faculty is also allowed to avail leave during the advantage stage of their Ph.D.
- For attending progressive seminars and thesis defence, OD (Study leave) is sanctioned.
- Our institute is a mentee institute under mentor organization VJTI as a part of Margadarshan scheme of AICTE. With this scheme, we are able to share resources of VJTI and other mentee institutes. At a time 2 faculty members are allowed to attend faculty development programmes at any of the institutes.
- Our faculty is encouraged to deliver guest lecturers as per his / her expertise.
- Our faculty is encouraged to attend STTPs / Workshops / National/ International Conferences by providing ODs.
- Regular increments and EPF are given to the faculty as per norms.

The faculty is also given the college level portfolios so that they can even contribute to the growth and development of the college.i.e. ISTE,NSS,WDC, Festival I/C, Sports I/C, Conference coordinator,Placement, Magazine etc.

The faculty is encouraged to have memberships of professional societies in their field. i.e. ISTE,IEEE,MSAE,IETE,CSI,IACSIT, ISHRAE / ASHRAE,MESA,CESA,ETSA, SCEE, EESA, etc

The identified faculty are referred to the industries for consultancy, R and D projects etc.

- Nonteaching staff also has same set of rules for duties. They are also encouraged to participate in workshops like Maintenance of labs / Handling of Electricals / Safety etc.
- The Ph.D. guides are paid the honorarium as sanctioned by the management per anum.
- The faculty conducting VACs is paid as permissible under 70: 30 models.
- The faculty / nonteaching staff is paid exam related remuneration as per University norms.

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?

As mentioned above our faculty is encouraged and motivated for performing the task they are given. In addition, the following activities are done

- The faculty whose subject results are above 80 % is given a letter of appreciation.
- We also believe in the philosophy of train the trainer and have already conducted programmes like Mission 10x, Infosys campus connect, NBA workshops, other faculty development.
- We also depute our faculty for corporate meets where they can learn new techniques develop and hone their skills.

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.

In order to evaluate the performance of the faculty we have very stringent appraisal formats, which cover all aspects of performance. The appraisal forms are evaluated annually for the regular faculty and for probationers it is annual and after 18 months. The following parameters are covered in the appraisal forms.

- Subjects taught / Practicals taught
- Subject results
- Student feedback
- Teaching aids used
- Publications National / International
- Patents
- Books / Chapter
- Reviewership
- Grants received
- VAC'S Conducted
- Professional memberships
- Awards fetched
- Internal Revenue Generation
- Head's Recommendations

- Leave records
- College level portfolios
- University level portfolios

With these aspects, the faculty performance for the year is appropriately captured.

The sanstha also conducts probationer's academic reviews during which they are interviewed by panel of experts for their suitability and are accordingly counselled.

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?

After the annual academic reviews for regular faculty and for probationers and the interviews by the expert panel, the decisions are communicated to the respective faculty members by Director, LTJSS.

The satisfactory report as well as those having shortcomings / are communicated in writing to the concerned faculty. During probation, the faculty is warned about their lacunae. Sometime the probation is extended by 6 months for making up the deficiencies.

For the award of annual increment, publications and other factors are made mandatory, as mentioned in IQAC. This inculcates the research culture and also ensures discipline.

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?

The following welfare schemes are in existence:

- EPF scheme
- Maternity leave to regular faculty as per rules.
- DA revision as and when is applicable
- Medical insurance for faculty, staff and students

6.3.6 What are the measures taken by the Institution for attracting and retaining eminent faculty?

We have a reputation of good retention ratio as our 60 % of senior faculty are almost retained consistently at any given point of time. This is because of implementation of sixth pay scales with appropriate AGP and DA. We provide healthy atmosphere and good academic ambience to teachers.

We advertise annually to get the best talent in terms of highly qualified teachers. This also enables us to maintain the cadre ratio. We also welcome eminent faculty to be a part of adjunct faculty.

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?

We being self financed private engineering college student fees are the only source of revenue for us. The major part of our revenue goes into salary head. We does not get any subsidies from government except a few grants which we have fetched from AICTE and University of Mumbai.

Our governing body allocates yearly budgets to all the institutes under LTJSS. All our requirements i.e. lab equipments, consumables, books, online journals, computational facilities, softwares, stationery, guest lecture remuneration etc, are projected by Heads of the departments.

These requirements are discussed in Local Managing Committee and accordingly the total budget is disbursed to various departments.

Our purchases are finalized by Dean Planning, LTJSS and Director, LTJSS at Nagpur. We get most of our requirements finalized from Nagpur. If required, our Heads visit Nagpur for discussion and finalization.

We also have a purchase committee comprising Director (Rand A), Principal, Vice Principal, Registrar, CAFO for LTCE requirements. Competitive offers are called and the most competitive offer is considered in a transparent way.

Building maintenance and renovations are dealt by the management separately.

Upto Rs 10,000 /- and other sundry expenses, the Director (RandA) and Principal are authorized to sanction after ascertaining justification.

Budgets for Technical-fest, sports, cultural fest and Conference are separately obtained by Director (RandA) and Principal. The disbursement is done to the student council by faculty coordinator and CAFO.

In addition, the management sponsors certain project based learning projects like, Robocon, SAE MINIBAJA, etc partly. In this case the faculty coordinator holds the responsibility of settlement of funds given for the purpose.

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.

Our internal audit is conducted every year by March end. The audit is done by a competent chartered accountant.

External audit is done by visiting committees like AICTE, LIC of University of Mumbai etc. Otherwise the University of Mumbai sometimes appoints external audit agency for the purpose.

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.

We being Hindi speaking minority and a self financed private Engineering college, our only source of revenue are through student fees, which are approved by Shikshan Shula Semite annually based on facilities offered to the students. As such we do not get any subsidies from the government of India, except for a few grants which we have fetched from AICTE and University of Mumbai.

Our major expenditure is on the salary head and the deficit occurs only if the admissions are not full. In the event of shortfall of admissions, the budgets are proportionally distributed to account for deficit.

Year	Total Income				Actual expenditure (till date)			Total No. of Students
	Fee (in Lacs)	Govt	Grants	Other Sources	Recurring including salaries	Non-recurring	Special projects /Any other	Expenditure per student In Thousand
2015-16	1804.74	-	---	---	3068.47	241.57	---	---
2014-15	1959.26	-	---	---	2466.85	93.47	---	---
2013-14	2236.85	-	---	---	2782.10	1607.28	---	---

Items	Budget in FY 2016-17	Budget in FY 2015-16	Actual expenses in FY 2015-16	Budget in FY 2014-15	Actual expenses in FY 2014-15	Budget in FY 2013-14	Actual Expenses in FY 2013-14
Library (books)	35	30	30.32	10	4.49	5	1.94
Laboratory equipment	12	10	7.10	5	1.76	25	21.94
Laboratory Consumables	85	80	78.24	60	57.23	60	58.35
Staff Salary	1580	1550	1550.38	1250	1249.83	1200	1159.67
Maintenance	210	205	202.86	125	123.30	160	156.69

R and D	7	5	5.39	5	3.71	10	10.25
Training and Travel	70	65	66.92	70	69.36	70	69.18
Miscellaneous expenses	320	300	295.56	225	221.58	225	224.39
Others, specify	1150	1120	1111.68	1000	921.29	1300	1281.36
Total	3469	3365	3348.45	2750	2652.55	3055	2983.77

6.4.4 Give details on the efforts made by the institution in securing additional funding and the utilization of the same (if any).

As mentioned above we are self financed private Engineering College and are not eligible for any government subsidies. However, through various schemes we have managed to get grants, which are as under

- Under MODROBS scheme of AICTE our Advanced Manufacturing lab got Rs 9.00 lakh in 2010 and Satellite communication lab got Rs 5.00 lakh in 2012.
- Three of our faculty members got DST travel grant for attending International conference.
- One faculty member got travel grant from Indian Medical Association for attending International conference.
- Many of faculty members apply for minor research grant of the University of Mumbai every year and get these grants.
- We had applied for TEQUIP grant in the year and were shortlisted in first 20. However, in the final list we could not make it.
- Consistent efforts are on to earn revenue through R and D and consultancies and value added courses.

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 Institutional policy with regards to quality assurance has contributed in institutionalising the quality assurance as per the process mentioned below:

A. QMS for Faculty

In order to appoint competent teachers we have benchmarked certain requirements of qualifications as per sixth pay commissions recommendations. For being appointed as an Assistant Professor the candidate has to be post graduate and for being appointed as an Associate Professor / Professor the candidate has to be Ph.D. holder .We also give them necessary freedom to upgrade the knowledge to keep themselves abreast of state of the art in their respective fields. In all following measures are taken up to maintain quality of faculty and nonteaching staff , keeping in view the Graduate Attributes , Institute Vision , Institute Mission and Quality Policy.

(i) Faculty Recruitment Process

The faculty is appointed strictly as per AICTE norms, DTE guideline and University guidelines from time to time. For conducting interviews, UGC / USSC, the University subscribed quorum is followed so as to ensure transparency. Annually the faculty requirements are advertised in National news papers and the candidates are shortlisted as per the criteria / guidelines given by the University. The teaching load is also as per University guidelines i.e. 16 clock hours per week for Assistant Professor, 12 clock hours for Associate Professor and 8 clock hours for Professor. This system ensures that they are left with spare time for creative work which is useful for their upliftment as well as for the benefit of Institute.

(ii) Qualification Upgradation

Our management with a vision of achieving long term goals of becoming educationist par excellence continuously strive for encouraging upgradation of qualifications. We have a policy of sponsoring eligible candidates for Ph.D. programmes of reputed institutes every year. These decisions are taken by duly constituted local managing committee. We also use to sponsor candidates for PG programmes earlier. Now, since the minimum qualification has become PG, we get PG candidates at entry point. We also encourage certification courses in various streams of Computers Engineering, Electrical Engineering, Mechanical Engineering etc. to hone their expertise.

(iii) STTPs / Workshops / Conferences

As mentioned earlier we sponsor faculty for various STTP'S / Workshops / Conferences suiting their field of expertise. This is done to widen their horizon and facilitate out of box thinking. We generally emphasize on journal papers of good impact factor, encourage filing of patents and international conference. Many of our faculty have quality publications, patents with good citation index. A few of our faculty could attend international conference abroad with management support. A few faculty

members got DST travel grant for attending international conference abroad.

(iv) Academic Review / Probationer's Review

We have a unique system of academic review wherein the reviews are conducted by our Dean Academics, LTJSS and Professors / Heads, across the sanstha. We are a Nagpur based sanstha having in all 6 Engineering colleges. Therefore, for conducting reviews the teams are shuffled. This process is done every year for regular faculty and probationers. Probationers are reviewed after 1 year and subsequently after 18 months for their performance. The lacunae if any in their performance is notified in advance so that they can make up for the shortcomings / weaknesses in 2 years of probation. Our reviews are conducted by Dean Academics, LTJSS and Professors / heads of our Nagpur colleges.

(v) Student Feedback

We have a system of taking feedback from students on infrastructure and also subject wise teachers. This enables us to know where we lag. This is a feedback on 5-pointscale, which measures parameters like Subject knowledge, Expression, teaching aids use, methodology etc. which is analysed by our management for taking appropriate decisions for improving the infrastructure and also quality of teachers. For teachers' feedback rating upto 3 is acceptable. Those who are having a rating below 3 are called and counselled / warned about their shortcomings. Student feedback is considered as most important tool in QMS as; students are the most important stake holders of an Institute.

(vi) Train the Trainer – Pedagogy

The pedagogy has evolved over period of years in Professional Engineering education in terms of Classroom teaching, Laboratories, extra-mural learning, out of syllabus teaching, Industry internships, Live projects, Project based learning, mini projects, affiliation of professional bodies, Project competitions, etc, but however the fundamental question to be asked is whether the trainer is trained? Whether the teacher imparting knowledge is well informed? With this philosophy in mind, we conduct faculty development programmes. We have conducted several such programmes including campus connect of Infosys; Mission 10x of Wipro, in which the basics of Bloom's Taxonomy are exposed to the trainers / teachers. In addition, several other subjects' related programmes and programmes to improve teaching learning process have been conducted. This paradigm came into existence to improve the ability of trainers to improve their connect with students and also to meet industry request of reduced training at their end. We are also part of Margdarshan scheme of AICTE, under VJTI which is mentor institute. This scheme enables mutual sharing of expertise with mentor and other mentee institutes.

(vii) Industry-Institute Interaction

Bridging the academia-industry gap is perhaps the most vital for any institute to attain its short term and long term goals. In our internal academic council we have industry representatives who help us in identifying gaps in the curriculum. In the University committee for syllabus revision, the Chairman board of studies, members of BOS, Industry representatives give their inputs. By the virtue of 1-1 Interaction we are able to have expert guest lecturers / seminars, sponsored labs / equipments, internships, live projects and MOUs for mutual sharing.

B. QMS for Students

In order to achieve learning outcomes, we have adopted following measures:

(i) Academic monitoring Cell

Our Dean Academics is incharge of academic monitoring cell. Academic monitoring cell is responsible for ensuring proper academic calendar and teaching learning process. It monitors all parameters right from attendance, assignments, practicals, internal tests. List of defaulter students is notified fortnightly and the parents are informed.

(ii) CBGS / CBCGS Systems of University Examinations

Credit Based Grading Systems and Choice Based Credit Grading System of exams is student centric in nature and provide sufficient flexibility in terms of choice of subjects and electives. These systems of exams also enable continuous assessment keeping the student focused and engaged throughout the semester.

(iii) Parent-Teacher Guardian Mentoring

We have a system of class advisor who keeps track of the whole division. In addition, we also have a teacher-mentor – guardian appointed for every 20 students. His/her responsibility is to mentor his/her 20 students for any academic issue or personal issue interact with parents. The responsibility of teacher –guardian and class advisors is to identify the weaker students and provide them with extra coaching, counselling. We identify the weak students from their test scores and segregate them accordingly. Extra classes for weaker students are arranged on Saturdays. This system enables us to improve our results.

(iv) Attainment of COs

We have predefined course outcomes subjectwise / coursewise, which are in line with the graduate attributes. Direct methods such as internal tests, term work and end semester exam and indirect methods such as exit feedback, quiz etc are used with appropriate weights. COs and PEOs are

mapped thereafter. This exercise is a fair indication of learning outcomes. In this case the target can be increased and refinement can thus be achieved.

(v) Alumni Feedback / Exit Feedback

The alumni feedback and exit feedbacks are taken from all students. From these forms, we are able to make out whether the proper teaching learning process is in place. Also, this process enables the institute to improve in the areas where ever necessary.

(vi) Project Based Learning

Our students actively participate in project competitions such as SAE MINIBAJA, SAE supra, ROBOCON, Texas Instruments Project competition which are open to students of First year to Final year Engineering. The institute sponsors these project to some extent so as to encourage the students. These students are offered placements in reputed companies in their respective fields.

(vii) Placements

The barometer of success of any Engineering Institute is governed by its results and placements. To cater to the requirements of placements we have strong network of companies who visit us every year. We have a full-fledged Training and Placement officer with assistants. We also have departmental T and P Coordinators, who on continuous basis provide data to the office about eligible students. We also have a Dean, Placements and Entrepreneurship Development at the helm of affairs. His responsibility is to rope in more companies through contacts, Sign MOUs for mutual exchange, with Government, Semi Government, PSUs, Private, and MNCs etc.

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 taken by IQAC have been approved by the management and it is implemented by the institute."

c. Does the IQAC have external members on its committee? If so, mention any Significant Contribution made by them.

Yes.

External members are present in the following processes:

[i] Faculty Recruitment – We invite subject experts from various colleges for UGC / USSC selection process as per the quorum subscribed by the University.

[ii] Board of Studies, University of Mumbai – The syllabus revision is carried out by the Board of studies which form groups subjectwise. The board also has other experts from academia and industry for giving inputs.

[iii] Academic monitoring cell— In this, we have 2 experts from industry who are instrumental in policy making relevant to academics.

[iv] Faculty Appraisals at Institute Level –As mentioned earlier we have Dean Academics, LTJSS and his team of Professors for this purpose. This team also takes student feedback on Infrastructure and teachers on 5-point scale.

[v] Expert Lectures / Seminars – We organize expert lectures in a structured manner under the banners of various professional bodies. i.e. IEEE, ISHRAE, IIIE, IETE, CSI. etc. which adds to the value.

[vi] Ph.D. Candidates selection / APS and ME Student APS – We have a transparent system of carrying out Ph.D. candidate selection process. We generally call Professors from IITB to do the selection process. These Professors also are called for ME APS during III semester.

[vii] MOUs With Industry – We have MOU with eminent Industry which helps us bridge academia- industry gap. Thus, industry experts are instrumental in improving our academics.

d. How do students and alumni contribute to the effective functioning of the IQAC?

Over the 23 years of inception in 1994, we have our 19 batches of Engineering passed out and many of them occupying eminent positions in Industry. We arrange Alumni meet regularly for mutual sharing and to have feedback from them about their prospects. As mentioned in the alumni feedback specimen form earlier given we get information about our standing in the market. Some of the alumni offer to help us in a tangible or intangible way in our goals. They also offer internships, projects and placements.

e. How does the IQAC communicate and engage staff from different constituents of the institution?

- The vision mission of institute and various departments is disseminated through college website and College prospectus.
- Within the hierarchy as mentioned earlier the communication is through various means like standard formats of Google spreadsheets, excel, mails and ERP.
- For students, the information is passed on through college website, notices, through T & P blogs, Departmental blogs, Google spreadsheets etc.

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.

Academic Activities

The University of Mumbai has a system of conducting examinations Bi-Annually, in May- June and November / December for all courses under its ambit. The question papers are sent online to all centres. The answer sheets of FE and BE are assessed / moderated online at various centres. (Almost all Engineering Colleges Affiliated to University of Mumbai) The answer sheets of SE and TE are assessed / moderated at respective institutes. The assessment of answer sheets of SE and TE is done by the subject teachers of the institute and moderation is done by the examiners on the University panel. The results are sent to respective institutes. The subsequent process is revaluation for which students can apply if they are eligible. i.e Earlier the criteria was, 40 % of passing marks, but however now with the revised G.R. any failed student can apply for photocopy and revaluation irrespective of marks scored.

The Chairman Board of Studies arranges meetings of syllabus revision at various institutes depending upon the availability of courses. Once the syllabus content is finalized along with text books, reference books, scheme etc are finalized. Subsequently the same is approved in BOS meeting at University and also needs clearance of academic council / management council before release.

The University of Mumbai follows CBGS / CBCGS system of examinations, which are student centric in terms of the choice available to them. It follows 80 / 20 weightage for end semester examination and internal marks respectively. If a student scores 50 and above in end semester exam he is exempted from internal test marks. The marks for TW / PR / ORAL etc are as per the scheme for the subject.

For academics on the college level, University calendar is available on the basis of which the college academic calendar is designed taking into account all events. In all 15 weeks are planned which mainly include commencement date, closing date of the term, dates of internal tests I and II, college festivals, submissions, oral / practical exams etc.

The division wise time table, individual time table to the teachers and lab occupancy are made in advance prior to commencement of the term. Teachers are supposed to maintain course files of their subjects.

Now, on the institute level, the students get following information from their class advisors.

- Attendance Defaulter Notices
- TW Marks from their subject teacher

- Internal Test Marks from Notices
- All assignments in first two weeks, so that they can plan and complete the assignments in time.
- Parents meeting notice

The SE and TE examination results are prepared in the institute using software and sent to the University for Moderation / endorsement. After the results are received in the institute, it is declared on the notice board, blogs etc. so that students can take a copy of that. Subsequently the process of issuing photocopy and revaluation starts. The same rules are valid for SE and TE students as mentioned for FE and BE. The revaluation results are again sent to the University for Moderation / endorsements.

The eligibility for admission to the subsequent year is as per University rule.i.e. Total 8 KTs out of which maximum of 5 theory subjects are permissible. This proves as a filter / latch for maintaining the quality.

Administrative Activities

The whole gamut of administrative activities which govern the working of the institute are handled by the Principal, Vice Principal, Registrar, Admin Office, CAFO and Accounts office. Heads of the departments are also part of administration that is responsible for delegating the work down the line in the department. The administration includes liaison with governing bodies like AICTE, DTE, University of Mumbai and other allied bodies like Social Welfare Dept, AISHE, EPF, Shikshan Shulka Samiti etc.

AICTE gives yearly approval to all institutes; DTE recognizes the institutes statewise.DTE is also instrumental in allotment of CAP (Centralised Admission Process) students to various institutes as per the reservations permissible. DTE monitors the admissions and approves the merit list. The private institutes are authorized to fill 20 % candidates as management quota. The merit list approved by the DTE is also recognized by the University and it allots UICN number.

