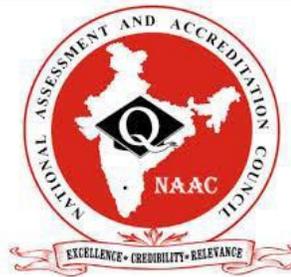


INSTITUTIONAL ACCREDITATION

Self-Study Report (SSR)

Submitted to

**NATIONAL ASSESSMENT AND ACCREDITATION
COUNCIL
(NAAC)**



An Autonomous Institution of the University Grants Commission
P.O. Box No.1075, Agarbhavi
BANGALORE-560072

by



K. J. Somaiya College of Engineering
(Autonomous College Affiliated to University of Mumbai)
Vidyavihar, Mumbai-400077, Maharashtra.
Email: principal.engg@somaiya.edu,
Website: www.somaiya.edu/vidyavihar/kjsce/
Phone: + 912266449191
Fax: +912221025272

K. J. Somaiya College of Engineering, Mumbai-77
(Autonomous College Affiliated to University of Mumbai)

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List of Abbreviations

Sr. No	Abbreviation	Expansion
1.	ACB	Anti-Corruption Bureau
2.	AICTE	All India Council for Technical Education
3.	ARC	Anti-Ragging Committee
4.	BARC	Bhabha Atomic Research Centre
5.	BOM	Board of Members
6.	CA	Continuous Assessment
7.	CAP	Central Admission Process
8.	CCF	Common Computing Facility
9.	CDEEP	Centre For Distance Engineering Education Program
10.	CIS	Course Information Sheet
11.	CIWGC	Children of Indian Workers in Gulf Countries
12.	CO	Course Outcomes
13.	COMP	Department of Computer Engineering
14.	CSI	Computer Society of India
15.	DTE	Directorate of Technical Education
16.	EBC	Economically Backward Class
17.	ESE	End Semester Examinations
18.	ETRX	Department of Electronics Engineering
19.	EXTC	Department of Electronics and Telecommunications Engineering
20.	FDC	Faculty Development Committee
21.	FDP	Faculty Development Program
22.	FN	Foreign National
23.	GATE	Graduate Aptitude Test in Engineering Conducted by IITs on National Level
24.	HOD	Head of Department
25.	IA	Internal Assessment
26.	ICC	Internal Complaints Committee
27.	IDAPL	Industrial Design Associates Pvt. Ltd.
28.	IEEE	Institute of Electrical and Electronics Engineers
29.	IETE	Institution of Electronics and Telecommunication Engineers
30.	IITB	Indian Institute of Technology – Bombay
31.	ILO	Intended Learning Outcomes
32.	ILS	Institute Level Seats
33.	IQAC	Internal Quality Assurance Cell
34.	ISHRAE	Indian Society of Heating Refrigerating and Air Conditioning

K. J. Somaiya College of Engineering, Mumbai-77
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Sr. No	Abbreviation	Expansion
35.	ISR	Institute Social Responsibility
36.	ISTE	Indian Society for Technical Education
37.	IT	Department of Information and Technology
38.	JEE	Joint Engineering Entrance
39.	KJSCE	K.J. Somaiya College of Engineering
40.	LAC	Library Advisory Committee
41.	LGBT	Lesbian Gay Bisexual Transgender
42.	LMS	Learning Management System
43.	MECH	Department of Mechanical Engineering
44.	MH CET	Maharashtra State Common Entrance Test
45.	MOOC	Massive Open Online Course
46.	MPC	Maths, Physics, Chemistry
47.	NPTEL	National Program on Technology Enhanced Learning
48.	NRI	Non Resident Indian
49.	OCI	Overseas Citizen of India
50.	OPAC	Online Public Access Catalog
51.	PG	Post Graduate
52.	PI	Principal Investigator
53.	PIO	Person of Indian Origin
54.	PUSH	People United for Students Help
55.	R&D	Research and Development
56.	RiiDL	Research Innovation Incubation Design Lab
57.	SAE	Society of Automotive Engineers
58.	SAMEER	Society for Applied Microwave Electronics Engineering & Research
59.	SB	Subject Board
60.	SC	Special Cell
61.	SDC	Student Development Committee
62.	SVV	Somaiya Vidyavihar
63.	TFW	Tuition Fee Waiver
64.	UG	Under Graduate
65.	UGC	University Grants Commission
66.	WDC	Women Development Cell
67.	IDC	Interdisciplinary Course
68.	TT	Term Test

K. J. Somaiya College of Engineering, Mumbai-77
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Section A:
Executive Summary – The SWOC Analysis of the Institution

Executive Summary

Our Founder

"Whatever you do in word or in deed, Do all in the name of the Lord, Giving thanks to Him" – was the ethos of life of our founder late Padmashri Karamshibhai Jethabhai (K.J.)Somaiya. Born to humble beginnings he rose to become one of the doyens of the sugar industry in Western India.

His pioneering efforts and hard work not only revolutionized the sugar industries but his balanced perspective and the social bent of mind enabled him in furthering his dream of shaping young minds through quality education. Shri K. J. Somaiya laid the foundation for Somaiya Vidyavihar Trust in 1959 whereby educational institutes covering programs in Humanities and basic Sciences were established.

Identifying that the growth of the state will be largely dependent on the development of technology and necessary manpower associated with it; around 1983, visionary late Shri Vasantdada Patil; the then Chief Minister of Maharashtra State, endorsed permission to private trusts to initiate engineering education. In sync with his thoughts, the Somaiya Vidyavihar Trust established the K J Somaiya College of Engineering.

Shri K. J. Somaiya strongly believed that modern professional education must remain true to the spirit of Indian ethos and culture. He insisted on value-based education, believing firmly that a community uncaring for its traditions is decadent and insubstantial. He thus also started institutes for Jainism, Buddhism, Sanskriti Peetham, etc. Thus, in close to five decades, Somaiya Vidyavihar has grown into a large educational complex with 33 institutions catering to diverse fields of education such as Humanities, Science, Commerce, Engineering, Education, Management , Medicine etc.

Shri K. J. Somaiya passed away on May 9, 1999, a week before his 97th birthday. However, he left behind him a standing monument to his sagacity, perseverance and foresight in the form of a huge flourishing tree; the Somaiya Vidyavihar and the tree continues to grow!!!

Dr S K Somaiya was the next to follow Shri K. J. Somaiya. Dr S K Somaiya himself was fully immersed in social service; but he meticulously nurtured each of these institutes such that each of them works on a common goal “what you receive from society give back multifold”.

Shri Samir Somaiya, grandson of Shri K J Somaiya and son of Dr S. K. Somaiya; is currently the chairman of Somaiya Vidyavihar. Recognising, that the graduates of tomorrow can no more be contended by *getting a job*, but they should be able to create jobs for others; a Research, Innovation Incubation Design Lab (RiiDL) was

K. J. Somaiya College of Engineering, Mumbai-77
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established in Somaiya Vidyavihar, where students from across the institutions come together on innovative projects.

With his global vision, the Somaiya Vidyavihar institutes are gearing up to become at par with other international institutions.

Our College

Our college; K J Somaiya College of Engineering (KJSCE), established by the Somaiya Vidyavihar Trust, is an institution having a commitment towards Quality in Technical Education. Right since inception, there have been conscious and persistent efforts towards pursuit for excellence in the overall development of the students. As a natural outcome of this, many programs are accredited previously since 1998 and all the 5 UG programmes are provisionally accredited for 2 years (from 2013 to 2015) by the National Board of Accreditation (NBA) New Delhi.

As of today, ours is the only Self-financed (private) Engineering College affiliated to University of Mumbai to get an Autonomous Status from the academic year 2014-15. Hence, students admitted fresh in 2014-15 are governed by the new scheme and curriculum designed under autonomy whereas, all students admitted in the year 2011 onwards and were part of the college in 2014, continued with the University curriculum. However, irrespective of their year of admission to the college, certain benefits of autonomy, such as execution of our own academic and examination calendar, could be extended to all of them.

With such a flexible academic calendar, it is possible for the students to plan their activities beyond college engagements; to pursue hobbies, interests, explore career options, take up interesting internships etc. which otherwise lies beyond the ambit of technology education.

As a part of the continuous evaluation for each subject, a variety of tools and techniques are now adopted to evaluate understanding and knowledge of a student. Necessary feedback is given to a student by making the evaluation and assessment fully transparent. The students are encouraged to discuss and understand their shortcoming which in turn helps them in becoming professional engineers of tomorrow.

Understanding the fact that lessons in engineering cannot be confined to only class room teaching, the education in our college has always tried to reach beyond the curriculum. Students have been encouraged to participate in real life projects at national as well as international level to achieve a global outlook. Projects with innovative ideas and entrepreneurial approach are encouraged.

Thus, with the backing of a progressive management, requisite infrastructure, committed staff and versatile students, it is not a surprise to see that our College is one of the most sought after colleges in the University of Mumbai !!

SWOC Analysis of the College

Strength

- College founded by philanthropic trust with reputation in the field of education since 1959.
- Progressive management, chaired by industrialist, maintaining transparency in governance
- Financial powers to Principal for allocating resources towards development of college
- Spacious college buildings in Green campus with state-of-art sports facilities
- Unique PG programs introduced recently in the areas of global relevance
- Well-equipped laboratory, library and internet facilities
- Consistency in admissions with nearly 100% enrolment in UG and 80% in PG
- Students belonging to different districts of the state; including interior regions
- Academic autonomy enabling
 - Streamlined academic calendar
 - Need based updates in curriculum with inputs from stakeholders
 - Use of different tools for continuous assessment of students
 - Opportunities for internships
 - Overall development of students
- Promotion of social awareness through student activities
- Encouragement to culture of inclusive education
- Established mechanism catering to financially weak, physically challenged and differently abled students
- Appreciation of academic achievers by way of prizes and scholarships
- Well established placement activity
- Promotion of entrepreneurial and innovation activities of students
- Backing to student participation in national & international project competitions
- Experienced, dedicated faculty members & staff
- Policies for research and consultancy facilitating professional development
- Support for professional development of faculty members & staff
- Various schemes for faculty members & staff welfare

Weakness

- Number of faculty members having Ph.D. in technology
- Formal training on pedagogy, research and administration
- Research funding from external agencies
- Collaboration with industries or research organizations
- Placement of students in Multi-National Companies or with higher pay package
- Time constraints due to metro lifestyle and non-residential campus

Opportunities

- Use of distance education and adoption of Information & Communication Technologies for flexibility in teaching-learning
- Internships leading towards placements of students in industries and national laboratories
- Strategic alliances and collaborations with national & international organizations for professional growth
- Support from Government schemes for entrepreneurship and use of technology for societal needs
- Accomplishment of vision of the college in collaboration with alumni

Challenges

- Diversity in admitted students in the form of demography, linguistic abilities, financial and academic background
- Keeping pace with updates in technology
- Reinforcement of formal teaching-learning by use of ICT
- Promotion of technological entrepreneurs
- Attracting leading companies including MNCs for student internships/ placement
- Balance in administrative, academic and research work.
- All faculty members with Ph. D. in technology
- Promotion of research in college through external funding
- Enhancing expertise to attract industrial projects and consultancy

Section B: Preparation of Self Study Report

Profile of the Autonomous College

1. Name and Address of the College

Name:	K.J. Somaiya College of Engineering	
Address:	Vidyavihar, Mumbai 400077	
City : Mumbai	Pin : 400077	State: Maharashtra
Website:	www.somaiya.edu/kjsce	

2. For communication:

Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Dr. Shubha Pandit	(O)022 66449191 (R) 022 24331872	9820514966	022 21025272	principal.engg@somaiya.edu
Vice Principal (1)	Mr. A. S. Thosar	(O) 022 66449004 (R) 022 25235096	9869762889		viceprincipal@somaiya.edu
Vice Principal (2)	Dr. N.R. Gilke	(O) 022 66449014	9920479991		viceprincipal2@somaiya.edu
Steering Committee Coordinator	Ms. Arati Phadke	(O) 022 66449217 (R) 022 5826327	9821053269		aratiphadke@somaiya.edu

3. Status of the Autonomous College by Management

Private

4. Name of University to which the College is Affiliated: **University of Mumbai**

5. a. Date of establishment, prior to the grant of 'Autonomy':

08.05.1983 From A.Y. 1983-84

b. Date of grant of 'Autonomy' to the College by UGC:

22/05/2013 From A.Y.2014-15

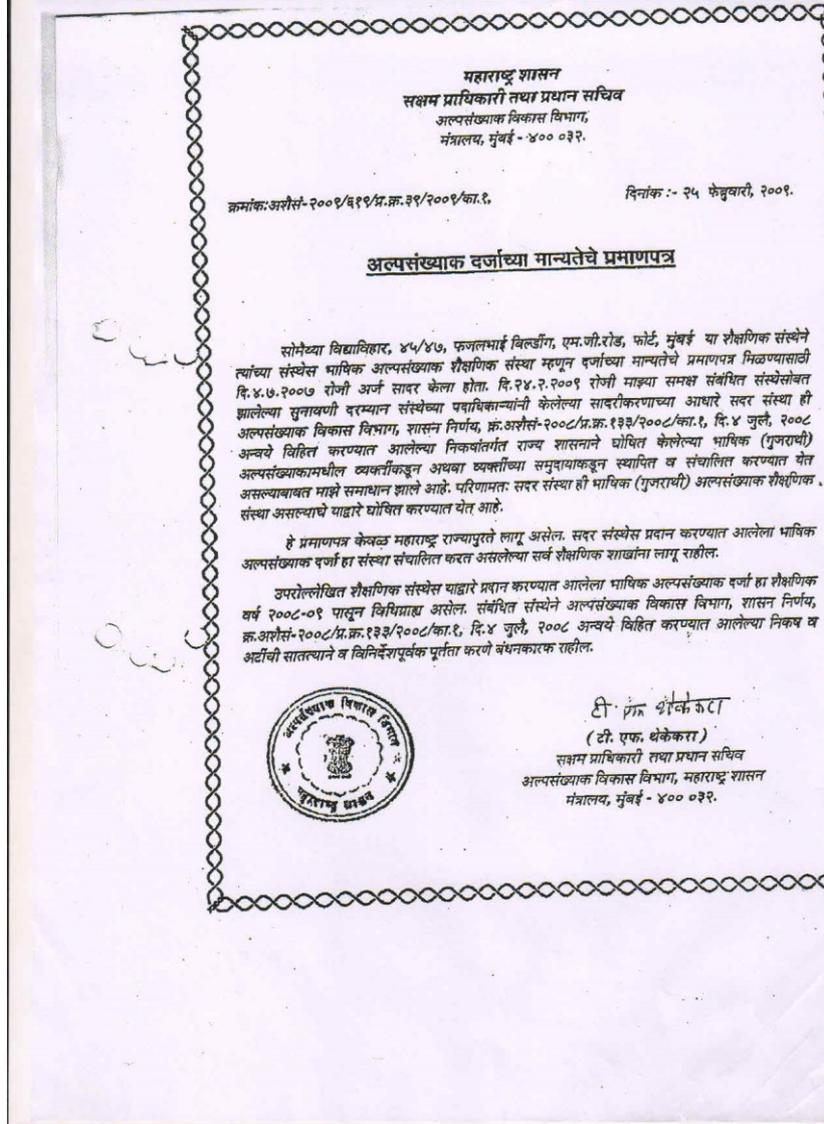
6. Type of Institution

a. By Gender : **Co-education**

b. By Shift : **Regular**

c. Source of Funding : **Self Financing**

7. It is a recognized minority institution? **YES**
If YES specify the minority status and provide documentary evidence **Linguistic Minority (Gujarathi)**



8. a. Details of UGC recognition:

Under Section	Date, Month & Year	Remarks (If any)
i.2 (f) & 12(B)	24.05.2012	vide letter no. F.No. 8-457/2011 (SPP-I/c) our college is included under recognition

K. J. Somaiya College of Engineering, Mumbai-77
(Autonomous College Affiliated to University of Mumbai)

Ph: 23236351, 23232701, 23237721
23234116, 23235733, 23232117
23236735, 23239437, 23234627

Extension No. 413 (CPP-I Colleges)
UGC Website: www.ugc.ac.in

F. No. 8-457/2011 (CPP-I/C)

The Registrar,
University of Mumbai,
Mumbai - 400 032,
Maharashtra.

Sub: Recognition of College under Section 2 (f) & 12 (B) of the UGC Act, 1956.

Sir,

I am directed to refer to the letter No. KJSCE/P/119/2012 dated 09.03.2012 received from the Principal, K.J. Somaiya College of Engineering, Vidyanager, Vidyavihar (E), Mumbai - 400 077 (Maharashtra) on the above subject and to say that it is noted that the following college is **unaided/self financing** and **permanently** affiliated to **University of Mumbai**. I am further to say that the name of the following college has been included in the list of colleges prepared under Section 2 (f) & 12 (B) of the UGC Act, 1956 under the head **Non-Government** College teaching upto **Master's Degree**:-

Name of the College	Year of Establishment	Remarks
K.J. Somaiya College of Engineering, Vidyanager, Vidyavihar (E), Mumbai - 400 077 (Maharashtra)	1983	As the College is charging fee as per State/University norms and a certificate in this regard has been received in UGC. The College would also be eligible to get grant for all UGC schemes related to teachers and students only as per the decision of the Commission dated 8 th July 2011.

The Indemnity Bond and the other supporting documents submitted in respect of the above College have been accepted by the University Grants Commission.

Yours faithfully,

(A.K. Dogra)
Joint Secretary

Copy to:-

1. The Principal, K.J. Somaiya College of Engineering, Vidyanager, Vidyavihar (E), Mumbai - 400 077 (Maharashtra)
2. The Secretary, Government of India, Ministry of Human Resource Development, Department of Higher Education, Shastri Bhawan, New Delhi - 110 001.
3. The Principal Secretary, Tech. & Higher Education Deptt., Government of Maharashtra, Mantralaya, Annex Building, Mumbai - 400 032 (Maharashtra).
4. The Deputy Secretary, UGC, Western Regional Office (WRO), Ganeshkhind, Poona - 411 007, (Maharashtra).
5. Publication Officer (UGC-Website), New Delhi.
6. Section Officer (FD-III Section), UGC, New Delhi.
7. All Sections, UGC, New Delhi.
8. Guard file.

(Sunita Gufati)
Section Officer



इतिहास-विज्ञान विभूषण
SPEED POST

विश्वविद्यालय अनुदान आयोग
बहादुरशाह जफर मार्ग
नई दिल्ली-110 002
UNIVERSITY GRANTS COMMISSION
BAHADURSHAH ZAFAR MARG
NEW DELHI-110 002

May, 2012
24 MAY 2012

b. Details of recognition/approval by statutory/regulatory bodies other than UGC

Under Section/Clause	Day, Month & Year	Validity	Programme / Institution	Remarks
AICTE (Grant of approvals for Technical Institutions) Regulation 2012	25.04.2016	2016-17	UG- 5 courses PG - 6 courses	Letter no Western/1-2809571953/20016/EO A Dated 25-Apr-2016

K. J. Somaiya College of Engineering, Mumbai-77
(Autonomous College Affiliated to University of Mumbai)

Annexure 2



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/1-2809571953/2016/EOA Date: 25-Apr-2016

To,

The Secretary,
Tech. & Higher Education Deptt.,
Govt. of Maharashtra, Mantralaya,
Anand 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-SI/Legal/2012 dated: 27/06/2012 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	1-2809571953
Name of the Institute	K. J. SOMAIYA COLLEGE OF ENGINEERING	Permanent Id	1-3118891
Name of the Society/Trust	SOMAIYA VIDYAVIHAR TRUST	Institute Address	VIDYANAGAR, VIDYAVIHAR, MUMBAI-400077, MUMBAI, MUMBAI SUBURBAN, Maharashtra, 400077
Institute Type	Unaided - Private	Society/Trust Address	45-47 SOMAIYA BHAVANMAG ROAD FORT, MUMBAI CITY, Maharashtra, 400001

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 Approval and Vice versa	Not Applicable	Change of name Approval	Not Applicable	Change of site Approval	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2016-17

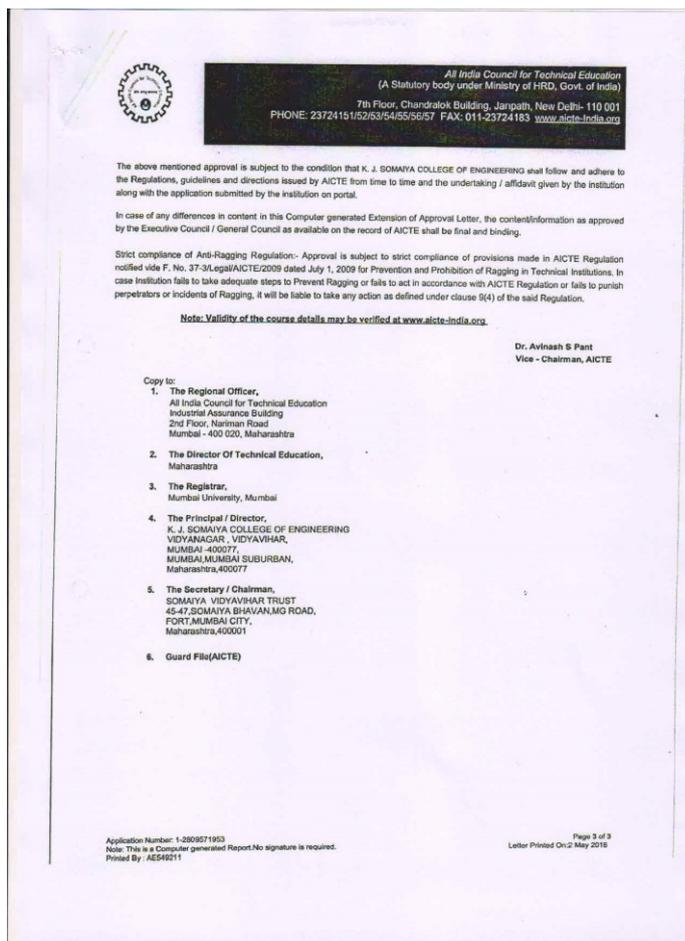
Program	Sem	Level	Course	Full Time	Instituting Univ.	Intake			AICTE Approval Status	UPEU Approval Status	Other Approval Status
						16	18	NA			
ENGINEERING AND TECHNOLOGY	1st Sem	POS T GRA DUA TE	COMPUTER ENGINEERING	FULL TIME	Mumbai University, Mumbai	18	18	NA	NA	NA	NA

Application Number: 1-2809571953
Note: This is a Computer generated Report. No signature is required.
Printed By : AES49211

Page 1 of 3
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											
ENGINEERING AND TECHNOLOGY	1st Sem	POS T GRA DUA TE	ELECTRONICS AND TELECOMMUNICATIONS ENGINEERING	FULL TIME	Mumbai University, Mumbai	18	18	NA	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Sem	POS T GRA DUA TE	ELECTRONICS ENGINEERING	FULL TIME	Mumbai University, Mumbai	18	18	NA	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Sem	POS T GRA DUA TE	ENERGY ENGINEERING	FULL TIME	Mumbai University, Mumbai	18	18	NA	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Sem	POS T GRA DUA TE	INFORMATION SECURITY	FULL TIME	Mumbai University, Mumbai	18	18	NA	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Sem	POS T GRA DUA TE	MECHANICAL ENGINEERING (CAD/CAM)	FULL TIME	Mumbai University, Mumbai	18	18	NA	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Sem	UNDER GRADUATE	COMPUTER ENGINEERING	FULL TIME	Mumbai University, Mumbai	120	120	Yes	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Sem	UNDER GRADUATE	ELECTRONICS AND TELECOMMUNICATIONS ENGINEERING	FULL TIME	Mumbai University, Mumbai	120	120	Yes	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Sem	UNDER GRADUATE	ELECTRONICS ENGINEERING	FULL TIME	Mumbai University, Mumbai	120	120	Yes	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Sem	UNDER GRADUATE	INFORMATION TECHNOLOGY	FULL TIME	Mumbai University, Mumbai	120	120	Yes	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Sem	UNDER GRADUATE	MECHANICAL ENGINEERING	FULL TIME	Mumbai University, Mumbai	120	120	Yes	Yes	NA	NA

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9. Has the college recognized

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

NO

b. For its contributions / performance by any other governmental agency?

NO

10. Location of the campus and area

Location	Vidyavihar, MUMBAI-77 (URBAN)
Campus area in sq.mts. or acre	4.25 acres
Built up area in sq.mts	17757.21 sq.mtrs

11. Does the College have the following facilities on the campus (Tick the available facility)? In case the College has an agreement with other agencies in using such facilities provide information on the facilities covered under the agreement.