We being Hindi speaking minority institute have got right to admit 51 % of the quota as permissible vide minority G.R. However, depending upon the trend of admissions we surrender seats to DTE and it is not always 51 %.Once the student confirms the admission , his roll no , erp no , identity card is issued by the admin dept . The students also get travel concession from admin dept.The fees charged annually are as approved by the Shikshan Shulka Samiti. Thereafter the student is handed over to respective departments.

As per the directives of AICTE we have also constituted the following committees for smooth functioning and streamlined policy making.

- Local Managing Committee
- Ant ragging Committee
- Greivance-Redressal Committee
- Women's Development Cell

- National Service Scheme

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.

As described earlier we ensure that the teacher / staff is competent enough to do justice to his job of imparting knowledge.

The pedagogy has evolved over period of years in Professional Engineering education in terms of Classroom teaching, Laboratories, extra-mural learning, out of syllabus teaching, Industry internships, Live projects, Project based learning, mini projects, affiliation of professional bodies, Project competitions, etc, but however the fundamental question to be asked is whether the trainer is trained? Whether the teacher imparting knowledge is well informed? With this philosophy in mind, we conduct faculty development programmes. We have conducted several such programmes including campus connect of Infosys; Mission 10x of Wipro, in which the basics of Bloom’s Taxonomy are exposed to the trainers / teachers. In addition, several other subjects related programmes and programmes to improve teaching learning process have been conducted. This paradigm came into existence to improve the ability of trainers to improve their connect with students and also to meet industry request of reduced training at their end. We are also part of Margdarshan scheme of AICTE, under VJTI which is mentor institute. This scheme enables mutual sharing of expertise with mentor and other mentee institutes.

We are also deputing our non-technical staff for training courses such as, Lab Equipment Maintenance, Handling of electricals, Application of IT in admin, Trainings arranged by bodies such as DTE, Social Welfare Dept etc.

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?

Yes.

As described earlier we have a robust mechanism of academic audit in place.

We have a unique system of academic review wherein the reviews are conducted by our Dean Academics, LTJSS and Professors / Heads, across the sanstha. We are a Nagpur based sanstha having in all 6 Engineering colleges. Therefore, for conducting reviews the teams are shuffled. This process is done every year for regular faculty and probationers. Probationers are reviewed after 1 year and subsequently after 18 months for their performance. The lacunae if any in their performance is notified in advance so that they can make up for the shortcomings / weaknesses. in 2 years of probation. Our reviews are conducted by Dean Academics, LTJSS and Professors / heads of our Nagpur colleges.

The institute on a continuous basis encourages Patents / Publications / IRG (Internal Revenue Generation) for the faculty. Our sanstha has defined factors governing annual increments for the faculty, which makes it mandatory for them. The factors governing increments for our sanstha are as under

- There should be no adverse remark in the Annual Confidential report.
- Assistant Professor should have presented/published at least 2 research papers in National/International conference/journal in the preceding academic year. The Associate Professor/Professor should have presented/published at least 2 research papers in International conference/journal in India/outside India from time to time as prescribed by the Sanstha.
- The teaching as well as non-teaching employee should have not availed total leave without pay exceeding a period of 60 days in the preceding academic year.
- The employee should have satisfactorily completed his/her probation tenure.
- In case of teaching faculty, their academic performance of the latest two examinations in the year should not be poor.

6.5.5 How are the internal quality assurance mechanisms aligned with the requirements of the relevant external quality assurance agencies/regulatory authorities?

Following are the regulatory authorities and their requirements are met through our IQAC initiatives as mentioned.

[i] AICTE – AICTE is apex body giving approvals yearly to the institutes based on complying with its norms for faculty, cadre ratio, land, built up area, instructional area, labs, library, computational facilities etc. We follow all AICTE norms which are reflected in our IQAC. i.e. QMS for Faculty and Students. This forms a part of best practices which we follow and are in alignment with AICTE requirements. The best practices which we follow are Appointment of qualified faculty as per cadre ratio, High end infrastructure, adequate computational facilities beyond norms with internet / wi-fi, Adequate library facilities with online journals. Our faculty has been consistently applying for AICTE / CSIR / DST and other grants for upgradation of institute facilities. Other best practices which we follow are Alumni networks, Memberships of professional bodies, Organizing conferences, Biometric machines for attendance registration, Joint academic research by Institute-Industry, Introduction of PG and Ph.D. courses, formulation of key performance indicators for institutes, Mentor-Mentee institute MOU, Formation of Entrepreneurship development cell, Development of effective MIS for effective administration. These IQAC measures gel quite well with the requirements of regulatory authorities.

[ii] DTE, Government of Maharashtra – As described earlier DTE plays a vital role in admission process. We cooperate with DTE in meeting deadlines related to

various admissions and updating the portal. This is because we are equipped with adequate IT infrastructure which becomes a part of IQAC.

[iii] University of Mumbai – All our appointments are approved by the university. The University approval is important for promotions as well as changeover of job. The selection process is also prescribed by the University by following a quorum for selection panels. The University is offering CBGS / CBCGS of exams which are student centric in terms of choice available to them. Due to available faculty, we are able to offer them the choice. The University appoints LIC (Local Enquiry Committee) to assess infrastructure and other academic requirements annually and gives affiliation on yearly basis. Our IQAC is able to meet all such requirements thus it aligns with University requirements. Our faculty apply for minor research grants of the University for conducting research. This is one of the best practices and forms a part of our IQAC.

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?

Academic monitoring Cell is one of the units which monitor the teaching learning process. The functioning of academic monitoring cell is as under.

Our Dean Academics is in charge of academic monitoring cell. Academic monitoring cell is responsible for ensuring proper academic calendar and teaching learning process. It monitors all parameters right from attendance, (75 % attendance is mandatory as per University rules), assignments, practicals / labs, internal tests. List of defaulter students is notified fortnightly and the parents are informed. The term work marks are distributed under three heads namely, attendance, write-ups and the performance.

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We have a unique system of academic review wherein the reviews are conducted by our Dean Academics, LTJSS and Professors / Heads, across the sanstha. We are a Nagpur based sanstha having in all 6 Engineering colleges. Therefore, for conducting reviews the teams are shuffled. This process is done every year for regular faculty and probationers. Probationers are reviewed after 1 year and subsequently after 18 months for their performance. The lacunae if any in their performance is notified in advance so that they can make up for the shortcomings / weaknesses. In 2 years of probation. Our reviews are conducted by Dean Academics, LTJSS and Professors / heads of our Nagpur colleges.

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- There should be no adverse remark in the Annual Confidential report.

- Assistant Professor should have presented/published at least 2 research papers in National/International conference/journal in the preceding academic year. The Associate Professor/Professor should have presented/published at least 2 research papers in International conference/journal in India/outside India from time to time as prescribed by the Sanstha.
- The teaching as well as non-teaching employee should have not availed total leave without pay exceeding a period of 60 days in the preceding academic year.
- The employee should have satisfactorily completed his/her probation tenure.
- In case of teaching faculty, their academic performance of the latest two examinations in the year should not be poor.

6.5.7 How does the institution communicate its quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders?

As mentioned earlier the Vision, Mission, Quality Policy and PEOs are displayed on the college website, Admission information brochure, notice boards, Prospectus and our college magazine.

- Further POs / PSOs / COs are also displayed on the college website department-wise and also on student journals.
- Other quality assurance policies are available in the form of standing instructions in the admin department.

CRITERION VII: INNOVATIONS AND BEST PRACTICES**7.1 Environment Consciousness****7.1.1 Does the institution conduct a Green Audit of its campus and facilities?**

The MoU is constituted between Energy Audit Consultant, M/s. Senergy Consultants Pvt. Ltd. and Department of Mechanical Engineering. The Energy Audit of the campus and facilities is conducted by Dr. S. D. Dalvi, BEE certified Energy Auditor, (Department of Mechanical Engineering), Shilpa Kapse (Department of Electrical Engineering), (August 2016 to April 2017), and report is prepared. Lot of expenditure is incurred to make the campus eco-friendly. The college has lavish greenery.

The college has a separate maintenance cell for better housekeeping. The cell maintains the water treatment and supply system along with duly taken care of all the environmental aspects. A dedicated maintenance supervisor is available for conservation of greenery. There is a separate provision for collection of solid waste from various sources by NMMC. On North direction, a very good ground with lawn is maintained. All the possible efforts are taken to make college campus eco-friendly. NMMC supplies pure and good quality water in college campus and water purifiers are also installed to ensure good quality of water.



Measurement of A/C and Lighting Performance of LTCE

In AY 2016-17, as a part of environmental consciousness, the event named “Green LTCE Initiatives” is planned to get the suggestions from students about green activities that can be planned in LTCE.



Green LTCE Initiatives Event 2017

7.1.2 What are the initiatives taken by the college to make the campus eco-friendly?

- **Energy Conservation**

For energy conservation, the following measures are taken:

- Energy Audit and Conservation course is offered as elective subject at Institute level and Department level (ILO1018).
- Campus energy conservation projects are promoted and allotted to final year students.
- CFLs and LEDs are used for lighting at most of the places.
- Energy conservation awareness labels and posters are provided near main switches.
- Use of Air conditioning unit is made only when necessary.

- **Use of renewable energy**

For use of renewable energy the following measures are taken:

- Proposed to install solar street light units in the institute campus.
- Proposed to install solar roof panels in institute premises.

- **Water harvesting**

The campus terrace is roofed and roof water is collected through ducts and various sump systems have been set up to store the water. Harvested rainwater is used for groundwater recharge. This has appreciably resulted in ever-increasing water levels. Due to this, the college is self-reliant for its water usage.

- **Check dam construction**

It is done by local authority NMMC at the suitable location outside the campus premises.

- **Efforts for Carbon neutrality**

- The college has made a commitment to being carbon neutral by allowing the stakeholders to be part of the solution to climate change.
- The campus has enough natural greenery. The big trees are along the borders of the campus.
- Use of bio mass is proposed.
- Sustainability projects are promoted and allotted among the final year students.

It helps apparently to achieve carbon neutrality.

- **Plantation**

- Tree plantation program is conducted, within campus and outside campus, on the occasion of Founders Day/World Environment day.
- Plant mementos are presented to the guests for each function/ceremony of the campus.
- The plant mementos for felicitating the internal stakeholders are then planted in the college campus.

- **Hazardous waste management.**

- Institute does not produce hazardous waste.

- **e-waste management:**

A team for management of computer hardware, accessories and software is formed at institute level. Electrical, electronic and computer accessories like displays, CPU's, chargers etc. which are affirmed "archaic" are disposed of by dedicated vendor (Bloomberg) on periodical basis.

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.

The institute has made several innovations which have helped smooth out the functioning of the college. These innovations are in academics, examination, administration and other levels of the college working.

1. Innovation in academics

- With the help of Bloom's taxonomy, it documents from designing course teaching plan, session plan and project assessment sheet to implement syllabus taking into account CO's/ PO's/ PSO's.
- Significant academic growth in the form of new and innovative academic program (such as GATE classes, Automobile development Innovation program, Workshop on Aerospace, ROBOCON etc).
- Library with online book and internet facilities to ensure the students don't have problem in their studies and research work.
- Institute consists of different cells (such as MESA, CESA, ETSA, SCEE and EESA, etc), which emphasizes the development of students in education, co-curricular activities and may other.
- The institute motivates the final year students to develop environmental based and eco -friendly projects for social cause to the society. (Wheel chair, smart stick for blind, electronics voting system).
- Institute promotes the students to patent their innovative B.E projects.
- Mini projects for S.E and T.E students to promote creativity and development.
- Case studies on the relevant subject by students.
- M. E. -Dissertation: Real life problems from industry are taken up by students as projects and solutions are provided to the industry at the end of project in the form of dissertation.
- The institute conducts several quiz and mock interviews to face the companies and several exams.

2. Strategy associated with examination

- Question paper setting and evaluation sheet according to course outcome defined by University.
- Independence given to teachers for choosing best method of evaluation of understanding of the student in the course taught in all the way which forms the internal assessment component.
- Transparency of internal assessment answer papers to the students and revaluation if demand arise.
- Swapping of internal assessment answer sheets among the faculty teaching same subject. If any grievance of checking is reported by the student, then subject in-charge will be moderator and assessment will be final.
- Term work submission sheet is circulated to ensure submission of all students.
- To ensure student attendance, junior supervisor signs the student's hall ticket for university examination paper.

- Create URL site for students to view their corresponding results.

3.Faculty Feedback system

- Mid-term and end-term teacher feedback from the student's is conducted, analysis of feedback form is done and inform to the faculty for their further improvement and if any drawbacks in the teaching learning process.
- Every semester junior faculty evaluation is processed by senior faculty, subject experts and inform to the faculty for enhancing their skills.

7.3. Best Practices

7.3.1 Following practices have contributed towards the achievement of the vision / mission and objectives as well as improvement of quality of various activities of LTCE.

Best Practice-1

1. Title of the Practice :

Strengthening of Student Support and Welfare.

2. Goal

To extract leadership qualities and technical outcome of students through financial and non-financial assistance.

3. The Context

Engineers seem to thrive on competition at student level due to resonant energy present inside them. This is in reference to provide platform for students to show their intellectual skills and talent in the events organised at National and International levels.

The Practice

The Society of Automotive Engineers (SAE) and ROBOCON club is established at institute level and students from different branches are participating enthusiastically. Institute provides financial supports for participating in different events and competition.

4. Evidence of Success

SAE members develops and race the vehicles in Formula SAE (Team SCHNELL RACING), BAJA (Team TT), ROBOCON India and other super mileage competitions organised at National and International levels.



Team TT Racing India

BAJA is one of the toughest competitions held in India where different teams from various parts of the country participate. Among the different teams, our team named 'Team TT Racing INDIA' also participates in the same.



Management Visit to SAE BAJA Team selected for USA Event

Our BAJA Team stood 6th among 450 colleges in SAE BAJA virtual 2017 held at Christ University, Bangalore in June 2016. The team is selected for SAE BAJA INTERNATIONAL USA among top 100 universities all around the globe and became one of the 5 Indian teams to represent the nation at world's toughest competition to be held at ILLINOIS, USA. In Enduro Student India 2017, which was held at Coimbatore, the team stood overall 22nd among 74 institutes and also stood AIR 7th in Business presentation, AIR 20th in Cost event, AIR 24th in Manoeuvrability and AIR 19th in Endurance race and achieved top 15 ranking in Design at SAE BAJA India held at Indore.

Conceiving, designing, building and testing a formula race car at student level and then competing against various other teams from different universities all over the country is a challenging task but exciting as well. It's a demonstration of creativity, engineering expertise and engineering skills by a group of passionate students and that's what a team of 10 engineering students known as team Schnell Racing. The team has participated in FORMULA BHARAT 2017 which was held in Kari Motor Speedway, Coimbatore from 26-29th January 2017. Team was ranked overall 19th among 68 teams that participated in the competition and this being a student engineering design competition the team managed to hold 9th position in the design event. This is what team Schnell Racing is doing since 2014 and did it in 2017 with their car **SR38**. The team participated in SAE Supra India, 2014 and stood All india rank (AIR) 42nd overall then in the year 2016 they have participated in Formula Student India held at Buddh International Circuit, Greater Noida and stood 13th in COST and 22nd overall in India



Schnell Racing

ROBOCON India:

It is an international robotics competition where two teams compete each other on a set of hurdles or problems given in the problem statement. It is broadcasted by the Asia Pacific Broadcasting Union (ABU).

Robocon 2015 was the first attempt of Lokmanya Tilak College of Engineering in this prestigious competition. In its very first endeavour, the team earned praises from colleges from all around India. The team secured a commendable 23rd ranking all over India and 5th all over Mumbai. The team also boasts of being the only team to have a match tied with the 7 time defending champions – Nirma University.



Robocon Team (2015-16)

Robocon 2016 was the second attempt of LTCE in this prestigious competition. This year 105 teams from all over India participated in this event, among them we stood 6th all over India, 3rd in Maharashtra and 1st in Mumbai. That was the first huge achievement for the team. The team was even awarded with the ‘BEST ECONOMICAL ROBOT- 2016’.



Robocon Team (2014-15)

This year theme takes inspiration from Japan’s traditional game Tosenkyo. The theme revolves around the word “asobi” (play), which is also a fundamental philosophy behind Robocon. In “asobi,” playful, unique, original show of skills is often more important than winning or losing, as everyone – friend and foe alike – can applaud and enjoy them.

So, in the “asobi” spirit, the theme encourages playful, unique and original robot designs and strategies. The positive result of the competition is still to come.

5. Problems Encountered and Resources Required

The main problem which the team faced was the testing of the vehicle which requires a proper area with different types of hurdles which are used in the racing track. Team faced problem in the transportation of the vehicle as well as for testing robot due to space constraints.

The team had to tow/transport the vehicle everyday for the testing to the nearest open ground that is almost 3-4 km away which incurred additional costs.

6. Notes (Optional)

By participating in these national level competitions the members had a subsequent boost in their confidence level as they interacted to some of the finest engineers from the automotive industries. Being able to represent the nation at the world’s biggest competition is the most appraisable achievement which makes our institute proud of this successful feat. This is the biggest motivation for other non-participating students to think out of the box and apply the theoretical knowledge in real life. Students were encouraged to file their own patents as well.

Best Practice-2

1. Title of the Practice :

Comprehensive Evaluation of Internal Performance of Students

2. Goal

Continuous evaluation of student’s performance.

3. The Context

- Student performance evaluation.
- Capacity for hard work, leadership, team work, motivation, critical thinking and skill development.
- Assessing the student performance throughout the semester.
- Grading of assessment for term work, mini projects, presentation, industrial visit, etc.
- Evaluation of term work for final year project based on PO/PSO.
- Continuous assessment of laboratory work based on performance indicators.
- Encouragement for publishing technical paper or participating in project exhibition/competition for final year students.
- Felicitation of topper in academics and technical paper presentation.

4. The Practice

Institute has taken following steps to achieve the goal.

- Direct and indirect assessments are conducted as per COs.
- Various tools and performance indicators are used for assessing the level of understanding of the students.
- Typed manuals of the experiments (performance) are issued to students.
- Conducting remedial classes for slow learners and absentees.
- Maintenance of log book for conducting labs smoothly.
- Internal answer scripts are shown to the students.
- Conducting GATE classes for students interested in pursuing higher education / Jobs.

5. Evidence of Success

- Continuous improvement of grade by the end of the semester, which in turn helps students in tracking their own progress.
- Uniformity and clarity of the experiment during explanation of theory by the faculty during laboratory session.
- Enhancing the learning capability of slow learners and updating students with important topics/ revision of topics with respect to examination.
- Uniformity of experiments with respect to results achieved by a particular batch and cross verification with the previous batch. Also to make faculty aware about the status of experiments performed.
- More and more students are registering for GATE examination in the academic every year.

6. Problems Encountered and Resources Required

- Due to continuous evaluation process students gets less time for co-curricular /extra-curricular activities.
- Lack of familiarity with the evaluation system of newly appointed faculty.
- Problems encountered due to climatic condition and unforeseen circumstances.
- Less time for faculty to concentrate on research activities and administration work.

7. Contact Details

Name of the Principal: **Dr. Vivek K. Yakkundi**

Name of the Institution: Lokmanya Tilak College of Engineering

City: Navi Mumbai

Pin Code: 400709

Accredited Status: Applying for Cycle 1

Work Phone: 02227541005

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Website: www.ltce.ltjss.net

E-mail: principal.ltce@gmail.com

Mobile: 09324622654

**EVALUATION REPORT
OF THE DEPARTMENTS**

Mechanical Engineering

1. Name of the Department: Mechanical Engineering
2. Year of establishment: 1994
3. Names of programmes offered:
 - B.E. Mechanical Engineering
 - M.E. Manufacturing System Engineering
 - Ph.D. in Mechanical Engineering
4. Names of Interdisciplinary courses and departments involved

Sr. No	Name of Interdisciplinary Course	Department Involved
1	Data base & information retrieval system	Computer Engg / Mechanical Engg
2	Industrial Electronics	Electronics Engg / Electrical Engg
3	Business communication and ethics	FE
4	Applied Maths I, II, III, IV	Mathematics Dept.

5. Annual/Semester/Choice Based Credit System (Programme wise)
Credit Based Grading System and Choice Based Credit System from AY 2016-17.
6. Participation of the department in the courses offered by other departments

Sr. No.	Courses offered by Other Department	Other Departments Name
1	Applied Mechanics	First year of Engineering
2	Engineering Drawing	First year of Engineering

7. Courses in collaboration with other universities, industries, foreign institutions, etc.
NA
8. Details of programmes discontinued, if any, with reasons.
NO

9. Number of teaching posts:

	Sanctioned	Filled
Professors	08	05
Assoc. Professors	13	01
Asst. Professors	36	23 (R)+32(A)

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 last 4 years
				Teaching	Industry	Total	
Dr. Vivek Sunnapawar	Ph.D.	Professor and Director	World Class mfg.	26		26	6
Dr. Vivek Yakkundi	Ph.D.	Principal	Manufacturing	21		21	2
Dr. Chandrababu D.	Ph.D.	Professor (HOD)	Production	30		30	
Dr. A.D. Sarode	Ph.D.	Professor	Manufacturing	19		19	
Dr. J.J. Dange	Ph.D.	Professor	Mechanical Engg.	19		19	
Dr. S.D. Dalvi	Ph.D.	Associate Professor	Machine Design	13	2.5	15.5	
Prof. Vjjoykumar	ME	Asst. Professor	Thermal Engg.	27		27	
Prof. Sunil Satav	ME	Asst. Professor	Machine Design	24.7		24.7	

Prof. V.S. Bhaskarwar	ME	Asst. Professor	Manufacturing	22		22	
Prof. Bennur Shrinivasan	ME	Workshop Superetendent	Machine Design	25		25	
Prof. Preethakumari	ME	Asst. Professor	Civil-Structural	23	5.5	28.5	
Dr.KavitaDhanawade	Ph.D.	Asst. Professor	Heat Power Engg.	21		21	
Prof. Ajay Kashikar	ME	Asst. Professor	Mfg. System Engg.	12	1.6	13.6	
Prof. M.S.Bhadane	M.Tech	Asst. Professor	Manufacturing	12		12	
Prof. Archana Darandale	ME	Asst. Professor	CAD/CAM	10		10	
Prof. Shweta Matey	ME	Asst. Professor	Industrial Engg.	10		10	
Prof. Manoj Dhawade	ME	Asst. Professor	Thermal Engg.	9		9	
Prof. Harikumar	ME	Asst. Professor	Manufacturing System Engg	4		4	
Prof. Snehal Junnarkar	ME	Asst. Professor	Industrial Engg.	3	4	7	
Prof. Milind Deotale	ME	Asst. Professor	Prod. Tech &Mgt	20	0	20	
Prof. Suchita Lokhande	ME	Asst. Professor	Manufacturing System Engineering	11		11	
Prof. Nimisha Shirbhate	ME	Asst. Professor	CAD/CAM& Robotics	6		6	
Prof. Ujjwala Pandharkar	ME	Asst. Professor	Machine Design	6		6	
Prof. Kulwant Dhankar	MS	Asst. Professor	Mechanical Engg	3		3	
Prof. Hemant More	M.Tech	Asst. Professor	Machine Design	2		2	
Prof. Meera Kokate	ME	Asst. Professor	CAD/CAM	0.5		0.5	
Prof. A.J. Parmar	ME	Asst. Professor	Manufacturing	22		22	
Prof. Krishna Dwivedi	ME	Asst. Professor	Production Engg.	3	2	5	
Prof. Smita Ganjare	ME	Asst. Professor	CAD/CAM	5		5	
Prof. Neerajkumar	ME	Asst. Professor	Thermal Engg.	2		2	
Prof. Geetha S.	ME	Asst. Professor	CAD/CAM	2		2	

Prof. Zeeshan Ahmad	ME	Asst. Professor	Machine Design	1.5	1	2.5	
Prof. Swati Rahate	ME	Asst. Professor	CAD/CAM & Robotics	4		4	
Prof. Suprabhat Mohod	M.Tech	Asst. Professor	Heat Power Engg.	1.5		1.5	
Prof. Navinkumar Jha	M.Tech	Asst. Professor	Industrial Management Engg	2		2	
Prof. Neha Pandit	ME	Asst. Professor	Heat Power Engg.	3.5		3.5	
Prof. Uday Paliwal	ME	Asst. Professor	Manufacturing	1		1	
Prof. Manju Panchal	ME	Asst. Professor	CAD/CAM	2		2	
Prof. Satish Gaikar	ME	Asst. Professor	Machine Design	0.5		0.5	
Prof. Hemant Sahu	M.Tech	Asst. Professor	ThermalEngg	1.5		1.5	
Prof. Gaurav Chaure	ME	Asst. Professor	CAD/CAM	1.5		1.5	
Prof. Ravndra Patil	ME	Asst. Professor	Machine Design	3.5		3.5	
Prof. Shivam Shukla	ME	Asst. Professor	ThermalEngg	0.5		0.5	
Prof. Pradip Bodade	ME	Asst. Professor	Thermal Engg.	7		7	
Prof. Sunil Kadam	ME	Asst. Professor	CAD/CAM & Robotics	2		2	
Prof. Saumy Agarwal	ME	Asst. Professor	Product Design and Development	2		2	
Prof. Ashutosh Singh	M.Tech	Asst. Professor	ThermalEngg	4		4	
Prof. Sunny Sarraf	ME	Asst. Professor	CAD/CAM	1		1	
Prof. Ritesh kumar	ME	Asst. Professor	Heat Power	3		3	
Prof. Vishnu Kendre	ME	Asst. Professor	Thermal Engg.	2	1	3	
Prof. Rishikes hPandey	M.Tech	Asst. Professor	Thermal Engg.	0.5	2	2.5	
Prof. Rajesh Gadekar	ME	Asst. Professor	CAD/CAM	20	2	22	
Prof. Shrikant Lamture	ME	Asst. Professor	Machine Design	4		4	
Prof. Jackson Anthoney	ME	Asst. Professor	Machine Design	1		1	
Prof. Mukeshkumar	M.Tech.	Asst. Professor	Production Design & Development	1		1	

Prof. Sitaram Kharade	ME	Asst. Professor	Production	1		1	
Prof. Bhavesh Pasi	ME	Asst. Professor	Machine Design	3		3	
Prof. Vaibhav Deshpande	M.Tech	Asst. Professor	Heat Power Engg.	4		4	
Prof. Mohit Tripathi	ME	Asst. Professor	Industrial Engineering & Management	6		6	
Prof. Mohamad Ansari	ME	Asst. Professor	Aerospace Engg.	2		2	
Prof. Sagar Gavhane	M.Tech	Asst. Professor	Machine Design	0.5		0.5	

11. List of senior visiting faculty : NA

12. Percentage of lectures delivered and practical classes handled(programme wise) by temporary faculty :

Sr. No.	Program	Academic Year	% of Lectures	% of Practical
1	UG	2013-14	54.2	67.9
		2014-15	51.3	71.9
		2015-16	42.5	69
		2016-17	52.12	76.46
2	PG	2013-14	NA	NA
		2014-15		
		2015-16		
		2016-17		
3	Ph.D.	2013-14	NA	NA
		2014-15		
		2015-16		
		2016-17		

13. Student -Teacher Ratio (programme wise) :

Sr. No.	Program	Academic Year	Student-Teacher Ratio
1	UG	2013-14	23:01
		2014-15	16:01
		2015-16	15.5:01
		2016-17	18.9:01

2	PG	2013-14	10:01
		2014-15	06:01
		2015-16	05:01
		2016-17	3.5:01
3	Ph.D.	2013-14	1:1
		2014-15	1:1
		2015-16	1:1
		2016-17	1:1

14. Number of academic support staff (technical) and administrative staff;

sanctioned and filled :

Sr. No.	Academic Support Staff	Sanctioned	Filled
1	Number of academic support staff (technical)	12	12
2	Number of administrative staff	0	0

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.

Sr. No.	Qualifications	Academic Year	Number of Faculty
1	Ph.D.	2013-14	2
	PG		26
	Others		18
2	Ph.D.	2014-15	5
	PG		16
	Others		41
3	Ph.D.	2015-16	7
	PG		57
	Others		0
4	Ph.D.	2016-17	8
	PG		52
	Others		0

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received

Sr.	Year	Project Title	Name of Principal	Amount
1	2016-17	Design and fabrication of	Prof ShwetaMatey	30,000
2	2016-17	design and development	Dr.NileshGhongde	25,000
3	2016-17	Measurement of drag	Prof.MaheshBhadane	25,000
4	2016-17	Design and fabrication of	Prof.AnilMagre	25,000
5	2016-17	Design and Development	Dr.JayeshDange	30,000
6	2016-17	Design and fabrication of	Prof.ArchanaDarandale	25,000
7	2016-17	Performance	Prof.VinodBhaskarwar	25,000
8	2016-17	Design and development	Prof.Preethakumari	25,000

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received

A) Funded by UGC

Sr. No.	Year	Project Title	Name of Principal Investigator (PI) and Co-Principal Investyigator (Co-Pis)	Amount Sanctioned in Rs.
1	2012-13	Forced convection heat transfer through extended surfaces with square perforation.	Dr.Kavita Dhanawade	30,000
2	2012-13	limb allignment analysis in total knee replacement	Dr.Nilesh Ghongde	25,000
3	2015-16	Design an experimental analysis of automotive muffler for noise attenuation	Prof. Ajay Kashikar	40,000
4	2015-16	Analysis and evaluation of bone porosity and its effect on Fracture	Prof. Sunil Satav	40,000
5	2015-16	Experimental analysis of wire mesh finning on horizontal surface by mixed flow heat transfer	Dr.Kavita Dhanawade	40,000
6	2016-17	Design and fabrication of SMOG consuming	Prof Shweta Matey	30,000

		machine		
7	2016-17	design and development of customized surgical guide for Parkinson disease	Dr.Nilesh Ghongde	25,000
8	2016-17	Measurement of drag force using a spring mass system	Prof. Mahesh Bhadane	25,000
9	2016-17	Design and fabrication of cold rolling mill	Prof.Anil Magre	25,000
10	2016-17	Design and Development of novel,transformable wheel chair for transfer of patient to the bed	Dr.JayeshDange	30,000
11	2016-17	Design and fabrication of single cylinder flexible dumping	Prof.ArchanaDaran dale	25,000
12	2016-17	Performance enhancement of domestic air conditioning system using PCM with modified evaporator design	Prof.VinodBhaskar war	25,000
13	2016-17	Design and development of AQUA CLEANUP to remove floating debris	Prof.Preethakumari	25,000

B) Funded by DST

Sr. No.	Year	Project Title	Name of Principal Investigator (PI) and Co-Principal Investigator (Co-Pis)	Amount Sanctioned in Rs.
1	2012-13	Analysis and evaluation in limb alignment in total knee replacement	Dr.NileshGhongde	1,00,000
2	2012-13	Comparative evaluation of fatigue assesment techniques on Forged Steel Crankshaft of Single cylinder diesel engine (ASME)	Dr.Vivek Sunnapwar	85,480

3	2013-14	Experimental and CFD investigations of heat transfer in helical coils for the development of correlations for newtonian and non newtonian fluids in transient state-space conditions	Dr. S.S Pawar (PI) Dr.Vivek Sunnapwar (Co-PI) Dr.vivek Yakkundi (Co-PI)	80,000
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18. Research Centre /facility recognized by the University

Sr. No	Name of the lab	Equipment/software identified As Tool for execution of research
1	Simulation Lab 118, 119,110	MATLAB, Simulink, P-simulator, H-simulator, EAGLE, GSPICEUI, KICAD, QUCS, ANSYS+CFD
2	CAD/CAM Lab 402,403,103	PTC Creo, Dell Vostro 470 Model, Processor-intel Pentium(R)CPU G3260 @3.30GHZ *2, (Dual Core)HDD-500GB, RAM-4GB DDR-III, Monitor-17 LCD color (BENQ), Dell Keyboard & Mouse, Cabinet-6USB port, Integrated Ethernet 10/100/1000MBPS,
3	Advanced Manufacturing Lab G001	FMS Setup, CNC Machine, Assembly Station

19. Publications: Publication per faculty –

- Number of papers published in peer reviewed journals (national / international) by faculty and students
- Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- Monographs
- Chapter in Books
- Books Edited
- Books with ISBN/ISSN numbers with details of publishers
- Citation Index

- SNIP
- SJR
- Impact factor
- h-index

Please Refer Appendix

20. Areas of consultancy and income generated

Sr. No.	Branch Name	Nature of Consultancy	Cost of the Project	Duration	
				From	To
1	Mechanical	Energy audit(rspl,chatisgarh)	300000/-	2015	2016
2	Mechanical	Energy audit in tptpl, Rayong	500000/-	2013	2014
3	Mechanical	Energy audit	400000/-	2011	2012

21. Faculty as members in

- National committees
- International Committees
- Editorial Boards....

Sr. No.	Name of the Faculty	Faculty as member
1	Dr.Vivek Sunnapawar	1)Member, Board of Studies 2)Member-LIC Committee (U.G, P.G and Ph.D.) 3)Member-University Selection Committee 4)Examiner for Ph.D. (RTM- Nagpur University, SGBAU Amravati University, University of Mumbai, Dr. Babasaheb Ambedkar Marathawada, University-Aurangabad) 5) Fellow member of IIIIE 6) Fellow member of IME
2	Dr.Vivek Yakkundi	1)Member-LIC Committee 2)Member-Avishkar, Judging Committee
3	Dr.A.D.Sarode	1)Member-L.I.C Committee 2)Member-University Selection Committee
4	Dr.J.J.Dange	Member-Result and Moderation Committee

5	Prof.Vijoykumar	Joint Chief Conductor for University exam
6	Prof.SunilSatav	University Selection Committee(subject expert)

22. Student projects

1. Percentage of students who have done in-house projects including inter departmental/programme.

Sr. No.	Academic year	Percentage of Students with In-house Projects
1	2014-15	88.89%
2	2015-16	90.00%
3	2016-17	73.40%

2. Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies

Sr. No.	Academic year	Percentage of Students Placed for Projects in Organizations Outside the Institution
1	2014-15	11.11%
2	2015-16	10.00%
3	2016-17	26.60%

23. Awards / Recognition received by faculty and students

Sr No	Name of the Faculty	Research Awards Received	Recognition Received
1	Dr.Vivek Sunnapwar	P. V. Ramarao Memorial Award	Indian Institution of Industrial Engineering for the contribution in growth of Industrial Engineering
2	Dr.Vivek Sunnapwar	Devi Thadani Award	
3	Dr.Vivek Yakkundi	Fellowship of IIIE	
4	Dr.AvinashSarode	Fellowship of IIIE	

24. List of eminent academicians and scientists / visitors to the Department

Sr. No	List of Eminent Person Visited the Institute	Specialisation
1	Mr.Rohan. P. Enelek Pvt. Ltd. incubated with IIT Bombay	Solar
2	Mr. Sanjay Kemkar, Director, IMATRIX	Nanotechnology, Nano Science
3	Mrs.Shanmogham and Mr.NadarHussain	PIPING ENGINEERING
4	Mr.Murari P. Shrivastava (MD IRD Mechanysis LTD.)	Supply Chain
5	Mr.Chetan Hon	3D Printing Technology
6	Mr.Vishal Biradkar (SMC, pneumatics)	Pneumatics
7	AdityaPremji&MagdaleenaHammarn (FUSION FINLAND)	Virtual Reality
8	Adv. AnandMahurkar	IPR, Innovations & Project Writting
9	Miss. Pooja Welling (Mission Career)	Abroad Education
10	PranjwalBanjan (CAD CAM GURU)	Designing and Manufacturing Integration
11	Vijay Shekhar	GATE exam

25. Seminars/ Conferences/Workshops organized & the source of funding

1. National

Sr. No.	Title of Seminars/Conference/Workshops organised	Source of Funding	AY
1	IIT BOMBAY E-CELL Integrated Envoyage Pre summit workshop on Entrepreneur skills	M.E.S.A	2013-14
2	Seminar onMechatronics and Automation scope applications in Industry	M.E.S.A	2013-14
3	Industrial automation training	M.E.S.A	2013-14
4	SEMINAR ON PIPING ENGINEERING SOFTWARE	M.E.S.A	2014-15
5	Seminar on Condition Monitoring Initiative for enhancing manufacturing supply chain reliability	M.E.S.A	2014-15
6	Seminar on 3D Printing Technology	M.E.S.A	2014-15
7	Seminar on Tharmal Engineering and its Relivant Applications	M.E.S.A	2014-15
8	MECHTALENT compitition	M.E.S.A	2014-15

9	Project Exhibition	M.E.S.A	2014-15
10	Seminar on 3D Printing Technology	M.E.S.A	2015-16
11	National level 5day workshop- Automobile Development Internship Program	M.E.S.A	2015-16
12	Seminar on PIPING ENGINEERING SOFTWARE	M.E.S.A	2015-16
13	Seminar on Pnumatics-Industrial Applications	M.E.S.A	2015-16
14	Seminar on Training & placement	M.E.S.A	2015-16
15	National level 5day workshop- Automobile Development Internship Program	M.E.S.A	2015-16
16	Seminar on Vertual Reality	M.E.S.A	2016-17
17	IPR, Innovations & Project Writting (One day workshop)	M.E.S.A	2016-17
18	Seminar on promotion on Abroad Education	M.E.S.A	2016-17
19	Awareness program about Society of Automotive Engineering	M.E.S.A	2016-17
20	Teacher's day program	M.E.S.A	2016-17
21	Seminar on Designing and Manufacturing Integration	M.E.S.A	2016-17
22	National level 5day workshop- Automobile Development Internship Program	M.E.S.A	2016-17
23	One day workshop on Aeronautical & Aerospace	M.E.S.A	2016-17
24	Seminar on GATE exam. & oportunities for qualifiers	M.E.S.A	2016-17

26. Student profile programme/course wise:

a) Undergraduate:

Sr. No.	Name of the Course/Program	Academic Year	Applications Received	Selected	Enrolled	
					M	F
1	UG (MECHANICAL ENGINEERING)	2013-14	Admission process is as per rules and regulations of Director of Technical Education		228	13
		2014-15			173	24
		2015-16			217	10
		2016-17			195	16

b) Post Graduate and Ph.D.

Sr. No.	Name of the Course/Program	Academic Year	Applications Received	Selected	Enrolled	
					M	F
1	P.G. (MECHANICAL ENGINEERING)	2014-15	Admission process is as per rules and regulations of Director of Technical Education		6	0
		2015-16			3	1
		2016-17			3	0
2	Ph.D.	2013-14			3	0
		2014-15			NIL	NIL
		2015-16			4	0
		2016-17			1	3

*M = Male

*F = Female

27. Diversity of Students:

Sr. No.	Year	Name of the Course	% of Students from the Same State	% of Students from Other States	% of Students from Abroad
1	2013-14	UG	90.76	5	0
	2014-15		96.37	3.63	0
	2015-16		93.09	6.91	0
	2016-17		96.36	3.64	0
2	2013-14	PG	55	45	0
	2014-15		50	33.33	0
	2015-16		50	50	0
	2016-17		100	0	0
3	2013-14	Ph.D.	3	0	0
	2014-15		1	0	0

	2015-16		4	0
	2016-17		4	0

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?