- Auditorium : **Available**
- Sports facilities
 - * Playground : **Available**
 - * Swimming pool : **Not Available**

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- * Gymnasium : **Available**
- Hostel
 - * Boys' Hostel) : **Available to limited students**
 - * Girls ' Hostel) : **Available to limited students**
- Residential Facilities
 - * For teaching staff : **Available to limited teaching staff**
 - * For non-teaching staff: **Available to limited Non-teaching staff**
- Cafeteria : **Available**
- Health Centre
 - * First Aid Facility : **Available in each department**
 - * Inpatient Facility : **No**
 - * Outpatient Facility : **No**
 - * Ambulance Facility : **No**
 - * Emergency Care Facility: **No**
- Health Centre Staff –
 - * Qualified Doctor Full Time **No**
Part Time **Available in college
thrice in a week**
 - * Qualified Nurse Full Time **No**
Part Time **No**
- Other Facilities
 - * Bank : **No**
 - * ATM : **Available**
 - * Post Office : **No**
 - * Book Shops : **No**
- Transport Facilities
 - * For students : **No**
 - * For staff : **No**
- Power House : **Yes, Available**
- Waste Management Facility: **Yes, Available**

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

Sr. No.	Program Level	Name of the Program/Course	Duration	Entry Qualification	Medium of Instruction	Sanctioned/ Approved Student Intake	No. of students admitted
1.	UG	B.Tech ETRX Mechanical EXTC Computer Info Tech.	04 years	HSC(Science) with 50% PCM & CET score	English	120 in each Branch and extra 18 seats in Mech. Total:618	605
2.	PG	M.Tech Computer Info.Security EXTC ETRX MECH(Energy Engg) Mech(CAD/CAM)	02 years	BE/B.Tech With GATE score	English	18 in each Branch Total:108	85
3.	Ph.D	Ph.D (Tech) Electronics Mechanical	5 years	ME / M.Tech With PET	English	10 10	05 05

13. Does the institution offer self-financed Programmes?

No

14. Whether new programmes have been introduced during the last five years? – **Yes**

Sr.No.	Year in which programme is introduced	Name of the Programme
1	2013-14	<ul style="list-style-type: none"> • M.Tech in Information Security • M.Tech in Energy Engineering • PhD in Electronics Engineering
2	2015-16	<ul style="list-style-type: none"> • PhD in Mechanical Engineering

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15. List of departments: (Do not list facilities like library, Physical Education as departments unless these are teaching departments and offer programmes to students)

Particulars	Number	Number of Students
SCIENCE Under Graduate Post Graduate Research centre(s)	Nil	Nil
ARTS Under Graduate Post Graduate Research centre(s)	Nil	Nil
Particulars	Number	Number of Students
COMMERCE Under Graduate Post Graduate Research Centre(s)	Nil	Nil
Any other (ENGINEERING) Under Graduate Post Graduate Research Centre(s)	05 06 02	2931 195 10

16. Are there any UG and/or PG programmes offered by the College, which are not covered under Autonomous status of UGC? Give details.
NO

17. Number of Programmes offered under (Programme means a degree course like BA, MA, BSc, MSc, B.Com etc)
B.TECH- 05
M.TECH- 06 **SEMESTER SYSTEM**
Ph.D.(TECH)- 02

18. Number of Programmes with
- a. Choice Based Credit System **YES**
 - b. Inter/Multidisciplinary Approach **NO**
 - c. Any other (specify) **NO**

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

- (a) Including the salary component = **Rs. 86,768.00**
- (b) Excluding the salary component = **Rs. 49,749.00**

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20. Does the College have a department of Teacher Education offering NCTE recognized degree programmes in Education?
NO
21. Does the College have a teaching department of Physical Education offering NCTE recognized degree programmes in Physical Education?
NO
22. Whether the College is offering professional programme?
YES (Approved by AICTE)
If yes, please enclose approval/recognition details issued by the statutory body governing the programme. **Copy attached in 8 (b)**
23. Has the College been reviewed by any regulatory authority? If so, furnish a copy of the report and action taken there upon.
Yes Approved by AICTE Copy attached in 8 (b)
24. Number of teaching and non-teaching positions in the College

Positions	Teaching Faculty						Non-Teaching		Technical	
	Professor		Associate Professor		Assistant Professor		Staff		Staff	
	M	F	M	F	M	F	M	F	M	F
Sanctioned by the University Recruited	05	01*	22	23	38	67	41	20	45	35
Sanctioned by the Management/Society or other authorized bodies Recruited	01	-	-	-	09	18	-	-	-	-

*Including Principal

25. Qualifications of the teaching staff

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Regular (Permanent)							
Ph.D.	05	01*	03	01	04	03	17
M. Phil	-	-	01	-	02	03	06
M.E. M. Tech	-	-	17	22	25	54	118
NET	-	-	-	-	02	02	04
Others (MSc/MA/BE)	-	-	01	-	05	05	11
Contractual							

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Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Ph.D.	01	-	-	-	-	-	01
M. Phi	-	-	-	-	-	-	-
M.E. M. Tech	-	-	-	-	08	16	24
NET	-	-	-	-	-	-	-
Others (MSc/MA/BE)	-	-	-	-	01	02	03

*Including Principal

26. Number of Visiting Faculty/Guest Faculty engaged by the College

Nil

27. Students enrolled in the College during the current academic year (2016-17), with the following details:

Student	UG		PG		Integrated Masters		M.Phil.		Ph. D.		Integrated Ph.D		D.Litt/D.Sc.		Certificate		Diploma		PG Diploma	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
From the state where the college is located	2032	608	111	72	-	-	-	-	5	5	-	-	-	-	-	-	-	-	-	-
From other states of India	153	51	08	04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NR I students	50	37	--	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Foreign	--	--	--	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Student	UG		PG		Integrated Masters		M.Phil.		Ph.D.		Integrated Ph.D		D.Litt/D.S.c.		Certificate		Diploma		PG Diploma	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
students																				
TOTAL	22	69	11	76					5	5										

28. Dropout rate in UG and PG (average for the last two batches)

UG : 8.477%

PG : 6.75 %

29. Number of working days during the last academic year: **250**

30. Number of teaching days during the last academic year: **170**

31. Is the College registered as a study centre for offering distance education

programmes for any University?

NO

32. Provide Teacher-student ratio for each of the programme/course offered (2015-16)

PROGRAMME	UG	PG
COMPUTER	15.16	9.57
ETRX	17.11	9.27
EXTC	17.83	7.38
IT	16.65	9.31
MECHANICAL	16.80	EE 3.15 CAD/CAM 3.02

33. Is the College applying for?

Accreditation: Cycle 1 : **YES**

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

Cycle 1: Not Applicable

Cycle 2: Not Applicable

Cycle 3: Not Applicable

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- Kindly enclose copy of accreditation certificate(s) and peer team report(s)

Not Applicable

35. a. Date of establishment of Internal Quality Assurance Cell (IQAC)
31st May 2016

b. Date of submission of Annual Quality Assurance Reports
(AQARs).

AQAR for year : Not Applicable

36. Any other relevant data, the College would like to include. (Not exceeding one page)

All the five UG programmes were provisionally accredited for the period of two years (Year 2013 to 2015) by National Board of Accreditation (NBA) New Delhi. College has following features

- Upon recommendations of UGC and the State Government, University of Mumbai has conferred Autonomous Status to our college from Academic year 2014-15, whereby the College will award B.Tech/M.Tech. Degree on behalf of University of Mumbai
- Permanent affiliation to University of Mumbai for all UG Courses from 2007-2008.
- Closing Ceremony of Silver Jubilee Celebration at the hands of Dr. A. P. J. Abdul Kalam.
- Vibrant student activities with participation in National/International event.
- Encouragement to inter-disciplinary activities, entrepreneur efforts.
- Each department with devoted classrooms equipped with computer and LCD's
- More than 75 well equipped laboratories
- Spacious workshops
- 1450 + different configured computers
- Wifi Availability in complete college premises.
- Open and online access to library
- More than 37430 books in library
- Book titles more than 18760
- More than 110 National and International Periodicals and also have seven on-line e- journal Database on-line versions.
- Almost 100% placement record

Understanding the fact that learning in Engineering cannot be confined to only class room teaching, the education in this institution has always tried to reach beyond the curriculum. Students have been encouraged to participate in real life projects at national as well as international level to achieve a global outlook. Efforts are being made to orient students towards factual situations in industry and the multi-disciplinary approach in finding tangible solutions.

Section C: Criteria-wise Analytical Reports

CRITERION I CURRICULAR ASPECTS

1.1 Curriculum Design and Development

1.1.1 How are the institutional vision / mission reflected in the academic programmes of the College?

Vision and Mission of College

- **Vision**

K. J. Somaiya College of Engineering envisages to become a World Class Centre of Learning in the field of Engineering Sciences where pursuit of Knowledge is leavened with Human Values of Courage and Compassion to produce Engineers in the service of Humanity.

- **Mission**

- To be leading institution of learning in the field of Engineering Sciences with an activity engendered scholarly ambience, encouraging diversity of thought and expression.
- To provide an enabling environment for attaining excellence through an on-going dialogue with industry and benchmarking ourselves with the best amongst peer institutions.

- **Conferment of Autonomy**

- K. J. Somaiya College of engineering (KJSCE) is affiliated to University of Mumbai since 1983. Being affiliated the curriculum was as per University of Mumbai.
- KJSCE was conferred Autonomy in 2014. Prior to that KJSCE adapted curriculum of University of Mumbai.
- From 2014-15, KJSCE designed curriculum in steps (KJSCE2014). For all students admitted prior to 2014, curriculum of University of Mumbai (R 2012) was adapted with assessment as per KJSCE examination pattern.
- The objective of the curriculum is to adapt to upcoming technologies, implement application oriented learning and imbibe value system. With autonomous status of the college the focus is also to improvise curriculum by giving importance to modern tool usage, self-learning, continuous assessment and exposure to various fields of study.
- Thus the vision and mission of the college are comprehended by the curriculum based on the changing technological developments.

1.1.2 Describe the mechanism used in the design and development of the curriculum? Give details on the process. (Need Assessment, Feedback, etc)

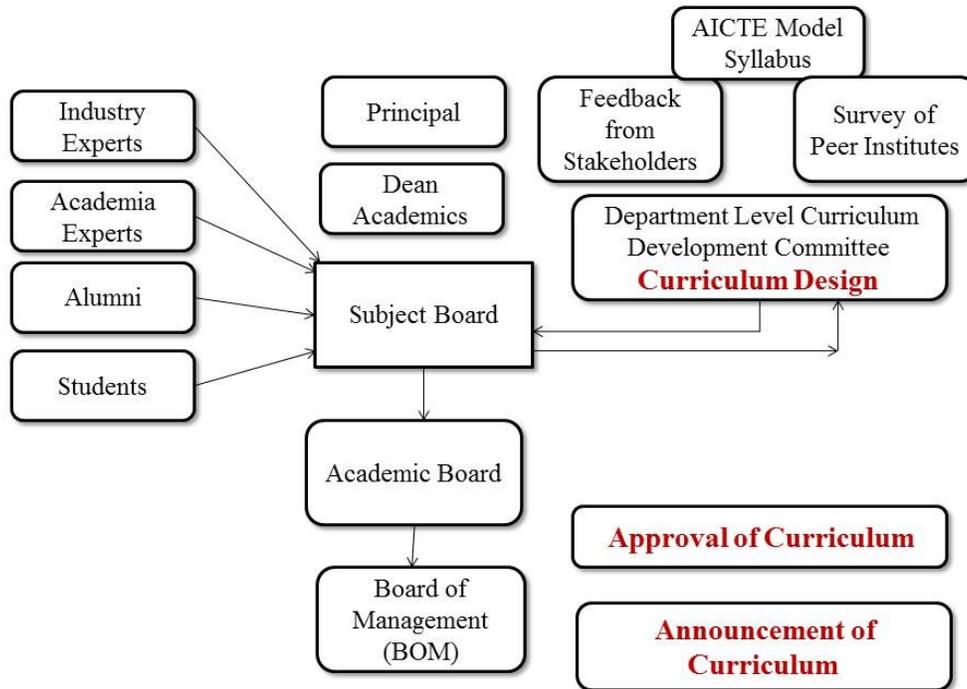


Fig.1.1.1 Curriculum Design Flow

- The process of curriculum design comprises of formation of various committees and boards. The meetings are held from time to time and minutes of meeting are documented and circulated. The suggestions of experts and feedback from stake holders are taken into account in development of curriculum. The steps followed for UG/PG syllabus design are as shown in Fig. 1.1.1.
- The curriculum development committee of each department works by forming groups of faculty members as per area of specialization. These groups design a curriculum by surveying curriculum of reputed institutes, with critical discussions and deliberations. Various stake holders like academicians from reputed colleges, senior faculty members of the college, engineers from industry and alumni, and recruiters formally or informally contribute to the curriculum development process.
- Critical planning, analysis of feedback reports received by the department from various stake-holders, discussions on graduate attributes etc. take place before a new course is introduced.
- The curriculum proposed by the department committee is tabled and discussed in Subject Board (SB) meeting. Any suggestions by various members are taken into consideration. The modified curriculum is then

presented in the Academic Board (AB) which is generally scheduled to meet once per semester.

- While framing the curriculum all the guidelines from AICTE are taken into account. Entire curriculum is designed with more flexibility for student to undergo interdisciplinary components. With addition of internship students will get facility to undergo skill based and professional courses.
- The modified curriculum is then presented in Board of Management for the final approval

- **Features covered in curriculum**

Undergraduate curriculum is comprised of following features:

- Series of courses in basic sciences to develop understanding of scientific principles and methods, analytical ability and rigour.
- Courses in engineering sciences to develop engineering skills through training in engineering drawing, measurements, computing skills, manufacturing technology and effective communication.
- The professional courses in the chosen field of specialization are meant to develop abilities for applying basic and engineering sciences to engineering problems involving planning, design, manufacturing, maintenance and research and development.
- In addition, courses in humanities and social sciences are incorporated to develop appreciation of the impact of science and technology on society.
- There is an in-built flexibility to encourage students to specialize in streams of their choice through a system of professional electives, audit courses and interdisciplinary courses.
- The college strives to foster among its students a strong desire and capacity for lifelong learning to develop professional and leadership qualities, team spirit and a strong sense of service to society through designed, curricular, co-curricular activities.
- Somaiya campus is well known for the value education and ethics and both are addressed through variety of audit courses and co-curricular and extracurricular activities.

PG curriculum is comprised of following features:

- Series of professional core courses.
- Wide variety of elective courses with Interdisciplinary elective course.
- Audit courses such as research methodology and quantitative methods, which help in building research culture in PG students.
- Professional Practice Laboratory for two semesters of PG program helps to develop communication and professional skills.
- Curriculum in general has emphasis on learning by doing through mini projects / projects.

1.1.3 How does the College involve industry, research bodies, and civil society in the curriculum design and development process? How did the College benefit through the involvement of the stakeholders?

Expert academicians from reputed colleges, professionals from industry and alumni, and recruiters are members in Subject Boards and Academic Board. The curriculum is designed with their inputs at every stage. The experts offer their suggestions for starting new courses, or modifying existing courses as well as for introducing innovation in teaching learning methodologies and assessment methods. Numbers of alumni who are working in industry or studying abroad, formally or informally give suggestions and contribute to the curriculum development process.

1.1.4 How are the following aspects ensured through curriculum design and development?

- * **Employability**
- * **Innovation**
- * **Research**

Practices in Table 1.1.1 ensure the development of student in different aspects.

Table 1.1.1: Practices for Student Development

Sr. No.	Aspect	Practices Adapted
1	Employability	<ul style="list-style-type: none"> ○ Schema and syllabi are prepared taking into account the feedback from industry to meet their general and specific requirements. ○ Most of the courses of UG and PG program enable the students to enhance their technical and logical skills. ○ Theory courses are augmented by corresponding laboratory courses which help students in developing skills related with design, development, debugging, evaluation, instrumentation etc. ○ Mini-projects are a part of curriculum to develop hands on skills. ○ Major project is carried out by the UG students in the final year of the program either in the department or in the industry. ○ For PG programs, one full year is allotted for dissertation with appropriate credits. ○ The presentation of mini-projects and projects through seminars for UG program and exclusive seminar course for two semesters of PG program helps to develop communication and professional skills.

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Sr. No.	Aspect	Practices Adapted
2	Internships	<ul style="list-style-type: none"> ○ Need based training programs are provided to the students in the form of workshops and guest lecturers from industry experts, professors from reputed foreign or national institutes or in-house faculty members. ○ Special soft-skill, aptitude development programs from industry professionals are arranged from Training and Placement cell on regular basis. ○ Industrial Visits are arranged by various departments to give vision and understanding of current trends and needs of industries. ○ Efforts are taken to introduce Audit courses, interdisciplinary courses and electives so that students can get knowledge from across domain platforms and apply skills to develop integrated systems.
3	Innovation	<ul style="list-style-type: none"> ○ PG and UG students are encouraged to present the papers on their dissertation and project work in the conferences held anywhere in India. ○ The state of the art centres of excellence for ROBOCON and Racing Car projects are established in the college. ○ Self-learning modules are introduced in UG/PG syllabi. ○ Professional Practice Laboratory is a part of revision in the PG syllabi.
4	Research	<ul style="list-style-type: none"> ○ College has linkages with organization like BARC, SAMEER, IITB, ISRO, Force Motors, L and T etc. in order to pursue collaborative UG/PG projects. ○ The mini-projects and projects in the syllabus make the students to review the literature and prepare the synopsis. This helps to impart them self-learning attitude. ○ Financial support is given to the students and faculty members who present papers in national or international conferences or journals. ○ Research funding and projects from Mumbai University, Somaiya Trust, HRD Ministry, etc. are undertaken to pursue research in areas of national thrust.

1.1.5 How does College ensure that the curriculum developed address the needs of the society and have relevance to the regional / national developmental needs?

- The formal and informal discussions with employers and civic bodies help to imbibe sense of social responsibility. The interaction with institutes like ICT, IITB Mumbai, TIFR, state level autonomous institutes etc. and industries like TCS, iGATE, IDA, Ulka, Pangea3, Force Motors etc. help in obtaining sponsored projects, internship for students, industry oriented audit course and collaborative projects.
- Since stakeholders are actively involved in curriculum development, they are assured of the attributes of the graduates of this college which can lead to internships and employment of the students by them. Some of the stakeholders also contribute in conduction of audit or interdisciplinary courses.
- The efforts are put in to make syllabus more versatile so that KJSCE students will be able to face any professional challenges during career. The curriculum is framed to prepare the students to address the needs of local as well as global society.
- The concept of energy conservation, environment, management skills, social aspects, software skills, hardware tasks etc. enable students to tackle both national and local development.

1.1.6 To what extent does the College use the guidelines of the regulatory bodies for developing or restructuring the curricula? Has the College been instrumental in leading any curricular reform which has created a national impact?

- The technical institutes like KJSCE follow the AICTE norms for distribution of core/elective/social science/management etc. related courses. Fig 1.1.2 gives the analysis of KJSCE autonomous syllabus which is set as per AICTE norms. While finalizing the curriculum, it is confirmed that all the aspects as per the program specific criteria recommended by international professional bodies like IEEE for ETRX and EXTC Engineering, ASME for Mechanical Engineering, CSAB for Computer Science and Engineering and IT department are taken into consideration. For UG, minimum no of credits to be completed in all eight semesters need to be 180. It is a just first revision after academic autonomy and the efforts are put in to make curriculum at par to the global demands.

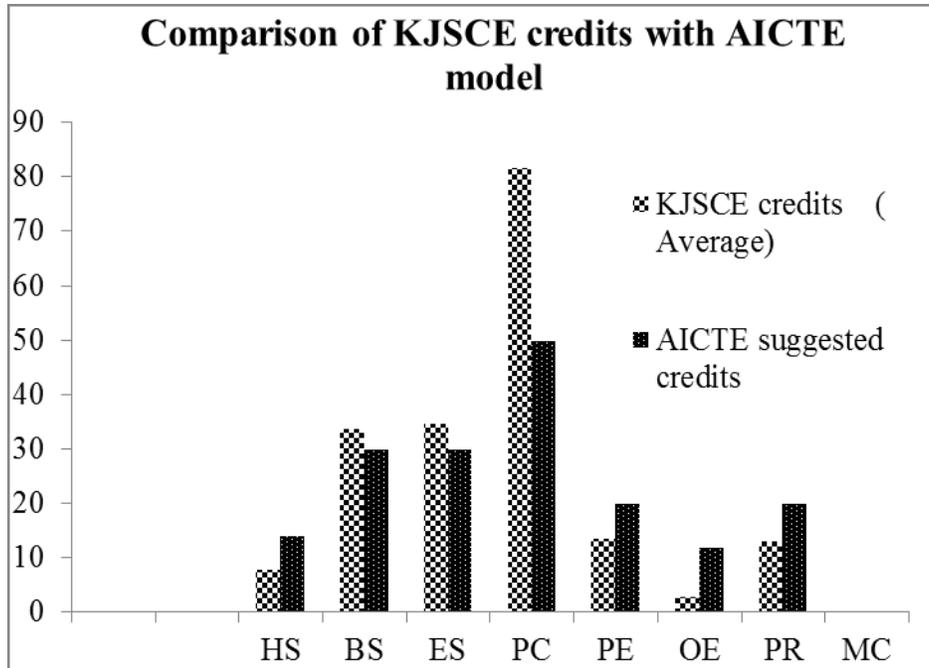


Fig 1.1.2 Curriculum Components in Percentage (AICTE & KJSCE)

The summary of analysis of KJSCE schema as compared to AICTE norms

- The Basic and Engineering Sciences including Mathematics and Basic Computing (generally included in the first year of Engineering and is common to UG programs) is to a level of 25-30% in terms of number of credits.
- The Professional Core and Professional Electives courses are to a level of 45-50%. Enough emphasis is given to design and analysis related courses in all the programs.
- The percentage wise contribution of courses on Project, Humanities and open electives is to a level of 10%, 5% and 8-10% respectively.
- As per the guidelines of statutory bodies, the mandatory courses on Environmental Science and Engineering Economics and Industrial Management are included in the curriculum.
- The curriculum also includes non-credit courses such as Industrial Visits, Case Studies, CSR activities, Team Building activities and specialized skill based programs etc.

1.2 Academic Flexibility

1.2.1 Give details on the following provisions with reference to academic flexibility

- a. Core / Elective options**
- b. Enrichment courses**
- c. Courses offered in modular form**
- d. Credit transfer and accumulation facility**
- e. Lateral and vertical mobility within and across programmes and courses**

Following provisions are made for flexibility in curriculum.

- **Professional Core Courses (UG)**
Professional Core courses include all the basic and higher level courses of corresponding program in addition to those required as per the Program Specific Criteria of corresponding international professional body. This establishes the equivalence of the graduate of this college with any other related engineering graduate anywhere in the world.
- **Elective Courses at UG**
For UG students, academic flexibility is extended by offering elective courses in VII and VIII semesters as per their choice for specialization in subarea of the chosen discipline.
- **Interdisciplinary Courses at UG**
The college provides academic flexibility to the students by offering interdisciplinary courses in semester VI. This allows students to choose the courses of their choice from any other department excluding parent department. These courses have been formulated to acquire breadth and knowledge from other engineering programs so that students are able to solve the real world engineering problems.
- **Choice for Project (UG)**
The students are given option in the VI semester to carry out their final year project in the industry or research institute or any other reputed academic college/in the department/across the department for the full term. The former option gives exposure to the students of industrial/research environment and helps them broaden their perceptions and views.
- **Enrichment courses (UG)**
Enrichment courses are offered as exposure and audit courses right from first year.
The list indicates the wide coverage of variety of topics ; foreign languages, law, finance management, virtual laboratories, Ahinsa, appreciation of visual art, music, history of Mumbai to name a few. These courses give students opportunity to acquire technical skills, personality development and knowledge of contemporary issues.
- **Professional Core Courses (PG)**
The core courses in each semester are offered to PG students. It is expected that the PG students of a particular program must have in-depth knowledge of that program irrespective of specialization in the chosen program.
- **Elective Courses (PG)**
For PG students, academic flexibility is extended by offering elective courses in I and II semesters as per their choice for specialization in subarea of the chosen discipline.
- **Enrichment courses (PG)**
Enrichment courses are offered as audit courses in semester I and II.
- **Courses offered in modular form**
KJSCE does not have courses offered in modular form as on date.

- **Credit transfer and accumulation facility**
KJSCE does not have system of Credit transfer and accumulation facility as on date.
- **Lateral and vertical mobility within and across programmes and courses**
Lateral entry to Diploma students is allowed at the second year of the UG program
Vertical entry in other program through branch transfer is allowed at the second year of the UG program.

1.2.2 Have any courses been developed specially targeting international students? If so, how successful have they been? If 'no', explain the impediments.

'No', at present no such courses have been developed specially targeting international students.

1.2.3 Does the College offer dual degree and twinning programmes? If yes, give details.

'No', at present KJSCE does not offer dual degree and twinning programmes. However three (03) KJSCE students are simultaneously doing BA / B. Com/ B.Sc. programs as per the rules and regulations of University of Mumbai, and can be considered as first step towards dual degree and twinning programmes

1.2.4 Does the College offer self-financing programmes? If yes, list them and indicate if policies regarding admission, fee structure, teacher qualification and salary are at par with the aided programmes?

KJSCE is self-finance private Gujarati linguistic minority autonomous college affiliated to University of Mumbai. All UG/PG (5 UG and 6 PG) are self-financing programmes. All the rules and regulations regarding admission are as per DTE, Maharashtra. The fee structure is decided by the state government authority.

1.2.5 Has the College adopted the Choice Based Credit System (CBCS)? If yes, how many programmes are covered under the system?

For all UG/PG programmes absolute credit based grading system is adopted by KJSCE. Choice based as well as relative grading system is not adopted in KJSCE as on date.

1.2.6 What percentage of programmes offered by the College follows:

- * Annual system
- * Semester system
- * Trimester system

All the programmes offered are Semester System

1.2.7 What is the policy of the College to promote inter-disciplinary programmes? Name the programmes and what is the outcome?

- For UG programme Exposure courses (during first year) / Audit courses (during III, IV and V semester) / Interdisciplinary Courses (during VI semester) / Electives (during VI, VII and VIII semester) are choice based.
- For PG programmes Audit courses (during I and II semester) / Electives (during I and II semester) are choice based.
- The first step taken is to introduce interdisciplinary courses in VI semester as per KJSCE 2014 syllabus revision. These courses will be now available with choice based system to the students during the term Jan.2017-April2017. This will lead to promote UG/PG programme itself interdisciplinary. The college is proposing PG course in Energy Engineering as interdisciplinary programme from the July 2017. The syllabus will be modified in accordance that.

1.3 Curriculum Enrichment

1.3.1 How often is the curriculum of the College reviewed for making it socially relevant and/or job oriented / knowledge intensive and meeting the emerging needs of students and other stakeholders?

- Curriculum of UG and PG programmes need to be reviewed and revised periodically based on the needs of the stakeholders.
- The college received academic autonomy in July 2014 and first revision of UG syllabus KJSCE14 is being implemented step by step. PG syllabus is revised from July 2016. Major modifications/revisions (e.g. structure of the syllabus) of UG syllabus will be done in July 2018 i.e. once in four years.
- At the end of every semester, learning outcomes of students are analysed. From feedback of students and faculty members gaps in content, delivery methods and evaluation methods are identified. Minor revisions deemed fit are reviewed and revised as per the procedure.
- In few cases such modifications would be carried out even during three years period to satisfy the emerging needs of the students and other stakeholders through proper approval process.
- In general as compared to the Mumbai University (MU) pattern the KJSCE revision is more inclined to the choice based, self-learning, skill development, and interdisciplinary education.

1.3.2 How many new programmes at have been introduced UG and PG level during the last four years? Mention details.

- * Inter-disciplinary
- * programmes in emerging areas

Following PG level programmes are added in last four years

- M. Tech Information security

- M. Tech Energy Engineering
- Ph.D. Electronics Engineering and Mechanical Engineering

1.3.3 What are the strategies adopted for revision of the existing programmes? What percentage of courses underwent a major syllabus revision?

The strategies adopted for revision of the existing programme are as follows:

- Formal and informal suggestions / feedback from stake holders and subject experts and its analysis
- Introduction of Major and Minor degree
- Reference to syllabi of nationally reputed autonomous / affiliated institutes
- Reference to guidelines on model Curriculum by AICTE
- Graduate Attributes
- Program specific criteria suggested by professional associations
- Emphasis on self and skill based learning

In recent revision of curriculum, about 30-40% courses underwent major change whereas in fundamental courses revision was for removal of obsolete topics, and restructuring. More focus is on hands on training and learning by doing which is ensured through special laboratory courses and mini projects. All courses are designed with focussed learning outcomes and its relevance to graduate attributes. Analysis of these learning outcomes helps in attaining the objectives.

1.3.4 What are the value-added courses offered by the College and how does the College ensure that all students have access to them?