Sr. No.	Name of Examination	Year	No. of Students Cleared Examinations
1	GATE	2013-14	1
		2014-15	12
		2015-16	13
		2016-17	22
2	GRE	2013-14	16
		2014-15	12
		2015-16	13
		2016-17	22
3	MBA	2013-14	1
		2014-15	1
		2015-16	8
		2016-17	5

29. Student progression

No. of students	211	293	232	--
Student Progression	2013-14	2014-15	2015-16	2016-17
UG to PG	1.90%	9.56%	7.76%	in
PG to M.Phil.	NA	NA	NA	NA
PG to Ph.D.	5.56%	0	16.67%	5.56%
Ph.D. to Post-Doctoral	NA	NA	NA	NA
Employed				
1. Campus Selection	2.37%	6.83%	20.26%	in
2. Other than Campus	6.16%	6.14%	22.41%	batch not
Entrepreneurship/Self-	1.90%	1.37%	2.59%	batch not

30. Details of Infrastructural facilities

1. Library-(departmental)

No. of Titles	1253
No. of Volumes	3216
No. of Conference Proceedings	Online 22
No. of General Books	444

2. Internet facilities for Staff & Students

Sr. No.	Name of Classroom with INTERNET facility	Purpose/Subject	% Utilization
1	Computer Lab 1 (A102)	FEA	80.00%
2	Computer Lab 2(A103)	COURSE WORK/ PRACTICALS	80.00%
3	Computer Lab 3(A104)	COURSE WORK/ PRACTICALS	80.00%
4	ME LAB(A110)	RESEARCH AND BE PROJECTS	40.00%
5	MECHATRONICS LAB (A118)	MECHATRONICS	40.00%
6	Computer Lab 4 (A119)	FEA/ CAMD	80.00%
7	A402, A403	CAD/CAM PRACTICALS	80.00%

3. Class rooms with ICT facility

Sr. No.	Name of Classroom with ICT facility	Activities	% Utilization
1	C110(DEPARTMENTAL SEMINAR HALL)	Seminars, lectures Workshop, Training programs,Expert lectures	60.00%

4. Laboratories-Attached separately-Appendix

31. Number of Students receiving financial assistance from college, university, government or other agencies.

Sr. No.	Agency	No. Students Receiving Financial Assistance			
		2013-14	2014-15	2015-16	2016-17
1	College	0	0	0	0
2	University	0	0	0	0
3	Government	51	50	89	70
4	Other Agencies	0	0	16	14
TOTAL		51	50	105	84

32. Details on student enrichment programmes (special lectures / workshops / seminar) with external expert

Sr No.	Date	Topic Of Seminar/Workshop	Expert	For Students	Total Students Attended
1	02/03/2015	Seminar on PIPING ENGINEERING SOFTWARE	Mrs.Shanmogham and Mr.NadarHussain	TE	170
2	20/03/2015	Seminar on Condition Monitoring Initiative for enhancing manufacturing supply chain reliability	Mr.Murari P. Shrivastava (MD IRD Mechanysis LTD.)	SE, TE	180
3	09/03/2015	Seminar on 3D Printing Technology	Mr.Chetan Hon	SE,TE	220
4	13/03/2015	Seminar on Thermal Engineering and its Relevant Applications	Prof. Vasant Jog (Vice Principal GVAIET, Shelu)	SE	250
5	16 & 17/03/2015	MECHTALENT competition	Dr. Joseph Rodrigue & Prof. SavitaGole	SE, TE	120
6	23/04/2015	Project Exhibition & Fairwell Program-2015	Prof. N.M.Pampattiwar & Mr.H.S.Dhanawade	BE	320
7	20/08/2015	Seminar on 3D Printing Technology	Mr.Chetan Hon	SE,TE	180
8	6 th to 10 th Jan	National level 5 day	EZINITH	SE,TE	250

	2016	workshop- Automobile Development Internship Program	Education		
9	02/03/2016	Seminar on PIPING ENGINEERING SOFTWARE	Mrs.Shanmogham and Mr.NadarHussain	TE	150
10	08/03/2016	Seminar on Pneumatic-Industrial Applications	Vishal Biradkar (SMC pneumatics)	TE	100
11	16/03/2016	Seminar on Training & placement	Prof. Anil Magre (TPO-LTCOE)	TE	200
12	27/04/2016	Project Exhibition & Farewell Program- 2016	Dr.H.S.Dhanawade Dr. Ajay Kumar Dr. Vijay Kumar	BE	300
13	18 th to 22 nd June 2016	National level 5 day workshop- Automobile Development Internship Program	EZINITH Education	SE,TE	180
14	14/07/2016	Seminar on Virtual Reality	AdityaPrmji&MagdaleenaHammarn (FUSION FINLAND)	TE, BE	250
15	28/07/2016	IPR, Innovations & Project Writing (One day workshop)	Adv. AnandMahurkar	BE	260
16	9/8/2016	Seminar on promotion on Abroad Education	Miss. Pooja Welling (Mission Career)	BE	180
17	9/08/2016	Awareness program about Society of Automotive Engineering	SAE LTCE CLUB	SE, TE	290
18	03/09/2016	Teacher's day program	MESA students		
19	20/09/2016	Seminar on Designing and Manufacturing Integration	PranjwalBanjan (CAD CAM GURU)	BE	225
20	7 th to 12 th January 2017	National level 5 day workshop- Automobile Development Internship Program	EZINITH Education	SE,TE	230
21	24/01/2017	One day workshop on Aeronautical & Aerospace	KYTE AEROSPACE	SE,TE & BE	275

22	30/01/2017	Seminar on GATE exam. & opportunities for qualifiers	Vijay Shekhar Academy	SE, TE	150
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33. Teaching methods adopted to improve student learning

- The subject in-charge guide the other faculty members of the subject in understanding the fundamentals. Common strategies are finalized by subject in-charge.
- Notes of various units, standard readings in lab are prepared right at the beginning of semester. This activity helps the faculty members of the same subject to maintain uniformity across various classes and batches.
- **Guest Lecture:** It's a way of enriching our students with the latest updates of the Industries and technologies. Students are guided by experts from various fields about Industrial needs, latest technical updates, avenues for higher studies etc..
- **Workshop/Conferences:** Faculty and students are encouraged to attend workshops/Conferences in order to enhance their technical skills and keep themselves updated with the current technologies and also helps in their projects.
- **Industrial Visits & Internships:** To enrich the practical knowledge of the students, the department insists the students to engage in internships & industrial visits. In the training, students study a problem in industrial perspective and submit the reports to the department.
- **Assignments & Class tests:** Assignments are given on regular basis to make the students familiar with the problems which are framed according to university examination and class test are conducted to check their performance.
- **Feedback Analysis:** The feedback is key tool which triggers in continous improvement in the quality of education. The feedback is taken from students in order to analyze and implement as per their needs. Also feedback is taken from experts and external examiners on quality of our students.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities.

- Blood donation camp is conducted every year.
- Marathi literature promotion events: MARATHI WANGMAYA MADAL has setup in the institution which is involved in celebration of different cultural festivals like Ganesh Utsav and Holi to let the

students to understand various cultures in India.

- Womens' Development Cell is responsible for well being and encouragement of women in the department. Competitions as well as counsellings are held for girls. Womens day celebration was done specially for ladies of cleaning and maintenance department.
- NSS Camp.
- Yoga camp.
- Donation of needy items such as food, fruits, notebook, clothes etc.
- Financial help for medical reason.
- Tree plantation
- *Swachhata Abhiyan*
- Cattle feeding
- Events management through Zephyr annual gathering

35. SWOC analysis of the Department and Future plans.

Strength:

- Department has highly motivated faculty having passion for teaching and self-development for improvement of quality of education in the institution.
- The department has healthy environment for growth of academics, research culture and social awareness, as well as sports and cultural activities.
- Faculty and students are motivated to publish research papers in reputed international peer reviewed journals and conferences.
- Departmental Newsletter is published every semester. It consists of progress report of department and all the activities which are conducted during the semester.
- Innovative teaching and learning methodologies are being adopted by arranging Training, Seminars, Workshops, Guest lecturers, Industrial Visit, etc so as to encourage students and faculty to develop to their fullest potential.
- Customized ERP system is used in the department for effective administration and data analysis.
- Faculty members are encouraged for training & qualification upgradation.
- Academic and research oriented MoUs with industry/training institute has been signed in order to accelerate placement & research activities.
- Department has state-of-the-art computing facilities with mechanical engineering tools for analysis and simulation of practical oriented problems.
- Students are guided on regular basis for various competitive exams like GATE, GRE/TOEFL etc.
- Department has formed Mechanical Engineering Student Association (MESA) which is the most active student bodies in the institute.
- Department has formed Society of Automotive Engineers (SAE) collegiate club which encourages the students to participate in various technical competitions.

Weakness:

- The faculty members need be motivated for several patents, copyrights, disclosures and technology transfers.
- Efforts are required to be taken to form an authorized center for testing of materials.
- Sufficient efforts are required to enhance Public Relations and Brand Building.
- Efforts need to be made to attract meritorious students.

Opportunities :

- Demand for qualified Engineers is high in view of MAKE in INDIA campaign.
- Boost and strengthen Industry Institute Interaction.
- Campus connect, distance education, training courses in emerging areas are to be developed.
- Attracting and retaining highly qualified faculty through faculty development programs to improve teaching-learning process.
- To strive continuously to improve knowledge and skills .

Challenges:

- Opportunities for global acceptance for our graduates.
- To remain in the close competition by providing state-of-the-art infrastructure in line with foreign institutes
- Limited time available during academics for industrial training/internships for staff & students.

Computer Engineering

1. Name of the Department: Computer Engineering.
2. Year of establishment: 1994.
3. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

Name of the Programme	Intake
UG	120
PG	18
Ph.D.	10

4. Name of Interdisciplinary programmes and departments involved

Sr. No.	Course	Department
1	Database Information Retrieval System	Mechanical
2	Structured Programming Approach	All
3	Environmental Studies	All

5. Annual/ semester/choice based credit system (programme wise):

Credit Based Grading System and Choice Based Credit System from AY 2016-17.

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 programmes discontinued, if any, with reasons

Master of Computer Application (MCA) was discontinued in **2016**.

9. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

Year	Designation	Sanctioned	Filled
2016-17	Professors	03	2
	Assoc. Professors	05	00
	Asst. Professors	18	27
	Professors	03	02

2015-16	Assoc. Professors	05	00
	Asst. Professors	18	32
2014-15	Professors	03	01
	Assoc. Professors	05	00
	Asst. Professors	18	31
2013-14	Professors	03	01
	Assoc. Professors	05	00
	Asst. Professors	18	26

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
Dr. Pravin J. Nikumbh	PH.D.	PROF.	Computer Engineering	32 Years	3 (ongoing)
Dr. Subhash K. Shinde	PH.D.	PROF.	Computer Engineering	17 Years	5 (ongoing)
Dr. Anil Z. Chhangani	PH.D.	A.P.	Computer Engineering	23 years	
Prof. Chitra T. Wasnik	MTECH	A.P.	Computer Engineering	21 Years	NA
Prof. Rajendra D. Gawali	ME	A.P.	Computer Engineering	24 years	NA
Prof. Monika Mangla	MTECH	A.P.	Computer Engineering	15.5 years	NA
Prof. Sanjay D. Naravadkar	BE	A.P.	Computer Engineering	24 Years	NA
Prof. Manish R.Umale	MTECH	A.P.	Computer Engineering	20 Years	NA

Prof. Sonal A. Bankar	ME	A.P.	Computer Engineering	16.5 years	NA
Prof. Kahkashan Siddavatam	ME	A.P.	Electronics and Telecommunication Engineering	12.5 years	NA
Prof. Sulbha S. Yadav	ME,Ph.D.(pursuing)	A.P.	Computer Engineering	12.4 years	NA
Prof. Jyoti S. More	MTECH	A.P.	Computer Engineering	11 years	NA
Prof. Smita A. Attarde	ME	A.P.	Computer Engineering	15.5 years	NA
Prof. Sheetal K. Dhamal	ME	A.P.	Computer Engineering	16.5 years	NA
Prof. Shobha S. Lolge	ME	A.P.	Computer Engineering	13 years	NA
Prof. Chaitrali P. Chaudhari	ME	A.P.	Computer Engineering	15.5 Years	NA
Prof. Smita S. Ambarkar	MTECH	A.P.	Computer Engineering	11 Years	NA
Prof. Shikha P. Gupta	MTECH	A.P.	Computer Engineering	10.5 Years	NA
Prof. Jayendra S. Jadhav	MTECH	A.P.	Computer Engineering	8.6 Years	NA
Prof. Sanjivani T. Deokar	ME	A.P.	Computer Engineering	15 years	NA
Prof. Rakhi Akhare	ME	A.P.	Computer Engineering	8 years	NA
Prof. Archana Naware	ME	A.P.	Computer Engineering	11 years	NA
Prof. Pranjali Gurnule	ME	A.P.	Computer Engineering	12 years	NA

Prof. Datta Deshmukh	ME	A.P.	Computer Engineering	7 years	NA
Prof. Sudhakar Jadhav	ME	A.P.	Computer Engineering	6.6 Years	NA
Prof. Kanchan Gawande	ME	A.P.	Computer Engineering	11 years	NA
Prof. Shruti R. Pandey	ME	A.P.	Computer Engineering	6.6 Years	NA
Prof. Ujwala Tayade	ME	A.P.	Computer Engineering	6.6 years	NA
Prof. Subhodh R. Nikhale	ME	A.P.	Computer Engineering	6.7 Years	NA

11. List of senior visiting faculty

Name of faculty	Subject
Prof. Dr. Heena Jain	Environmental Studies
Prof. H.V Jadhav	Environmental Studies
Ms. Venisha Karia	Foreign Language (German)

12. Percentage of lectures delivered and practical classes handled(programme wise) by temporary faculty

All Faculty are appointed on Regular Post in Computer Engineering Department

13. Student -Teacher Ratio (programme wise)

UG: 17:1

PG: 12:1

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Name of the Post	Sanctioned	Filled
Lab Assistant	NA	6

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.

Sr. No.	Qualification	No. of Faculty
1	Ph.D	03
2	PG	25

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : NIL

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received

Sr. No.	Name of Faculty	Title of Project	Funding Agency	Year (Duration)	Amount Sanctioned
1	Dr. S. K. Shinde	Revolution of Thermal Image processing in Electrical and fire safety (577)	Minor Research Grant, Mumbai University	2016-17	INR 30000/-
2	Dr. A. Z. Chhangani	Smart Lighting for better health(576)	Research Grant, Mumbai University	2016-17	INR 20000/-
3	Ms. Shikha Gupta	Internet of Things for Monitoring Pipe Leakage Detection of Water Distribution Network(574)	Minor Research Grant, Mumbai University	2016-17	INR 20000/-
4	Prof. R. D. Gawali	A Novel Approach for securing Wi-Fi Network in Educational Institutes	Minor Research Grant, Mumbai University	2013-14	INR 25000/-
5	Ms. Jyoti More	Reality Mining using Wi-Fi	Minor Research Grant, Mumbai	2013-14	INR 30000/-

			University		
6.	Ms. Smita Ambarkar	Multicast routing in Mobile communication network.	Minor Research Grant, Mumbai University	2013-14	INR 30000/-

18. Research Centre /facility recognized by the University.: Yes.

19. Publications:

a. Publications: Publication per faculty –

- Number of papers published in peer reviewed journals (national / international) by faculty and students
- Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- Monographs
- Chapter in Books
- Books Edited
- Books with ISBN/ISSN numbers with details of publishers
- Citation Index
- SNIP
- SJR
- Impact factor
- h-index

Please refer Appendix

20. Areas of consultancy and income generated: NIL

21. Faculty as members in

- a) National committees: NIL
- b) International Committees: NIL
- c) Editorial Boards/ Reviewer:

Sr. No.	Name of Faculty	National/International Committee/ Conferences	Designation
1	Dr.Subhash K. Shinde	International Journals: Big Data, Springer, IJDMM inderscience, Experts System Elsevier etc.	Reviewer

2	Dr. Pravin Nikumbh	2 nd International Conference in Fuzzy System and Data Mining, FSDM 2016	Reviewer
		International Journal of Applied Evolutionary Computations, IGI Global	Reviewer
		National Level Conference on Emerging Technology for Innovative India	Session Chair
		National Conference on Technological Advancement and Automization in Engineering	Session Chair
3	Mr. Sanjay Naravadkar	4th National Level Conference on “Emerging Technology for Innovative India” Year-2016	Reviewer
		4th National Level Conference on “Emerging Technology for Innovative India” Year-2016	Session Chair
4	Mr. Jayendra Jadhav	4th National Level Conference on “Emerging Technology for Innovative India” Year-2016	Reviewer
5	Ms. Shikha Gupta	4th National Level Conference on “Emerging Technology for Innovative India” Year-2016	Reviewer

22. Student projects

a. Percentage of students who have done in-house projects including inter departmental/programme.

Year	Percentage of students who have done in-house projects	
	UG	PG
2013-14	100%	100%
2014-15	90%	100%
2015-16	97%	100%
2016-17	93%	100%

b. Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies

Year	Percentage of students placed for projects in organizations outside the institution	
	UG	PG
2013-14	NIL	NIL
2014-15	10%	NIL
2015-16	03%	NIL
2016-17	07%	NIL

23. Awards / Recognitions received by faculty and students

Faculty Achievements			
Name	Award	Organization	Year
Mr. Sanjay Naravadkar	Invited as a guest for the inaugural ceremony of Technical Competitions "TALENT HUNT-2016"	Anjuman-I-Islam's A.R. Kalsekar Polytechnic, Panvel.	2015-16
Ms. Jyoti More	Awarded Silver Medal for securing II position for project presentation (AVISHKAR) at University level	University of Mumbai	2016
Students Awards			
Name	Award	Organization	Year
Mayur Shahasane	Received First prize at AngelHack hackathon	AngelHack , Vizag	18 June, 2016
Mayur Shahasane	Received Third prize under Hardware Category at InOut hackathon	VNIT, Surat	14 August, 2016
Mayur Shahasane	1st prize in C++ debugging at TechZephyr	LTCOE, Koparkhairne	2016
Mayur Shahasane	Semi Final Round in Cross Fire Debate at Inter college level	NMIMS, Mumbai	2016
Mayur Shahasane	First prize at State level coding in C++	CAD center , Mumbai	October, 2016
Dickson Arulraj	Received First prize at AngelHack hackathon	AngelHack , Vizag	18 June, 2016
Ragini Patil	Received First prize at AngelHack hackathon	AngelHack , Vizag	18 June, 2016
Ragini Patil	Received Third prize under Hardware Category at InOut hackathon	SVNIT, Surat	14 August, 2016

Akshay Dhavale	1st prize in Marathi Article for college magazine	LTCOE, Koparkhairane	2016
Madhura Mhatre	3rd prize in west zone inter university handball women's tournament	Jaipur	2016
Madhura Mhatre	Best Methodology and Best Paper Award for Braille Tech: An Efficient Platform For Deafblind People - National Conference On Advance Trends In Engineering	DMCE, Airoli	2016
Madhura Mhatre	Letter of Appreciation from College for Great Performance as the Co-Editor	LTCOE, Koperkhairane	2015-16
Sanjana Kamat	Elocution competition sponsored by Mumbai Port Trust	Mumbai Port Trust	2016
Rashmi Gautam Siddhi Choudhari	Technical Paper Presentation competition (Fusion-2015)	Vasantdada Patil College of Engineering, Sion	2015

24. List of eminent academicians and scientists / visitors to the department

Name	Designation	Date of visit
Mr. Nilesh Redekar Mr. Pranjal Mule	Trainer VESIN	28/01/2016
Mr. Karan Makharia	Trainer Gate Tutorial	15/02/2016 16/02/2016
Mr. Kunal Keshalini	Software Developer- Rakuten Japan	02/03/2016
Mr. Amit	Faculty Manipal University	10/03/2016
Mr. Ramya Gokhale	Trainer, Virtual Reality	20/07/2016
s. Pooja Welling Ms. Katja Freidal	Faculty Mission Career	09/08/2016
Mr. Tejas Samuel	Art of living	27/07/2016
Mr. Vinayak	Trainer, AVIN-SAM	09/08/2016 30/08/2016

Ms. Debina	Trainer, Quik Technologies	15/01/2016
Mr. Amit Agarwal	Trainer CSI	29/02/2016
Mr. Nilesh Wadkar	Trainer Optimiser	09/03/2016
Mr. Manish Jain	Corporate Trainer and Faculty IFDE Infotech	09/01/2017 10/01/2017
Mr. Rakesh Singh	Patent Drafting Ex. Deputy controller, patent office, Mumbai Senior patent Associate and patent agent, Microsoft	01/10/2016

25. Seminars/ Conferences/Workshops organized & the source of funding

a. National

Name of Seminar/ Conference/ Workshop	Name of Expert/ Organizing agency	Source of Funding	Amount	Duration	Year
Word press And Web site Designing	Mr. Karan Makharia	Self Organised	950 per student	27/02/2016 28/02/2016	2015-16
Practical Approach and Hands on training for Hadoop- Big Data FDP	IFDE Infotech	Self Organised	1200 per faculty	09/01/2017 10/01/2017	2016-17
Patent Drafting	Mr. Rakesh Singh	Free	--	01/10/2016	2015-2016
Introduction to big data & Statistical Analysis on SAS	Mr. Nilesh Redekar	Free	--	09/03/2016	2015-2016
Reasoning ability & Critical Thinking	Mr. Kunal Keshalini	Free	--	02/03/2016	2015-2016
Talent Age-Android, Cloud Computing, Hadoop	Mr. Amit	Free	--	10/03/2016	2015-2016

Virtual Reality	Mr. Ramya Gokhale	Free	--	20/07/2016	2015-16
Seminar on Abroad Education	Ms. Pooja Welling Ms. Katja Freidal	Free	--	09/08/2016	2015-16
Health and Happiness	MR. Tejas Samuel	Free	--	27/07/2016	2015-16
Software Asset Management	Mr. Vinayak	Free	--	09/08/2016 30/08/2016	2015-16
Ethical Hacking	Ms. Debina	Free	--	15/01/2016	2015-16
Big Data & Hadoop	Mr. Amit Agarwal	Free	--	29/02/2016	2015-16
Cyber Security	Microsoft	Free	--	08/03/2016	2015-16
Software Testing	Mr. Nilesh Wadkar	Free	--	09/03/2016	2015-16

26. Student profile programme/course wise:

Academic Year	Name of the course/programme	Applications Received	Selected	Enrolled		Pass Percentage
				*M	*F	
2016-17	UG	Through DTE	114	81	33	Result Awaiting
	PG	Through DTE	0	0	0	Result Awaiting
	Ph.D.	30	2	0	2	Result Awaiting
2015-16	UG	Through DTE	116	77	39	93.38
	PG	Through DTE	3	0	3	Result Awaiting
	Ph.D.	28	4	2	2	Result Awaiting
2014-15	UG	Through DTE	98	60	38	96.99
	PG	Through DTE	8	1	7	Result Awaiting
2013-14	UG	Through DTE	122	66	56	99.18
	PG	Through DTE	15	07	08	86.66

*M = Male *F = Female

27. Diversity of Students

Academic Year	Name of the course	% of students from the same state	% of students from the other states	% of students from abroad
2016-17	UG(BE)	87.82	12.17	--
	PG(ME)	--	--	--
	Ph.D.	100	0.00	--
2015-16	UG(BE)	90.51	09.48	--
	PG(ME)	33.33	66.66	--
	Ph.D.	100	0.00	--
2014-15	UG(BE)	91.83	08.16	--
	PG(ME)	87.50	12.50	--
2013-14	UG(BE)	74.14	13.11	--
	PG(ME)	33.33	66.66	--

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?