- **Value-added courses:**
 - Somaiya Vidyavihar Campus and KJSCE strongly believe inculcating values and ethics in the students. The cultured and ethical behaviour of all faculty members and staff members along with traditional campus imparts values and virtues in the students.
 - In addition to that some courses like Ahimsa Darshan, Sanskrit, Buddhism and Science and Conscience are included to imbibe values in the students.
 - There are courses which add value to human life such as Appreciation of Visual art, Indian Classical Music, Dance, Painting and Sketching to name a few.
 - Courses such as Accountancy, Virtual Lab, and Web Programming help students grow as a professional.
 - These value added courses are introduced as core / elective / exclusive laboratory courses / exposure courses / audit courses / interdisciplinary courses. Except the core courses all the courses are choice based. In addition to curriculum student organisations organise various expert talks/training programs/activities etc. which further support value added courses.

1.3.5 Has the College introduced any higher order skill development programmes in consonance with the national requirements as outlined by the National Skills Development Corporation and other agencies?

- **Higher Order Skill Development**

- KJSCE is engaged in organizing many soft skill development programs for UG and PG students to enhance their employability by other agencies.
- The efforts currently being taken by the college to improve the skills of the students are as below:
 - The college conducts competitions and workshops to enhance knowledge and skills of the students.
 - Students are encouraged to participate in competitions held by Texas Instruments, IITs, MIT and other engineering colleges to test their capabilities in design and development of systems
 - Students participate in international racing car competition, Robocon etc.
 - Students are encouraged to take their final year project UG/PG dissertation in the industry to get the exposure to industry environment besides obtaining technical skills
 - The college is looking forward for higher order skill development at par to NSDC like agencies while developing syllabus.
 - Some of the other efforts made for skill development are
 - a) Introduction of Professional Practice laboratory in KJSCE 2016 PG syllabus
 - b) Various types of Audit courses like Entrepreneurship / Prototype to Product development / Sales and Marketing / Basic of Accounts / German Language etc.
 - c) To develop sports spirit exposure courses on various sports during first year
 - d) Massive Online Open Courses (MOOCs)
 - e) For spiritual development exposure course on Ancient Wisdom For Success is introduced since 2014 for first year
 - f) Exposure course on Painting and Sketching is introduced since July 2014 for first year students

1.4 Feedback System

1.4.1 Does the College have a formal mechanism to obtain feedback from students regarding the curriculum and how is it made use of?

- **Feedback from Students**

- A course faculty member collects the feedback from the students on attainment of learning outcomes of the course delivered. A feedback analysis for this Course Exit Report is done by the faculty members. A

rigorous analysis on that directs for the strengths and weaknesses of that course so that modifications in content or delivery or assessment can be carried out in the subsequent versions. A separate Graduate exit feedback is collected from the graduating students for their satisfaction on the attainment of program outcomes, the contents of curriculum and in general infrastructure of the department. Their genuine suggestions are taken into consideration while revising the contents of the curriculum.

- The informal feedback from students is always considered important and KJSCE academic system always takes care of positive suggestions. While running university curriculum, suggestions were implemented through the student activities / seminars / industrial visits / expert lectures / projects / laboratory work etc. as curriculum revision was beyond control of college.
- Since the college has been conferred autonomous status form July 2014, students are members of Subject board. There are many components which are introduced in KJSCE 2014 version which are based on the student feedback such as internships/audit courses/interdisciplinary courses/exposure courses/mini projects/self-learning components etc.

1.4.2 Does the College elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods adopted to do the same - (conducting webinar, workshop, online forum discussion etc.). Give details of the impact on such feedback.

- **Elicit Feedback**
 - The college does elicit feedback on the curriculum from the faculty of IITs and other autonomous colleges in the state. In fact, few of the members of SB and AB are from VJTI and IIT, Mumbai.
- The worth mentioning contributions in latest curriculum development (KJSCE 2014 UG and KJSCE 2016 PG) are:
 - Dr. Vaze from TIFR, Mumbai helped in upgrading the contents of Wireless Communication and he engaged some lectures for M. Tech semester I students during the academic year 2014-15.
 - One course on Energy Conservation & Management in M. Tech EE is introduced as per the suggestions from Dr. Andrew Hunter from Cornell University USA. He has taken this course for semester I M. Tech EE students during the term July 2016-November 2016.
 - Dr. S. S. Joshi, HOD Mechanical Engineering IIT, Bombay, helped in preparing the contents of course Rapid Prototyping and Digital Manufacturing for M.Tech.(CCR) Sem I (2016-17).
- The worth mentioning contributions in latest syllabus development is relevant to audit courses. The syllabus was set by the alumni/industry expert.
 - Dr. Sandeep Oberoi of TCS conducted an Audit course for semester III students during the term July 2015- November 2015
 - Mr. Parchure and Mr. Nimish Patki, KJSCE alumni, took Audit courses during academic year 2015-16 and will be taking in 2016-17.

1.4.3 Specify the mechanism through which alumni, employers, industry experts and community give feedback on curriculum enrichment and the extent to which it is made use of.

- **Feedback from Alumni and employers**
 - A structured survey questionnaire is given to alumni and employer for curriculum development, which reflects recent trends, industry needs and scenario of other universities and institutions of global standards.
 - Alumni and industry experts are also members of Subject boards. The informal discussion with them is also taken into consideration to revise the curriculum, lab facilities, central facilities etc. A thrust is given to identify the areas where graduates failed to perform as per expectations of the employers.
 - The most worth mentioning is preparation of M. E. Energy Engineering (EE) curriculum R-2012 of MU. Our faculty members' contribution is major and KJSCE is the only college which offers a need of the hour curriculum of EE. In development of this curriculum even though direct involvement of feedback mechanism was not involved the KJSCE faculty members made the syllabus contents student centric which has lead them to stand with professional competence needed in the field of energy engineering.

1.4.4 What are the quality sustenance and quality enhancement measures undertaken by the institution in ensuring effective development of the curricula?

- **Quality Sustenance and Enhancement measures**

Curriculum of KJSCE is developed by the Subject Board considering following aspects:

- AICTE Model Curriculum
- Curriculum of University of Mumbai and other autonomous colleges
- Vision , Mission of KJSCE
- Industrial Requirements
- Students Expectations
- Overall Development of Student

Highlights of KJSCE schemes:

The uniformity is maintained across the departments and care is also taken that the students will get opportunity for self-development.

UG KJSCE 2014 Scheme

- Choice based Exposure courses during FY B. Tech
- Choice based Audit courses during semester III/IV/V
- Choice based Interdisciplinary courses in VI semester

- Encouragement for internships within the college and outside
- More time for self-development as load per week is limited to 27-31 hours
- Student development policy supportive to curricula to encourage students to participate in various workshops/competitions/conferences etc.

The KJSCE autonomous PG syllabus is implemented from first year students admitted in July 2016. Following measures are taken for PG courses

PG KJSCE 2016 scheme

- Mandatory Non-credit Courses namely Research Methodology and Computational Methods and Optimisation Techniques introduced in first year.
- Professional Practices laboratory is introduced in both semester I and II
- Choice based elective courses in semester II such that student may develop specialisation in the field of own choice
- Encouragement for internship within the college and out side
- Encouragement for publications based on M.Tech Project.
- Internship and project both are included in the industry oriented M. Tech course on Information security
- Internship is introduced in M. Tech Mechanical (Energy Engineering) syllabus at the end of first year.

Thus, KJSCE aims at transforming a student entering the college into a professional with strong knowledge, skills developed in variety of fields and social awareness.

CRITERION II
TEACHING-LEARNING AND EVALUATION

2.1 Student Enrolment and Profile

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

- **Admission:**
KJSCE strictly follows all rules for Admissions, set by, the Directorate of Technical Education (DTE) Maharashtra and the University of Mumbai, from time to time.

- **Publicity and Transparency**
 - The seats are divided into two parts; Central Admission Process (CAP) (34%) and Institute Level Seats (51 +15 %) (Including Gujarati Linguistic Minority & Non Resident Indian (NRI) seats). KJSCE has approval for admitting students under NRI category in all 5 UG programs and additional 15% seats under category of Foreign Nationals (FN) / Person of Indian Origin (PIO) / Children of Indians Working in Gulf Countries (CIWGC) in Mechanical Engineering Program. In the past 7 years KJSCE is participating in Educational Exhibitions organized in various Gulf countries and is efficacious in attracting good number of students from these countries.
 - The CAP being conducted by the DTE, information about that is displayed on www.dtemaharashtra.gov.in website as well in newspapers from time to time. The Institute Level quota seats as well as Minority seats are filled at college level. College displays admission process through their website www.somaiya.edu/kjsce and admission schedule is advertised in National as well as Regional & Vernacular newspapers. The admission guidelines are displayed on the various notice boards as well as an inquiry counter for admission is also set up from May last week of every year.
 - The entire lists of students who have applied for Minority as well as Institute Level Seats are displayed on the notice boards and the admissions are offered through counseling in open and transparent manner strictly on Merit.
 - The information about the admission procedure, guidelines, syllabus, evaluation pattern, Academic fees etc. is uploaded on the website www.somaiya.edu/kjsce. KJSCE prospectus is also available online.

2.1.2 Explain in detail the process of admission put in place for UG, PG and Ph.D. programmes by the College. Explain the criteria for admission (Ex. (i) merit, (ii) merit with entrance test, (iii) merit, entrance test and interview, (iv) common test conducted by state agencies and national agencies (v) others followed by the College?

Table 2.1.1 gives details of admission procedure.

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Table: 2.1.1 Information Regarding Admission

Course	Type of Seats	Website and Information Shared by
UG	CAP	www.dtemaharashtra.gov.in DTE Maharashtra
	Institute Level & Minority	www.somaiya.edu/kjsce College
PG	CAP	www.dtemaharashtra.gov.in DTE Maharashtra
	Minority	www.somaiya.edu/kjsce College
Ph.D.	All	www.somaiya.edu/kjsce College

• **Process of Admission**

The eligibility criteria as per DTE norms and the entrance test conducted / authorized by them are as follows:

UG Programs:

Table 2.1.2: Entrance Test & Eligibility Criteria for UG Programs

Year of Admission	Entrance Test	Qualification Criteria
2011-12	MH CET	50% in MPC (Maths , Physics , Chemistry) at 12 th or equivalent examination
2012-13	MH CET	50% in MPC at 12 th or equivalent examination
2013-14	MH CET	50% in MPC at 12 th or equivalent examination
2014-15	JEE mains	50% in MPC/ Vocational Courses at 12 th or equivalent examination
2015-16	JEE Mains	50% in MPC at 12 th or equivalent examination
2016-17	MH CET	50% in MPC/ Vocational Courses at 12 th or equivalent examination

MH CET: Maharashtra State Common Entrance Test (Conducted by DTE Maharashtra)

JEE: Joint Engineering Entrance (Conducted by IITs on National Level)

The Admission Process for UG changes every year and the process for Academic year 2016-17 is as follows. College as Gujarati Linguistic minority and 51 % seats (61) in each Program are reserve for Gujarati Speaking candidates. The Minority Seats and Institute Level seats (Except NRI) admitted through Central Admission Process. Even NRI seats are admitted by DTE registration.

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Table 2.1.3: Two levels where the admissions are offered in UG

Category	Process
<p>Admission after Passing 12th Examination and State Level Common Entrance/ Joint Engineering Entrance (JEE) National Level</p>	<ol style="list-style-type: none"> 1. Issue of notification- published in the leading Newspaper and websites www.dtemaharashtra.gov.in 2. Availability of online prospectus and applications 3. Filling of Online Application Form for Centralized Admission to Engineering/Technology by eligible candidates 4. Conducting the CET and publishing the results. 5. Publishing counseling dates and schedule on the websites as well as in newspapers. 6. Document Verification & Confirmation of Online Application form at Facilitation Centers (FCs) 7. Display of Provisional Merit List of candidates who have confirmed the online Application Form on website 8. Submission of Grievances (if any) at FC 9. Display of Final Merit List of candidates on website. 10. Filling and Confirmation of Option forms by candidate through his/her Login. 11. Display of Allotment of CAP Round on website. 12. Confirming the choice as Freeze/ Slide/ Float for the seat offered in this round in Admission Reporting to Admission Reporting Centers (ARCs) as per allotment of CAP Round. 13. Those who have not selected Freeze option, next reallocation of the seats as per merit by DTE in successive Rounds 2 & 3 and steps 11 & 12 are followed. 14. Reporting to the respective College/ Institute for conformation of admission. 15. Conduction of Vacancy round by KJSCE to fill-in vacancy seats, if any, after Round 3 before the Cut-Off date set by DTE.
<p>Direct admission to Second Year of UG program for diploma passed students.</p>	<p>There is a provision for Diploma holders for admission in the second year of the B. Tech. Program (20% seats) under Lateral entry scheme. The admission is based on the marks obtained in Diploma examinations conducted by Maharashtra Board of Technical Education. These admissions also are governed centrally at the state level, the detail information of which is available in the website www.dtemaharashtra.gov.in</p> <p>The admissions to second year of a particular branch are exercised by the college for the eligible and desiring students in case there is vacancy due to year down students in the first year examinations. The rules for this are published on KJSCE website www.somaiya.edu/kjsce as academic Rules and regulations document. On the basis of inter-se-merit the branch transfer is offered.</p>

PG:

Table 2.1.4: Entrance Test & Eligibility Criteria for PG Programs

Year of Admission	Qualification Criteria
2011-12	GATE / Sponsored / Non-GATE
2012-13	GATE / Sponsored / Non-GATE
2013-14	GATE / Sponsored / Non-GATE
2014-15	GATE / Sponsored / Non-GATE
2015-16	GATE / Sponsored / Non-GATE
2016-17	GATE / Sponsored

GATE: Graduate Aptitude Test in Engineering Conducted by IITs on National Level

Ph.D:

Admission to Ph.D is as per the rules and regulations of the University of Mumbai as Regular student. The details are available on www.somaiya.edu/kjsce

2.1.3 Does the College have a mechanism to review its admission process and student profiles annually? If yes, what is the outcome of such an analysis and how has it contributed to the improvement of the process?

- **Review of Admission Process**
 - A separate Admission- In-charge is appointed who is responsible for conducting admission process. A committee is constituted consisting Vice- Principal, Senior Faculty members, Registrar, Support staff and Administrative staff. The committee plans the various activities and looks after the entire admission process. The review and analysis of the admission process is done at the end. The students' profile is generated.
 - Outcome of this analysis: The admission process was further improved by implementing the following suggestions as put forward by the admission committee
 - Payment gateway was integrated for ease in paying fees for the students. For off-line payment of fees, bank cashiers were deputed for collecting the demand drafts at our counters.
 - After completion of admission process, the comprehensive statistical profile of the students on the basis of the category, mother tongue (as KJSCE is a Gujarati Linguistic Minority) is carried out to decide academic strategies for the year.

2.1.4 What are the strategies adopted to increase / improve access to students belonging to the following categories

- * SC/ST
- * OBC
- * Women

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- * **Different categories of persons with disabilities**
- * **Economically weaker sections**
- * **Outstanding achievers in sports and extracurricular activities**
- **Strategies to increase access**
 - As college has Gujarati Linguistic Minority, no other reservations are applicable. 51 % of the seats in each program are reserved for Gujarati speaking candidates.
 - Strategies used for improving access to students of various categories are mentioned below.
- **Economically weaker section:**
 - Along with the Government directives to admit students belonging to the economically weaker section under Tuition Fee Waiver (TFW) category admitted through DTE.
 - Additionally, College offers scholarships to needy students from selected programs. From year 2014-15 onwards, College offers Need-cum-Merit Scholarship in the form of 50% tuition fee waiver to 5 students whose annual family income is less than a predefined amount (currently INR 4,50,000.) 3 students from Electronics Engineering and 2 students from Information Technology who are admitted in the round 1 of any of the CAP/ ILS/ Minority rounds are eligible to apply. These students would continue to get this benefit throughout the 4 years of their degree.
 - The Faculty & Staff members of KJSCE has started an initiative “People United for Students Help” (PUSH), where need based scholarships are awarded. This money is collected from contributions of the Faculty & staff members.
 - KJSCE has also been able to have good interaction with industries which has enabled additional need cum merit scholarships e.g. Mohan T Advani Centennial Scholarship by Blue Star Foundation, JSW Foundation etc.
 - The details of various scholarships offered are available on www.somaiya.edu/kjsce
- **Physically Challenged:**
 - KJSCE has created facilities to attract good number of students. Along with the mandatory requirements of infrastructure, college takes care for physically challenged students by providing special learning aids, using different evaluation Methodology & assessment tools etc. This has been reflected in the increased number of students admitted under that category through centralized process.
- **Non Resident Indians (NRI)/ Foreign Nationals (FN)/ Person of Indian Origin (PIO) Over Seas Citizen of India (OCI)/ Children of Indian Workers in Gulf Countries (CIWGC) quota:**
 - KJSCE has permission to admit students under the above mentioned categories.
 - Every year college participates in various Educational Fares arranged in different countries to attract the students. This helped in attracting

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meritorious students from various countries such as Kuwait, Saudi Arabia, Oman, Qatar, UAE, Singapore, Malaysia etc. to name a few.

- Majority of parents visit the college, well in advance, and are impressed with the facilities available on campus. The academic ambience, transparency followed right from admission to the examination system has impressed the parents and the aspirant students. The sports facilities in the campus and wide choice of activities in the college attract students. The records show siblings preferring KJSCE and students from same schools showing interest in securing admission in KJSCE. Good hostel facility enables them to take admission.
- **Outstanding performers in Sports and Extra-curricular Activities:**
 - Facilities available on campus and wide choice of activities attract students.

2.1.5 Furnish the number of students admitted in the College in the last four academic years.

UG Admission Data:

- Since college has Gujarati linguistic minority no other reservation is applicable.
- Admission of 51% students from Gujarati linguistic quota is mandatory

Table 2.1.5: Number of students admitted Category-wise in UG courses

Category	2011-12		2012-13		2013-14		2014-15		2015-16	
	Year 1		Year 2		Year 3		Year 4		Year 5	
	M	F	M	F	M	F	M	F	M	F
General	213	76	192	94	214	78	206	74	193	89
Gujarati Minority	247	58	251	54	245	60	252	47	248	53
ST	--	--	--	--	--	--	--	--	--	--
OBC	5	2	3	1	4	0	8	1	9	2
SC, NT1, NT2, NT3, DT	--	--	--	--	--	--	--	--	--	--
Physically Handicapped	7	1	11	6	8	1	6	0	6	0
Other TFW (Sports, Ex-servicemen etc.)	24	6	24	5	19	6	25	3	21	2
Total Number	496	143	481	160	490	146	497	125	477	146

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PG Admission Data:

Table 2.1.6: Number of students admitted Category-wise in PG courses

Category	2011-12*		2012-13*		2013-14		2014-15		2015-16	
	Year 1		Year 2		Year 3		Year 4		Year 5	
	M	F	M	F	M	F	M	F	M	F
General	16	36	24	12	19	15	25	14	37	37
Gujarati Minority	0	0	9	10	8	7	13	16	5	2
ST	0	1	0	0	0	0	0	0	0	0
OBC	5	5	1	2	2	5	4	2	16	7
SC	2	0	2	0	2	1	0	2	2	2
NT 1, NT2, DT	--	--	--	--	--	--	--	--	--	--
NT 3	--	2	--	--	--	--	--	--	--	--
Physically Handicapped	NA									
Other TFW (Sports, Ex-servicemen etc.)	NA									
Total Number	23	44	36	24	31	28	43	34	60	48

* Only Four Programs

2.1.6 Has the College conducted any analysis of demand ratio for the various programmes offered by the College? If so, indicate significant trends explaining the reasons for increase / decrease.

○ **Analysis of demand ratio**

UG:

- Till admissions of academic year 2015-16, out of the 600 sanctioned intake, 175 local along with 30 TFW students are admitted by DTE through CAP. As such, the number of applicants is not known for carrying out analysis for demand ratio.
- Even at the institute level admissions, choice for a particular program is a part of the admission process. So program-wise application forms are not collected. Hence, it is not possible to carry out a program-wise demand analysis.
- It can be observed from the following table that, in the past five years, number of application forms received in both, Minority as well as Institute level admissions, is significantly higher as compared to their sanctioned intake.

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Table 2.1.7: Number of students admitted against application forms received UG courses

Year		Sanctioned Intake	
		Minority (305)	Institute Level (120)
2011-12	Admitted	305	120
	Applicants	1210	1220
	Demand ratio	3.97	10.17
2012-13	Admitted	305	120
	Applicants	1396	1595
	Demand ratio	4.58	13.29
2013-14	Admitted	305	120
	Applicants	1393	1447
	Demand ratio	4.57	12.06
2014-15	Admitted	299	120
	Applicants	1268	1476
	Demand ratio	4.24	12.30
2015-16	Admitted	300	120
	Applicants	1079	1626
	Demand ratio	3.60	13.55

PG:

Table 2.1.8: Number of students admitted against applied PG courses

Year	Minority	CAP	Filled in Seats	Sanctioned Seats
2011-12	00	67	67	72
2012-13	19	41	60	72
2013-14	15	44	59	90
2014-15	29	48	77	108
2015-16	108		108	108

* Since minority seats were surrendered for Centralized Admission Process (CAP), the admissions were carried out through CAP. Hence no information regarding no of applications received for the college is available.

2.1.7 Was there an instance of the College discontinuing a programme during last four years? If yes, indicate the reasons.

No, none of the programmes of the college has been discontinued in last four years.

2.2 Catering to Student Diversity:

2.2.1 Does the College organize orientation / induction programme for freshers? If yes, give details of the duration of programme, issues covered, experts involved and mechanism for using the feedback in subsequent years.

- **Orientation program for freshers:**
 - KJSCE organizes formal orientation program at the start of the First Year for both UG & PG students.
 - Schedule of such orientation program is displayed on the website. The program is for the fresher as well as their parents. The students admitted in different programs are invited to assemble in the auditorium. Principal, Vice Principal, Dean Students' Affair, respective head of the Department and Students' Council, addresses the students. Students are briefed about the temple of learning where they are going to shape their careers. They are introduced to ethos and culture of Somaiya Vidyavihar by motivational speeches and presentations. They are also apprised regarding history and past performance of the institution to give them sense of their challenge and lineage to which they belong to.
 - An informal departmental level orientation program is arranged for the students directly admitted in the Second year (lateral entry).
 - During these interactions, the students are briefed about the benefits of Academic Autonomy, need and importance of Exposure Courses offered in the First year, highlights of Academic calendar, Rules and Regulation of the college, Importance of Attendance, Mentorship (Proctor) System, etc. They are also informed about the infrastructural facilities, Laboratory & Library Facilities, Sports facilities and Hostel facility available to them. They are introduced to Students' Associations & Activities which enable their all-round development.
 - In a separate session, the Controller of Examination discusses different evaluation and grading systems, importance of continuous assessment, etc. prevalent in the college.
 - Every year Freshers' Eve is arranged to welcome the newly admitted students. This helps to create warm relationship between the seniors with juniors.

2.2.2 Does the College have a mechanism through which the “differential requirements of student population” are analyzed after admission and before the commencement of classes? If so, how are the key issues identified and addressed?

Following are the attempts by KJSCE, to cater to requirement of admitted students

- KJSCE admits students under NRI category, who are from various countries and background. To make them comfortable and to bring them at par with local students, additional lectures are arranged during the weeks before the

- other students join the college. This gives them a breathing time to adjust in the new environment away from their homes and in a new academic system.
- An audit course in Mathematics is conducted for the students admitted directly in the Second Year (after competing Diploma). This helps them in handling various other Mathematics based courses in their programs. Extra coaching sessions are arranged for lateral entry students, depending on their need in various courses of Semester III.
 - To cater to the need of improvement in Communication skills of the students studied in vernacular medium, a Language Laboratory is setup.
 - KJSCE has received Academic Autonomy from year 2014-15. This has made it possible to offer Exposure Courses in the First Year of Engineering and Audit Courses in the semester III, IV and V. The idea while introducing such courses is to boost interdepartmental activities, create opportunity to learn courses other than defined for an enrolled discipline, nurturing their hobbies, aspirations as well as for overall development of the students.

2.2.3 Does the College provide bridge /Remedial /add - on courses? If yes, how are they structured into the time table? Give details of the courses offered, department-wise/faculty-wise?

Bridge Courses:

- Yes, the college does provide bridge courses for the topics having gaps in the syllabus.
- Generally such gaps are covered by the guest lectures/ workshops whenever required (for better learning / hands on purpose of the continuity of the subject matter) after the regular time table.

Remedial Classes:

- Special efforts are taken for weak students or those who have failed in certain courses as the case may be. Extra Sessions are then conducted which helps in solving individual problems. e.g. Applied Mathematics For Semester I & II, Advanced VLSI for Semester VII and VIII in Electronics Engineering Department.
- College has a very good mechanism for continuous evaluation and monitoring the progress of the students. This helps to identify slow learners.
- Slow learners are given enough assistance during tutorial classes by clarifying their doubts, re-explaining the critical conceptual topics.
- Faculty members upload their lectures on learning Management System or Google classroom to facilitate learners to download those and learn at their own pace.
- The students remaining absent frequently and hence failing in performance are counseled, their parents are consulted and collective efforts are taken by the parents and the institute to see that students attend the classes regularly.
- National Programme for Technologically Enhanced Learning (NPTEL) Courses is made available which are accessible through wi-fi connectivity from anywhere in the campus.

2.2.4 Has the College conducted a study on the incremental academic growth of different categories of students; - student from disadvantaged sections of society, economically disadvantaged, physically challenged and slow learners etc.? If yes, give details on how the study has helped the College to improve the performance of these students.

Incremental academic growth of different categories of student:

- **Disadvantaged sections of society, economically disadvantaged, physically handicapped and slow learner**
 - There has been no formal study conducted to monitor academic growth of various disadvantaged sections of society. However efforts are made so that no student coming from any disadvantaged background gets a feeling of alienation. While, physical infrastructure helps the learning of physically challenged students, various schemes of financial assistance available in the college take care of students coming from financially weaker section (chapter 7.3).
 - The peer group support is provided to physically handicapped student. Extra care is taken for their academic growth by giving them required support.
 - KJSCE has a counseling cell handled by professionals, to guide students in psychological needs and as well as for career counseling.
 - A Book Bank facility is provided to those needy students. Paying nominal reading charges, students can use the standard books for the entire semester.

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

- **Needs of advanced learners**

KJSCE has a separate committee to assist students to participate in Industrial Training Programs, Dual degree, participation in MEGA projects, competitions like eYantra.

Table 2.2.1: Number of students undergone Internship

Program	2011-12	2012-13	2013-14	2014-15	2015-16
UG	2	18	110	280	276
PG	--	--	--	04	20

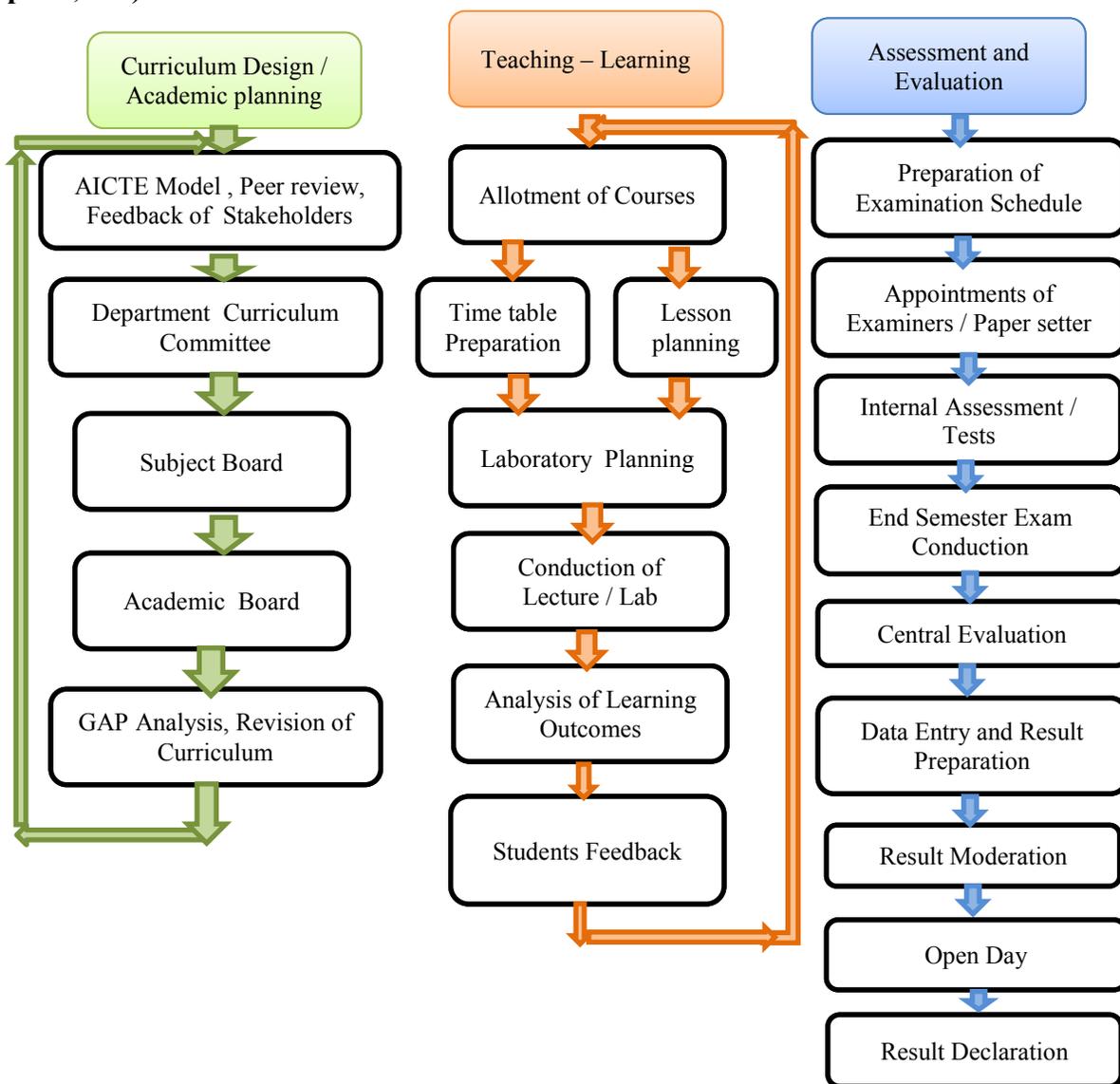
2.2.6 How does the institution cater to the needs of differently-abled students and ensure adherence to government policies in this regard?

- **Needs of Differently abled students**
 - Though the physically and visually challenged students enrolled are very few, the following provisions have been made for their convenience:
 - Ramps are available to make the movement less tiresome for those on the wheel chairs. Extra time is provided for differently-abled students in examination, additional time is allotted to Dyslexia Students to complete their theory paper as per the University ordinance. KJSCE permits writer

to physically and Visually Challenged students during their examination as per the University guidelines. Different evaluation scheme is designed for Visually Challenged students providing them an opportunity to exhibit their competency.

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 and evaluation blue print, etc.)



- **Planning of the Teaching, Learning and Evaluation Schedules**
KJSCE plans Teaching, Learning & Evaluation schedule as follows:

- **Teaching & Learning:**
 - At the beginning of every semester, an Academic Calendar, comprising all activities for the semester, is planned.
 - This is prepared by Dean Academic Program for the entire College and is displayed on KJSCE website before the commencement of the semester.
 - The Class time table is prepared by time table committee of each Department adhering to the guidelines. This is displayed on the notice boards and website for students, well before the commencement of the semester.
 - For every course taught in a semester Course Information Sheet (CIS) is prepared by faculty in-charge. The Learning Outcomes along with the target levels of attainment of the same are decided. Tools used for teaching as well as for assessment are announced to students. The suggestions from gap analysis about improving the delivery of the course are incorporated in the CIS. These CIS helps in assessment of learning Outcomes.
 - A Learning Management System (LMS) is used for sharing resources, continuous assessment, collecting Course Feedback as well as Teacher's feedback.

- **Evaluation:**
 - The evaluation is continuous and spread over the entire semester. 40% of the weightage is for Continuous Assessment (Test1, Test 2 & Internal Assessment) & 60 % End Semester Assessment.
 - Tentative dates of commencement of Internal Assessment (IA) and End-Semester Examination (ESE) are announced at the beginning of the semester. Detailed time table is displayed on the website, notice boards.
 - Centralized Assessment of Papers is carried out for all ESE.
 - For every assessment tool used such as Quiz, Assignment, Experiment etc., Rubrics are discussed with peers and displayed. This brings transparency in evaluation process of internal assessment. The syllabus for these examinations is shared with students well in advance. Detailed evaluation scheme for IA and ESE is shared with the students. The assessed papers are shown to the students including the ESE on open day.
 - ESE papers are blind masked for impartial assessment. In case of poor performance or very high performance of the students in this examination 100% moderation is carried out by second examiner.
 - Marking scheme for Tests as well as ESE are prepared and shared with the students. On Open-day students have access to the assessed ESE papers.

Highlights of the process:

- Well planned academic calendar
- Slot time table
- Content delivery and assessment tools with a focus on learning outcomes
- Assessment of Learning Outcome attainment-and gap analysis
- Use of LMS
- Continuous (within semester) assessment having 40% weightage while ESE having 60% weightage

2.3.2 Does the College provide course outlines and course schedules prior to the commencement of the academic session? If yes, how is the effectiveness of the process ensured?

- **Course Schedules**
 - The details of Course outline, Units in course and Evaluation Scheme are disseminated through Website, Intra-net before commencement of the academic session. The printed copies of these are available in the library. Course Outcomes (CO) are defined as part of syllabus.
 - The same is also discussed with the students in the first lecture.

2.3.3 What are the courses, which predominantly follow the lecture method? Apart from classroom interactions, what are the other methods of learning experiences provided to students?

- **Variety of Learning Experiences**
 - Most of the courses follow the conventional lecture methods.
 - Apart from class room interactions, variety of learning experiences are provided to the students based on:
 - ✓ Project Based Learning:
 - Group Project
 - Mini Project.
 - ✓ Opportunities of Experiential Learning
 - ✓ Hands-on experience of laboratory Instruments
 - ✓ Internship
 - ✓ Workshops/ Seminars/ Guest Lectures
 - ✓ Industrial Visits / Field Trips
 - ✓ Online Courses conducted by IITB under Blended Massive Open Online Courses (MOOCs)
 - ✓ Video lectures of Eminent Professors of IIT are made available through National Program on Technology Enhanced Learning (NPTEL)
 - ✓ Use of Kindle which are lent to the students permits access the E-books.
 - ✓ Introduction of Self learning topics in syllabus extends the learning beyond the specified topics, covering the latest trends in the area, etc.
 - ✓ Library has software which allows students to practice competitive examinations such as GATE.

2.3.4 How is 'learning' made more student-centric? Give a list of participatory learning activities adopted by the faculty that contribute to holistic development and improved student learning, besides facilitating life-long learning and knowledge management.

- **Student Centric Learning**
 - Taxonomy of education lays emphasis on the fact that knowledge is not to be just imparted but should be synthesized in interaction. KJSCE believes in this philosophy.

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- Right from curriculum design, importance is given to the opinion of the students in the Subject Board where Alumni and current students have mandatory representation. Exposure courses, Audit Courses, Inter-Departmental Course as well as the Electives in the last two semesters give them the opportunity to choose the courses.
- Options in the internal evaluation pattern are also offered to the students. The students are allowed to select either mini project or a list of specified practical as a part of their internal evaluation. For some courses the experiment list consists of one experiment based on students' choice.
- Some of methodologies used for student centric learning are:
 - Experiential Learning while doing Field- Project, Field/ Industrial Visit,
 - Internship,
 - Project Based Learning: Mini Projects and Projects as a part of evaluation
 - Seminars & Presentations
 - Massive Open Online Courses (MOOCs)
 - Organizing college festivals

2.3.5 What is the College policy on inviting experts / people of eminence to provide lectures / seminars for students?

- The gap between the curriculum and industry needs is bridged with the help of interacting with experts in relevant fields. Guest lectures, workshops, etc. are conducted both for students as well as faculty members.
- The college encourages the departments to organize expert lectures by inviting faculty from IITs, reputed academic institutes (national or international) and industry experts.
- New courses are designed and taught by industrial experts.

2.3.6 What are the latest technologies and facilities used by the faculty for effective teaching? Ex: Virtual laboratories, e-learning, open educational resources, mobile education, etc.

- **Use of latest technologies for effective teaching**
 - All faculty members are provided with individual laptop, which they can use for preparing for the lecture as well as at the time of delivery.
 - All class rooms are fitted with a Multi Media Projectors and a LAN connection for effective teaching.
 - The entire campus of KJSCE is Wi-Fi enabled which allow students to access internet.
 - Each student , faculty & staff member is provided with Somaiya mail id which could be used lifelong. This helps in creating groups for sharing important information and submission.

- Several workshops are held by professionals to apprise & train the faculty member for usage of Google Apps, Google Classrooms, Google Drive. These are used during teaching learning
- A customized Professional Learning Management system is used for conduction of online quizzes, sharing information, collecting feedback, and preparing documents for various accreditation related work.
- Virtual Lab is used for conduction of laboratories of courses across various departments.

2.3.7 Is there a provision for the services of counselors / mentors/ advisors for each class or group of students for academic, personal and psycho-socio guidance? If yes, give details of the process and the number of students who have benefitted.

• **Student Mentoring System**

- The physical and mental well- being is at the core of human development. KJSCE believes in providing counseling at various stages of career.
- A Medical Professional is available on Campus on all the working days and in the college during specified timings.
- A professional Psychiatrist is available for psycho-socio guidance.
- A separate Career Guidance cell is formed which provides Career guidance though professionally trained career counselor.
- Proctor System: Each Faculty member is assigned around 20 students and these students will remain with him/ her for the entire program duration. Proctor meets formally to these students. This proctor acts as a one point of contact for support and advice for parents to know academic and overall progress of student. The proctor helps in solving academic as well as non-academic difficulties by the student. This also helps in grooming the student through the continuous guidance on various issues. This system develops the bond between the student and College.

2.3.8 Are there any innovative teaching approaches/methods/ practices adopted/put to use by the faculty during the last four years? If yes, did they improve the learning? What methods were used to evaluate the impact of such practices? What are the efforts made by the institution in giving the faculty due recognition for innovation in teaching?

• **Innovative teaching approaches**

- Use of LMS, Google classroom for supplementing classroom teaching by study material for learning at the pace of student.
- Use of ICT techniques such as TPS, DIY
- Mini projects are included in some courses to encourage finding solution to real life problems.
- Virtual laboratory facilities are used to support regular laboratory work.
- Audit courses and exposure courses help students to learn courses beyond technical fields.

2.3.9 How does the College create a culture of instilling and nurturing creativity and scientific temper among the learners?

- **Creativity and scientific temper among the learners**
 - KJSCE offers an opportunity to the students to listen to eminent personalities from industries and research institutes of national repute by organizing Expert Lectures.
 - Alumni pursuing higher studies in India and abroad are invited to interact with students share their experience, motivate students to take up final year projects involving Research and Developmental activities, etc.
 - KJSCE encourages students' participation in co-curricular activities organized in the parent institute or any other institute, taking part in paper presentation, project competition, Technical Quiz, Poster presentation etc. This develops self- learning attitude, analytical skills, communication skills and creativity. This is supported by Student Development Committee (SDC) which also caters to financial assistance for such activities.
 - Students participating in mega projects such as the Formula Race Car, the All-Terrain Vehicle, Energy Efficient Vehicle, Robotics, etc. need to work on building a new prototype every year while they participate in national / international competitions. Such activities help the students inculcating research along with independent thinking. Looking at the developmental work that needs to be put in, the college gives them seed money to enhance their infrastructural needs or as assistance in competitions.
 - In order to create innovation ecosystem and synergy between various institutions of Somaiya Vidyavihar, a unique incubation center called Research Innovation Incubation Design Lab (RiiDL) has been established. It is a facilitating center for converting brilliant ideas of the students into start-ups, by extending complete support for technology incubation and star up incubation, filing patent, etc. Till date it has filed 14 patents and 24 start-ups.
 - BloomBox is the entrepreneurship cell of KJSCE which extends support budding entrepreneurs.
 - Prakash is an Inter-Collegiate Project Competition organized to display the project ideas implemented by students. Technical Paper Presentation competition is also part of the Technical Festival.
 - KJSCE-MUN (Model United Nation), Code Cell part of Code Chef is few other student activities of the college where students are very active and learn by examples in such initiatives.

2.3.10 Does the College consider student projects a mandatory part of the learning programme? If so, for how many programmes is it made mandatory?

*** Number of projects executed within the College**

*** Names of external institutions associated with the College for student project work**

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*** Role of the faculty in facilitating such projects**

• Student Projects

All UG & PG programs include Project as one of the mandatory part of evaluation.

Table 2.3.1 Number of UG Projects Executed within KJSCE.

Programs in	2011-12	2012-13	2013-14	2014-15	2015-16
COMP	46	51	38	46	47
ETRX	47	46	38	54	42
EXTC	46	40	37	40	37
IT	48	50	48	53	47
MECH	57	58	54	61	60

Table 2.3.2 Number of PG Projects Executed within KJSCE.

Program in	2011-12	2012-13	2013-14	2014-15	2015-16
COMP	--	18	17	12	15
ETRX	18	16	10	08	08
EXTC	16	13	17	15	17
IT	--	--	--	00	00
MECH (CCR)	08	11	11	04	10
MECH (EE)	--	--	05	12	18

Few names of The External Institutions associated with the college for students project Work:

- Bhabha Atomic Research Center (BARC)
- Larsen Toubro Ltd.
- Larsen Toubro InfoTech
- Godrej and Boyce
- Force Motors
- IDAPL
- SAMEER
- IIT Bombay
- Anticorruption Bureau

• Role of faculty members in facilitating in such projects:

- Every project group executing projects within the college a mentor is assigned, to guide them right from, selection of the topic, implementation & presentation.
- For projects implemented outside, along with the Mentor from that organization, an Internal guide is assigned to keep track of the progress. Project Committee of the Department keeps track of the progress of these projects by conducting repeated progress presentation seminars. These seminars are also part of the project evaluation.
- External examiners appointed to the internal examiners for evaluation of these UG program projects are predominantly from industry. This helps to improve the quality of projects.

2.3.11 What efforts are made to facilitate the faculty in learning / handling computer-aided teaching/ learning materials? What are the facilities available in the College for such efforts?

- **Computer Aided Teaching/ Learning Facilities**
 - All faculty members are provided with individual laptop, which they can use for preparing for the lecture as well as at the time of delivery.
 - All class rooms are fitted with a Multimedia Projectors and a LAN connection for effective teaching.
 - KJSCE has dedicated 155Mbps internet connection.
 - KJSCE organizes various workshops for Non-Teaching staff to facilitate learning computers.
 - Google Classrooms, Learning Management Systems etc. are used to develop the learning environment.
 - Students are encouraged to use NPTEL courses, participate in MOOCs, use Virtual Labs, etc.
 - e-Library provides access to number of e-books as well as research papers and Kindles are available for such purpose.
 - e-journals can also be accessed from remote locations.
 - Wi-Fi enabled campus gives opportunity for learning from anywhere in the campus.

2.3.12 Does the College have a mechanism for evaluation of teachers by the students / alumni? If yes, how is the evaluation used in achieving qualitative improvement in the teaching-learning process?

- **Faculty Feedback for improvement in Teaching –Learning Process**

All faculty members are evaluated by the students for every course in each class they teach.

 - Feedback form is designed at the institute level to keep uniformity.
 - Form is made available online and it is anonymous. The average of each question is then calculated for each teacher for each course.
 - The feedback consists of objective as well as subjective questions providing a facility for descriptive comment.
 - The feedback is shared with the teacher for improvement.

Based on the feedback received through this process, due correctives actions are taken. This includes using portable Public Address (PA) system for those having low audibility.

2.3.13 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.

- **Execution as per academic calendar**

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- Academic Calendar of KJSCE is planned meticulously. It contains teaching schedule of 13 weeks apart from midterm test examinations and college festivals.
- In the timetable an hour is marked as “Make-up” class for conduction of classes missed by a teacher due to personal reasons. KJSCE works from Monday- Friday and Saturdays are non-instructional. Some Saturdays are utilized to conduct extra practical/ lectures missed due to Public holidays. This provision is displayed in the Academic Calendar for extra Theory and Practical for missed terms well in advance.
- Usually the admission of direct Second Year students is delayed. Extra lectures/ practical are arranged for them to cover the topics missed by them. Separate tests are conducted for them.

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

- **Library resources to augment the Teaching-Learning process**
 - KJSCE has a well-equipped central library. Apart from the text books, reference books, the library has an excellent collection of CDs and DVDs. This is supported by the Departmental library with repository of previous project reports and papers published by the students. The Central Library has web based Online Public Access Catalog (Web OPAC) used for accessing information online. In order to cater to the research related requirements, numerous research journals are available both in the form of hardcopy and online. Library is equipped with Kindles to access e-books. The central library is linked to all other libraries on the campus, so availability and status of the book in the entire campus libraries can be located and can be made available to the required. KJSCE has institutional membership of British Council Library as well as IIT Bombay Library.
 - All the e-journals are accessible from any computer in the college campus as well as from remote location. KJSCE has software which allows Reserving or Renewal of a book on-line using internet is possible.

2.3.15 How does the institution continuously monitor, evaluate and report on the quality of teaching, teaching methods used, classroom environments and the effect on student performance.

- **Continuous Monitoring and Improvement System**

The Course Information Sheet (CIS) prepared at the end of the semester reflects the attainment of the course outcomes which indicates the quality of teaching. If this average attainment is low, the reasons are analyzed critically.

 - Academic:
 - A feedback is collected for students at the end of each semester for each course, which covers questions about teaching mechanism &

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tools used for teaching. The students' comments about teaching is given due consideration.

- Academic Audits are conducted inviting experts from other prestigious colleges/ institutes to review the processes.
 - The internal test papers are reviewed on sample basis for coverage of syllabus, level of difficulty or questions and adhering to Blooms' Taxonomy and CO mapping.
 - These feedbacks are analyzed and deliberated in Meetings of Heads of the Departments, Academic Boards and Board of Management.
 - Audit of Test and ESE papers is conducted every year.
- Support systems:
- Laboratory audit committee checks the repair, maintenance of equipment/ furniture in the laboratories
 - The cleanliness in the classrooms and laboratory is assured through an outsourced housekeeping agency.
 - Register is maintained in the office to ensure that all the classrooms and laboratories in the college have sufficient lighting and ventilation.
 - Separate feedback is collected about infrastructure and facilities.

2.4 Teaching Quality

2.4.1 What is the faculty strength of the College? How many positions are filled against the sanctioned strength? How many of them are from outside the state?

• Faculty Strength

To maintain the requisite faculty-student ratio, the college requires faculty strength of 182; of which 151 faculty members are permanent while 31 are on contract basis. The table shows cadre ratio of filled-in posts. The posts at senior level are remaining vacant due to lack of appropriate candidates. Contractual faculty members are appointed against such vacant posts.

Table 2.4.1 Regular Faculty Positions:

Department	Post	Sanctioned	Filled-in	Vacant	Contract
College	Principal	01	01	--	--
Computer Engineering	Professor	05	00	05	00
	Associate Professor	10	08	02	00
	Assistant Professor	16	16	00	06
Electronics Engineering	Professor	05	01	04	00

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Department	Post	Sanctioned	Filled-in	Vacant	Contract
Electronics Engineering	Associate Professor	10	11	00	00
	Assistant Professor	16	15	01	03
Electronics & Telecommunication Engineering	Professor	05	01	04	00
	Associate Professor	10	09	01	00
	Assistant Professor	16	15	02	06
Information Technology	Professor	05	00	05	00
	Associate Professor	10	06	04	00
	Assistant Professor	16	17	00	05
Mechanical Engineering	Professor	06	03	03	01
	Associate Professor	12	09	03	00
	Assistant Professor	18	18	00	04
Science & Humanities					
Mathematics	Associate Professor	01	01	00	00
	Assistant Professor	07	07	00	01
Physics	Associate Professor	01	01	00	00
	Assistant Professor	03	03	00	01
Chemistry	Assistant Professor	04	04	00	00
Communication Skills	Assistant Professor	04	04	00	01
Environmental Science	Assistant Professor	02	02	00	00

2.4.2 How are the members of the faculty selected?**• Selection Process**

- Recruitment procedures/ Promotional policies for faculty members are as per AICTE, Government of Maharashtra and the University of Mumbai norms in force. Promotions for teaching staff are effected through Career Advancement Scheme as per the provisions of AICTE, Government of Maharashtra and the University of Mumbai.
- The filling up of the sanctioned posts is rigorously done based on the rule and regulations stipulated by the University of Mumbai.

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Typically, selection committee for faculty member recruitment is constituted as follows:

Table 2.4.2 Selection Committee

Chairman	01
Subject Experts, recommended by the University	02 for Assistant Professor 03 for Professor
Vice-Chancellor's Nominee	01
D.T.E.'s Nominee	01
Management's Representative	01
Member Secretary (Principal)	01

The committee is assisted by the Head of the Department

- The process of filling faculty is as follows:
 - Calculate the work load in the concerned department as per the rule. Calculate the number of positions required as per norms.
 - Obtain permission from the Management for filling up these posts.
 - Get the draft advertisement approved from the University of Mumbai.
 - Display advertisement in National newspaper and local (regional) newspaper. The advertisement is also displayed on our college website.
 - Constitute the selection committee as per the norms suggested by the University.
 - Screen the received applications.
 - Send Call letters to qualified and eligible candidates for interview. Emails are also sent.
 - The selection process is carried out based on assessment methods such as Written Test/ presentations etc. as the case may be, followed by Interview.
 - Serve offer letter to the selected candidates.

2.4.3 Furnish details of the faculty

• **Details of the faculty:**

Following tables give details of faculty members based on their gender as well as their qualifications.

Table 2.4.3: Faculty Details

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Regular (Permanent)							
Ph.D.	05	01*	03	01	04	03	17
M. Phil	-	-	01	-	02	03	06
M.E. M. Tech	-	-	17	22	25	54	118
NET	-	-	-	-	02	02	04
Others (MSc/MA/BE)	-	-	01	-	05	05	11
Contractual							
Ph.D.	01	-	-	-	-	-	01
M. Phi	-	-	-	-	-	-	-
M.E. M. Tech	-	-	-	-	08	16	24
NET	-	-	-	-	-	-	-
Others (MSc/MA/BE)	-	-	-	-	01	02	03

*Including principal

2.4.4 What percentage of the teachers have completed UGC-CSIR-NET, UGC-NET, and SLET exams? In that what percentage of teachers are with PG as highest qualification?

Table 2.4.4 Faculty Qualifications

Department	Percentage with Highest qualification as	
	PG	Ph.D.
Computer Engineering	100%	-
Electronics Engineering	100%	7%
Electronics & Telecommunication Engineering	100%	7%
Information Technology	100%	-
Mechanical Engineering	97%	19%
Science & Humanities	100%	27%

2.4.5 Does the College encourage diversity in its faculty recruitment? Provide the following departments-wise details.

Faculty Diversity:

Table 2.4.5 Faculty Diversity

Department	Number of Faculty					
	product of same college (UG + PG +Ph.D.)	From other colleges within the state		From other states	From IIT/NI T	From Abroad
		From Mumbai	Outside Mumbai			
COMP	2+4	21	3	6		0
ETRX	1+8	6	15	8		0
EXTC	2+4	8	18	3		0
IT	1+4	10	11	7		0
MECH	-	22	7	1	5	2
S&H	0	15	4	6		0

2.4.6 Does the College have the required number of qualified and competent teachers to handle all the courses for all departments? If not, how do you cope with the requirements? How many faculty members were appointed during the last four years?

• **Faculty Competency**

KJSCE has sufficient duly qualified faculty members in each department. Based on the curriculum & industrial trends Thrust areas are identified in each department. The following table shows number of faculty members involved in activities related to these areas.

Table 2.4.6 Faculty Competency

Name of Department	Thrust Area	No. of Faculty members
Computer Engineering	1 Information Systems	10
	2 Networking	5
	3 Signal & Image Processing	5
	4 System Software & Architecture	6
Electronics Engineering	1 Circuits	4
	2 Digital Systems	8
	3 Power & Controls	7
	4 Signals & Systems	4
	5 Communication	7

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Name of Department	Thrust Area	No. of Faculty members
Electronics & Telecommunication Engineering	1 Microwave and Antenna	8
	2 Signal Processing	10
	3 Wireless Communication	5
	4 Microelectronics & VLSI	4
	5. Embedded Systems	2
Information Technology	1 Information and Intelligent System	12
	2 Information and Network Security	10
	3 Application Development	9
	4 Signal and Image Processing	4
Mechanical Engineering	1 Design	8
	2 Manufacturing & Allied	20
	3 Thermal	9

At the UG level, Foreign Languages such as German & French are taught by visiting faculty. Course like Accounting & Finance are taught by the Faculty members from Institutes on Campus. Some courses are supported by our own alumni, some by experts from industries while some are taught by the faculty members within the college.

2.4.7 How many visiting Professors are on the rolls of the College?

There are visiting faculty members for conduction of Audit courses, Interdisciplinary Courses, and few UG and PG Elective courses. For conduction of these courses the number of faculty visiting are 12 in 2015-16 and 32 in 2016-17.

2.4.8 What policies/systems are in place to recharge teachers? (eg: providing research grants, study leave, nomination to national/ international conferences/Seminars, in-service training, organizing national/international conferences etc.)