Academic Year	No. of Students cleared in competitive exams			
	GATE	GRE/GMAT	CAT/CET	Defence Services
2015-16	1	15		--
2014-15		12		--
2013-14		12		--
2012-13		21		--

29. Student progression

Campus Placement Details

Academic Year	Enrolled	Selected	% Selection
2016-17	64	03 (Till Date)	5
2015-16	50	41	82
2014-15	32	32	100
2013-14	52	23	45

Student Progression	Against % Enrolled
UG to PG	61

PG to M.Phil	NA
PG to Ph.D.	0.00
Ph.D. to Post-Doctoral	0.00
Employed Campus selection Other than campus recruitment	
Entrepreneurship/Self-employment	Entrepreneurship - 01 Self-Employment - 00

30. Details of Infrastructural facilities

a. Library

Area	653.68 sqm
No. of Books	8451
No. of Titles	2749
No. of Journals	26 Indian + IEEE = POP Subscription (299)

b. Internet facilities for Staff & Students

Yes, Available with Wi-Fi Facility

c. Class rooms with ICT facility

Classrooms with WiFi facility

Seminar Hall with Audio system and projector

d. Laboratories

Lab No.	Name of Laboratory	Area	Cost (Rs.)
C-501	Advance Computing Lab (PG)	82 sqm	9,06,500/-
C-502	Database lab	82 sqm	8,22,400/-
C-511	Digital Signal And Image Processing Lab	82 sqm	7,29,000/-
C-512	Computer Network Lab	82 sqm	8,22,400/-
C-513	Ph. D Research Center	34 sqm	2,43,000/-
C-601	System Software Lab	82 sqm	8,95,000/-
C-602	Microprocessor & Microcontroller lab	82 sqm	8,87,000/-

C-611	Web Engineering Lab	82 sqm	8,61,500/-
C-612	Algorithm & Data Structure Lab	82 sqm	8,09,500/-
C-702	AI & Soft Computing Lab	82 sqm	8,61,500/-
C-704	Software Engineering Lab	82 sqm	8,08,000/-
C-705	Computer Graphics & Multimedia Lab	82 sqm	8,61,500/-

31. Number of students receiving financial assistance from college, university, government or other agencies

Academic	No. of Students	College/university/government/other
2013-14	15	EBC
2014-15	13	EBC
2015-16	50/2	EBC/TATA Scholarship
2016-17	35/2	EBC/TATA Scholarship

32. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

Sr. No.	Name of Enrichment Programme	Year
1	Practical Approach and Hands on training for Hadoop- Big Data	2016-2017
2	Wordpress And Website Designing	2015-2016
3	Patent Drafting	2015-2016
4	Introduction to big data & Statistical Analysis on SAS	2015-2016
5	Reasoning ability & Critical Thinking	2015-2016
6	Talent Age-Android, Cloud Computing, Hadoop	2015-2016
7	Virtual Reality	2015-2016
8	Seminar on Abroad Education	2015-2016
9	Health and Happiness	2015-2016

10	Software Asset Management	2015-2016
11	Ethical Hacking	2015-2016
12	Big Data & Hadoop	2015-2016
13	Cyber Security	2015-2016
14	Software Testing	2015-2016

33. Teaching methods adopted to improve student learning

The department of computer engineering follows the syllabus set by the university for the learning process. Apart from this university syllabus, department organizes various activities to enhance the students' learning. Department also arranges video lectures (e.g. nptel lectures) and online quizzes for the students to enhance their understanding. Workshops, Seminars and Expert talks are also arranged by the research coordinator and the student activity coordinators as value added activities for the benefit of the students.

For students to learn in a meaningful manner, they are made to actively engage in the learning process by giving minor exercises during theory and lab sessions. It helps them to envision practical and professional applications for what they are learning. This type of understanding is invaluable for a career as an engineering professional. The Department also believes in the concept of collaborative learning. In order to implement collaborative learning, students are given collaborative writing, group/mini projects, joint problem solving, debates and study teams etc. During collaborative learning, it is seen that students have mixed-ability group so that it is beneficial for everyone.

Faculty in the department also mentor the students for their personal and academic issues. Special remedial classes are arranged for academically weak students. Model answers are also discussed during these classes. Department considers the feedback system in a constructive manner in order to improve the quality of teaching and learning process. Bright students are identified, appreciated and encouraged by motivating them for taking up challenging assignments, mini projects, additional practical assignments, etc.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Blood Donation Camps, tree plantation, Women Development Cell, fruit distribution, NSS, walkathon/cycling, stationary/clothes donation in ashrams, diversion of ganpati donation to drought prone farmers, women empowerment, yoga/art of living/positive thinking seminars, digital practical files have been considered as the ISR being fulfilled throughout the year. In addition several activities include teaching to street kids, social activities for some registered ashram and providing infrastructure like lab garden etc to needy, conducting informative/science/technological exhibition for slum/down trodden kids, festival celebration with weaker class

35. SWOC analysis of the department and Future plans

Strengths:

- The Institute has adequate infrastructure as per the norms.
- Strong Management support to pursue/initiatives at all fronts to achieve success
- Provides support for societal and environmental related issues
- Conducive environment and retention policy of faculty/staff leading to better quality research work
- Recruitment of qualified teaching faculty through a proper merit based mechanism.
- Consistent performance monitoring and encouragement to further enhance the skill.
- Technology aided learning (using NPTEL, Online courses)
- Expanding R&D base through collaborations with research organizations

Weakness:

Focus should be given to improve placement, institute-industry interaction. Create more opportunities for the students, so as to expose themselves to the industry standards, and for internship.

Opportunities:

- Increase the number of MOU for greater industry-academic interaction.
- Encourage the student for Entrepreneurship and out-house projects
- Educate students through seminars and expert talk for education in abroad
- FDP and other value added courses for upcoming technologies like IOT etc.

Challenges:

- Strict competition in professional education.
- Major grants from relevant industries and limitations on the resources to fund for R&D

Electronics and Telecommunication Engineering

1. Name of the Department: **Electronics and Telecommunication Engineering**
2. Year of Establishment: **Regular- 2001 and Second Shift-2010**
3. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.): **UG in Electronics and Telecommunication Engineering**
4. Names of Interdisciplinary courses and the departments/units involved: **NO**
5. Annual/ semester/choice based credit system (programme wise): Credit Based Grading System and Choice Based Credit System from AY 2016-17.
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: **NA**
9. Number of teaching posts:

Designation	Sanctioned	Filled
Professors	03	01
Assoc. Professors	07	00
Asst. Professors	14	14+10

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. Etc.,)

Sr. No	Name	Qualification	Designation	Specialization	No.of years Experience
1	Dr. Ravindra Duche	Ph. D (ETRX)	Professor	WSN, VLSI	22 yrs.
2	Dr. Rajeshree Rokade	Ph. D (ELEX)	Asst.Prof.	IVP,Computer vision	8 yrs.
3	Ms. Rupali Sawant	M.E.(EXTC) Ph.D.persuing	Asst.Prof.	WCOM	15.5 yrs.

4	Ms. Vandana Khobragade	M.TECH (ETRX) Ph.D.persuing	Asst.Prof.	IP,SP	13 yrs.
5	Mr. Vikas Kshirsagar	M.E.(ETRX)	Asst.Prof.	Micro controller & Microprocessor	21 yrs.
6	Ms. Nandini Nag	M.E.(IT) Ph.D.persuing	Asst.Prof.	Signal Processing, communication	15yrs.
7	Mr. Nitin Deotale	M.TECH (EXTC) Ph.D.persuing	Asst.Prof.	Antenna, wireless	11 yrs.
8	Ms. Pranita Potey	M.E.(EXTC) Ph.D.persuing	Asst.Prof.	WCOM & microwave	13 yrs.
9	Ms. Sunita Munde	M.TECH (ETRX)	Asst.Prof.	Wireless & control system	16 yrs.
10	Ms. Supriya Sonsurkar	M.TECH (EXTC)	Asst.Prof.	Signal processing	9 yrs.
11	Ms. Gitimayee Sahoo	M.TECH(EXTC) Ph.D.persuing	Asst.Prof.	RF & microwave, WCOM	9 yrs.
12	Mr. Devidas Chikhale	M.E. Ph.D.persuing	Asst.Prof.	Communication & Network	18 yrs.
13	Ms. Jayashree Sonawane	M.E. (EXTC)	Asst.Prof.	MCOM,OFC	5.6 yrs.
14	Mr. Sheshmal Shingne	M. Tech (EDT)	Asst.Prof.	EDT	6.5 yrs
15	Mr. Mohd. Farhan	M.E. (EXTC)	Asst.Prof.	AE, SP, RF & microwave	6 yrs.
16	Ms. Gauri Ashtankar	M.Tech (ETRX)	Asst.Prof.	WCOM & ES	7 yrs.
17	Ms. Susmita Dutta	M. Tech (EXTC)	Asst.Prof.	IA & Robotics	9.5 yrs.
18	Ms. Vrushali Bendre	M.E. (digital system)	Asst.Prof.	Digital System	9 yrs.
19	Mr. Vaibhav Palav	M.E. (EXTC)	Asst.Prof.	CS,WCON, CCNA	2 yrs.
20	Mr. Vijay Kawde	M. Tech (EXTC)	Asst.Prof.	VLSI & ES	4 yrs.
21	Ms. Shraddha Kunkunkar	M.E. (EXTC)	Asst.Prof.	EMI,DCOM	3 yrs.

22	Ms. Kavita Rathi	M.E. (EXTC)	Asst.Prof.	IVC,OS	8 yrs.
23	Ms. Priti Motwani	M.E. (EXTC)	Asst.Prof.	TNM,EMI	7 yrs.
24	Ms. Garima Yadav	M.E. (Embedded system)	Asst.Prof.	ES	1.6 months
25	Ms. Sasirekha Kintali	M. Tech (VLSI & ES)	Asst.Prof.	VLSI & OS	8 yrs.

11. List of senior visiting faculty- **NO**

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty- **Nil**

13. Student -Teacher Ratio (programme wise)- **1:15**

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Name of the Post	Sanctioned	Filled
Lab Assistant	06	05

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.

Sr. No.	Qualification	No. of Faculty
1	Ph.D.	2
2	PG	23

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : **NIL**

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received.

Year	Sr. No.	Name of Faculty	Title of Project	Funding agency	Amount Sanctioned
2016-17	1	Mr. Niin Deotale	Minor Research	University Of Mumbai	30,000
	2	Ms. Pranita Potey	Minor Research	University Of Mumbai	34,000
	3	Ms. Sunita Munde	Minor Research	University Of Mumbai	30,000
	4	Mr. Devidas	Minor Research	University Of Mumbai	20,000

		Chikhale			
	5	Ms. Gitimayee Sahu	Minor Research	University Of Mumbai	20,000
	6	Ms. Jayashree Sonawane	Minor Research	University Of Mumbai	25,000
	7	Mr. Shesmal Shingne	Minor Research	University Of Mumbai	24,000
2014-15	1	Ms. Vandana Khobragade & Dr. Rajeshree Rokade	Minor Research	University Of Mumbai	30,000

18. Research Centre /facility recognized by the University- **Nil**

19. Publications: Publication per faculty

- Number of papers published in peer reviewed journals (national / international) by faculty and students
- Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- Monographs
- Chapter in Books
- Books Edited
- Books with ISBN/ISSN numbers with details of publishers
- Citation Index
- SNIP
- SJR
- Impact factor
- h-index

	Dr. Ravindra Duche	Dr. Rajeshree Rokade	Mr. Mohd. Farhan
Number of papers published in peer reviewed journals	2	2	-
Number of publications listed in International Database	-	-	-
Monographs	-	-	-
Chapter in Books	-	-	-

Books Edited	-	-	-
Books with ISBN/ISSN numbers with details of publishers	-	-	5 books by Publisher: Synergy Knowledge Ware Book Name and ISBN Number: 1) Analog Electronics II- 9789383352081 2) Discrete Electronics Circuit 9789383352098 3) Satellite communication 9789383352050 4) Electronic devices and circuits 9789383352197 5) Satellite communication and networks 9789383352111
Citation Index	57	50	-
SNIP	-	-	-
SJR	-	-	-
Impact factor	1.98	IET- 1.2	-
h-index	3	2	-

20. Areas of consultancy and income generated: **NIL**

21. Faculty as members in

- a) National committees : Nil
- b) Editorial Boards/ Reviewer

Sr. No.	Name of Faculty	National/International Committee/ Conferences	Designation
1.	Dr. Ravindra Duche	National & International	Reviewer
2.	Dr. Rajeshree Rokade	National & Internationa	Reviewer
3.	Ms. Rupali Sawant	National	Reviewer
4	Ms. Vandana Khobragade	National & Internationa	Reviewer
5	Mr. Vikas Kshirsagar	National	Reviewer
6	Ms. Nandini Nag	National & Internationa	Reviewer
7	Mr. Nitin Deotale	National	Reviewer
8	Ms. Pranita Potey	National	Reviewer

9	Ms. Sunita Munde	National	Reviewer
10	Mr. Devidas chikhale	National	Reviewer
11	Ms. Gitimayee Sahoo	National	Reviewer
12	Mr. Sheshmal Shingne	National	Reviewer
13	Mr. Mohd. Farhan	National	Reviewer

22. Student projects

(a) Percentage of Students who have done in house Projects including inter departmental/ Programme

Year	Percentage of students who have done in house project
	UG
2016-17	97.61
2015-16	97.05
2014-15	94.59
2013-14	93.93

(b) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies

Year	Percentage of students placed for projects in organizations outside the institution
	UG
2016-17	2.3
2015-16	2.9
2014-15	5
2013-14	6

23. Awards / Recognitions received by faculty and students

a) National

Year		Name	Award	Organisation
	Faculty	Dr. Ravindra Duche	Silver medal in project competition	8th State Level Avishkar

	Student	1.Rahul Walmik 2.Amit yadav	1 st prize in National level Conference-2014	Lokmanya tilak College of
2014-15		-	-	-
2015-16	Student	1.Rahul Yadav 2.Rahul Gupta	3 rd prize in National level Conference-2014	Lokmanya tilak College of
		1.Rahul Yadav 2.Rahul Gupta	Best paper in National level Conference-2014	Datta Meghe College of
		1.Manisha Yadav 2.Rajat kumar	3 rd prize iin College level Avishakar Compitition	Lokmanya tilak College of
2016-17	Faculty	Mrs. Nandini Nag	Best paper award in conference	<i>Fr. C. Rodrigues Institute of</i>

24. List of eminent academicians and scientists / visitors to the department

Year	Name	Designation	Date of visit
2015-16	Dr. Nisha Sanvade	Retired Professor	29 September 2016
	Dr. R. B. Jain	Professor	10 October 2016
	Dr. Munir Sayyad	General Manager	16 March 2016
	Mr. Badhe	Asst. Professor	November 2016
2014-15	Dr. Milind Shah	Professor	14 March 2016
	Dr. R. B. JaIn	Professor	4 September 2015
	Mr. Mahesh Munde	Asst. Professor	10 February 2015
2013-14	Dr. Ravindra Duche	Professor	March 2014

25. Seminar/Conference/Workshops Organized & Source of funding

Year	Name of the seminar / conference / workshop	Name of expert / organizing agency	Source of funding	Amount	Duration
2016-17	1) Latex for report writing	Ms. Rupali Sawant	Free		3 hrs.

	2) Seminar on Recent Trends in 4G	Mr. Devidas Chikhale & Ms. Gitimayee Sahoo	Free		2 hrs
	3) PCB Design	Mr. Sheshmal Shingne	Free		3hrs.
2015-16	1) Seminar Microsoft	Mr. Rohit Lamba/Microsoft	Free		1 days
	2) 3 days Microsoft Workshop	Mr Panth Shukla /Microsoft	Free	2500/-	3 days
	3) Hands on Training on NS2	Mr. Vishwas Kshirsagar	Student & Department	150/-	1 day
	4) Guest lecture on WCOM	Dr. Munir Sayyad	Department		3 hrs
2014-15	1) Matlab workshop for students	Dr. Rajeshree Rokade & Mr. Farhan Mohd	Student	100/-	3 Days
	2) Latex workshop for student and faculty	Dr. Sanjay Shitote	Participants	300/- & 500/-	1 day
	3) Guest lecture on SATCOM	Mr. Kaustubh Pandharikar	Free		2 hrs
	4) Guest lecture on Speech Process	Dr. Milind Shah	Free		3 hrs
2013-14	Expert lecture on RSA	Dr. R. B. Jain	Dept.		3 hrs.

26. Student profile programme/course wise:

Year	Application received	Selected	Enrolled		Passed		Passing %	
			Male	Female	Male	Female	Male	Female

2016-17	DTE CAP	DTE CAP	49	23	NA	NA	NA	NA
2015-16	DTE CAP	DTE CAP	96	44	86	42	89.27	95.45
2014-15	DTE CAP	DTE CAP	116	38	90	32	77.87	83.80
2013-14	DTE CAP	DTE CAP	95	36	87	31	91.55	89.15

27. Diversity of Students

Year	Name of the course	% of students from the same state	% of students from the other states	% of students from abroad
2013-14	EXTC	93.96	6.04	0
2014-15	EXTC	91.28	8.72	0
2015-16	EXTC	96.45	3.55	0
2016-17	EXTC	78.63	21.37	0

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?

Academic Year	No. of students cleared in competitive exams			
	GATE	GRE/GMAT	CAT/CET	Defence Services
2013-14	01	08	15	-
2014-15	02	08	15	-
2015-16	02	04	04	-
2016-17	46 (Appeared)	05	08	-

29. Student progression

Year	Student Progression	Against % enrolled
2013-14	UG to PG	11%
	PG to M.Phil	0

	PG to Ph.D.	0
	Ph.D. to Post-Doctoral	0
	Employed	
	Campus selection	12%
	Other than campus recruitment	75%
	Entrepreneurship/Self-employment	8%
2014-15	UG to PG	10%
	PG to M.Phil	0
	PG to Ph.D.	0
	Ph.D. to Post-Doctoral	0
	Employed	
	Campus selection	24%
	Other than campus recruitment	61%
	Entrepreneurship/Self-employment	5%
2015-16	UG to PG	12%
	PG to M.Phil	0
	PG to Ph.D.	0
	Ph.D. to Post-Doctoral	0
	Employed	
	Campus selection	32%
	Other than campus recruitment	45%
	Entrepreneurship/Self-employment	2%

30. Details of Infrastructural facilities

a. Library

No. of Books	95
No. of Titles	30

No. of Journals :15

b. Internet facilities for Staff & Students: **Yes**c. Class rooms with ICT facility: **Yes (Dept. Seminar Room, C-310)**

d. Laboratories

Sl. No.	Lab No.	Name of Laboratory	Area of the Lab (in	Total cost of the
1	A-202	Simulation & Design Lab	74.55	7,20,000/-
2	A203	Analog Communication	72.65	7,41,784.8/-
3	A-204	Analog and Digital	74.55	5,33,072.8/-
4	A-205	Electronic Devices and	72.55	1,88,947/-
5	A208	Wireless Communication	66	7,64,266/-
6	A-210	Research & Development	68.68	6,63,105.37/-
7	A-217	Microprocessor	73	4,92,970/-
8	A-218	Advanced	73	7,64,266/-
9	A-219	Microwave and Fiber	72.62	10,91,896.44/-
10	A-220	Antenna and Wave	72.62	8,22,552/-

31. Number of students receiving financial assistance from college, university, government or other agencies

Academic	No. of Students	College/university/government/other agency
2016-17	33	TATA SCHOLARSHIP
2015-16	34	TATA SCHOLARSHIP
2014-15	40	TATA SCHOLARSHIP
2013-14	40	TATA SCHOLARSHIP

32. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

a) National

Year	Name of the seminar /		Duration
2016-17	1) Latex for report writing	Ms. Gauri Ashtankar	2 hrs
	2) Seminar on Recent Trends	Mr. Devidas Chikhale &	2 hrs
	3) PCB Designing	Mr. Sheshmal Shingade	3hrs.
	4) IoT and RF	Mr. Sabahat	1 hour
	5) Abroad Education	Mrs. Pooja Welinkar	1 hour
	6) Tele networks	Mr. Yogesh	1 hour

	7) Expert talk on VLSI	Dr. Ravindra Duche	2 hrs
2015-16	1) Seminar Microsoft	Mr. Rohit Lamba/Microsoft	1 days
	1) Latex for report writing	Ms. Rupali Sawant	3 hrs.
	2) 3 days Microsoft Workshop	Mr Panth Shukla /Microsoft	3 days
	3) Hands on Training on NS2	Mr. Vishwas Kshirsagar	1 day
	4) Guest lecture on Wicom	Dr. Munir Sayyad	3 hrs
	5) Guest lecture on speech	Dr. Milind Shah	1 day
	6) Expert talk on DCOM	Dr. Ravindra Duche	2 hrs
	7) Business Analytics	Management , VES,	2 hrs
	8) Expert lecture on CTL	Mr. Bade Datta	2 hrs
	7) Expert talk on Neural	Dr. Ravindra Duche	2 hrs
8) Guest lecture on optical	Dr. Ranjanbala Jain	1 day	
2014-15	1) Matlab workshop for	Dr. Rajeshree Rokade &	3 Days
	2) Latex workshop for student	Dr. Sanjay Shitote	1 day
	3) Guest lecture on SATCOM	Mr. kaustubh Padirkar	2 hrs
	4) Guest lecture on Speech	Dr. Milind Shah	3 hrs
2013-14	Expert lecture on RSA	Dr. R. B. Jain	3 hrs.
	Guest lecture on Wireless	Dr. R. N. Duche	1 hour

33. Teaching methods adopted to improve student learning

Teaching - Learning Processes

Conventional Method:-

- Chalk-Board method
- Transparency Projector
- Over Head Project
- LCD Projector
- Reference Book
- Unit Test-1, Unit Test-2, Assignment

Measure taken for improvement in quality of teaching and learning:-

- Eminent person from Industry and reputed College
- Journals, Conference paper, Science magazine

- Workshop, Seminar
- Mini project
- Mock test, Quiz, Debate, MCQ, Chapter wise test
- Presentations on small topic by student
- Student development program
- Remedial lecturer for weak student- animated video, extra lecturer
- Industrial visit
- Chapter wise assignment
- Solving previous year university paper
- For bright students projects are given relevant to current telecommunication trends

Initiatives to improve the quality of mid-term tests and assignments

In our programme thrust is given on the qualitative continuous evaluation of students and thus internal test for each course in the semester is introduced.