- **Faculty Recharge Policy**

The College has a separate Faculty Development Committee (FDC). The purpose of this committee is to approve the applications received from the Faculty members to attend, Short Term Training Programs, Seminars, Workshops, Refreshers' Courses, National and International Conferences (within India as well as abroad) etc. They are approved up to INR 12000 (within TWO years) for such purpose. The faculty members are granted study leave. The rules are available on the intra-net along with the minutes of these meetings.

2.4.9 Give the number of faculty who received awards / recognitions for excellence in teaching at the state, national and international level during the last four years.

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The awards received by Mrs. Nandana Prabhu

1. Outstanding performance for the academic year 2013-14 on the occasion of Somaiya Foundation day, Ekatva 2014
2. Distinguished Associate Professor by CSI Mumbai chapter in TechNext India 2017, symbiosis of academicians and IT industry Academic Conference and academia Awards(Jan 14-15 2017)

2.4.10 Provide the number of faculty who have undergone staff development programmes during the last four years. (Add any other programme if necessary)

Following tables (2.7.7 and 2.7.8) give details of number of faculty pursuing higher education, undergone Development programmes and presented papers in conferences.

Table 2.4.7 Number of Faculty Deputed for Higher Studies, undergone Development Programmes

Year	Deputed for PG	Deputed for PhD	Attended Orientation Courses/ Workshops, etc
2011-12	12	03	86
2012-13	02	06	136
2013-14	01	06	193
2014-15	0	03	123
2015-16	0	08	205

Table 2.4.8 Number of Faculty Deputed for Conference, Financed for paper publications

Year	Sponsored for Conferences	Financial Support for Paper Publication	STTP
2011-12	12	12	4
2012-13	08	04	15
2013-14	20	06	42
2014-15	14	09	37
2015-16	17	03	63

2.4.11 What percentage of the faculty have

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

*** participated in external Workshops / Seminars / Conferences recognized by national/ international professional bodies presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies**

- * **teaching experience in other universities / national institutions and others**
- * **industrial engagement**
- * **international experience in teaching**

Table 2.4.9 Faculty Activities

Sr. No.	Particulars	No. Of Faculty
1.	Faculty members invited as resource person in Workshops/ Seminars/ Conferences organized by external Professional Agencies	91
2.	Faculty members who Participated in External workshops/ seminars/ conferences recognized by National/ International Professional Bodies	78
3.	Faculty members who Presented papers in Workshops/ Seminars/ Conferences conducted or recognized by professional agencies	71
4.	Faculty members who have some kind of Industrial Engagement/ collaboration	--
5.	Faculty members who have international experience in teaching	1

2.4.12 How often does the College organize academic development programmes for its faculty, leading to enrichment of teaching-learning process?

- * **Curricular Development**
- * **Teaching-learning methods**
- * **Examination reforms**
- * **Content / knowledge management**
- * **Any other (please specify)**

- **Academic Development Program for enrichment of Teaching-Learning process**
 - KJSCE, through several workshops and seminars, trained Faculty members.
 - The College had organized a 4 day workshop on Bloom’s Taxonomy for all Faculty members. This helped them to understand various cognitive levels of understanding. The teachers were explained preparation of Course Delivery Plan, setting up Test papers as per Bloom’s Taxonomy etc.
 - Similar workshops were also arranged on development of rubrics for indirect assessment, experiential learning, evaluation methodology, etc.
 - These seminars and workshops provide a platform to create interaction among faculty members having common interests; promote research interest within the group.

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- The Dean Research & Development leads a group of faculty members from each department. They are encouraging the other Faculty members to prepare and submit research proposals to be sent to various bodies for funding.
- Increased interaction of the Faculty members to enhance understanding of new trends in Higher education and help in personal and professional development of the Faculty members.
- The faculty members participate actively in modifying the syllabus as per the need of the hour. The meetings of the Subject Board deliberate new avenues in the course, current business practices, cutting-edge research in the area.
- The workshops are conducted for faculty and staff on Google Apps.
- **Examination**
 - The Internal Assessment is done as per the Rubrics shared with the students. The College conducts Open Day, during which the students will have access to assessed papers and the Marking scheme. This brings the transparency in assessment.
 - The College also conducted supplementary examination in July for UG Semester VIII and PG semester II. This gives students one more chance to clear the pending examinations.
 - Currently college is using a LMS, which customized as per the need.

2.4.13 What are the teaching innovations made during the last five years? How are innovations rewarded?

- **Teaching Innovations**
 - All the class rooms are fitted with LCD projectors and each faculty member is provided with a personal Laptop. This helps the teachers to effectively use presentations, videos, and animations etc. for effective teaching
 - Use of LMS, Google classroom for supplementing classroom teaching by study material for learning at the pace of student.
 - Use of ICT techniques such as TPS, DIY
 - Mini projects are included in some courses to encourage finding solution to real life problems.
 - Virtual laboratory facilities are used to support regular laboratory work.
 - Audit courses and exposure courses help students to learn courses beyond technical fields.

2.4.14 Does the College have a mechanism to encourage

*** Mobility of faculty between institutions for teaching?**

*** Faculty exchange programmes with national and international bodies?**

If yes, how have these schemes helped in enriching quality of the faculty?

No such mechanism for mobility of faculty exists in college.

2.5 Evaluation Process & Reforms

2.5.1 How does the College ensure that all the stakeholders are aware of the evaluation processes that are operative?

- **Awareness of Stakeholders for Evaluation Process**
 - The students are made well aware of the rules by keeping them on intranet / website.
 - An orientation program is organized for the first year students at the start of the Academic year where all rules pertaining to examination system are explained to the students. The faculty members also explain the examination reforms to the students during their lectures.
 - The examination marking scheme is available in the syllabus which is displayed on the website as well in the hard copy available in the library.
 - The rubrics for oral and practical examination as well as the internal assessment component of continuous assessment are well defined and shared with the students.
 - The evaluation process is kept transparent wherein the assessed answer-books for internal tests as well as end semester examinations can be viewed by the students. The key points in the solution of the question paper are also displayed which helps the students to understand the logic during evaluation.
 - The students can access the examination cell with their queries. Controller of Examination, Assistant to Controller of Examination, Examination Committee and the staff of Examination Cell are well equipped to look into and resolve all the queries related to the Examination System
 - Detail examination time table is displayed in the Academic Time table on the College website. The Evaluation Rule Book is available on the Intranet. The parents are informed about examination schedules during Parent- Proctor Meet. They can get the information on the College Website also.

2.5.2 What are the major evaluation reforms initiated by the College and to what extent have they been implemented in the College? Cite a few examples which have positively impacted the evaluation management system?

Major evaluation reforms initiated by the College

- Before implantation of the Autonomy, the College used to follow the examination system prescribed by the University Mumbai.
 - The system relied on Continuous Assessment (in- semester Assessment) (20%) and End Semester Assessment (80%), where separate passing in each head was compulsory.
 - The End Semester Assessment for the First Year & the Last Year used to be carried at the University level while that for the Second Year & Third Year used to be carried out at College.

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- All the End Semester Assessment papers used to be set by the University.

After implementation of Autonomy following evaluation reforms are being implemented

- In the credit-based grading system, continuous evaluation is carried out thorough out the semester. The evaluation is 40:60 as Continuous Assessment to End Semester assessment. Two tests are conducted which contribute to 30% weightage , 10%weightage is for assessment using tools such as presentation, Quiz etc. (pre-announced) . 60 % weightage is given to the End Semester Assessment. There is NO separate head of passing for Continuous Assessment.
- All questions are based on Taxonomy, are compulsory with internal choice.
- 3 sets of papers are set for each course in the End Semester examination of which one is from external examiner. Random selection of the Question paper on the last minute assures the entire coverage of syllabus and quality of paper.
- It is observed that the questions cover the entire syllabus as per the appropriate weightage mentioned in the syllabus and are also focused on Course Outcomes.
- Marking scheme & solution key for the end semester paper is available on intra-net before open day. The marks obtained by the students are displayed before Open day. Students are able to go through the assessed papers on Open Day.
- For some courses, such as Fundamentals of C Programming & Engineering Graphics Onscreen examinations are conducted where 6 sets of papers are prepared with equal difficulty level.
- For specially-abled students admitted in the college, a different methodology is adopted during evaluation which helps to assess their understanding of the course contents.
- Repeat examination is conducted for Semester 8 as well as M.Tech. Semester II, so that the graduating students will not be required to wait for 6 months for completion of program
- Promotion to next year based on % credits earned.
- Students are given opportunity for Grade improvement. Those who are not attending a regular examination or fails in the regular examination Grade penalty is suggested.
- Designing of Term-work comprising mini project is recommended.
- Examination Audit is conducted to ensure the quality of question papers / examination system.

2.5.3 What measures have been taken by the institution for continuous evaluation of students and ensuring their progress and improved performance?

Continuous Evaluation

- The continuous evaluation of the students is a major activity in Teaching-Learning process. Innovative methods of evaluation such as Open Book test, projects, On-line Quiz are introduced along with MOOCs.
- At the start of each semester the Rubrics used for assessment are shared with the students. The detailed schedule of Internal Assessment is made available through Academic Calendar and is strictly adhered to.
- The two Internal Tests are scheduled approximately in the Fifth and the Tenth week of each semester as mentioned in the Academic Calendar displayed in advance. The faculty members are given freedom to design the test papers, as per various Cognitive learning levels mentioned in the Bloom's Taxonomy.

2.5.4 What percentage of marks is earmarked for continuous internal assessment? Indicate the mechanisms strategized to ensure rigour of the internal assessment process?

- 40% of the weightage is given to continuous internal assessment, which comprises of two tests (of 15 % each) and Internal Assessment by faculty (10%).
- Test Schedule is given in advance in academic calendar. Syllabus for tests and schedule for Internal Assessment with evaluation rubrics are announced by faculty member at the start of Semester.
- Laboratory work is regularly evaluated during the term.
- It is observed that the students appear for the test very seriously and give necessary importance to tests.

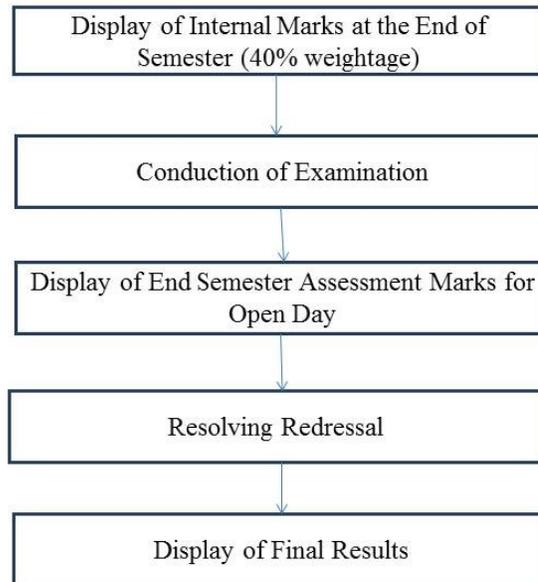
2.5.5 Does the College adhere to the declared examination schedules? If not, what measures have been taken to address the delay?

• Examination Schedule

- In the beginning of the semester Academic Calendar is displayed on KJSCE website with the tentative examination dates of Internal (in-semester) as well as of End- Semester Assessment.
- The schedule for the examinations are declared by the college well in advance and detailed schedule is made available to the students vide notices on the notice board as well as on KJSCE website.
- These norms are strictly adhered to by the College.

2.5.6 What is the average time taken by the College for declaration of examination results? Indicate the mode / media adopted by the College for the publication of examination results e.g., website, SMS, email, etc.

- **Declaration of examination results**
 - The results are displayed in two stages.
 - Process followed for Declaration of Results



- The results are declared within 45 days from the date of the last examination.
- The students will get an opportunity to go through the assessed papers on “Open Day” announced in the Academic Calendar.
- The final results are announced and the consolidated Mark lists are displayed on the intra-net.
- The Individual’s Mark lists are then issued to the student for each semester.

2.5.7 Does the college have an integrated examination platform for the following processes?

*** Pre-examination processes – Time table generation, OMR, student list generation, invigilators, squads, attendance sheet, online payment gateway, etc.**

*** Examination process –Examination material management, logistics.**

*** Post examination process – attendance capture, OMR based exam result, auto processing, generic result processing and certification.**

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Integrated Examination Platform

- As per the University Statutes examination committee is formed having members internal to the college as well as experts from University of Mumbai and other autonomous Institutes. These members have formulated the rules and regulations for the Examination system of the college after KJSCE became autonomous.
- The Principal is assisted by a full time Controller of Examination, assistant to Controller of Examination. Clerks are appointed separately who are supported by peons, programmer and laboratory assistants for data entry work. The faculty members verify the data entry for correctness of the results.
- Examination Section is provided with necessary infrastructure, which includes more 600 sq.m. space having a separate section for assessment of papers, 20 computer terminals for keeping records, printing / photocopying facility, customized software which is used for preparing the results. etc.

Pre-examination process, time table generation, students' list generation, invigilators, squads, attendance sheet, online payment gateway etc.

- The examination schedules for the semester are announced at the beginning of each semester through Academic Calendar on KJSCE Website.
- The examination timetables are also displayed well in advance.
- Block wise seating arrangement is displayed on the notice board prior to start of each paper, which is changed every day to avoid any chances of misconduct/ malpractice.
- The invigilation schedule is prepared and invigilators are appointed randomly in various blocks.
- No separate examination fee is collected for regular examinations as examination fees is part of academic fees.

Examination process- Examination material management and logistics

- The Head of the Department in assistance with the Departmental Examination Committee prepares a panel of examiners to set papers which includes external examiners.
- The Principal approves the panel of examiners.
- Appointment letters are sent to the examiners for setting up question papers. The syllabi mentioning Course Outcomes and Weightage along with the internal test papers are sent to the paper setter along with guidelines.
- On the day of examination, an hour before commencement of examination, one out of the three manuscripts is randomly selected by the Principal and printing of the question paper is completed after proof reading for minor typographical errors.
- The question papers are distributed in a sealed envelope in the examination block.
- A vigilance committee of Heads of the Departments and Deans is formed.

- The answer sheets are masked and coded before sending for assessment. The College carry out Central Assessment Process (CAP) to maintain confidentiality in assessment.

Post Examination process- attendance capture, auto processing, result generation and certification:

- The evaluated papers are made available under strict supervision to the students for inspection on “Open Day” which is prior announced. The students are expected to go through the evaluated papers by referring to marking scheme shared with them.
- After the process of evaluation, data entry and result preparation, the Result Moderation Committee verifies the results and resolution before the Open day.
- After the “Open Day” if a student is dissatisfied with the marks scored in End Semester Assessment, the student can apply for obtaining the photocopy of revaluation of the answer book and or for reverification & reassessment.
- The results are finalized after all the queries are resolved.

2.5.8 Has the College introduced any reforms in its Ph.D. evaluation process?

Every year progress of PhD candidates is reviewed with external expert as per University of Mumbai evaluation norms. However no candidate has reached final evaluation stage. It is proposed that publication in peer reviewed journal is expected from PhD candidate.

2.5.9 What efforts are made by the College to streamline the operations at the Office of the Controller of Examinations? Mention any significant efforts which have improved process and functioning of the examination division/section?

Operations at Controller of Examinations

- The office of the controller of examination besides its personnel has a committee consisting Vice-Principal and senior Faculty Members from each Department who oversees the process of running examination on a day-to-day basis.
- The Centralized Assessment of Paper (CAP) is monitored by Controller of Examination in coordination with Assistant to Controller of Examination.

2.5.10 What is the mechanism for redressal of grievances with reference to evaluation?

Redressal of grievances

- If students are not satisfied with the assessment of their answer papers, they have following options to redress their grievances:
- Students can directly apply for revaluation without requesting for a photocopy of their answer books.

- Students can apply for photocopy of his answer books
- Students can apply for both photocopy and revaluation.
- For any other grievance with respect to evaluation the students are free to meet the Principal, Vice-Principal and redress their grievance. The Unfair means committee looks after the malpractices in examinations.

2.6 Students Performance & Learning Outcomes

2.6.1 Does the College have clearly stated learning outcomes for its programmes? If yes, give details on how the students and staff are made aware of these?

Learning outcomes for its programs

- For each Program a Subject Board (SB) is appointed, as per statutes of the University of Mumbai. The Program Outcomes are discussed and finalized by this board.
- Learning Outcomes are carefully defined for each course which contributes to Program Outcomes. Evaluation strategies are proposed for each course and approved by this subject board.
- The Learning Outcomes and Program Outcomes are mentioned in Syllabus, and are displayed at various places in college. The learning outcomes are communicated to students by the concerned faculty member at the start of the course.

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

Achievement of Learning Outcomes

- Learning Outcomes are the main focus of teaching –learning.
- Assessment tools such as internal tests, laboratories, quizzes etc. developed for continuous evaluation during the term are relevant to these outcomes.
- For End Semester Evaluation, question papers are set with appropriate mapping/ weightage on each outcome mentioned and covering levels of taxonomy.
- Course Feedback is collected from the students at the end of the semester which gives students perspective on Learning Outcomes.
- The attainment of Learning Outcomes is monitored by well-defined outcome assessment for direct as well as indirect tools for each course.
- The gaps are identified and decisions are taken to improvise content delivery methods or assessment tools. Suggestions are given for minor changes in question paper pattern if required. The modification in curriculum, if any, will be put forward for approval in Subject Board.

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

- The Course Information Sheet is prepared & maintained by individual faculty for each course. Target for attainment of Learning Outcomes, its mapping to Program Outcomes and assessment tools are mentioned in the

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same. The Direct and Indirect assessment tools are used to assess the attainment.

- Attainment of learning outcomes at each course contributes to achievement of Program Outcomes.

2.6.4 Give Programme-wise details of the pass percentage and completion rate of students.

- Program wise Completion Rate

Table 2.6.1 UG programs (Final Years Result)

Year of passing		COMP	ETRX	EXTC	IT	MECH
2011-12	A	143	135	142	129	142
	P	136	126	128	127	102
	%	95.10	93.33	90.14	98.44	71.83
2012-13	A	152	146	147	133	142
	P	152	131	134	131	132
	%	100	89.72	91.15	98.49	92.95
2013-14	A	154	143	148	137	155
	P	148	123	144	135	135
	%	96.10	86.01	97.29	98.54	87.1
2014-15	A	151	156	155	141	157
	P	146	117	148	139	153
	%	96.68	75	95.48	98.58	97.45
2015-16	A	154	147	146	141	161
	P	144	116	145	141	158
	%	93.50	78.91	99.31	100	98.14

Table 2.6.2 PG programs (Final Years Result)

Year of passing	2011-12			2012-13			2013-14			2014-15			2015-16		
	Year of admission 2010-11			Year of admission 2011-12			Year of admission 2012-13			Year of admission 2013-14			Year of admission 2014-15		
	A	P	%	A	P	%	A	P	%	A	P	%	A	P	%
COMP				18	18	100.0	18	16	88.88	13	12	92.30	18	08	44.44
ETRX	18	17	94.44	18	16	88.88	13	11	83.75	10	10	100.0	10	05	50.0
EXTC	18	16	88.88	18	17	94.44	18	17	94.44	18	18	100.0	18	16	88.88
IT										08	08	100.0	09	05	55.55
MECH (CAD-CAM & Robotics)	8	8	100	12	9	75	11	11	100	4	4	100	10	03	30.0
MECH (Energy Engineering)										5	5	100	12	03	25.0

CRITERION III
RESEARCH, CONSULTANCY AND EXTENSION

It is well known that culture of research & innovation adds value to the teaching-learning process in any academic institute while research competency of faculty members enhances the focus of academics. Recognizing this, KJSCE is trying to promote research by enabling faculty members to learn about the advances in various fields of engineering through training programs, conferences and interaction with researchers, peers & industry. Activities such as internships, mentorships, hands on trainings in laboratories, etc. help the students to appreciate importance of research.

3.1 Promotion of Research

3.1.1 Does the College have a research committee to monitor and address the issues of research? If yes, what is its composition? Mention a few recommendations which have been implemented and their impact.

Yes: KJSCE has a Research and Development cell led by Dean (Research and Development). Faculty members are encouraged to write proposals to the funding agencies for conduction of focused research.

3.1.2 What is the policy of the College to promote research culture in the College?

- Financial assistance in the form of laboratory development or creation of experimental set-up is given to faculty members to initiate research in their areas of interest.
- Currently, two research centres have been recognized by University of Mumbai for enrolment for Ph.D.; one in Mechanical Engineering and the other in Electronics Engineering.
 - 3 Faculty members in the Department of Electronics Engineering and 2 in the Department of Mechanical Engineering are eligible for recognition as PhD supervisors.
 - Currently 5 students have enrolled for PhD in Mechanical Engineering while 5 students for Electronics Engineering.

• Support from Management

In order to focus on the professional development of faculty members, Faculty Development Committee (FDC) is formed in the college, having representation from each department and is supposed to carry out following tasks:

- Define various strategies for the Faculty Development Program (FDP) to enable all round development of faculty members through paper publication, presentation etc.
- Enhance the teaching-learning process by encouraging faculty members to participate in Short Term Training Programs/Workshops/Conferences/Symposiums, etc.

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- Encourage faculty members for higher studies leading to Ph.D. with various studies leave policies.
- Extend partial financial assistance to cover registration fees, etc.
- Support for travel for international journey.

On similar lines of FDC, there is a Student Development Committee (SDC) which promotes student activities by funding for project competitions, paper presentations, etc.

3.1.3 List details of prioritized research areas and the areas of expertise available with the College.

All departments in KJSCE have identified thrust areas as shown in the table below. These have been defined as per availability of faculty members' expertise or their research interest and developmental needs/ avenues.

Table 3.1.1: Thrust Areas of each Department

Sr.No.	Department	Areas of Expertise Available
1	Computer Engineering	Information systems ,Networking, Signal & Image processing , System Software & architecture
2	Electronics Engineering	Signal Processing, Communication Engineering, Embedded System & VLSI, Power Electronics, Control Systems & Robotics.
3	Electronics & Telecommunications Engineering	Communication Engineering, Microwave and Antenna, RF and Wireless Network, Mobile Communication, Signal Processing, Embedded System.
4	Information Technology	Information and Intelligent System, Information and Network Security, Application Development, Signal and Image Processing
5	Mechanical Engineering	Machine Design, Thermal and Fluid Engineering, Optimization, CAD/CAM, Mechatronics, CFD, Environmental and Emission Control, Renewable Energy

3.1.4 What are the proactive mechanisms adopted by the College to facilitate smooth implementation of research schemes/ projects?

Mechanisms to facilitate smooth implementation of research schemes/projects are as follows

- KJSCE provides funds in the form of seed money for research projects initiated by faculty members or students conducting research.
- Principal Investigator (PI) of any project has autonomy and authority to decide about the utilization of the allotted fund. However, the utilization is monitored by the Principal of the college.
- The grants are released as per the demand by the PI.
- The Accounts department reviews the expenditure and statement of expenditure is audited annually. Final reports along with audited statement

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of account are submitted to the funding agencies along with utilization certificate.

- Reports are filed properly for further clarification.

3.1.5 How is interdisciplinary research promoted?

Interdisciplinary Research is promoted as follows

- KJSCE is interested in promoting interdisciplinary activities through student projects and faculty member interactions.
 - Various laboratories such as virtual lab, e-Yantra have been set up for such interactions.
 - Faculty members encourage in-house internship wherein students from different departments take active participation.
 - Inter-disciplinary training programmes and expert lectures are also arranged to provide exposure to various fields.
- **Collaboration with National/International institutes / industries**

The following table below shows the collaboration with National/International institutes/ industries.

Table 3.1.2: Collaboration with National/International Institutes/Industries

Name of collaborating Agency	Nature of Activity	Department
Anti-Corruption Bureau, Mumbai.	The project keeps track of cases assigned, their progress and officer in charges during Life time of the case.	Computer Engineering
Tata Cancer Hospital Mumbai	Research and Development	Electronics Engineering
Godavari Bio refineries. Ltd.	Developed an efficient trash separation unit for sugarcane harvester.	Mechanical Engineering
ATE industries, Mumbai	CVD method for carbon Nanotubes deposition Metal Matrix composition preparation along with injection moulding	

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

KJSCE has taken the efforts to have eminent researchers visit and interact with the teaching and student community to encourage the research related activities by students as well as faculty members. College also organizes various seminars/workshops by eminent speakers on various research areas. The eminent

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speakers who visited our campus during the last five years are depicted in the following table.

Table 3.1.3: List of eminent speakers visited to campus

Resource Person	Industry/Institute Name	Department Involved
Dr. B. K. Mohan	IIT Bombay	Computer Engineering
Dr Shashikant Kelkar,	Adjunct Professor in IIT Bombay	
Dr. M.B. Patil	IIT Bombay	Electronics Engineering
Dr. D.K. Sharma	IIT Bombay	
Dr. Alice Cheeran	VJTI Mumbai	
Dr. Shivkumar	IIT Bombay	
Dr. Samudravijay	TIFR Mumbai	
Dr. Vishal Sardeshpande	ATE Industry	
Dr. S. N Merchant	IIT Bombay	
Dr. Preeti Rao	IIT Bombay	
Dr. M.B. Kokare	SGGS Nanded	
Mr. Santosh Soni,	C-DAC, Mumbai,	
Dr. Rahul Waze	TIFR, Mumbai	
Dr. Ajay K Poddar	Oradea University of Technology, Romania	
Dr. B. K. Sarkar	ISRO Chair Professor, IIT Kharagpur.	
Dr. K.P. Ray	SAMEER, IIT Campus, Mumbai.	
Dr. Jayanta Mukherjee,	Associate Professor, IIT Mumbai	
Dr. B. Ravi	IIT Bombay	Mechanical Engineering
Dr. C S Solanki	IIT Bombay	
Dr. Vishal Sardeshpande	IIT Bombay	
Mr. Rahul Joshi	IIT Bombay	
Dr. Sayadeep Mondas	IIT Bombay	
Dr. Maddulety	NITIE Powai	
Mr. Mukesh Jain	Vice President, Reliance Jio Infocomm Ltd.	
Mr. Somadev Singh	Head-program mgmt office, NCR, Mumbai	
Mr. Jagroop Singh	Regional Transition manager, NCR, Mumbai	
Mr. Manjit Gandhi	Kazen Barcode P.Ltd.	
Mr. Rajiv Nair	Consultant, Arthur D. Little, Mumbai	

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Table 3.1.3 Continued

Resource Person	Industry/Institute Name	Department Involved
Mr. Sudarshan Pisupati	Security Expert, Ernst & Young, Mumbai	Information Technology
Mr. Vaibhav Sakhare	Sr. Digital Forensic Analyst & Lab In-charge, Digital Forensics Esskay, Mahape, Navi Mumbai	
Mr. Shishir Gupta	Sr. Deputy General Manager, Larsen & Toubro Limited	
Dr. Zia Saquib	Executive Director, CDAC	
Mr. S. Venkateswaran	Director, Lab Systems Ltd., Mumbai.	
Prof. R K Shyamsundar	Department of Computer Science and Engineering, IITB.	
Mr. Malla Reddy Donapati	Consultant, Aujas Networks, Mumbai	
Prof. Dayanad Ambawade,	SPIT, Mumbai	
Mr. Lucius Lobo	Head, Cyber Security practice, Tech Mahindra, Mumbai	
Dr. Harold D'Costa	CEO, Intelligent Quotient Security System, Pune	
Mr. Vicky Shah	Advocates High Court Mumbai, Founder of Eagle Eye	
Dr. Uday Khedkar	IIT Bombay	
Prof. Rupendra Nehete	Fr. Agnel Polytechnic, Vashi	
Prof. Sanjay Shitole	SNDT, Mumbai	
Dr. R. B. Sunoj	IIT Bombay	
Dr. N. M. Singh	VJTI, Mumbai	

3.1.7 What percentages of faculty have utilized sabbatical leave for research activities? How has the provision contributed to the research quality and culture of the College?