Quality of midterm test is defined as:-

- Well defined system of conduction of test with planning in advance and planning in detail.
- Meaningful question paper to test learning objectives.
- Highest level of transparency in evaluation.
- Timely declaration of results

In each semester two tests of 20 marks are conducted in 6th and 13th week from the commencement of the term and equivalent 20 marks are added in the final result. Schedule of the test is provided in academic calendar. Syllabus for each test is declared to the students well in advance in class and on notice board.

Setting of the question paper for each test is very important and quality of the mid-term test largely depends on that. It is known fact that teachers of engineering colleges are not formally trained in “Education Science” and thus are not aware about standard practices to draw an ideal question paper. So the need was felt and initiative was taken at college level to train all faculty members about this. With the help of experts in the field, two days workshop was arranged for faculty members in the May-June 2014 vacation with batch size equal to 25 to prepare them in paper setting methodology namely Bloom’s Taxonomy. From 2016 -17 academic year test papers will set with learning objectives.

Concern faculty members teaching the course to both the division set the paper for test. While setting paper, questions are designed to test 6 objectives of learning (namely knowledge, comprehension, application, analysis, synthesis and evaluation). In any one test sometimes it happens that all 6 objectives can’t be

tested. Similarly after questions are set faculty decides its relation with attainment of particular COs mentioned in the course. So each question is specifically mentioned as a tool to measure a particular course objective. Short solution of the test paper is prepared and mark distribution is finalized and made available to IECC in stipulated time.

IECC will make sufficient copies of the test papers and will keep in sealed envelope in their custody. Detail schedule of test will be prepared with proper seating arrangement, supervisors' invigilation duty, non teaching staff's duty and test will be conducted for 3 days under the supervision of IECC members.

After the completion of examination IECC will mail the solution and marking scheme to all concern students for their reference and will hand over the answer sheets to respective subject teacher as an examiner. Assessment of answer papers is done according to solution and marks distribution by the examiner.

After the assessment of answer papers, concerned faculty will show the answer sheet to the students for their understanding. Students will go through the answer sheet and compare their assessed answers with the solution and marking scheme declared. This will enable them to understand drawbacks and incompleteness in their answers. Students will discuss their various doubts about checking and subject teacher will clarify it or do the needful as case may be. If there are some changes in marks the student will put his signature on changed marks as to indicate his awareness about action taken.

Course teacher freeze the test marks scaled down to 15 marks for each test and finally get added to Internal Assessment (IA) component and final mark sheet of the respective class submitted to IECC

Quality of assignments is defined as:-

- Well define planning in advance and in detail.
- Question with Meaningful learning objectives.
- Highest level of transparency in grading.
- Timely assessments & Evaluation.

In each semester minimum two to three assignments are given in each course. For lower semester assignments are limited to questions set based on university question papers. Whereas for higher semester it is not limited to question based on university question papers but it also includes seminars, problem solving, case study, analysis and design, as per course objective.

Assignments are planned by subject teachers and displayed one week in advance on notice board with date of submission. If it is not same for all students, then

names of students as per task is displayed. Assignments are verified from expert advisory committee nominated by department of head as per area of expertise. Timely assessments with highest level of transparency are done.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Year	Name of Faculty	Activity	Post
2014-15	Mrs.Pranita Potey	NSS	College Coordinator

35. SWOC analysis of the department and Future plans

Strengths:

- 1) 40% Ph.D. pursuing faculty.
- 2) Research & motivated faculty with 7 ongoing & 3 completed minor research purpose.
- 3) 1 MODROB proposal sanctioned in 2008 & one proposal is in process.
- 4) Two proposals in process for DST grant.
- 5) Well equipped labs .
- 6) State of Art seminar hall with capacity of 100 & ICT equipped.
- 7) Maximum faculty retention.
- 8) Placement assistance provided.
- 9) Training for examination like GATE , Aptitude skills,etc
- 10) Strong Alumni Base.

Weakness:

- 1) Shortfall in MoU, Major grants , Online projects, Consultancy.
- 1) Less interaction with foreign industry.
- 3) Monograph & patents
- 4) Book publication .

Opportunity:

- 1) Academic ambiance for Research
- 2) Additional VAP in emerging areas for experts interaction & enhancement in knowledge
- 3) Improving the Industry Institute Interaction

Challenges:

- 1) Placement
- 2) Admission
- 3) Entrepreneurs.

Electrical Engineering

1. Name of the Department:-Electrical Engineering
2. Year of Establishment:- 1995
3. Names of programmes/courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.) -

UG Bachelor of Electrical Engineering, University of Mumbai

4. Names of Interdisciplinary courses and departments/units involved :NA

5. Annual/Semester/Choice Based Credit System (programme wise)

Credit Based Grading System and Choice Based Credit System from AY 2016-17.

6. Participation of the department in the courses offered by other departments

Sr. No.	Department	Course
1	Electronics Engineering	Basic Electrical & Electronics Engineering Sem :- I
2	Electronics & Telecommunication Engineering	Basic Electrical & Electronics Engineering Sem :- I
3	Computer Engineering	Basic Electrical & Electronics Engineering Sem :- I
4	Mechanical Engineering	Basic Electrical & Electronics Engineering Sem :- I
5	Mechanical Engineering	Industrial Electronics Sem :- IV

7. Courses in collaboration with other universities, industries, foreign institutions, etc.: NA

8. Details of courses/ programmes discontinued, if any, with reasons : NA

9. Number of Teaching Posts

Posts	Sanctioned	Filled
Professors	01	00
Assoc. Professors	02	00
Asst. Professors	09	11 Regular + 2 Adhoc

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. Etc.,) **ALL**

Name	Qualification	Designation	Specialization	No. of Years of Experience
Dr. C. M. Wankhade	Ph.D.Electrical	Assistant Professor	Electrical	27 Yrs
Mrs. Madhwi Kumari	M. Tech., Electrical Power System (Ph.D. Pursuing)	Assistant Professor	Power System	17 Years 8 Months
Mr. N. P. Totre	ME Electrical (Ph.D.. Pursuing)	Assistant Professor	Power System	16 Yrs.8 Month
Mrs. Shruti Nema	ME Electronics (Ph.D. Pursuing)	Assistant Professor	Electronics	20Yrs6 Months
Mrs. Shilpa M. Kapse	ME Electrical Power System (Ph.D.. Pursuing)	Assistant Professor	Power System	18 Yrs.3 Month
Mrs. R. Sonune	ME Electrical Power System	Assistant Professor	Power System	16 Yrs.
Mrs. Neelam S .Pinjari	ME Electrical (Ph.D.. Pursuing)	Assistant Professor	Power System	15 Yrs.
Mrs. N. Attarde	ME Electrical (Ph.D.. Pursuing)	Assistant Professor	Power System	10 Yrs.
Mrs. U. Tade	ME Electrical Power System	Assistant Professor	Power System	12 Yrs.
Mrs. M. Chaple	ME Electrical (Ph.D.. Perusing)	Assistant Professor	Power System	15 Yrs.
Mr. Kushal Dhawad	ME	Assistant Professor	Electronics	6 Yrs.
Mrs. N. Ingle	M. Tech.	Assistant Professor	Power System	3 Yrs. 5 Month
Mr. M. Patil	M. Tech.,	Assistant Prof.	Digital Electronics	02 Years

11. List of senior visiting faculty NA

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty-

Faculty Name	Year	Odd	Even
Kushal Dhavad	13-14	27	25
	14-15	25	25
Nikita Ingle	13-14	27	25
	14-15	25	25
	15-16	22	24
	16-17	20	16
Umesh Murkar	13-14	27	25
	14-15	25	25
	15-16	-	22
Jayaprakash Waka	15-16	22	-
Juhi Darji	15-16	22	22

13. Student -Teacher Ratio (programme wise) **1: 20**

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Name of the Post	Sanctioned	Filled
Lab Assistant	----	04
Lab Attendant	----	01

15. Qualification of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil /PG.

Sr. No.	Qualification	No. of Faculty
1	Ph.D	01
2	PG	12

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received: NIL

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received

Refer Appendix

18. Research Center /facility recognized by the University : NIL

19. Publications: Publication per faculty-

Number of papers published in peer reviewed journals (national / international) by faculty and students

- Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- Monographs
- Chapter in Books
- Books Edited
- Books with ISBN/ISSN numbers with details of publishers
- Citation Index
- SNIP
- SJR
- Impact factor
- h-index

Please refer Appendix

20. Area of consultancy and income generated

Sr. No.	Name of Faculty	Year	Name of Organization	Nature of Consultancy work	Income Generated
1	Dr. C. M. Wankhade	2014-15	Kalyan Dombivali Municipal Co. Kalyan Dist Thane	Third party audit	36000

21. Faculty Members In

a) National committees : NIL

b) International Committees : NIL

c) Editorial Boards/ Reviewer

Sr. No.	Name of Faculty	National/International Committee/ Conferences	Role
1	Mr. N. P. Totre	IEEE International Conference <ul style="list-style-type: none"> • ICNTE 2017 • ICNTE 2016 • ICIC 2015 	Reviewer
2	Mrs. N. Pinajri	IEEE International Conference	Reviewer

		<ul style="list-style-type: none"> • ICNTE 2017 	
3	Mrs. S. Nema	IEEE International Conference <ul style="list-style-type: none"> • ICNTE 2017 	Reviewer
4	Mrs. S. Kapse	IEEE International Conference <ul style="list-style-type: none"> • ICNTE 2015 • CSCITA 2017 • CSCITA 2014 	Reviewer

22. Student projects-

a. Percentage of students who have done in-house projects including inter departmental/programme.

Year	Percentage of students who have done in-house projects		
	UG		PG
2013-14	14 Groups.	86.3%	NA
2014-15	15 Groups.	82.2%	NA
2015-16	17 Groups.	88.46%	NA
2016-17	14 Groups.	65%	NA

b. Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies

Year	Percentage of students placed for projects in organizations outside the institution		
	UG		PG
2013-14	2 Groups.	13.7%	NA
2014-15	03 Groups.	17.72%	NA
2015-16	03 Groups.	11.54%	NA
2016-17	07 Groups.	35%	NA

23. Awards / Recognitions received by faculty and students

Name	Award	Organization	Year
Mrs.Shruti Nema	Best Teacher Award	IGCoE, Koparkhairane	2004-05
Mrs. Shruti Nema	Teaching	IGCoE, Koparkhairane	2002-03

	Proficiency Award		
Mrs. Shruti Nema	Best Student Award	MKHSS, Indore, MP	1988-89

24. List of eminent academicians and scientists / visitors to the department:

Name	Designation	Date of visit
Dr. Sanjay Khemkar	Director, IMATRIX Ltd, Mumbai	4 Oct 2016
Dr. R. D. Kulkarni	Scientist OS, BARC, Mumbai	7 April 2015
Mr. C. G. H. Aranha	Consultant, Tata Power Mumbai	24 Jan 2017

25. Seminars/ Conferences/Workshops organized & the source of funding-

- National : Refer Appendix
- International: Refer Appendix

26. Student profile programme/course wise:

Academic Year	Name of the course/programme	Applications Received	Selected	Enrolled		Pass Percentage
				*M	*F	
2016-17	Electrical/ Bachelors Degree in Engineering	---	47	41	6	---
2015-16	Electrical/ Bachelors Degree in Engineering	---	48	42	6	83.33%
2014-15	Electrical/ Bachelors Degree in Engineering	---	44	35	9	65.9%
2013-14	Electrical/ Bachelors Degree in Engineering	---	58	44	14	31.03%

*M = Male *F = Female

27. Diversity of Students

Academic Year	Name of the course	% Of students from the same state	% of students from the other states
2016-17	Electrical/ Bachelors Degree in Engineering	97.87%	2.12%
2015-16	Electrical/ Bachelors Degree in Engineering	93.75%	6.25%

2014-15	Electrical/ Bachelors Degree in Engineering	93.18%	6.81%
2013-14	Electrical/ Bachelors Degree in Engineering	85.75%	8.62%

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?-

Academic Year	No. of students cleared in competitive exams			
	GATE	GRE/GMAT	CAT/CET	Defense Services
2016-17	44 appeared	05		
2015-16	30 appeared	04		
2014-15		03		
2013-14		03		

29. Student progression-

Student Progression	Against % enrolled
UG to PG	0
PG to M.Phil	0
PG to Ph.D.	0
Ph.D. to Post-Doctoral	0
Employed	
Campus selection	
Other than campus recruitment	
Entrepreneurship/Self-employment	01

UG to PG

Academic Year	Course Name	Entrance exam
2016-17	MS	05
2015-16	MS	03
2014-15	MS	03
2013-14	MS	03

Campus selection

Academic Year	No of students placed	Eligible students	Percentage Selection
2016-17	03	31	10%
2015-16	22	26	85%
2014-15	08	18	45%
2013-14	03	19	16%

30. Details of Infrastructural facilities-

a) Library

Area	41 Sq. M
No. of Books	321
No. of Titles	90
No. of Journals	27

b) Internet facilities for Staff & Students

There is a separate lab – Computer Lab in the department for performing practicals and for students. One separate computer with Internet connection is provided to faculty. Every lab has got one computer with Internet connection.

c) Class rooms with ICT facility

Department has three classrooms with the provision of Internet connection, Overhead projectors, LCD Projector with screen.

d) Laboratories

Name of Laboratory	Area	Cost
Switch Gear and Protection lab	72 Sq/m	598241/-
Machines Lab I	72 Sq/m	933222/-
Machines Lab II	72 Sq/m	
Computer Lab	72 Sq/m	232998/-
Basic Electronics Lab	72 Sq/m	990468/-
Power Electronics & Measurement Lab	72 Sq/m	1500524/
Microprocessor & Control System Lab	72 Sq/m	881808/-
Utilization of Electrical Energy Lab	41 Sq/m	20000/-
Basic Electrical & Electronics Lab	72 Sq/m	863774/-

31. Number of students receiving financial assistance from college, university, government or other agencies

Academic Year	No. of Students	College/university/government/ other agency
2016-17	25 8	EBC Scholarship TATA Scholarship
2015-16	32 1	EBC Scholarship TATA Scholarship
2014-15	12	EBC Scholarship
2013-14	13	EBC Scholarship

32. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts-

Sr. No.	Name of Enrichment Programme	Year
1	Aptitude Test Training	2015 - 2016
2	Aptitude Test Training	2014 - 2015
3	5 in 1 Robotics Training Program and Lab View (11-12 Aug. 2016)	2016 – 2017
4	Personality Development Program (16 Aug 2016)	2016 – 2017
5	Importance of Soft Skill in Engineering (27 July)	2016 – 2017

33. Teaching methods adopted to improve student learning-

Following practices are adopted to improve the student learning

- Identify the slow learner through feedback and Test I and arrange Remedial Classes
- Identify the slow learner through feedback and Test II and arrange Remedial Classes
- Additional lectures on content beyond the syllabus
- Oral examination to evaluate conceptual understanding for Tutorial/ Assignments/Practicals
- Advanced learning on Syllabus for select students.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Academic Year	Nature of Activity (NSS)	Period	Participating Students
2012-2013	Day Visit Camp in which gardening , beach cleaning, leveling work carried out, Rajbhavan, Mumbai	5 days	14
2013-2014	Shramdan,Cleaning school, village nearby area, guava tree plantation.Nere, Panvel	6 days	07

35. SWOC analysis of the department and Future plans

Strength:-

- High Retention ratio
- Average teaching experience of 13 Yrs.
- One Doctorate faculty and Five Pursuing

Weakness:

Changing rules, Regulation and Admission criteria

Opportunity:-

- Department can start PG course in Electrical Engineering
- In future department will be recognize as research center for Ph.D. in Electrical Engineering

Challenges:-

- Student placement in changing scenario of national policies.
- Changing rules, Regulation and Admission criteria

Future Plans :-

Department of Electrical Engineering has planned to start consultancy in the area of testing of MCB, ELCB and Relays with the existing and future infrastructure of Switch gear and Protection Lab. Department of Electrical Engineering has planned to start consultancy in the area of testing of High voltage equipment with the future infrastructure of proposed High voltage Engineering Lab.

Electronics Engineering

1. Name of the Department: Electronics Engineering
2. Year of establishment: 1994
3. Names of programmes offered: UG in Electronics Engineering
(UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

4. Names of Interdisciplinary courses and the departments/units involved:

Sr. No.	Course	Department
1	Applied Mathematics III	Mathematics
2	Presentation and Communication Techniques	Communication Skills
3	Basics of Electrical Engineering	First Year
4	Industrial Electronics	Mechanical Engineering

5. Annual/ semester/choice based credit system (programme wise):
Credit Based Grading System and Choice Based Credit System from AY 2016-17.

6. Participation of the department in the courses offered by other departments

Sr. No.	Department	Course
1	First Year	Basics of Electrical Engineering
2	Mechanical Engineering	Industrial Electronics

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
Professors	1	Nil
Associate Professors	2	01
Assistant Professors	10	09 + 01 Adhoc

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
Dr.Sheeba P.S.	Ph. D.	Associate Professor	Control Systems	11 years
Ms.Prerana Shrivastava	M. Tech. Ph.D. Submitted	Assistant Professor	Electronics Engineering	17 years
Ms.S. S. Joshi	M. Tech. Ph.D. Pursuing	Assistant Professor	Electronics Engineering	11 years
Dr.S.M. Wakode	Ph. D.	Assistant Professor	Electronics Engineering	11 years
Mr.N. P. Jain	M. E. Ph.D. Pursuing	Assistant Professor	Electronics & Telecomm. Engineering	14 years
Ms.T.K. Harhare	M. Tech. Ph.D. Pursuing	Assistant Professor	Electronics & Telecomm. Engineering	12 years
Ms.Savitha Devaraj	M. E.	Assistant Professor	VLSI Design	08 years
Ms.V.P. Ramtekkar	M. Tech. Ph.D. Submitted	Assistant Professor	Electronics Engineering	11 years
Ms.S.K. Choudhary	M. Tech. Ph.D. Pursuing	Assistant Professor	Electronics Engineering	09 years
Ms.N.P. Gargote	M.E.	Assistant Professor	Electronics & Telecomm. Engineering	05 years
Mr.P.L. Ahire	M. Tech.	Assistant Professor	Electronics Engineering	12 years

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) : **1:15**

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Name of the Post	Sanctioned	Filled
Supporting staff (Technical)	4	4

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.