- KJSCE has given one year full paid leave to Mr. Avinash Prabhudesai from the Department of Mechanical Engineering for enabling him to work on the “Modification of Commercial Sugarcane Harvest Machine”. This has resulted in a consultancy income of Rs. 3 Lakhs to the college. Subsequently he filed 1 National Patent (2013) for which he was also given additional three month leave for the defence of the patent. He was also able to file 1 Global Patent (2015) and 4 International Patents (2016) on his work on “Radiator Grille”.

3.1.8 Provide details of national and international conferences organized by the College highlighting the names of eminent scientists/scholars who participated in these events.

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- KJSCE has not organised any National/International conference in last 5 years.

3.1.9 Details on the College initiative in transferring/advocating the relative findings of research of the College and elsewhere to the students and the community (lab to land).

KJSCE has taken initiatives to work on following projects which were useful to the college/ campus or to the industry.

- Faculty members from Department of Computer Engineering developed a software for College Time Table, Student Feedback, and Student Admissions.
- Faculty members from Department of Electronics Engineering developed methodology & test set-up for detection of Laryngeal Cancer and classification Using Speech Processing.
- Students from Department of Electronics Engineering developed a Pollution mapping kit named “Eco-Mapper”.
- Faculty members from Department of Mechanical Engineering developed Solar PV lighting system of 250 W which has been installed at K.J. Somaiya Institute of Management Studies and Research.

3.1.10 Give details on the faculty actively involved in research (Guiding student research, leading research projects, engaged in individual or collaborative research activity etc.)

Table 3.1.4: Details of the faculty members actively involved in research

Name of Faculty	Area of Research
Dr. Kashinath Patil	Renewable Energy
Dr. S.S. Bhusnoor	IC engine, Pollution Monitoring
Dr. Luckman	Metallurgy, Material for Photo Voltaics,
Dr. Ramesh Lekurwale	Rapid Prototyping, Manufacturing
Mr. N. S. Chandrashekhar	Design, Manufacturing
Dr. J H Nirmal	Digital Signal processing, Speech processing
Dr. Ameya Naik	Digital Signal processing, Image Processing

The faculty members are extensively involved in several individual as well as collaborative research activities. Guiding students for their research activities is one of the top priorities of the faculty members. Details of which are available in the respective Department.

3.2 Resource Mobilization for Research

Budget, expenditure, financial allocation and actual utilization 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 last four years.

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Table 3.2.1: Budget and utilization details for R&D (All figures in lakhs)

Items	Budgeted in 2012-13	Actual Expenses in 2012-13 (till 31-03-2013)	Budgeted in 2013-14	Actual Expenses in 2013-14 (till 31-03-2014)	Budgeted in 2014-15	Actual Expenses in 2014-15 (till 31-03-2015)	Budgeted in 2015-16	Actual Expenses in 2015-16 (till 31-03-2016)
Infrastructure Built up	20.00	13.84	-	23.18	220.92	60.87	261.25	-
Library	5.00	53.40	36.50	68.77	79.80	70.74	90.85	69.48
Laboratory Equipment	135.00	140.72	171.95	106.37	92.12	232.22	324.05	282.25
Laboratory Consumables & computer maintenance	--	9.61	41.30	8.62	28.65	6.74	19.81	6.98
Training and Travel	--	5.52	12.25	6.39	18.85	5.71	20	21.09

3.2.2 What are the financial provisions made in the College budget for supporting student research projects?

Financial provisions made in KJSCE budget for supporting student research projects are as follows

- KJSCE has a Student Development Committee (SDC) to encourage the research and development activity. The UG and PG students can submit their in-house project proposals with approximate budget for approval of SDC.
- Financial grants are also available to support and encourage the students for project competition, paper presentations as well as for attending short term training programme.
- Prior to formation of SDC, Research and Development Cell annually sponsored best five projects from each Department. Maximum Rs. 5000/- financial assistance was given to each project group.
- Students participating in mega projects need to work on building a new prototype every year while they participate in national/international competitions. Looking at the developmental work that needs to be put in, the college gives them seed money to enhance their infrastructural needs

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or as assistance in competitions. The financial aid given in the last four years is as shown in table below.

Table 3.2.2: Financial Aid for Student Research Projects

Year	Team Red Shift Racing	Team Orion Racing	Team ETA	Team Onyx	Team Robocon
2012-13	3,00,000	2,00,000	--	1,00,000	1,00,000
2013-14	1,00,000	2,00,000	3,00,000	1,68,887	1,50,000
2014-15	6,24,832	6,23,070	2,04,461	74,320	1,45,404
2015-16	2,68,145	--	3,72,091	40,927	1,70,414

3.2.3 Is there a provision in the institution to provide seed money to faculty for research? If so, what percentage of the faculty has received seed money in the last years?

- KJSCE has policy to provide seed money to faculty members to carry out their research. Provisions are made in annual budget for purchase of major or minor equipment intended for research and the equipment is procured every year. Amount required for consumables and contingencies is provided to faculty members.

3.2.4 Are there any special efforts made by the College to encourage faculty to file for patents? If so, provide details of patents filed and enumerate the sanctioned patents.

Yes: KJSCE provides full support to faculty members and students for accomplishment of their research contributions and motivates them to file patents. International patent for the “Radiator Grille”, filed by Mr. Avinash Prabhudesai, has been registered and published in the World Intellectual Property Organization Gazette. It has been successfully defended against a patent by Siemens and John Deere in 2013-14

3.2.5 Provide the following details of ongoing research projects:

Table 3.2.3 provides the details about the On-going Projects

Table 3.2.3: On-going Research Projects

Sr. No.	Year	Project Title	Funding Agency	Amount (amount actually received in corresponding year)
1	2013-14	MODROB for Renewable Energy Laboratory	AICTE	Rs. 321000
2	2013-14	Metal Composite with carbon Nanotubes by PIM route	ATE. Industries ltd. Mumbai	Rs. 100000

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Table 3.2.3: Continued

Sr. No.	Year	Project Title	Funding Agency	Amount (amount actually received in corresponding year)
3	2014-15	Development of receiver cum thermal storage cooking device for a parabolic dish concentrator type solar cooker	UGC-Minor	Accepted for funding by UGC and waiting for funding to Release (Rs 300000)
4	2014-15	To design and fabricate a machine for creation of tactical objects using digital light processing Technology	UGC-Minor	Accepted for funding by UGC and waiting for release of funding of Rs 260000
5	2014-15	Metal Composite with carbon Nanotubes by PIM route	ATE. Industries Ltd. Mumbai	Rs. 150000
6	2014-15	Development and Validation of Test Standards for Concentrating Solar Cookers	KJSCE	Rs. 30000
7	2015-16	Container sized PV Substation for MW Size	L & T Automation Limited Mumbai	Rs: 225000

3.2.6 How many departments of the College have been recognized for their research activities by national / international agencies (UGC-SAP, CAS, DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthrough due to such recognition.

Table 3.2.4: Recognized Research Projects

Sr.No.	Year	Project title	Funding Agency	Department
1	2013-14	MODROB for Renewable Energy Laboratory	AICTE, New Delhi	Mechanical Engineering
2	2014-15	Development of receiver cum thermal storage cooking device for a parabolic dish concentrator type solar cooker	UGC	Mechanical Engineering
3	2014-15	To design and fabricate a machine for creation of tactical objects using digital light processing Technology	UGC	Mechanical Engineering

Outcomes:

- MODROBS:
 - Semi-automated bomb calorimeter with PC based software has been purchased. It has improved our teaching and research capabilities.
 - Solar PV water pumping system has been installed and is being used for M. Tech (Energy Engineering) Batches.
- Receiver cum thermal storage cooking device:
 - Solar receiver cum heat storage device for parabolic dish cooker which stores the heat in PCM, has been designed, fabricated and tested successfully to cook food by boiling from stored heat.
 - Feasibility of concept has been demonstrated. A device for high temperature cooking with heat storage is under development.

3.2.7 List details of completed research projects undertaken by the College faculty in the last four years and mention the details of grants received for such projects (funded by Industry/ National/International agencies).

Table 3.2.5 gives the details about the completed research projects

Table 3.2.5: List of Completed Research Projects

Sr. No.	Year	Project title	Funding Agency	Department
1	2014-15	Development of receiver cum thermal storage cooking device for a parabolic dish concentrator type solar cooker	UGC	Mechanical Engineering
2	2014-15	To design and fabricate a machine for creation of tactical objects using digital light processing Technology	UGC	Mechanical Engineering
3.	2013-14	Design and development of air cooled heat exchanger	University of Mumbai	Mechanical Engineering
4	2012-13	Examiner Authentication and Paperless Data Compilation using Smart Card and Biometrics	University of Mumbai	Electronics & Telecommunication Engineering

3.3 Research Facilities

3.3.1 What efforts are made by the College to keep pace with the infrastructure requirements to facilitate Research? How and what strategies are evolved to meet the needs of researchers?

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KJSCE management has supported activities to procure equipment required for the research works in all the departments.

- Faculty members are encouraged to submit research proposals to funding agencies and to initiate their research, project specific equipment are procured based on the requirements.
- Refurbishment works are carried out to create necessary space, provide required set-up and environment for the conduct of research activities.
- Laboratory and computer facilities are provided for students and faculty members.
- Ph.D. Research scholars are provided with a separate computing facility with internet connection as well as Wi-Fi facility
- Library budget permits procurement of relevant reference material:
 - Latest editions of reference books, manuals, periodicals, encyclopaedia's, e-books and handbooks.
 - National and international journals published by reputed organizations/publishers like ASME, Springer, IEEE, Elsevier are subscribed.
- Libraries of other reputed institutes like IIT and British library are accessible.
- KJSCE has developed labs such as Virtual Lab (a Nodal Centre (VLNC) of IIT Bombay) and National Instruments Lab for carrying out research in the field of Electronics Engineering.
- Research facilities are also created in the Internal Combustion Engine, Renewable Energy, Material Testing laboratories for carrying out research in the field of Mechanical Engineering.

3.3.2 Does the College have an information resource centre to cater to the needs of researchers? If yes, provide details on the facility.

The Central Library of KJSCE has been playing a vital role as information resource centre catering to the academic and learning needs of its users.

- The Library has started a new service 'MyAthens', which helps to connect to the online electronic resources of our organization from remote places.
- Computerisations of all library procedures such as searching, indexing, issue / return records barcoding, Kindle facility, intimation of new arrivals and online conference proceedings through the mail, reminders regarding book status, etc. are some of the main features of the library which ease the efforts in literature survey during research phase of any project.
- EBSCO Discovery Service provides a unified platform for library users to access and search from all the library resources to get single set of results like Google.
- Provision of internet facility for online connectivity with INDEST and AICTE Consortium, New Delhi; computing facility with infrastructure of DVD and CD Writers, provision of reprographic facility to students and faculty members helps in disseminating material quickly and cost effectively aiding better learning on campus.

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- Availability of anti-plagiarism software Turintin enables to provide quality in publications.

3.3.3 Does the College provide residential facilities (with computer and internet facilities) for research scholars and faculty?

- KJSCE provides hostel accommodations in campus for UG and PG students, who have come from outside Mumbai region.
- Less than 5% faculty members are staying on the campus.

3.3.4 Does the College have a specialized research centre/ workstation to address challenges of research programmes? If yes, give details.

Yes:

Faculty members and research scholars from other colleges utilise our labs during their UG/PG/PhD work.

- Microwave and Antenna Lab of Electronics and Telecommunication Engineering
- IC Engine Lab of Mechanical Engineering by IIT Bombay
- Renewable Energy lab of Mechanical Engineering by RGIT Mumbai, KJ Somaiya Science and Commerce College.
- Material Testing lab of Mechanical Engineering by PhD scholar of VJTI

3.3.5 Does the College have research facilities (centre, etc.) of regional, national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

Yes: The College has the research centre recognised by Mumbai University in the department of Mechanical and Electronics Engineering. Currently 10 research scholars are pursuing their Ph.D programme.

3.4 Research Publications and Awards

Faculty members give importance for research and self-development. The research calibre of the faculty members is exhibited through paper presentations in national/international conferences and publications. Many research papers have been published by faculty members in the last 5 years.

3.4.1 Highlight the major research achievements of the College through the following:

- **Major Papers Presented in Regional, National and International Conferences**

The summaries of papers presented and published in conferences are given in Table 3.4.1. The details of Major papers presented in conferences during 2011-12 to 2015-16 are available in the departments.

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Table 3.4.1: Number of papers presented and published in conferences during 2011-2016

Department	Number of Papers presented/published in conferences	
	National	International
Mechanical Engineering	12	54
Electronics Engineering	24	54
Electronics and Telecommunication Engineering	26	46
Computer Engineering	04	39
Information Technology	04	33
Humanity and Social Science	10	13

• **Publication Per Faculty Member**

3.4.2: Publication with H Index per faculty member

Sr . No	Faculty Member Name	No of Publications in				Citations	H-index
		Journals		Conferences			
		International	National	International	National		
Computer Engineering							
1	Ms. Bharthi Hassan	6	-	-	-	5	1
2	Mr.. Uday Joshi	2	-	-	-	-	-
3	Mr. Deepak Sharma	15	-	14	-	15	2
4	Mr. Manish Potey	11	-	14	-	14	2
5	Ms. Kavita Kelkar	4	-	-	-	-	-
6	Ms. Jyothi Rao	3	-	1	-	14	2
7	Ms. Bhakti Palkar	5	-	-	-	195	4
8	Mr. Prasanna Shete	7	-	2	-	17	2
9	Ms. Rajani Pamnani	1	-	-	1	-	-
10	Mr. Gajanan Bherde	1	-	-	-	-	-
11	Ms. Swati Mali	5	-	3	1	23	3
12	Ms. Grishma Sharma	5	-	1	-	1	1
13	Ms. Mansi Kambli	6	-	-	-	-	-
14	Ms. Pallavi Kulkarni	2	-	-	-	8	2
15	Ms. Suchita Patil	8	-	-	-	21	4
16	Ms. Poonam Bhogle	7	-	1	-	-	-
17	Ms. Rohini Nair	3	-	-	-	-	-
18	Ms. Sheetal Pereira	3	-	-	-	-	-
19	Ms. Smita Sankhe	4	-	-	-	-	-
20	Ms. Pradnya Gotmare	2	-	2	-	-	-
21	Mr. Zaheed Shaikh	2	-	-	2	-	-
22	Ms. Nirmala Shinde	2	-	-	-	9	1
23	Ms. Saideepti P.	2	-	-	-	-	-
24	Ms. Shweta Chachra	-	-	-	-	-	-

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Sr No	Faculty Member Name	No of Publications in				Citations	H-index
		Journals		Conferences			
		International	National	International	National		
25	Ms. Archana Gupta	1	-	1	-	-	-
26	Mr. Gopal Sonune	-	-	-	-	-	-
27	Ms. Leena Sahu	3	-	-	-	-	-
28	Mr. Rajesh Kannan.K	-	-	-	-	-	-
29	Ms. Kavita Deshmukh	-	-	-	-	-	-
30	Mr. Vaibhav Chunare	-	-	-	-	3	-
31	Ms. Anjali Chachra	-	-	-	-	-	-
Electronics Engineering							
1.	Pritam S. Salankar	0	0	1	0	0	0
2.	Arati Phadke	3	0	3	2	9	2
3.	S A Hanumante	0	0	1	1	0	0
4.	Annu Abraham	2	0	1	1	0	0
5.	Sudha Gupta	7	0	14	3	130	6
6.	Rajashree Daryapurkar	1	0	1	1	0	0
7.	Makarand G. Kulkarni	1	0	2	1	1	1
8.	Milind S. Marathe	3	0	0	0	0	0
9.	Sonia Joshi	0	0	1	0	3	0
10.	Lekha Das	0	0	3	0	10	0
11.	Pragya Gupta	1	0	0	0	0	0
12.	Shila Dhande	2	0	1	2	0	0
13.	Anil S Thosar	1	0	2	0	0	0
14.	Kirti Sawlani	1	0	1	1	7	0
15.	Bharati khedkar	0	0	0	0	0	0
16.	Dr. J H Nirmal	5	0	11	2	66	5
17.	Angha Raich	0	0	0	0	6	2
18.	Samidha Kulkarni	1	3	2	3	0	0
19.	Uday Chhatre	4	0	3	3	0	0
20.	Jennifer E	1	0	0	0	0	0
21.	Sushama Kadge	0	0	2	1	0	0
22.	S S Halbe	3	0	2	2	0	0
23.	Pramod Kachare	0	0	1	0	0	0
24.	Seema Talmale	0	0	1	0	0	0
25.	Amrita Naiksatam	0	0	1	1	0	0
26.	Bhargavi Kulkarni	1	0	0	0	0	0
	Total	37	3	54	24		
Electronics & Telecommunication Engineering							
1	Dr. R. G. Karandikar	2	0	4	7	51	5
2	Ms. R. A. Deshpande	4	0	2	4	1	1

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Sr No	Faculty Member Name	No of Publications in				Citat ions	H- index
		Journals		Conferences			
		Internation al	National	Internat ional	Nation al		
3	Ms. J. M. Kundargi	6	0	2	3	9	1
4	Mrs.R.A.Jadhav	2	0	0	2	27	1
5	Ms. S. S. Mahajan	5	0	2	3	0	0
6	Ms. S. S. Kulkarni	6	0	2	1	7	1
7	Ms. B. A. Singh	8	0	1	7	9	2
8	Ms. J. M. Varavadekar	6	0	5	4	2	1
9	Mr. M. B. Zalte	6	0	0	2	3	1
10	Mr. A. K. Naik	5	0	2	5	40	3
11	Mr. D. P. Kulkarni	0	0	1	2	0	0
12	Ms. S. V. Arora	1	0	1	1	0	0
13	Ms. H. S. Doshi	1	0	0	1	1	1
14	Mr. S. R. Sainkar	1	0	0	1	0	0
15	Mr. N. S. Nagori	0	0	1	0	0	0
16	Ms.Khyati Jani	0	0	0	1	0	0
17	Mr. K. V. Ajetroa	0	0	0	1	0	0
18	Mr. V. N. Chheda	0	0	0	1	0	0
19	Prof. A. S. Kholapure	1	0	1	0	0	0
20	Prof. V. J. Satam	0	0	1	0	0	0
21	Prof.S.V.Raut	0	0	1	0	0	0
Science and Humanities Department							
1	Dr. Veena Naik	2	0	0	0	0	0
2	Dr. Kanaklata Tiwari	3	0	2	0	0	0
3	Mr. Anand Bodhale	1	0	2	2	0	0
4	Mr. Santosh A. Mani	5	0	8	5	1	0
5	Ms. Rachana Desai	1	0	0	0	0	0
6	Dr. Jitendra Satam	0	0	1	0	131	8
7	Dr. Archana Sharma	0	0	0	1	100	5
8	Ms. Deepali Phalak	0	0	0	1	0	0
9	Ms. Nandini Rai	0	0	0	1	0	0
Information Technology							
1	Ujwala Bhanarkar	2	0	0	0	7	0
2	Ujwala Bhangale	0	0	2	1	4	1
3	Sonali Patil	9	0	1	0	28	3
4	Sunayana V Jadhav	5	0	2	0	0	0
5	Sujata Pathak	4	0	1	0	9	1
6	Dipti Pawade	19	0	6	2	30	3
7	Sanjay Vidhani	2	0	0	0	0	0
8	Era Johri	6	0	5	0	4	1
9	Avani M Sakhapara	4	0	0	0	1	1

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Sr No	Faculty Member Name	No of Publications in				Citations	H-index
		Journals		Conferences			
		International	National	International	National		
10	Deepti Patole	3	0	0	0	5	2
11	Ashwini Dalvi	1	0	5	0	8	2
12	Irfan Siddavatam	3	0	3	0	11	1
13	Suchitra M Patil	4	0	0	0	7	2
14	Khushi Khanchandani	2	0	0	0	0	0
15	Purnima Ahirao	2	0	1	0	0	0
16	Nilkamal More	5	0	0	0	3	1
17	Nandana Prabhu	5	0	1	0	1	1
18	Anooja Joy	0	0	1	0	0	0
19	Anupam Jain	1	0	2	0	0	0
20	Garima Rawat	2	0	0	0	0	0
21	Kirankumari Sinha	1	0	0	0	0	0
22	Manjitsing Valvi	2	0	0	0	0	0
23	Pooja Malhotra	2	0	0	0	0	0
24	Sagar Korde	3	0	3	1	0	0
25	Sangeeta Nagpure	7	0	0	0	7	2
26	Yogita Borse	2	0	0	0	0	0
Mechanical Engineering							
1	Dr. Luckman Muhmood	3	0	3	0	175	6
2	S. N. Bansode	0	0	3	1	0	0
3	Dr. R. R. Lekurwale	3	1	4	1	0	5
4	Dr. A. G. Bhawe	6	0	3	0	0	0
5	Dr. N.R.Gilke	0	1	0	0	0	0
6	Dr. S.S.Bhusnoor	2	0	3	2	0	0
7	Shilpa Bhambure	1	0	1	0	0	0
8	A. K. Gangrade	2	1	8	2	0	0
9	A. Bhadauria	0	0	1	1	0	0
10	V.S. Narvane	6	1	4	3	0	0
11	Dr. Shailesh Nikam	0	0	2	1	0	0
12	Dr. K. N. Patil	8	2	4	1	10	3
13	Palsodkar M.A.	1	0	3	0	0	0
14	R.B.Pansare	1	0	1	1	0	0
15	V.M.Khparde	3	1	4	0	1	0
16	B M Pradhan	0	0	2	0	0	0
17	Ramola Singha	0	0	2	0	0	0
18	Shivangi Thakker	0	0	4	0	0	0
19	Chitra Menon	0	0	1	0	0	0
20	Prashant Jain	3	0	0	0	0	0

• Faculty Members Serving on the Editorial Boards of National and International Journals

Table 3.4.3: Faculty Members Serving on Editorial Boards / Board of Reviewers

Name	Journal
Dr. K N Patil	International Conference on Recent Trends in Engineering and Technology, 2014.
	Iranian Journal of Mechanical Engineering
Dr. Jagannath Nirmal	Expert system, Elsevier
	Neural Computing & Applications, Springer.
	Journal Of Advanced Electrical Engineering.
	International Journal of Neural Computing & Applications.
Mrs. Sudha Gupta	IET Generation, Transmission & Distribution.
	IEEE Transactions on Human Machine Systems.
Dr. Luckman Muhmood	Metallurgical and Materials Transactions B
	Philosophical Magazine
	International Journal of Heat and Fluid Flow
	Steel Research International, Wiley
	Industrial & Engineering Chemistry Research, ACS
	Journal of The American Ceramic Society
	Transactions of the Indian Institute of Metals
Dr. R.G. Karandikar	Electrical Power and Energy system, Elsevier
	International Journal of Science, Engineering and Technology
Dr Ameya K Naik	IEEE Transactions on Signal Processing
	IET Journal on Signal Processing
	Elsevier Journal on Signal Processing Image Communication
	IET Journal on Image Processing
Dr Ramesh Lekurwale	International Journal of Supply and Operation Management
	International Journal of Industrial and Systems Engineering (Inderscience Publication).
Ms. Dipti Pawade	International Journal of Emerging Technology and Advanced Engineering
	International Journal of Recent Development in Engineering and Technology

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- **Faculty members on the organization committees of international conferences, recognized by reputed organizations/societies.**

Table 3.4.4: Faculty Members Serving on organization committees of international conferences

Name of faculty member	Role	Conference Detail
Dr. K.N.Patil	Reviewer and Session Chair	National Symposium on Engineering and Research (NSER 2012), held at Mathoshri College of Engineering and Research Centre, Nashik.
	Reviewer and Session Chair	National Conference on Emerging Trends in engineering & Technology”, SANJIVANI VISION 2012, at Sanjeevani College of Engineering Kopergaon, A.Nagar.
Dr. K.N.Patil	Reviewer	2 nd International Conference on Recent Trends in engineering and Technology, 22-24 Feb 2013, at SNJB's Late Sau K. B. Jain College of Engineering, Chandwad, Nashik
	Reviewer and Session Chair	3 rd International Conference on Recent Trends in engineering and Technology, 25-28 March 2014, at SNJB's Late Sau K. B. Jain College of Engineering, Nashik
Mrs. Nandana Prabhu	Reviewer	International Conference on Interdisciplinary applications of Remote sensing Geographical Information Systems (ICRTET 2013) organised by D.J.SCOE Mumbai.
	Reviewer	International Conference on Advanced Computing Technologies and Applications (ICACTA-2015) organised by DJSCE Mumbai.
Dr. R.G. Karandikar	Reviewer	NCATEME 2013 organised by Al Mussana College of Technology, Ministry of Manpower, Sultanate, Oman.
	Reviewer	International Conference on Circuits, Systems, Communication and Information Technology (CSCITA -2014) organised by SFIT Mumbai
	Reviewer	International Conference on Advances in Communication and Computing Technologies (ICACACT-2013) Organised by PVPPCOE Mumbai.
	Chairperson for conferences	VIT, Wadala and Thakur COE ,March 2013
	Reviewer & Session chair	“Multiple Conferences and Workshops (MULTICON-W) 2014” organized by Thakur

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Name of faculty member	Role	Conference Detail
		College of Engineering and Technology, Mumbai, 28th February and 1st March 2014
	Reviewer & Session chair	International Conference on Emerging Trends in Technology and Applications (ICETTA)2014” organized by organized at Yadavrao Tasgaonkar College of Engineering and Management, 7th and 8 th March 2014
	Reviewer & Session chair	International conference on “Recent Advances and Challenges in Engineering and Management” (RACEM) 2014, ” organized at Vidyalankar Institute of Technology, Mumbai , 3rd and 4th April 2014
Dr. R.G. Karandikar	Reviewer	Conference organized by Father Agnel, Bandra and DJSCOE
	Reviewer & Session chair	Conference organized by SPIT and Father Agnel, Vashi
	Session chair	International conference & workshop “MULTICON-W-2016” Thakur College of Engineering, Mumbai, 27th February 2016
	Session chair	VIVA institute of Technology, Palghar, 4th March 2016
	Reviewer	International conference on Advances in communication & computing Technologies (ICACACT-2013) organized by TCE Mumbai
Mrs.J.M.Kun dargi	Reviewer	International Conference on “Advances in Computing, Communication and Control”organized by Father Agnel, Bandra, Mumbai November 2012
	Session chair	“International Technological Conference 2014 (I-Tech- CON), VESIT, Mumbai, 3rd – 4th January 2014
	Reviewer	International Conference on Circuits, Systems, Communication and Information Technology Applications (CSCITA-2014)organized by S.F.I.T., Mumbai, 4th – 5th April 2014
Dr. A. K. Naik	Session chair	ICETTA-13,organized by Tasgaonkar college of Engineering, Bhiypuri March, 2013
	Session chair	International Conference (ICNTE 2015), Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai, 9th January2015

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Name of faculty member	Role	Conference Detail
Mr.Vicky Chheda	Reviewer	A paper for IEEE Communication Letters, July 2013
Mrs. Ruchira Jadhav	Reviewer	International Conference (ICNTE 2015), Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai, 9th January 2015
Mrs. V.M. Satam	Reviewer	IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems 2015 (ICSPICES-2015) organised by NIT Calicut
Dr. J.H. Nirmal	Session Chair	International Conference & Workshop on Emerging Trends in Technology (ICWET 2012) organised by TCE Mumbai.
	Session Chair	International Conference & Workshop on Emerging Trends in Technology (ICWET 2016) organised by TCE Mumbai.
	Reviewer and Session Chair	3 rd International conference on Advances in Computing, Communication and Informatics (ICACCI 2014) organised by GCET Noida, New Delhi 2014.
	Reviewer and Session Chair	Student paper presentation competition (Abhyantriki 2015) organised by IEEE student chapter K J Somaiya College of Engineering on 29 th September 2015
	Reviewer	International Conference on Industrial Instrumentation and Control (ICIC 2015) is organized by Govt College of Engineering, Pune
	Reviewer	IEEE Bombay Section Symposium organised by UMIT-SNDT Mumbai 2015
	PC Member	International Conference on Global Trends in Signal Processing, Information Computing and Communication SSBT's College of Engineering and Technology, Bambhori, Jalgaon, India. Oct 2016
	PC Member	International Conference on Soft Computing and Applications (ICSCA'16) San Francisco, USA, 19-21 October, 2016
	Reviewer	International Conference On Signal And Information Processing (IConSIP-2016) October 2016 Organised by SGGs IET Nanded.
Mrs. Sudha	Reviewer	International conference on Advances in computing Communication and control organized by Fr. Conceicao Rodrigues College of Engineering on 23rd -24th January 2009

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Name of faculty member	Role	Conference Detail
Gupta	Reviewer	Advances in computing Communication and control Organized by Fr. Conceicao Rodrigues College of Engineering on 23rd -24th January 2011
Ms. Era Johri	Reviewer	Third International Symposium on Women in Computing and Informatics (WCI-2015)
	Reviewer	Fourth International Symposium on Women in Computing and Informatics (WCI-2016)
Ms. Ujwala M. Bhangale	Reviewer	International conference on advanced computing technologies and applications (ICACTA 2015) (D. J. Sanghvi College of Engg.)
	Reviewer	Third International Symposium on Women in Computing and Informatics (WCI-2015)
	Reviewer	Advances in technology and management (NCATM 2016) (A. C. Patil college of Engg.)
	Reviewer	Fourth International Symposium on Women in Computing and Informatics (WCI-2016)
Mr. Manish Potey	Reviewer	RACEM International Conference
		ICACCI International Conference
		ICCUBEA International Conference
Ms. Swati Mali	Reviewer	Fr. C. Rodrigues Institute of Technology's conference - 2 nd Biennial International Conference on Nascent Technologies in Engineering
		Don Bosco International Conference
Mr. Uday Joshi	Reviewer	Don Bosco International Conference
Mr. Deepak Sharma	Reviewer	RACEM International Conference
		ICACCI International Conference
		ICCUBEA International Conference
Mr. Prasanna Shete	Reviewer	ICACIT International Conference

3.4.2 Does the College publish research journal(s)? If yes, indicate the composition of the editorial board, publication policies and whether it is listed in international database?

No: At present, College does not publish any research journal. However the college publishes a magazine and Newsletters.

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3.4.3 Give details of publications by the faculty:

Faculty members have published a number of research articles in various journals of national and international repute.

3.4.5: Faculty Members Publications

Department Name	Publications in National & International Journals
Computer Engg.	110
Electronics Engg.	40
Electronics & Telecommunication Engg	54
Information Tech.	96
Mechanical Engg.	46
HSS	12

- There is no significant contribution of faculty members in publishing books or book chapters.
- Monographs: No
- Editing Books : No
- Books with ISBN numbers with details of publishers : No
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : No
- Citation Index – range / average: Refer Table 3.4.2
- SNIP: No
- SJR: No
- Impact factor – range / average : Refer Table 3.4.2
- h-index : Refer Table 3.4.2

3.4.4 Indicate the average number of successful M.Phil. and Ph.D. scholars guided per faculty.

3.4.6: Doctoral Research Guidance

Sr. No	Department	Name of Faculty Member	Ph.D. Pursuing Students
1	Electronics Engineering	Dr. R.G.Karandikar	02
		Dr. J.H.Nirmal	01
		Dr. A.K.Naik	01
		Dr. Udaypandit Khot	01
2	Mechanical Engineering	Dr. N.R. Gilke	04
		Dr. R.R Lekurwale	01

- KJSCE runs the following M.Tech. Programs with 18 intake capacity in each:
 - M.Tech. (Computer Engineering)
 - M.Tech. (Electronics Engineering)
 - M.Tech. (Electronics and Telecommunication Engineering)
 - M.Tech. (Information Technology: Specialization in Information Security)

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- M.Tech. (Mechanical Engineering: Specialization in CAD/CAM & ROBTICS)
- M.Tech. (Mechanical Engineering: Specialization in Energy Engineering)

3.4.7: M. Tech Research Guidance

Sr. No	Faculty	Admitted in Year	No. of students: Admitted to M.Tech	No. of students: Completed M.Tech.
1	Computer Engineering	2011-12	18	18
		2012-13	18	16
		2013-14	13	12
		2014-15	18	08
		2015-16	18	In Process
2	Electronics Engineering	2011-12	18	16
		2012-13	13	11
		2013-14	10	10
		2014-15	10	05
		2015-16	17	In Process
3	Electronics & Telecommunication Engineering	2011-12	18	17
		2012-13	18	17
		2013-14	18	18
		2014-15	18	16
		2015-16	18	In Process
4	Information Technology	2011-12	--	--
		2012-13	--	--
		2013-14	08	08
		2014-15	09	05
		2015-16	18	In Process
5	Mechanical Engineering (CAD/CAM & Robotics)	2011-12	12	09
		2012-13	11	11
		2013-14	04	04
		2014-15	10	09
		2015-16	18	In Process
6	Mechanical Engineering (Energy Engineering)	2013-14	05	05
		2014-15	12	05
		2015-16	18	In Process

3.4.5 What is the stated policy of the College to check malpractices and misconduct in research?

- **Policy to check malpractices and misconduct in research**
 - KJSCE purchased an antiplagiarism software to check the plagiarism for the various research papers, Thesis and other reports published by B Tech, M.Tech and Ph.D. students.

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3.4.6 Does the College promote interdisciplinary research? If yes, how many inter departmental / inter disciplinary research projects have been undertaken and mention the number of departments involved in such an endeavour.

Yes: List of Interdisciplinary research projects in presented in table 3.4.8

Table 3.4.8 Interdisciplinary research projects

Sr. No.	Project Title	Faculty Member Involved	Department	Status
1	Solar Lighting Project	Dr. K. N. Patil	MECH	Project Completed
		Mr. Nilesh Lakade	ETRX	
2	Early Detection and Classification of Cardiac Arrhythmias based on Electrocardiogram (ECG) & Phonocardiogram (PCG)	Dr J.H. Nirmal	ETRX	Submitted to University of Mumbai
		R.A. Deshpande	EXTC	
3	Wireless Electronics Notice Board	Mr. Ravindra Divekar	IT	Completed
		Mr. S.S Halbe	ETRX	
4	Enhancing Search Over Encrypted Data Using Correlation Cloud	Mr. D.H. Sharma	COMP	Completed
		Shailaja Gogate	IT	

3.4.7 Mention the research awards instituted by the College.

No

3.4.8 Provide details of

- Research Awards received by Faculty Members are given in table 3.4.9

Table 3.4.9: Research awards received by the faculty members

Name of Faculty Members	Prize/Award received	Organization/ Institute	Year
Mechanical Engineering			
Mr. A. A. Prabhudesa	Provost's Award for Frugal Engineering	Somaiya Trust	2014.
	Letter of Appreciation for patent	Somaiya Trust	2015.
	Best Publication Award	Somaiya Trust	2015

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- recognition received by the faculty from reputed professional bodies and agencies are presented in table no 3.4.10

Table: 3.4.10: Recognition received by faculty from reputed professional bodies & agencies

Sr no	Name of Faculty	Awards / recognitions received
1	Dr. Luckman Muhmood	<p>1.Awarded the 12th Willy Korf award for young excellence at the AMM Steel Success Strategies Congress (SSS XXVI), June, 2011 at New York, USA.</p> <p>2.Won the best paper award by a postdoctoral fellow at CSIRO, Australia in Feb 2014</p> <p>3.Awarded C .J. Yngstroms scholarship for conducting research work at Carnegie Mellon University, Pittsburgh, USA.</p> <p>4.Was one of the nominees for the Henry Marion owe/Marcus A. Grossman Young Author Award by ASM International in the year 2012</p> <p>5.Co - recipient of 2016 TMS (The minerals, materials and metal society) Extraction & processing division science award.</p>
2	Dr. K N Patil	Best Thesis Award by IIT Bombay for 2013 with cash prize of Rs 20000=00
3	Dr. R R Lekurwale	Availed UGC Travel Grant (file No 6-412/2013/TG) of Rs. 82803/- for presenting the paper in IEEM at Bankok
4	Dr. S R Nikam	Availed UGC Travel Grant (file No 6-172/2014/TG) of Rs 1,60609/- for presenting the paper in USA.

3.4.9 State the incentives given to faculty for receiving state, national and international recognitions for research contributions.

- **Incentives given to faculty for receiving state, national and international recognitions for research contributions.**

Table: 3.4.11: Incentive received by Faculty from National Agencies

Sr no	Name of Faculty	Awards / recognitions received
1.	Dr. K N Patil	Best Thesis Award by IIT Bombay for 2013 with cash prize of Rs 20000=00
2.	Dr. R R Lekurwale	Availed UGC Travel Grant (file No 6-412/2013/TG) of Rs. 82803/- for presenting the paper in IEEM at Bangkok
3.	Dr. S R Nikam	Availed UGC Travel Grant (file No 6-172/2014/TG) of Rs 1,60609/- for presenting the paper in USA.

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- **Incentives given to faculty members for research contributions by the college.**
 - KJSCE encourages and financially supports the faculty members to submit and present the proposals before national funding agencies.
 - The faculty members are provided with financial support towards registration fee, and travel grants for attending conferences.
 - The publication charges (if required) for peer reviewed journals is also borne by the college.
 - The expenses borne by faculty member to visit the specialized laboratories / centres / libraries / industries for their research work are also reimbursed to faculty members.
 - College has appreciated, encouraged and given incentives in the form of printer cum photocopying machine with scanner to the faculty members who has published paper in peer reviewed journals/IEEE explore. The following faculty members received this incentive.

Table 3.4.12: Incentive received by Faculty from KJSCE

Sr No	Faculty Member Name	Department
1	Dr. N.R. Gilke	Mechanical Engineering
2	Dr. K.N. Patil	Mechanical Engineering
3	Dr. R.R. Lekurwale	Mechanical Engineering
4	Dr. J.H. Nirmal	Electronics Engineering
5	Dr. A.K. Naik	Electronics and Telecommunication Engineering

3.5 Consultancy

3.5.1 What is the stated policy of the College for structured consultancy?

List a few important consultancy services undertaken by the College.

There are defined policies for revenue sharing for different consultancy projects as stated below:

Type-I Consultancy Projects

- Consultancy Projects which DO NOT USE laboratory facilities of the Departments / Institute are classified as Type-I Consultancy Projects.

Type-II Consultancy Projects

- Consultancy Projects involving use of laboratory facilities or equipment of the Departments / Institute for testing / calibration of equipment/ instruments, measurements and testing of materials in laboratory, field testing, etc. are classified as Type-II Consultancy Projects.

Table 3.5.1: Distribution of Funds

Funds	Consultancy Type- I:	Consultancy Type- II:	Testing Assignments
A. Institute Overhead Charges (IOC) (a+b+c)	30%	60%	70%
(a) College Revenue Generation Fund (IRG)	20%	35%	45%
(b) R & D Development Fund (RDF)	5%	10%	10%
(c) Department Development Fund (DDF)	5%	15%	15%
B. Project Investigator	70%	40%	30%
Grand Total (A+B)	100%	100%	100%

3.5.2 Does the College have College-industry cell? If yes, what is its scope and range of activities?

KJSCE does not have college-industry cell however, since college has good reputation for its academic activities in the region, interaction with recruiters or involvement of alumni enables the college in getting consultancy projects.

3.5.3 What is the mode of publicizing the expertise of the College for consultancy services? Mention the departments from whom consultancy was sought.

The Board of Management of the College has approved a post for appointing a person who would interact with industries to identify their problems which in turn could create consultancy assignments for the College. The job profile of such a person is to bridge the gap between the relevant problems in the associated fields/industries with related experience of the faculty members in the College. Depending upon the industries visited and the interaction thereafter, he/she would carry the necessary details of the faculty members who could then be able to take such kind of assignments. The College is currently in the process of advertising for such a person.

3.5.4 How does the College encourage the faculty to utilise the expertise for consultancy services?

The College has defined consultancy policy which covers variety of assignments, depending upon whether the College labs are used for testing or computational facility is used for simulations or assignments would involve participation of students, etc. This policy enables the faculty members to earn additional revenue in the form of cash or kind.

3.5.5 List the broad areas of consultancy services provided by the College and the revenue generated during the last four years.

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The College regularly interacts with the industrial experts during the student internship or as experts in evaluation of UG and PG projects or while framing the syllabus of the departments etc. With the expertise of few faculty members of the Mechanical Engineering department in the thermal area such kind of consultancy assignments are taken up. So far the College has generated Rs. 4.5 lakhs by way of consultancy. The details about this policy is available on intranet for ready reference of the faculty.

Table 3.5.2 Revenue Generated through Consultancies

Sr. No.	Faculty Member	Title Proposal	Amount	Remark
1	Dr. K. N. Patil	Metal Matrix composite form Al waste	1,50,000/-	ATE Industries (2014-15)
2	Mr. A. A. Prabhudesai	Modification in sugarcane harvesting machine for performance improvement	3,00,000	Godavari Biorefineries (2014-15)
Total			4,50,000/-	

Table 3.5.3 Consultancies in-progress

Sr. No.	Name of the Funding Agency	Name of Faculty	Department	Type of the Project	Amount	Start date of the Project	Remarks
1	L&T Automation Litimited Rabale	Dr. K. N. Patil	Mechanical Engineering	Containerized substation for solar PV solution: A thermal and Design Analysis	Rs. 2,25,000/- +VAT	October 2016	Accepted For Funding
2	L&T Automation Litimited, Rabale	Dr. S. R. Nikam	Mechanical Engineering	Heat Transfer Analysis of IGBT at MW size Inverter	-		Technical presentation is over and financial negotiations are going on
3	L&T Automation Litimited, Rabale	Sagar Korde Dr. J. H. Nirmal	Information Technology and Mechanical Engineering	Car parking Project	-	Feb-2016	Technical presentation is over and financial negotiations are going on
Total					Rs.2,25,000/-		

3.6 Extension Activities and Institutional Social Responsibility (ISR)

3.6.1 How does the College sensitize the faculty and students on Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience.

- Parvah is the social initiative of KJSCE student activity.
- With Parvah as a platform, students address many socially important issues such as Child Abuse, Emotional Impacts of Rape on Society and Victims, Save Girl Child, etc.
- KJSCE student council organizes many activities having social bearing. These typically involve blood donation camps, clean up drives, women's day celebration, campaigns against women harassment, awareness regarding the LGBT community, computer literacy drives, etc.
- Socially relevant celebrations such as Marathi bhasha diwas, vachan prerana diwas are given due importance.
- KJSCE faculty members initiated a forum named called PUSH (People United for Students' Help) which offers financial assistance to these well-deserving needy students. Student volunteer take a lot of initiative in conduction of this activity.
- Social internship is given to students by NGO such as U & I and Ekagrata which is run by our Alumni, which works for providing education to under-privileged children, canteen boys, etc.

3.6.2 How does the College promote College-neighbourhood network and student engagement, contributing to holistic development of students and sustained community development?

- BloomBox, the Entrepreneurship Cell of KJSCE, helps in guiding and mentoring budding campus companies. Objective of this cell is to provide students with a chance to gain real world experience through internships, company visits, and speaker sessions and also promote social entrepreneurship through our social initiatives.
- BloomBox organises various activities such as Gang Rush, Campaign Mania, Idea Storm, TLP technology, Like Ten Again, Techno Freak, etc. These activities develop their teamwork, time management and other skills.
- KJSCE Students' Council and other Councils: Details of this are available in Criteria 5.

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

Though there is no NCC unit of the college, many students and faculty members of the college do participate in various social activities in our own and other institutions.

- KJSCE has signed MoU with a few NGOs working with various under-privileged groups of society. Eg: NGO working with the street children or children affected by HIV, etc. As a part of special internship, students of KJSCE have worked with these NGO for a period of two weeks each in their vacations.

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Table 3.6.1: Participation of Students in extension activities

Name of NGO	Nature of Work	Place of Work	No. of Students	Activity Carried Out
Snehalaya	Snehalaya is working for the welfare of victimized women and minors in flesh trade and their children. The welfare projects undertaken by Snehalaya include a shelter home for destitute girls and boys. They provide residence with health and education facilities. Snehalaya mainly works with children from the red light areas.	Ahmad nagar	16	Awareness Camp, Tree Plantation, Teaching Computers to Students in Rural Areas, Repair and Maintenance of Computers Documentati on Work.
Samtol Foundation , Ghatkopar	Samtol is a Non Governmental Organisation for children living in hardships, including children living on Railway Platforms and on the Streets. Samtol run its Awareness Program through Social Media.	Dadoji Kondde v stadium, Khartan Rd. Thane	4	Data Collection & Documentati on, Survey and Editing Forms.
Vacha Organisatio n	Vacha Organisation works towards Women Empowerment. They offer to teach useful skills such as English and Computers. They also conduct Gender Sensitisation Workshops for Municipal School Teachers. They have also documented the lives of women freedom fighters and have produced lively handbooks on health for girls.	Kalyan Centre at Pisavali	6	Teaching English and Computers to girls in rural areas.

The feedback collected from the students working on various social problems indicate that they are able to understand the evils of the society and the perspective of students gets widened. Such activities sensitize them so that they work towards bringing hope to the life of these deprived people.

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- To empower our canteen staff, KJSCE BloomBox students and faculty members have undertaken an activity ‘Kartavya’, in which basics of computer and Internet were taught to canteen staff.
- Inspired by the ‘Swachh Bharat Mission’ a group of students, initiated drive on ‘Swachh Bharat’ campaign cleaned the campus created awareness of importance of cleaning.
- To understand the importance of ‘Green Globe’, our students planted number of trees in the campus and nearby our campus.
- During the Joy-of-Giving months our students initiated the ‘Clothes Collection Drive’ to donate clothes to orphans and underprivileged strata of the society.
- For improvement of the communication skills, self-esteem and confidence of our house keeping staff, our students organised ‘Project Smile’, in which they taught English to our house keeping staff.

3.6.4 Give details on social surveys, research or extension work (if any) undertaken by the College to ensure social justice and empower the under-privileged and most vulnerable sections of society?

BloomBox, the entrepreneurship cell of the College tries to sell the products made by the villager by selling it to the urbans. The College creates awareness about the “Just Society” through various student activities. The students take active participation in reaching out to the underprivileged persons from the society by empowering them with computer education, conducting cleanliness drive for the nearby Ghatkopar station. They also have tried to voice against the discrimination of the LGBT community in the Society by way of organizing street plays, conducting rallies etc.,

3.6.5 Give details of awards / recognition received by the College for extension activities / community development work.

Not received any such awards

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

The vision of the College expects every student to inculcate human value of compassion and work towards goodwill of society. A large number of students are encouraged to participate in the social initiative “Parvah” as volunteers as well as organisers and they are involved in conducting variety of activities. They use techniques such as street plays, painting, conducting workshops, etc. depending upon the nature of the problem. This not only enables them to understand the social situation but it also encourages their creativity while they address the problem which in turn helps the development of their personality.

3.6.7 How does the College ensure the involvement of the community in its outreach activities and contribute to the community development? Detail the initiatives of the College which have encouraged community participation in its activities.

Blood donation drives are regularly held in the College twice in a year. Organisers of this event approach the students and encourage them to donate blood. The programmes such as celebration of Woman's Day, creates awareness for the need for equal status of women in the society. Volunteers working with PUSH; which works for providing financial support to the needy students, approach their friends and relatives to encourage them to help their cause.

3.6.8 Does the College have a mechanism to track the students' involvement in various social movements / activities which promote citizenship roles?

The PUSH initiative of the College is executed by student volunteers who take the efforts in reaching out the needy students of the College, analyse their needs and help the College to come to a conclusion regarding the disbursement of the funds.

The Rhapsody team of the College has been working for the last three years and demonstrating the social issues through street plays. Students from all four years of the college participate in this activity.

Since all these teams have participation from junior as well as senior students, the activity continues even after senior students leave the college after completion of their program.

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

Students' Council of our College along with K J Somaiya Medical College regularly organize blood donation drives. Many students and faculty members of the College participate in the same.

The College has a tie up with Humsafar Trust which is involved in creating awareness for the rights of the LGBT community in the Society.

The College along with the University of Mumbai has conducted a one week Skill Development Program for the under privileged students from the nearby locality.

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.

Not received any such awards

3.7 Collaboration

3.7.1 How has the College's collaboration with other agencies impacted the visibility, identity and diversity of activities on the campus? To what extent has the College benefitted academically and financially because of collaborations?

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Table 3.7.1: Collaboration with Other Agencies

Sr.NO.	Collaboration with other agencies	Academic Benefits to the college
1.	Eduvance	Students Internship and Skill Set Development of students
2.	Industrial Design Associates Pvt Ltd	<ul style="list-style-type: none">• Internships,• Exposure to real life projects
3.	Force Motors	<ul style="list-style-type: none">• Internships• Placements
4.	L&T	<ul style="list-style-type: none">• Internships• Placements• Consultancy assignments

3.7.2 Mention specific examples of, how these linkages promote

Curriculum development: At least one member from industry is involved as a member in the subject board of every department

Internship, On-the-job training: Internships with L&T and Force motors were converted into job offers to the students

Faculty exchange and development: Most of the time, the training programmes organised by the college faculty members have sessions involving industrial experts.

New courses are designed by industrial experts and are offered as electives to the students. Faculty members are encouraged to attend such courses and due weightage is given for attending such courses during the appraisal of faculty for promotions/career advancement

Research, Publication: No collaborations so far

Consultancy, Extension: Two Consultancies assignments with L& T for two projects

Student placement: large numbers of companies have been consistent recruiter during student's placement.

3.7.3 Does the College have MoUs nationally / internationally and with institutions of national importance/other universities/ industries/corporate houses etc.? If yes, explain how the MoUs have contributed in enhancing the quality and output of teaching-learning, research and development activities of the College?

The college is likely to sign the MoU with University of Texas at Austin

3.7.4 Have the College industry interactions resulted in the establishment / creation of highly specialized laboratories / facilities?

Not so far

CRITERION IV
INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Physical Facilities

4.1.1 How does the college plan and ensure adequate availability of physical infrastructure and ensure its optimal utilization?

- The college is housed in two buildings. Aryabhat building is a G + 4 storeyed structure while Bhaskaracharya building is a G + 6 storeyed structure; amounting to a total area of 338000 sq. ft. Both these buildings together accommodate the Engineering departments as well as the Science & Humanities department. Each of the department has adequate number of well-equipped classrooms and laboratories.

Table 4.1.1: Classrooms allotted to each department

Departments	No. of Classrooms	
	UG	PG
Computer Engineering	06+01(tutorial room)	01+01(PG Sem Hall)
Electronics Engineering	06+01(tutorial room)	01+01(PG Sem Hall)
Electronics & Telecommunication Engineering	06+01(tutorial room)	01+01(PG Sem Hall)
Information Technology	06+01(tutorial room)	01+01(PG Sem Hall)
Mechanical Engineering	06+01(tutorial room)	02+01(PG Sem Hall)
First Year	10+01(tutorial room)	-

Table 4.1.2: Laboratories allotted to each department

Departments	No. of Labs
Computer Engineering	12 + (01 PG Computing Centre)
Electronics Engineering	15 + (01 PG & 01 UG Computing Centre)
Electronics & Telecommunication Engineering	14 + (01 PG Computing Centre)
Information Technology	12 + (01 PG Computing Centre)

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Mechanical Engineering	17 UG + (1 PG (EE) & 1 PG (CCR) Computing Centre)
Language Lab	01
Applied Science Lab	02

- **Seminar Hall:** College has 5 well equipped seminar halls (each with approximate capacity of 150) for conduction of lectures, training programs, workshops etc., With the initiative of an alumnus, a seminar hall with video conferencing facility has been set up.
- **Centre For Distance Engineering Education Program (CDEEP) Remote Centre:** IIT Bombay (IITB) has taken an initiative as part of National Mission of Education through ICT, supported by MHRD to improve the skills of students and faculties in engineering discipline. Our college is one of the Remote Centres. Since December 2009, more than 10 workshops have been conducted by IITB at our centre. Most of these were also supported by ISTE and large numbers of faculty members from many Institutes have attended the same.
- **Auditorium:** College has a well-equipped auditorium, named as Sakarben Karamshi Somaiya Sabhagruh, which can accommodate 450 audiences.
- **Common Computing Facility (CCF):** Common Computing Facility (CCF) provides Internet access facility that augments to the computing facility of every department. It is equipped with 39 PCs for students and faculty members.
- **Placement Cell:** Placement activity in the college is conducted in separate area, which includes discussion rooms, interview rooms and presentation area.
- **Amphitheatre:** An open air auditorium just outside the Aryabhat building of the college provides a platform for the students' to showcase their talent. It has a capacity of accommodating more than 500 viewers at any point in time.
- **Medical Facility:**
 - Medical facility is available in Aryabhat building for medical emergency. Dr. Hemlata Kawade is available in college on Monday, Wednesday and Friday, between 10 am to 1 pm. On the remaining days she is available in some other institutes in the campus where she can be easily approached.
 - First-Aid boxes are available in all the department offices and few other places.