Sr. No.	Qualification	No. of Faculty
1	Ph.D	2
2	PG	9

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : Nil

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received

Sr. No.	Name of Faculty	Title of Project	Funding Agency	Year (Duration)	Amount Sanctioned
1	Ms.Prerana Shrivastava	A Novel Approach for Silent Horn Technology using Vehicular Adhoc Network for Smart Cities.	Mumbai University	2016-2017	Rs.25,000/-
2	Ms.Trupti Harhare and Ms.Shilpa Joshi	Real Time Water Quality Measurement System based on GSM	Mumbai University	2016-2017	Rs.25,000/-
3	Dr.J.I.Sayyad and Ms.Prerana Shrivastava	Design and Implementation of an UOI based Intelligent Garbage Monitoring System for Urban Cities.	Mumbai University	2016-2017	Rs.25,000/-

18. Research Centre /facility recognized by the University: Nil

19. Publications: Publication per faculty:

Please refer Appendix

20. Areas of consultancy and income generated: Nil

21. Faculty as members in

a) National committees: NIL

b) International Committees: NIL

c) Editorial Boards/ Reviewer

Sr. No.	Name of Faculty	National/International Committee/ Conferences	Designation
1	Dr. Sheeba P.S.	International Technological Conference in 2014	Reviewer
		Journal of Systems of Science & Systems Engineering in 2013	Reviewer
		IEEE Multiconference on Systems & Control in 2013, 2007	Reviewer
		National level Conference on Technologies for Physically Challenged in 2012	Reviewer
		National level Conference on Technologies for National Security in 2011	Reviewer
		Naval Research Logistics Journal for 2011,2007	Reviewer
		American Control Conference in 2011,2010	Reviewer
		European Journal of Operations Research 2010	Reviewer
		IISC Contenary International Conference & Exhibition on Aerospace Engineering in 2009	Reviewer
		African Journal of Scientific Research	Reviewer
2	Ms. Prerana Shrivastava	National Conference on Emerging Technology for Innovative India in 2016	Reviewer
		3 rd National Conference for Developing Nation in 2013	Reviewer
		National level Conference on Technologies for Physically Challenged in 2012	Reviewer
3	Ms. S. S. Joshi	National Conference at LTCE in 2012, 2013, 2015 2016	Reviewer
4		Spvryan's International Journal of Engineering Sciences & Technology	On Editorial Board
		National Conference on Emerging Technology for	Reviewer

5	Dr. S. M. Wakode	Innovative India in 2016 3 rd National Conference for Developing Nation in 2013	Reviewer
	Mr. N. P. Jain	National level Conference on Technologies for Physically Challenged in 2012	Reviewer
		National Conference on Emerging Technology for Innovative India in 2016	Reviewer
6	Ms. T. K. Harhare	National level Conference on Technologies for Physically Challenged in 2012	Reviewer
		National Conference on Emerging Technology for Innovative India in 2016	Reviewer
	Ms. Savitha D.	National level Conference on Technologies for Physically Challenged in 2012	Reviewer
7	Ms. V. P. Ramtekkar	National level Conference on Technologies for Physically Challenged in 2012	Reviewer
8	Ms. S. K. Choudhary	National level Conference on Technologies for Physically Challenged in 2012	Reviewer
9	Ms. N. P. Gargote	National level Conference on Technologies for Physically Challenged in 2012	Reviewer
10			

22. Student projects

a. Percentage of students who have done in-house projects including inter departmental/programme.

Year	Percentage of students who have done in-house projects	
	UG	PG
2012-13	42.11%	--
2013-14	47.36%	--
2014-15	47.62%	--
2015-16	100.00%	--
2016-17	35.00%	--

b. Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies

Year	Percentage of students placed for projects in organizations outside the institution	
	UG	PG
2012-13	57.89%	--
2013-14	52.63%	--
2014-15	52.38%	--
2015-16	0.00%	--
2016-17	65.00%	--

23. Awards / Recognitions received by faculty and students

Faculty:

Name	Award	Organization	Year
Dr. Sheeba P.S.	Nominated for International Scientist of the Year	International Biographic center of Cambridge, England	2009
	Best Session Paper Award	International Conference on Advances in Control and Optimization of Dynamical Sysytems.	2007
	Included in Biographic data of Who's Who in Science and Engineering	Marquis Who's who	2007
Ms. Prerana Shrivastava	The Best Paper Award	IEEE International Conference at Andhra Pradesh	2013-14
	The Best Paper Award	IEEE International Conference at GHRCE, Nagpur	

Student:

Name	Award	Organization	Year
Sharjil Ghawte Rohan Patil	1 st Prize, Football 2 nd Prize , Football	ICT, Sterling SIES, Nerul BVPM	2015-16
Smit Modi Shubham Gupta Yash Manian Tanmay Chandak	3 Rd Prize, National Level Conference	LTCOE, Navi Mumbai	
Smit Modi Shubham	23 rd Rank , National	MIT, Pune	

Gupta Yash Manian Tanmay Chandak	Robotic Contest 2015		2014-15
Aaswad Gadkari	1 st Prize, Box Cricket	Institute of Chemical Technology, Mumbai	
Omkar Ketkar	1 st Prize in Football	Sportz Zephyr,LTCE	2013-14
Soumitra Khair	1 st Prize in Photography	Zephyr Galactica, LTCE, Navi Mumbai	
Agrima Mehta	Runner Up in Soccer Knockout Challenge	Sterling Institute of Management Studies, Nerul (E)	
Agrima Mehta	2 nd Prize ,Futsal	Dr. K M Vasudevan Pillai Campus, New Panvel	
Aishwarya Chavan	2 nd Prize, Rangoli	SIES Graduate School of Technology	2012-13
Vivek Pandey	2 nd Prize, Lan Gaming	IIM Ahmedabad	
	1 st Prize, Lan Gaming	1) Dilkap College of Engg., Nerul 2) G.V. Acharya College of Engg.	
Rupesh Anbhule	1 st Prize, Dance Competition	Bharti Vidyapeeth(Abhiyan)	
Aaswad Gadkari	Runner Up Cricket	Rajiv Gandhi College of Arts Commerce & Science	
Agrima Mehta	1 st Prize, Quiz Competition	State level extravaganza Zephyr-13,LTCE, Navi Mumbai	
Soumitra Khair	2 nd Prize, Quiz Competition	State level extravaganza Zephyr-13,LTCE, Navi Mumbai	

24. List of eminent academicians and scientists / visitors to the department

Name	Designation	Date of visit
Mr. Munnir Sayyad	G.M., Reliance Industries Ltd.	11-08-2012
Mr. Ravishakar Peela	General Manager, Reliance Industries Ltd.	17-10-2012
Mr. Manpreet Sodi	H.R. Manager Enelek Pvt. Ltd., Mumbai	07-02-2013
Mr. Godly Babukutty	Business Development Engg., SMEC Automation Pvt. Ltd., Mumbai	12-02-2013
Mr. Manpreet Sodi	H.R. Manager Enelek Pvt. Ltd., Mumbai	12-08-2013
Mr. Shirish Joshi	M.D. ADM, Mumbai	25-09-2013
Mr. Rohan P.	H.R. Manager Enelek Pvt. Ltd., Mumbai	30-01-2014

Mr. Abhik Chatterjee	Innovation Lead, Reliance Communications.	24-03-2014
Mr. Sandeep Jethani	Director, ATS Learning Solutions.	07-08-2015
Mr. Sanjay Choudhary	Director, Electronics Study Centre, Mumbai	15-09-2015
Mr. Rajkumar Singh	Speaker, Precon Automation & Systems Pvt. Ltd. ,Thane.	23-02-2016
Ms. Pooja Welling	Director, Mission Career, Mumbai	13-09-2016

25. Seminars/ Conferences/Workshops organized & the source of funding

a. National

Name of Seminar/ Conference/ Workshop	Name of Expert/ Organizing agency	Source of Funding	Amount	Duration	Year
Outcome based NBA Process and Attainment	Dr. Milind Shah, Dr. Shobha Krishnan, Dr. R.B. Jain, Dr. Dhanajay Kalbande	Fees towards Registration for the workshop and L.T.C.E.	INR 26,000	Two days 18-19 Nov 2016	2016
Electronics Hacking and Home Automation	Mr. Karan Makhija	Fees towards Registration for the workshop	INR 51,000	Two days 30 Sept – 01 Oct 2016	2016
Embedded System Using ARM Mbed	Dr. Jonathan Joshi (CEO Eduvance), Mr. Ganesh Gore (CTO, Eduvance) and Ms. Zalak Dave (Sr. Tech. Lead, Eduvance)	Fees towards Registration for the workshop and L.T.C.E.	INR 27,910	One Day 31 Oct 2015	2015

26. Student profile programme/course wise:

Name of the course/programme	Applications Received	Selected	Enrolled		Pass percentage	
			M	F	FE	BE
ELECTRONICS ENGINEERING (12-13)	DTE ADMISSION	DTE ADMISSION	40	19	35.59	79.17
ELECTRONICS ENGINEERING (13-14)	DTE ADMISSION	DTE ADMISSION	35	16	39.21	--

ELECTRONICS ENGINEERING (14-15)	DTE ADMISSION	DTE ADMISSION	21	13	8.82	--
ELECTRONICS ENGINEERING (15-16)	DTE ADMISSION	DTE ADMISSION	15	03	2	--
ELECTRONICS ENGINEERING (16-17)	DTE ADMISSION	DTE ADMISSION	06	03	--	--

*M = Male *F = Female

27. Diversity of Students

Name of the course	% of students from the same state	% of students from the other states	% of students from abroad
ELECTRONICS ENGINEERING (2012-13)	--	--	--
ELECTRONICS ENGINEERING (2013-14)	68.62	17.64	0
ELECTRONICS ENGINEERING (2014-15)	94.11	5.88	0
ELECTRONICS ENGINEERING (2015-16)	100	0	0
ELECTRONICS ENGINEERING (2016-17)	100	0	0

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.?

Academic Year	No. of students cleared in competitive exams			
	GATE	GRE/GMAT	CAT/CET	Defence Services
12-13	1	12	4	-
13-14	-	3	4	-
14-15	-	2	4	-
15-16	-	4	-	-

29. Student progression

Student Progression	Against % enrolled			
	12-13	13-14	14-15	15-16
UG to PG	17	7	6	4
	15 %			
PG to M.Phil	-			
PG to Ph.D.	-			
Ph.D. to Post-Doctoral	-			
Employed	12-13	13-14	14-15	15-16
Campus selection	03	10	11	4
Other than campus recruitment	47	18	37	22
Entrepreneurship/Self-employment	01	01	01	-
Total	51	29	49	26
% total	85	48	82	45
Avg against %enrolled	65 %			

30. Details of Infrastructural facilities

a. Library

Area	42 Sq.m
No. of Books	225
No. of Titles	127
No. of Journals	Nil

b. Internet facilities for Staff & Students :

Internal Facility with Wi-Fi is available for both faculty and students.

c. Class rooms with ICT facility: Three classrooms & one seminar hall.

d. Laboratories

Name of Laboratory	Area	Cost
Instrumentation Lab	85 Sq. Meter	1300156.4
Communication Lab	85 Sq. Meter	1304191.47
Basic Electronics Lab	85 Sq. Meter	744116
Electronics Workshop Lab	85 Sq. Meter	895890

VLSI Lab	85 Sq. Meter	2053614
Power Electronics Lab	85 Sq. Meter	515439
Microprocessor and Microcontroller Lab	85 Sq. Meter	1051949.13
Simulation Lab	85 Sq. Meter	495755.99

31. Number of students receiving financial assistance from college, university, government or other agencies:

Academic Year	No. of Students	College/university/government/other agency
2013-14	08	EBC
2014-15	06	EBC
2015-16	15	EBC
2016-17	08	EBC

32. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

Sr. No.	Name of Enrichment Programme	Year
01.	A lecture on “Network Security and Ethical Hacking”	2015-16
02	A lecture on “Who is the Good Student”	2015-16
03.	A lecture on “Need of Electronics in Industry”	2015-16
04.	A lecture on “Industrial Automation Technologies”	2015-16
05.	A lecture on “Personality Development”	2014-15
06.	A lecture on “Practical Approach to Overcome Mental Tension”	2014-15
07.	A lecture on “Fabrication Process using Proteus”	2014-15
08.	A lecture on “Ethical Hacking”	2013-14
09.	A lecture on “Solar Clan”	2013-14
10.	A lecture on “Proteus”	2013-14
11.	A lecture on “VHDL Evaluation”	2013-14
12.	A lecture on “Latex”	2013-14
13.	A lecture on “Filter Design”	2013-14
14.	A lecture on “Wireless Communication”	2013-14

15.	A lecture on “Personality Development”	2013-14
16.	A lecture on “Appization”	2013-14
17.	A lecture on “E-nose Development”	2012-13
18.	A lecture on “Future Generation Search Engine”	2012-13
19.	A seminar on “Next Generation Networks”	2012-13
20.	A seminar on “Goal Setting”	2012-13
21.	A seminar on “Industrial Automation”	2012-13

33. Teaching methods adopted to improve student learning

- Lectures are conducted regularly for each and every course. The course work and the specific laboratory is taken care by members of faculty handling different courses. Faculty members interact individually with students to clear their concepts and doubts of the respective courses. Guest lectures of experts from other institutes as well as Industry are organized by the faculty for their concerned course. Video lectures such as NPTEL lectures on Recent Trends in Technology and on curriculum are arranged from time to time.
- Special attention for weaker students is given by organizing remedial classes for every course on regular basis wherein main focus is on clearing their doubts and motivating them to excel in academics.
- Lab Experiments are set according to the defined CO's. The concerned faculty for laboratory provides demonstrative presentation before every experiment. Lab assessment is done after every lab experiment. Students are judged on the basis of their preparedness, performance, analysis & interpretation of the observation / data and conclusion. Timely evaluation of the lab write ups of the student is done and graded accordingly.
- Performance of the students is evaluated on the basis of Midterm test, End term test, Assignments, Quiz, presentation and lab assessment.
- Students can work on real time or research oriented projects and learn the methodology of analyzing, designing, implementing, testing and validating skills.
- The students are encouraged to participate in various Technical Paper Presentation at National and International level, Various Project competitions and Robotics competitions.
- Students are motivated for Internships which helps them in acquiring practical knowledge and gives them industrial exposure.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

At the Institute level various social activities are organized from time to time thereby inducing sense of social responsibility in the students. The students and faculty actively participate in number of social activities such as Blood Donation Camp, Tree Plantation, Book Donation, Food Distribution, NSS activities, etc

35. SWOC analysis of the department and Future plans

Strengths:

- Highly experienced and qualified faculty with excellent teaching skills.
- High retention ratio.
- State of the art laboratory with Internet facilities, Seminar hall and well managed library with ample collection of publications.

Weaknesses:

- MOUs and R & D Consultancy
- Research Grants
- Patents
- Placements needs to be improved

Opportunities:

- Addition of new programs for PG and Ph.D.
- Industry sponsored laboratories
- Industry Institute collaborations

Challenges:

- Gap between the curriculum and Industrial needs
- Placement in core companies
- Decline in the quality of students admitted

First Year Engineering

1. Name of the Department : F.E Engineering
2. Year of establishment : 1994
3. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; integrated Ph.D., D.Sc., D.Litt., etc.) : UG
4. Names of Interdisciplinary courses and the departments/units involved: **NA**
5. Annual/ semester/choice based credit system (programme wise):
CBGS and Choice Based Credit System from AY 2016- 17.
6. Participation of the department in the courses offered by other departments

Sr. No.	Department	Course
1	Mechanical Engineering	Business Communication and Ethics, Applied Mathematics
2	Computer Engineering	
3	Electronics And Telecommunication Engineering	
4	Electrical Engineering	
5	Electronics Engineering	

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
Professors	0	Nil
Associate Professors	0	Nil
Assistant Professors	17	14 + 03(Adhoc)

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
Nimi K. V.	M.Phil	Asst. Professor	Complex Analysis	19
Dr. Krishna Singhal	Ph.D	Asst. Professor	Magneto Hydrodynamics	18
Sheetal Thakare	Mphil, Net	Asst. Professor	Topology	11
Ratnakumari K.V.S.	M.Sc (Maths)	Asst. Professor	Applied Mathematics	16
Smita Joshi	M.Phil	Asst. Professor	Graph Theory	16
Dr. Trishala Garg	Ph.D	Asst. Professor	Shock Wave Theory	10
Mr. J. Malwatkar	M.Sc (Maths),Net	Asst. Professor	Complex Analysis	12
Amrita Upadhyay	M.Sc (Maths)	Asst. Professor	Operations Research	9
Priya P.Tilak	M.Sc	Asst. Professor	Physics	20
Nileema Patil	M.Sc, B.Ed	Asst. Professor	Physics	12
Madhuri Samel	M.Phil	Asst. Professor	Physics	7
Ms. Dolly Boban	M.Phil	Asst. Professor	Chemistry	20
Dr Renu Wasu	Ph.D	Asst. Professor	Chemistry	22
Ms.Urmila Bansal	M.Sc.	Asst. Professor	Chemistry	24
Ms. G Geetha	M.Phil, MBA, UGC-NET	Asst. Professor	English	13
Dr Rashmi Rani	Ph.D	Asst. Professor	English	8
Ms.Nomita Kolnoorkar	M.Phil	Asst. Professor	English	13

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**

14. Number of academic support staff (technical) and administrative

staff; sanctioned and Filled

Name of the Post	Sanctioned	Filled
Supporting staff (Technical)	2	2

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.

Sr. No.	Qualification	No. of Faculty
1	Ph.D	4
2	PG	13

16. Number of faculty with ongoing projects from

a) National

b) International funding agencies and grants received : **Nil**

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc.
and total grants received: **Nil**

18. Research Centre /facility recognized by the University : **Nil**

19. Publications: Publication per faculty :

Name of the Faculty	Conference		Journal		Total
	National	International	National	International	
Nimi K.V.	-		0	2	2
Dr.Krishna Singhal	1	1	-	5	7
Sheetal Thakare	-		0	2	2
Ratnakumari KVS	-		0	2	2
Smita Joshi	-	1	0	3	4
Dr.Trishla Garg	1	1	-	5	7
Jaykumar Malvatkar	-	-	0	1	1
Jaykumar Amruta	1	0	0	0	1
Priya Tilak	0	0	0	2	2
Nileema Patil	0	0	0	3	3
Madhuri Samel	0	0	0	2	2
Ms. Dolly Boban	0	1	0	3	4

Dr Renu Wasu	5	0	0	4	9
Ms.Urmila Bansal	1	0	0	1	2
Geetha G.	-	-	1	4	5
Dr. Rashmi Rani	-	-	1	5	6
Ms.Nomita Kolnoorkar	-	-	2	2	4

20. Areas of consultancy and income generated : **Nil**

21. Faculty as members in
- National committees: **Nil**
 - International Committees: **Nil**
 - Editorial Boards/ Reviewer:

Sr. No.	Name of Faculty	National/International Committee/ Conferences	Designation
1	Dr. Renu Wasu	Reviewer in National Level Conference	Assistant Professor
2	Urmila Bansal	Reviewer; Session chair at International conference IRAJ Research forum	Assistant Professor

22. Student projects
- Percentage of students who have done in-house projects including inter departmental/programme: **NA**
 - Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies: **NA**

23. Awards / Recognitions received by faculty and students
- Faculty: **Nil**
- Student: **Nil**

24. List of eminent academicians and scientists / visitors to the department

Name	Designation	Date of visit
Sudip Nagarkar	Writer/ Author	29-09-2015
Akshata Mahale	Corporate Trainer and Certified Image Coach	11-09-2015
Prof. Radhika Srinivas	Professor, VJTI	21 -03-2013
Prof. Rohini Chandramouli	Professor, DBIT	21-03-2013

25. Seminars/ Conferences/Workshops organized & the source of funding: Nil
26. Student profile programme/course wise: NA
27. Diversity of Students: NA
28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.? NA
29. Student progression: NA
30. Details of Infrastructural facilities

a. Library

Area	653.68 Sq. m
No. of Books	4512
No. of Titles	1320
No. of Journals	10

b. Internet facilities for Staff & Students :

c. Internet facility with Wi-Fi is available for both faculty and students.

d. Class rooms with ICT facility: One seminar hall.

e. Laboratories

Name of Laboratory	Area	Cost (Rs.)
Physics Lab	146 Sq. m	888216
Chemistry Lab	145 Sq. m	502463.50
Communication Skills Lab	165 Sq. m	2, 50, 000 (software)

31. Number of students receiving financial assistance from college, university, government or other agencies: NA
32. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

Sr. No.	Name of Enrichment Programme	Year
1.	Placements and Future Prospects	2016
2.	Image Building and Brand Management	2015
3.	Motivation and Success	2015

33. Teaching methods adopted to improve student learning

Physics: Use of transparencies, Use of models and charts, remedial lectures, additional demonstration practical, viva, presentations, survey report on certain topics.

Communication Skills: Activity based learning, PPTs, Language and Vocabulary games, Group Discussions, Public Speech, Debates, Elocutions, Student PPTs, Mock Interviews, Extempore, Role Plays, Soft skills activities, Case Studies, Video lectures, Movies, Tools for Digital content creation(email, blog, website), Online surveys.