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- College has appointed a medical counsellor, Dr. Shrirang Joshi, who is available in the college on Tuesday between 12 noon to 3pm.
- For the outdoor enthusiasts we have a football ground, a hand-ball court, and a cricket ground.
- Separate spaces are provided to encourage students in Co-curricular activities (BAJA Team, Orion Racing Team, Team Robocon, Team Eta professional society chapters of different branches, etc.)

4.1.2 Does the College have policy for creation and enhancement of infrastructure in order to promote a good teaching – learning environment? If yes, mention few recent initiatives.

- Yes. Each year, there is a budgetary provision for renovation of various physical infrastructures of the college. The activities are carried out as per suggestions of Heads of Departments. Additionally, Dean (Infrastructure & Resource Management) along with the Principal, during visit to the college premises identify areas that need attention and carry out necessary renovation or maintenance activity.
- Following list gives the major enhancements in the infrastructures carried out in recent past.
 - Creation of additional Seminar Halls for 3 departments.
 - Enhancement of computing facility in each department.
 - Provision of LCD projectors and internet connection in each class-room.
 - Allotment of Laptops to all the faculty members.
 - Strengthening of internet connectivity of college network.
 - Fixation of CCTV cameras and setting up Wi-Fi in both buildings of the college.
 - Introduction of learning management system.
 - Computerization of library management system.

4.1.3 Does the College provide all departments with facilities like office room, common room, and separate rest rooms for women students and staff?

- Each faculty member is provided with a specific room / sitting arrangement, a cupboard, table & chair. Recently, all the regular faculty members of the college have been given a laptop for professional / personal use; to be maintained till they are employees of the college.
- Each department head is provided with a cabin and department office is adjacent to it.
- Separate common room is provided for girl students.

4.1.4 How does the College ensure that the infrastructure facilities meet the requirements of students/staff with disabilities?

- Ramps are constructed at the entrances of both the college buildings as well as one classroom
- The multi-storeyed structure of college buildings has lifts which can accommodate a wheel chair bound person.
- College plans to procure a wheel chair to facilitate movement of the students inside the buildings
- The departments where the visually challenged students have enrolled also have additional teaching aid for supporting their teaching-learning.
- Medical room is on ground floor and is equipped with a bed. So it is used during examination period by students who are sick and need to take rest while writing the exam.

4.1.5 How does the College cater to the residential requirements of students?

Mumbai city is spread over main island and suburbs. However, all the parts of Mumbai are well connected through public transport facility in the form of local trains, Metro & BEST buses. Hence, most of the students enrolled in the college can remain day-scholars.

There are two hostels in the campus, where both outstation boys and girls including NRI can be provided accommodation. Since there is demand for more campus accommodation, one more hostel is under construction and is proposed to be available from 2017-18.

- Hostel-1
 - It is a 13 storey building with triple sharing accommodation in 104 rooms for 312 ladies and 100 rooms for 300 men. In addition, there are 26 rooms for guests.
 - All the rooms are well equipped and with internet facility.
 - There is a Gym, a laundry. Other recreational facilities are also available.
- Hostel-2
 - It is a 6 storey building having 80 rooms.
 - It has a capacity to accommodate 96 girls and 224 boys.
- Hostel-3
 - A new hostel building is also under construction.
 - It will have a capacity to accommodate 600+ students studying in the campus.

4.1.6 How does the College cope with the health related support services for the Students, faculty and non-teaching staff on the campus and beyond?

- Dr. Hemlata Kawade is available in college on Monday, Wednesday and Friday, between 10 am to 1 pm. in the medical room in Aryabhat building. For the rest of the days, she is available in the campus and she can be reached on a call for any emergency assistance, if required.
- First-Aid boxes are available in all the department offices and few other places. Signage for this are put up at various places in the college.
- All the students, by paying one time premium at the time of admission, are covered by the National Insurance Company with their policy namely “Amartya Shiksha Yojana”. Student admitted to First Year pays Rs. 684 covering 4 years of education in college while students admitted directly at second year pay Rs.442 for 3 years of education.
- The Somaiya Trust has a Hospital at Sion in which the students and the staff can receive medical treatment at very reasonable rates.
- Somaiya Diagnostic Centre is located just outside the College, where employees and students can avail services at concessional rates.
- Every year, in the month of March, all confirmed non-teaching staff are paid Medical allowance of Rs. 3500. Additionally, they are also covered under a group insurance scheme.
- Counsellor Dr. Shrirang Joshi is available on Tuesday between 12 pm to 3pm.

4.1.7 What special facilities are made available on the campus to promote interest in sports and cultural events?

- **Sports:**
 - Students regularly opt for Sports as an exposure course during their first year, which not only helps them to relax but also helps them in informally knowing fellow students. Some of them regularly attend sports of their interest as a part of their daily routine.
 - College promotes participation of students in sports, both indoor as well as outdoor.
 - Experts / coaches are appointed by the college as well as by the campus for guidance in various sports.
 - College teams participate in various inter-collegiate sports competitions and few students also selected to play on behalf of the University of Mumbai.
 - Students hold sports events twice in the year, once as an intra-college event and once as an inter-college event.
 - Girl students are also encouraged to participate in games such as football.

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- Teaching and non-teaching staff as well as alumni are also invited to participate in events organised specially for them. There is a very good response to such activities.

Some of these facilities are available inside the college building while some are inside the campus.

Table 4.1.3: Location of Sports Facilities

Type of sport	Name of sport	Location
Indoor	Carom	Aryabhat building of college
	Badminton	Aryabhat building of college
	Table tennis	Aryabhat building of college
	Squash	Chanakya building in Campus
	Gymnasium	SIMSR hostel building in Campus
Outdoor	Football	Campus Football ground
	Basketball	Basketball court in Science college of Campus
	Volleyball	Volleyball court in Polytechnic of campus
	Athletic track	Campus Athletic track
	Open Air Gymnasium	Near the athletic track of Campus
	Open Air Chess Board	Near Nakshtra Garden of the Campus
	Tennis	Campus Tennis court

- Facilities for Cultural events:

Following auditoria / open-air theatres, located in the campus, are available for organizing cultural events:

- Air-conditioned Sakarben auditorium (Capacity : 400)
- Air-conditioned Red Hall auditorium (Capacity : 250)
- Air-conditioned Blue Hall auditorium (Capacity : 250)
- Air-conditioned School Hall (Capacity : 400)
- Gargi Plaza (an open-air theatre).
- Tagore Amphi-theatre with stage.

4.2 Library as a Learning Resource

- **Introduction**

- With a comprehensive collection of literature predominantly related to engineering and its allied subjects, KJSCE library aims to cater to the present and future information needs of its users; viz. faculty members, students. Additionally, collection of books in the departmental library acts as a ready reference for the faculty members and students.

4.2.1 Does the library have an Advisory Committee? Specify the composition of such a committee. What significant initiatives have been implemented by the committee to render the library, student/user friendly?

The college has a Library Advisory Committee (LAC) which is appointed by the Principal. It has the following composition.

- **Composition:** The LAC has 12 members and composition is as follows:
 - Chairperson: Principal
 - Secretary: Librarian
 - Members: Vice Principals
 - Heads of the department by designation
 - Two members (proposed by the Librarian)

- **Tenure:** Typically, tenure of the members is for 3 years. However, since Heads of the Departments are members of the committee, the committee automatically gets reconstituted as per the rotation policy for the Headship. Principal can also recommend a replacement / addition of a member, if required. Also, there is a provision that no member shall serve the Committee for more than two consecutive terms. For the sake of continuation at least two members from previous committee are continued for a period of six months.

- **Functions:** The committee meets 3-4 times in a year to carry out the following functions
 - Finalise library budget and facilitate purchase procedure of library related items.
 - Act as a channel of communication between Library staff and its users.
 - Establish a bridge between Library, academic fraternity and college management.

- **Initiatives of LAC**
 - Render help during the literature review phase of any research

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- Suggest technology based solutions and tools to support library functioning
- Design policies for encouragement of readers
- Propose different methods of bringing discipline in readers

4.2.2 Provide details of the following:

- Total area of the library: 1140 Sq. Mts.
- Total seating capacity : 185+
- Layout of the library : Library is spread across four floors of Bhaskaracharya building
 - First Floor: Reading Room
 - Second Floor: Home Issue Section including Stacking areas
Issue/Return Counter & Digital Library Centre with
17 computers for browsing catalogue and accessing
e-resources
 - Third Floor: Reference Section
(Entrance from Stacking area
Second floor) Reference counter
Office of the Librarian
 - Fourth Floor: Periodical Section includes display of Print
Journals, Magazines,
(Entrance from Newspaper and Bound Volumes
Second floor) Books of the Bank Book
Separate seating area for PG students
 - Each floor displays floor plan showing various sections.
 - Each rack has adequate signage showing contents.
 - All the area is provided with firefighting system.
- Working hours :
 - Regular semester:
 - Working days: 9:30am - 9pm
 - College holidays: Closed
 - Examination period:
 - Working days: 9:30am - 9pm including all Saturdays.
 - Reading room: Open also on Sundays & public holidays:
9:30am- 5:30pm
 - Vacation period:
 - Working days: 9:30am - 5:30pm.
 - College holidays: Closed

4.2.3 Give details on the library holdings

Table 4.2.1: Library Holdings

YEAR	BOOKS	eBOOKS	KINDLE	BOOK BANK	JOURNALS	DATABASE
Upto 2011	24136	-	-	8640	-	-
2011-2012	1322	-	-	-	105	9
2012-2013	3109	-	-	-	111	8
2013-2014	2393	-	-	-	115	8
2014-2015	2526	-	-	300	115	8
2015-2016	1718	132	6	70	113	7
2016-2017	1219	21	-	477	114	7
TOTAL	#36423	153	6	9487	-	-

In addition to this, collection also includes complimentary and donated books.

4.2.4 What tools does the library deploy to provide access to the collection?

- **OPAC**

Automation of most of the procedures, such as Open Access System, bar coding of the books, etc. facilitates a thorough check on the inflow and outflow of books.

The library catalogue lists the books, bound volumes, Standards, book bank books, CDs, DVDs and other media available in all the Somaiya libraries. The Real-time Web OPAC allows users to search resources, reserve books and self-renew books. Link is displayed on the KJSCE Library page at <https://www.somaiya.edu/opac/>

- **Library Website**

Library webpage provides information about library, its layout, resources, Book Bank facility, Institutional Membership and Library staff.

URL: <https://www.somaiya.edu/kjsce/academics/library>

- **In-house/remote access to e-publications**

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Library has started a new service ‘RemoteXs’, which helps to connect to the online electronic library resources from remote places with somaiya.edu email account.

URL: <https://library.somaiya.edu>

- **Electronic Resource Management package for e-journals**

Library subscribes to the following e-resources:

Table 4.2.2: Electronic Resources

Sr.	Database	Content	URL
1	IEEE Electronic Library	All Journals, Trans, Magazines, Standards and conf. proceedings	http://ieeexplore.ieee.org/Xplore/home.jsp
2	AICTE-Springer Electrical & Electronics & Computer Sci. Engg. Collection	149 Journals	http://www.springerlink.com/
3	AICTE-Springer Mechanical Engineering Collection	49 Journals	http://www.springerlink.com/
4	AICTE-MC Graw Hill Access Engineering Library	623 books	http://2.accessengineeringlibrary.com/
5	Elsevier SCIENCE DIRECT	275 Journals	http://www.sciencedirect.com/
6	ASME	28 Journals	http://asmedigitalcollection.asme.org
7	ACM Digital Library	1203 Journals, 16375 Proceedings, 1264 books	http://dl.acm.org/

- Federated searching tools to search articles in multiple databases EBSCO Discovery Service provides a unified platform for library users to access and search from all the library resources to get single set of results like Google.

4.2.5 To what extent is the ICT deployed in the library?

- Library automation
 - All library functions are automated. Library uses **Oracle based BOOKWORM Software**. Users can do Discovery Search from remote places, Reserve books, and self-renew books online. Emails and SMS are used to send reminders to users.
 - Total number of computers for public access : **20**
 - Total numbers of printers for public access: **1**
- Internet band width speed: **155 Mbps**
- Institutional Repository: **DSPACE@KJSCE** Digital library available on intranet holds archives of syllabus, question papers, articles, department newsletters, College magazine “Kshitij”, etc. URL : <http://172.17.12.14:8080/>
- Participation in Resource sharing networks/consortia (like **DELNET**).
- Library is a member of **AICTE-INDEST Consortium**. Most of the e-resources are subscribed under this consortium.

4.2.6 Provide details with regard to.

- Average number of walk-ins : **Approx. 500 daily**
- Average number of books issued/returned : **Issue 215 & Return 215 daily**
- Library books as on 31-12-2016: 18760 titles & 37430 volumes (including donated / gift books)
- Ratio of library books to students enrolled: **12.77:1 (without book bank)**
- Average number of books added during last three years: **2212**
- Average number of login to OPAC : **Approx. 2000 per month**
- Average number of login to e-resources : **Approx. 2000 per month**
- Average number of e-resources downloaded/printed : **Approx. 1500 per month**
- Number of information literacy trainings organized : **3 in year 2015**

4.2.7 Give details of the specialized services provided by the library

Manuscripts:

- **E-Books:** Library has procured 102 eBooks from McGraw Hill perpetual access and 51 Kindle Version eBooks.
- **Book Bank Facility:** The Book Bank Scheme was started in the year 1993 for the benefit of the students coming from financially weaker section of the society. In this scheme, students are required to deposit 60% of the total cost of the books, of which 15% of total cost of the books is deducted as reading fee from the deposited amount and the rest is refunded to students upon return

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of books. No reading fee is collected from reserved category students and entire deposit is refunded. Students can borrow maximum upto 10 books of their choice from the Book Bank.

- Circulation of books to the users per day is 215

Reference:

- **Current awareness service:** Every month, a list of additions to the library collection is displayed on the intranet through Dspace and a copy is sent to all through email.
- **SDI (Selective Dissemination of Information):** Every department has identified their thrust areas of research. Library keeps the faculty members as well as students abreast by sending mails regarding recently published articles in areas of their research. Library also keeps a record of research areas of individuals. Relevant research articles, updates on seminars/conferences to be held and other related information is sent by email to the individuals.
- Library provides assistance in using databases to all researchers.

Reprography:

- A photocopy counter is available on the 4th floor of the library in periodical Section to cater to the needs of the users. Library allows free photocopies as well as printouts (maximum upto 100 copies per branch per month) of library resources to faculty members. The details are maintained in a register.

Inter Library Loan:

- Global Common Circulation (GCC) is adopted for the campus libraries by which any student or faculty member belonging to any of SVV institution can avail the KJSCE library facility
- KJSCE students can also avail library facility of other SVV institutes.

Information Deployment and Notification:

- User orientation and Information Literacy Drive
- **Reminders:** KJSCE library sends following types of reminders to the users in the form of emails or sms
 - **Gentle Reminder email** is sent to faculty members and staff seven days before due date of a book. While for students it is sent one day before due date of return of a book.
 - **Overdue Reminder email and SMS** is sent after due date of a book to all users periodically.

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- **Intimation Reminder email** is sent to users if any book issued by them has a reservation.
- **Intimation email and SMS** regarding availability of a reserved book is sent to the user who has reserved that book.

OPAC:

- **Web OPAC Online services:** Students can see real time WebOPAC, self-renew books, and reserve a book.
- Federated searching tools to search articles in multiple databases **EBSCO Discovery Service** provides a unified platform for library users to access and search from all the library resources to get single set of results like Google.

Other Services provided are:

- **E-readers:** Library has six Kindles and 51 Kindle version eBooks are procured.
- **NPTEL :** This e-learning through online Web and Video courses in Engineering, Sciences, Technology, Management and Humanities is available for students
- **Institutional Membership:** KJSCE library has access to IIT Bombay Central Library, Powai and British Council Library, Mumbai & DELNET.

4.2.8 Provide details on the annual library budget and the amount spent for purchasing new books and journals.

Table 4.2.3: Library Budget and Expenditure

Year	Books		eBooks		Journals/Magazines (for hard copy subscription)		E-Journal (for soft copy subscription)	
	Budget	Expenditure	Budget	Expenditure	Budget	Expenditure	Budget	Expenditure
	In Lakhs	In Lakhs	In Lakhs	In Lakhs	In Lakhs	In Lakhs	In Lakhs	In Lakhs
2011-12	6.6	5.24	-	-	3.25	3.2	18	18.11
201	18.6	19.2	-	-	3.2	2.78	42.7	46.43

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Year	Books		eBooks		Journals/Magazines (for hard copy subscription)		E-Journal (for soft copy subscription)	
	Budget	Expenditure	Budget	Expenditure	Budget	Expenditure	Budget	Expenditure
	In Lakhs	In Lakhs	In Lakhs	In Lakhs	In Lakhs	In Lakhs	In Lakhs	In Lakhs
2-13								
2013-14	27.06	21.28	-	-	3.3	3.16	37.5	40.28
2014-15	27.5	22.19	-	-	3.3	2.97	42	41.71
2015-16	22.5	14.22	4.25	6.25	3.5	2.94	46	47.07
2016-17	23	8.16	6	0.05	3.5	2.84	50	50.07

4.2.9 Does the library get the feedback from its users? If yes, how is it analysed and used for improving the library services.

A feedback on quality of facilities and services provided by the college is taken from the students of each program from past two years. It also includes feedback on quality of Library facility and its services. The library advisory committee takes cognizance of this feedback to improve the library facilities and services.

4.2.10 List the infrastructural development of the library over the last four years.

Apart from regular purchase of books and journals, following are the infrastructural developments in last four years:

2012-13:

- Addition of Godrej Book Racks
- Compactor storage for Bound Volumes & Book Bank Books

2013-14

- Addition of 13 Godrej Book Racks

- Creation of periodical Section on fourth floor
- Compactor storage for Bound Volumes & Book Bank Books

2014-15

- Exclusive seating arrangement for PG students

2015-16

- Renovation/ repair of Reading Room Chairs and Table for creating uniformity

4.2.11 Did the library organize workshop/s for students, teachers, non-teaching staff of the College to facilitate better Library usage?

- User orientation and Information Literacy Drive for PG students
- **Anti-Plagiarism Web Tool:** Turnitin is a leading software used by researchers all over the world for checking originality and prevention of plagiarism. Library has subscribed this software to inculcate best practices while using / citing material written by other people. UG as well as PG students and faculty members are encouraged to check their thesis / publications using this software.
- **GATE Practice software:** Library has installed a collection of question papers of the Graduate Aptitude Test in Engineering (GATE) over last 17 years on the college server. This covers more than 1200 questions of each branch of engineering and helps students to prepare not only for GATE but also for other competitive exams, interviews, etc.
- **Book Exhibition:** Every year library arranges for book exhibition through publishers or their representatives or the empanelled suppliers.
- **Star Reader Award for Students:** On the occasion of ‘**Reading Inspiration Day**’ i.e. **15th October**, library felicitates those students who borrow maximum number of books in a year.
- **Regional Language Books:** On the occasion of celebration of Marathi Bhasha Diwas, library has started adding good selected books from Marathi, Hindi and Gujarati language to the collection.
- **General Reading Books:** library also has a small collection of fiction and non-fiction books both in print and eBook format for light reading library, which has received good response from users.
- **Celebration of Special days:** Library takes initiative to celebrate different days as special days as per AICTE/ UGC/ DTE guidelines. This includes Marathi Bhasha Diwas, birth anniversary of Abdul Kalam, etc. Relevant materials from internet, books, etc. are displayed in the library for the benefit of users.

4.3 IT Infrastructure

- **Introduction**

- K. J. Somaiya College of Engineering is having 1500 nos. of Desktops connected through Local Area Network comprising of 116 managed and 1 unmanaged switches.
- The KJSCE Local Area Network spans two buildings: Aryabhata and Bhaskaracharya. The subnets of the two buildings are connected through 10 Gbps single mode optical fibre media (10 Gbps fibre media is link aggregated 1:1). KJSCE local network is managed by KJSCE Datacenter with core levels located at Bhaskaracharya building (Room # B-219) and Aryabhata building (Room# A-109) that manages the network in the respective buildings.
- Moreover, KJSCE campus is WiFi enabled. WiFi connectivity is made available at all important places e.g Board rooms, UG-PG seminar halls, Library, Placement cell and common areas like corridors. The WiFi network is deployed using Aruba's controller based WiFi solution and comprises 50 Aps (A-215, A-205 and A-105) connected through PoE switches to KJSCE's network.

4.3.1 Does the college have comprehensive IT policy addressing standards on IT service Management, Information security, Network Security, Risk management and Software Asset Management?

Following are the existing policies

- **Information Security:**

- **Desktop and Laptop:**
 - Sharing of Folders should be discouraged,
 - Every desktop should have administrator user with password security and is available only with Administrator/Lab In charge.
 - Use the campus computer systems only for approved purposes.
 - Do not provide access codes to any unauthorized user.
 - Do not use IT resources to damage other campus resources or systems.
 - AMC of every hardware device is placed.
 - Make regular backups of information and files as appropriate and store it in different Storage.
 - Detail IT asset register to be maintained in every Department.
- **Software**
 - Do not load Pirated Software or free unknown software.
 - Do not make copies of legal software.

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- Discourage use of IT resources for personal gain, illegal activities, or obscene activities except Scholarly activities, including carrying out research and development, writing of research papers, patents, textbooks or preparation of other teaching-learning materials by faculty members.
- Campus IT resources should not be used for commercial purposes, except the written approval of the Head of Institute.

- **Internet**
 - Comment or act on behalf of the campus over the Internet responsibly.
 - Do not use any device or application that consumes a disproportionate amount of network bandwidth (e.g recreational videos, songs etc.) to avoid misuse of bandwidth.
 - Encourage users to report all observed illegal activities to the appropriate administrative office. Examples illegal electronic file sharing, sound or video recording piracy, hacking etc.
 - Do not click on unwanted/unknown popup as it can load malicious software without your knowledge and slow down the network and PCs.

- **Email**
 - All the official communication should happen via email.
 - Do not send email chain letters or mass mailings for purposes other than official campus business.

- **Network Security**
 - **Antivirus**
 - Install, use, and regularly update virus protection software.
 - OS Patches will be updated on every computer via WSUS (Windows Server Update Service).
 - Block USB storage Device and discourage drive and folder sharing to protect IT Infrastructure from virus attack.
 - Do not introduce, create, or propagate computer viruses, worms, Trojan Horses, or other malicious code using campus IT resources.
 - Inform immediately administrator/ lab in charge for any virus found.
 - **Authentication**
 - Fortinet Firewall integrated with ADS (Active Directory Services) is used for authentication, more security and effective manageability.

- **Network**
 - Do not connect devices (such as, switches, routers, hubs, computer systems, and wireless access points) to the network that are not approved by the central campus or institutional IT organization.
 - Network Diagram of respective college should be maintained with IT Head.
 - Do not intercept others files and folders.
- **Switch and Firewall**
 - Cisco Nexus 3548 P-10G as local core switch with VLANs at KJSCE datacentre.
 - Cisco 4500 Catalyst Switch and Cisco Catalyst 2960 Switch with access control list and VLANs at SVV datacentre.
 - Fortinet 3040 B Firewall with all the critical services such as IPS, Antivirus, Web Filtering, DLP and Application Control at SVV datacentre.

4.3.2 Give details of the college's computing facilities (hardware and software).

- Number of systems with configuration : **1541(1340 desktops + 201 laptops)**
- Computer-student ratio : **1:1 (in Laboratories)**
- Dedicated computing facility: **Yes in CCF, 40 PCs**
- LAN facility: For **All Desktop computers**
- WiFi facility: **At all common places throughout KJSCE, with the help of 50 Access Points**
- Propriety software / Open source softwares: Proprietary-48, Open Source 8
- Number of nodes/ computers with internet facility: All computers have Internet access
- Any other: Dedicated Data Centre to take care of KJSCE's Networking and Computing needs.
 - Backbone Network comprising of 10 Gbps optical fiber connectivity, from Core to Distribution Level. Entire network is based on Cisco Switches; high speed Nexus as the Core switch and Cisco Catalyst switches at the distribution.
 - Two Rack Servers: Dell Power Edge R 720; Intel Xenon E5- 2620 v2, 2.1 GHz, 15MB Cache, 2*16 GB RAM, 4 TB storage with integrated RAID controller.
 - 2 Dell Power Edge T 300, Quad Core Xenon-Pro L3353, 12MB cache, 2.66 GHz, 4GB RAM, 300GB*2 HDD.

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- Proprietary Private Cloud that supports 64 VMs with 1GB RAM.

The detail of software facilities are as follows:

Table 4.3.1: List of Propriety Software available with KJSCE

Sr. No.	Propriety Software List
1	Microsoft School Campus Agreement (SCA) 3.5 which includes Office 2010 Prof., Windows 7 Upgrade, Core CAL along with MSDN AA online Subscription. 2 UJ 00011
2	MS Visual Studio Net PRO (Under CA Part No. CSE00814)
3	MS Windows 2003 Server MOLP NL AE
4	Kaspersky Endpoint Security 10 (Antivirus)
5	Adobe Licensing at SVV Level
6	MS Windows 2012 Server
7	Matlab 2013a
8	Matlab 2016a Under TAH Agreement
9	Cobol (Ansi 85 for DOS)
10	Oracle 9i
11	Macromedia Studio MXAE
12	MS SQL 2000 Server Media Kit
13	D2k-6i With IDS
14	Prolog
15	HTML Front Page
16	MS Visual Foxpro
17	MSDN
18	Turbo C++
19	Ms Project Pro (Under SCA)
20	MATLAB 2009
21	Oracle 11g Std. Edition License
22	Oracle Academy
23	IBM RSA Software Architect
24	Ms Project Pro (Under SCA) 9\$
25	Tina V7 Educational Version
26	Adobe CS4 Design Premium (10 Users Pack)
27	QualNet 5.0. Research License along with Network security Library
28	LABVIEW (Multi user)
29	Xilinx 6.1-ModelSim 5.7g (Multi user)
30	PSPICE ORCAD Capture 10
31	Microwind 3.1

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Sr. No.	Propriety Software List
32	Proteus VSM
33	Multisim 7 Education Version SPICE Simulation and Schemantic Capture Software
34	Fluid Sim- Pneumatic
35	Fluid Sim- Hydraulic
36	Neural Network Tool Box
37	Fuzzy Logic Tool Box
38	Control System Tool Box
39	SIMULINK
40	Solidworks 2015, Autodesk Inventor 2015
41	Ansys 16.2
42	AutoCAD 2016
43	Automation Studio
44	SIM Mechanics
45	Liguaphone-21 with Eyespeak
46	Liguaphone-L 21 Multimedia
47	IE3D

Table: 4.3.2: List of Open Source Software available with KJSCE

Sr. No.	Open source software List
1	Ubuntu
2	Fedora
3	Yak
4	Lex
5	MASM
6	Red Hat Linux
7	