Chemistry: Use of OHP, audio visual session.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Communication Skill:

- Elocution competition on 'Public Participation for Promoting Integrity and Eradication of Corruption' in association with Mumbai Port Trust, October 2016.
- Essay writing competition in association with CIDCO, Navi Mumbai on public participation against corruption, October 2016.
- Independence day and Republic day activities: Cleanliness drive, poster designing, speech, essay, sketching, tricolour craft and photography.
- English for employability, Times of India campaign in collaboration with British council for adult learners, Thane. March 2015
- Visiting different NGOs to interact and support their activities, and create awareness.

35. SWOC analysis of the department and Future plans

Strengths:

Physics: well equipped lab, dedicated staff, spacious lab with separate dark room.

Chemistry: well equipped and spacious lab, dedicated staff.

Mathematics: Experienced and highly qualified faculty.

Communication Skill: Activity based teaching, Language lab, English Literature club weekly activities, mentoring/counselling/healthy rapport and interaction with students, good teaching resources.

Weakness:

Physics: Less involvement in research work

Communication Skill: Diverse proficiency levels of students

Opportunities:

Physics: utilisation of staff for higher semester teaching.

Communication Skill : More specialised training for various competitive Examinations.

Challenges:

Physics: Assisting industrial projects

Communication Skill: Secondary importance given to English in technical institutions, disproportionate student proficiency level in English

Mathematics: bridging the gap between mathematics at diploma and degree level.

LIST OF ANNEXURES

AICTE APPROVAL LETTER



All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)
7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

F.No. Western/1-286611722/2016/EOA

Date: 30-Apr-2016

To,

The Secretary,
Tech. & Higher Education Deptt.
Govt. of Maharashtra, Mantralaya,
Annexe Building, Mumbai-400032

Sub: Extension of approval for the academic year 2016-17

Ref: Application of the Institution for Extension of approval for the academic year 2016-17

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Western	Application Id	1-286611722
Name of the Institute	LOKMANYA TILAK COLLEGE OF ENGINEERING	Permanent Id	1-6317941
Name of the Society/Trust	LOKMANYA TILAK JANAKALYAN SHIKSHAN SANSTHA	Institute Address	SECTOR-4, KOPARKHAIRANE, PLOT NO. 17, 18 & 19, NAVI MUMBAI, NAVI MUMBAI, MUMBAI CITY, Maharashtra, 400709
Institute Type	Unaided - Private	Society/Trust Address	LOKMANYA TILAK BHAVAN, LAXMI NAGAR, NAGPUR, NAGPUR, NAGPUR, Maharashtra, 440022

Opted for change from Women to Co-ed and Vice versa	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved and Vice versa	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2016-17

Application Id: 1-286611722			Course	Full/Part Time	Affiliating Body	Intake Approved for 2016-17	NET Approval status	PIO / FN / Gulf quota Approval status	Foreign Collaboration/Twinning Program Approval status*
Program	Shift	Level							
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	COMPUTER ENGINEERING	FULL TIME	Mumbai University, Mumbai	18	NA	No	N

Application Number: 1-286611722
Note: This is a Computer generated Report.No signature is required.
Printed By : ae932157

Page 1 of 4
Letter Printed On: 2 May 2016



All India Council for Technical Education
 (A Statutory body under Ministry of HRD, Govt. of India)
 7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
 PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

GY		TE							
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	MANUFACTURING SYSTEMS ENGINEERING	FULL TIME	Mumbai University, Mumbai	18	NA	No	N
ENGINEERING AND TECHNOLOGY	1st Shift	UG 2nd Yr DIRECT	MECHANICAL ENGINEERING	FULL TIME	Mumbai University, Mumbai	60	NA	No	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	COMPUTER ENGINEERING	FULL TIME	Mumbai University, Mumbai	120	NA	No	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRICAL ENGINEERING	FULL TIME	Mumbai University, Mumbai	60	NA	No	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRONICS ENGINEERING	FULL TIME	Mumbai University, Mumbai	60	NA	No	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRONICS & TELE-COMMUNICATION ENGINEERING	FULL TIME	Mumbai University, Mumbai	60	NA	No	N
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MECHANICAL ENGINEERING	FULL TIME	Mumbai University, Mumbai	120	NA	No	N
ENGINEERING AND TECHNOLOGY	2nd Shift	UNDER GRADUATE	ELECTRONICS & TELE-COMMUNICATION ENGINEERING	FULL TIME	Mumbai University, Mumbai	60	NA	No	N
ENGINEERING AND TECHNOLOGY	2nd Shift	UNDER GRADUATE	MECHANICAL ENGINEERING	FULL TIME	Mumbai University, Mumbai	60	NA	No	N

The above mentioned approval is subject to the condition that LOKMANYA TILAK COLLEGE OF ENGINEERING shall follow and adhere

Application Number: 1-2866111722
 Note: This is a Computer generated Report.No signature is required.
 Printed By : ae932157

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 Letter Printed On:2 May 2016



All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

Course(s) Applied for Closure by the Institute for the AY 2016-17:

Application Id: 1-2866111722			Name of the Course	Full/Part Time	Affiliating Body	Course Closure Status
Program	Shift	Level				
MCA	1st Shift	POST GRADUATE	MASTERS IN COMPUTER APPLICATIONS : (Last Approved Intake)	FULL TIME	Mumbai University, Mumbai	Pending†

† due to non submission of NOC's from University / Board and / or State Government

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Note: Validity of the course details may be verified at www.aicte-india.org.

Prof. Alok Prakash Mittal
Member Secretary, AICTE

Copy to:

- The Regional Officer,**
All India Council for Technical Education
Industrial Assurance Building
2nd Floor, Nariman Road
Mumbai - 400 020, Maharashtra
- The Director Of Technical Education,**
Maharashtra
- The Registrar,**
Mumbai University, Mumbai
- The Principal / Director,**
LOKMANYA TILAK COLLEGE OF ENGINEERING
SECTOR-4,KOPARKHAIRANE,
PLOT NO.17,18 & 19,
NAVI MUMBAI,
NAVI MUMBAI,MUMBAI CITY,
Maharashtra,400709
- The Secretary / Chairman,**
LOKMANYA TILAK JANAKALYAN SHIKSHAN SANSTHA
LOKMANYA TILAK BHAVAN, LAXMI NAGAR, NAGPUR,

Application Number: 1-2866111722
Note: This is a Computer generated Report.No signature is required.
Printed By : ae932157

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Letter Printed On:2 May 2016

**UNIVERSITY
AFFILIATION
LETTERS**

University of Mumbai

URGENT/BY REGISTERED POST
Tel: 022-2267532/22708542
Email: ar.affiliation2@fort.mu.ac.in



AFFILIATION SECTION
No. Aff/ICD/2016-17/2420
Date: 26th March, 2017.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Lokmanya Tilak Jankalayn Shikshan Sanstha's Lokmanya Tilak College of Engineering, Sector No.4, Vikas Nagar, Kopar Khairane, Navi Mumbai- 400 709 is affiliated to the University of Mumbai since 1994 and the following courses are conducted in the said college.

Sr. No	Courses	Affiliation (Permanent/ Temporary)	Validity Period
1	B. E. (Computer Engineering)	Temporary	From 1994-95 to 2016-17
2	B. E. (Mechanical Engineering)	Temporary	From 1994-95 to 2016-17
3	B. E. (Electronics & Telecommunication Engineering)	Temporary	From 2009-10 to 2016-17
4	B. E. (Electronics Engineering)	Temporary	From 1994-95 to 2016-17
5	B. E. (Electrical Engineering)	Temporary	From 1995-96 to 2016-17
6	B. E. (Mechanical Engineering II Shift)	Temporary	From 2009-10 to 2016-17
7	B. E. (Electronics & Telecommunication Engineering II Shift)	Temporary	From 2009-10 to 2016-17
8	B. E. (Mechanical Engineering Direct II Year)	Temporary	From 2009-10 to 2016-17
9	M. E. (Mechanical MFG Systems Engineering)	Temporary	From 2007-08 to 2016-17
10	M. E. (Computer)	Temporary	From 2011-12 to 2016-17

This Certificate is issued on the request of the Principal of the said College for submitting the same to the NAAC/N.B.A., accordingly.

(Dr. M. A. KHAN)
REGISTRAR

University of Mumbai



Th/ICD/2016-17/ 5536
 .Mumbai- 400 032.
 27th March, 2017.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Lokmanya Tilak Jankalyan Shikshan Sanstha's Lokmanya Tilak College of Engineering, Koparkhairane, Navi Mumbai - 400 709**, is recognized Ph. D. Centre to the University of Mumbai for the following course.

Sr. No.	Name of the Faculty / Subjects	Recognition	Year of Recognition
1	Ph. D. in Computer Engineering	Temporary	Recognition upto the Academic year 2017-18
2	Ph. D. in Mechanical Engineering	Temporary	Recognition upto the Academic year 2017-18

This Certificate is issued on the request of the Principal of said College for submitting the same to the NAAC accordingly.

Registrar
 University of Mumbai

AISHE CERTIFICATES



Track ID-MHCOGN27187

College Name-Lokmanya tilak
college of engineering

Page 1 of 3

IEQA SUBMISSION DATE-07/04/2017

INSTITUTIONAL ELIGIBILITY FOR QUALITY ASSESSMENT(IEQA)
QUESTIONNAIRE

1 COLLEGE DETAILS			
Name of the college	Lokmanya tilak college of engineering	Year of establishment	1994
Location of the college	URBAN		
2 ADDRESS			
Address	SECTOR 4 , VIKAS NAGAR , KOPARKHAIRANE , NAVI MUMBAI - 400709	City	Navi Mumbai
State	Maharashtra	Pin Code	400709
Website	www.ltce.in	E-Mail	principal.ltce@gmail.com
Phone STD Code	022	Phone No	27541005
Fax STD Code	022	Fax	27547793
3 HEAD OF THE INSTITUTION			
Name	Dr. VIVEK K. YAKKUNDI	Designation	PRINCIPAL
Status of appointment	PERMANENT		
4 CONTACT DETAILS OF HEAD OF THE INSTITUTION			
Phone std code	022	Phone number	27541005
Fax std code	022	Fax	27547793
Mobile	+919324622654	E-Mail	principal.ltce@gmail.com
5 DOES THE COLLEGE FUNCTION FROM			
a. MAIN CAMPUS			
	AREA OF THE CAMPUS IN ACRES	TOTAL BUILT UP AREA IN sq.m.	
OWN BUILDINGS	2.63	19202.0	
RENTED BUILDINGS	0.0	0.0	
b. SATELLITE CAMPUS			
	AREA OF THE CAMPUS IN ACRES	TOTAL BUILT UP AREA IN sq.m.	
OWN BUILDINGS	0.0	0.0	
RENTED BUILDINGS	0.0	0.0	
6 NAME OF THE UNIVERSITIES TO WHICH THE COLLEGE IS AFFILIATED OR CONSTITUENT			
University1	University of Mumbai, Mumbai	Other	
Nature of relationship with the university	AFFILIATED	If affiliated, status of affiliation	TEMPORARY
University2		Other	
Nature of relationship with the university		If affiliated, status of affiliation	
University3		Other	
Nature of relationship with the university		If affiliated, status of affiliation	
7 STATUTORY PROFESSIONAL REGULATORY COUNCIL(S)			
Does the college offer any programme recognized by any Statutory Professional Regulatory Council(s)?			yes
Programmes offered	BE, ME AND PHD	Name of the Regulatory Council(s)	AICTE
8 COLLEGE FUNCTIONING			
Type of college	CO-EDUCATION	Time of functioning	DAY COLLEGE
Nature of funding	SELF-FINANCING	Management	MINORITY
9 MANAGEMENT/TRUST DETAILS			

Name of the Management	LOKMANYA TILAK JANAKALYAN SHIKSHAN SANSTHA		Recognition under Ugc Act.1956	NEITHER 2f NOR 12B				
10 MANAGEMENT/TRUST OF THE COLLEGE IS REGISTERED UNDER								
Society's registration Act of 1960	yes		Relevant Act of the respective state Govt.	yes				
Any other(please specify)								
11 NUMBER OF DEGREES OFFERED BY THE COLLEGE								
UG	5		PG	2				
Research	2		Others	0				
Total	9							
12 DETAILS OF DEGREES OFFERED(B.A., M.A., B.Com., M.Com., B.Sc., M.Sc., M.Phil., Ph.D., etc.)								
Arts			Commerce					
Science			Education					
Health Science			Engineering & Technology	BE , ME AND PH.D.				
Management			Others					
Is the college opting for Assesment & Accreditation of Teacher Education department separately?								
no								
Is the college opting for Assesment & Accreditation of Physical Education department separately?								
no								
Number of departments								
6								
13 TOTAL NUMBER OF STUDENTS(EXCLUDING THOSE IN SELF-FINANCING PROGRAMMES)								
	UG		PG		M.Phil/Ph.D		Value Added Courses(Certificate/Diploma)	
	Male	Female	Male	Female	Male	Female	Male	Female
General	0	0	0	0	0	0	0	0
SC/ST	0	0	0	0	0	0	0	0
OBC	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total	0							
14 TOTAL NUMBER OF STUDENTS IN SELF-FINANCING PROGRAMMES								
	UG		PG		M.Phil/Ph.D		Value Added Courses(Certificate/Diploma)	
	Male	Female	Male	Female	Male	Female	Male	Female
General	1786	427	7	3	7	7	0	0
SC/ST	73	46	0	0	0	0	0	0
OBC	249	82	4	0	0	0	0	0
Total	2108	555	11	3	7	7	0	0
Grand Total	2691							
Total number of students in the college								
2691								
15 NUMBER OF TEACHING,TECHNICAL AND ADMINISTRATIVE STAFF								
	Permanent		Temporary		Total			
	Male	Female	Male	Female	Male	Female		
Teachers with PG	30	55	33	14	63	69		
Teachers with M.Phil.	0	6	0	1	0	7		
Teachers with Ph.D	10	8	0	0	10	8		
Teachers with NET/SLET	1	6	0	0	1	6		
Technical staff	8	4	19	8	27	12		
Administrative staff	6	5	4	2	10	7		
Support staff	20	1	1	0	21	1		
Total no. of teachers	40	69	33	15	73	84		
16 SUPPORT SERVICES								
Number of titles of books			12493					
Number of journals			300					
Number of e-resources			10141					
Does the college have a registered Alumni Association?			yes					
Does the college have a functional Placement Cell?			yes					

17 UNIT COST OF EDUCATION	
Unit Cost=Total annual expenditure divided by no. of students enrolled	121571.93
Unit cost calculated excluding salary component	60146.11
18 MENTION FIVE ACADEMIC MILESTONES OF THE COLLEGE	
First	ONCE ACCREDITED BY NBA IN 2008
Second	FIRST PRIVATE ENGINEERING COLLEGE TO GET RESEARCH CENTRE IN MECHANICAL ENGINEERING IN UNIVERSITY OF MUMBAI IN 2010
Third	PG COURSE IN MANUFACTURING SYSTEMS ENGINEERING INTRODUCED BY US UNDER UNIVERSITY OF MUMBAI IN 2007
Fourth	PH.D IN COMPUTER ENGINEERING IN 2014
Fifth	PRODUCED FIRST RANK IN MECHANICAL , ELECTRONICS AND TELECOMMUNICATIONS AND MCA IN UNIVERSITY OF MUMBAI
Section 2: Institutional Data Questionnaire	
1. The college has in place a structured internal quality assurance system for ensuring continuous quality monitoring or improvement	YES
2. Library has reading room facilities for students and faculty separately	YES
3. The college uses the students feedback for analysis and improvement purposes	YES
4. Basic computer literacy is ensured for all students in a structured way such as add on courses	YES
5. The college provides financial aid to at least 10% of the general category students	NO
6. The college has a mechanism for counselling students	YES
7. An annual in-house academic calendar is prepared and implemented by the college	YES
8. The college has a mechanism for addressing grievances of students and staff	YES
9. The college promotes scholarly activities of the faculty beyond the syllabus	YES
10. Internet facility is available in the college for faculty and students	YES
11. The college campus is differently-abled friendly	YES
12. The college has a formal mechanism to promote research activities of its students and faculty.	YES
13. The college has adequate sports facility	YES
14. The college has developed a short term and a long term plan for its development and growth	YES
15. Percentage of classrooms equipped with LCD projector	25-50%
16. Percentage of teachers using audio-visual aids including computer-aided teaching	>40%
17. The average number of extension activities organised by the college during the last four years	3-6
18. Average percentage utilization of annual allocated funds for the last four years	>75%
19. Maintenance expenditure on infrastructure as percentage of the total annual budget	>4%
20. Average pass percentage of graduating students	>70%
21. Computer students ratio	<1:30
22. Percentage of faculty benefitted from UGC and other staff development programmes (average of last four years)	>10%
23. Percentage of permanent teachers with Ph.D. qualification	20-40%
24. Percentage of classes taught by guest faculty or temporary teachers	<20%
25. Students teacher ratio	<30:1
26. Percentage of faculty positions filled against sanctioned posts	>80%
27. Number of add-on courses conducted by the college	>5
28. Awards received by the students in sports and cultural activities in the last four years	State or University Level
29. Percentage of teachers having on-going or completed research projects in the last four years	>25%
30. Number of academic seminars or conferences or workshops that the college has organized (average of last four years)	>4
31. Number of Journals subscribed in the library National or International	>20
32. Percentage of students admitted against the reservation category as per Government of India norms	<50%
Certificate	
This is to certify that the information given in the IEQA application is true to the best of my knowledge and ability and if the same is found to be false or misleading, I authorize NAAC to initiate any action which it deems fit including withholding the outcome of the Peer Team Visit.	



NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद

(An Autonomous Institution of the University Grants Commission)

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

IEQA EVALUATION RESULT

DETAILS	RESULT
Track ID	MHCOGN27187
Name Of The College	Lokmanya tilak college of engineering
Address	SECTOR 4 , VIKAS NAGAR , KOPARKHAIRANE , NAVI MUMBAI - 400709
E-Mail	principal.ltce@gmail.com
IEQA Submission Date	07/04/2017
IEQA Closing Date	07/04/2017
IEQA Evaluation Status	<p>Congratulations ! You have earned IEQA status . Institution should submit SSR/SAR (5 hard copies and 1 soft copy) within two weeks from the date of obtaining IEQA Status.</p> <p>Please note that the SSR/RAR uploaded on your institutional website must not be password protected and accessible to public until completion of the A&A process by NAAC. For further details/ instructions on procedures and timelines for processing A&A applications kindly visit our website: www.naac.gov.in</p> <p>Note :</p> <p>a) No Separate intimation will be mailed on the above matter.</p> <p>b) Ensure submission of the SSR in the correct and applicable format. Please use the NAACs Manual for Self Study applicable to your institution.</p> <p>c) The Institutions are hereby advised to upload information on All India Survey of Higher Education in MHRD website (http://aishe.gov.in) under intimation to NAAC. At the time of submission of SSR/RAR to NAAC, institutions have to submit the documentary proof of uploading the AISHE information</p> <p>Please note that a copy of IEQA application submitted by college is to be annexed to SSR/SAR so that peer team can verify the data</p> <p>Kindly note: SSR/SAR should be submitted by post/courier only. SSR/SAR will not be accepted by hand in NAAC office.</p>

Lokmanya Tilak Jankalyan Shikshan Sansthaa's

LOKMANYA TILAK COLLEGE OF ENGINEERING

Approved by AICTE vide letter No. F-740-89-295 (E)/RC/94 Dt. 26-07-1994
 Affiliated to University of Mumbai & Recognised by Govt. of Maharashtra
 Courses Accredited by The National Board of Accreditation (NBA)



Shri. Satish Chaturvedi
 Chairman

Dr. Vivek K. Yakkundi
 Principal

Certificate of Compliance

This is to certify that Lokmanya Tilak College of Engineering, Navi Mumbai, fulfils all norms

1. Stipulated by the affiliating University of Mumbai,
2. Regulatory Council/Body such as UGC, AICTE, DTE etc. and
3. The affiliation and recognition is valid as on date.

In case the affiliation / recognition is conditional, then a detailed enclosure with regard to compliance of conditions by the institution will be sent.

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: 12/04/2017

Place: Navi Mumbai


 Principal

(Dr. Vivek K. Yakkundi)

PRINCIPAL

Lokmanya Tilak College of Engineering
 Sector -4, Vikas Nagar, Koparkhairane,
 Navi Mumbai - 400 709.



Lokmanya Tilak Jankalyan Shikshan Sanstha's

LOKMANYA TILAK COLLEGE OF ENGINEERING

Approved by AICTE vide letter No. F-740-89-295 (E)/RC/94 Dt. 26-07-1994
Affiliated to University of Mumbai & Recognised by Govt. of Maharashtra
Courses Accredited by The National Board of Accreditation (NBA)



Shri. Satish Chaturvedi
Chairman

Dr. Vivek K. Yakkundi
Principal

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 team visit.

Place: Navi Mumbai

Date: 12/04/2017

Principal
PRINCIPAL

Lokmanya Tilak College of Engineering
Sector -4, Vikas Nagar, Koparkhairane,
Navi Mumbai - 400 709.

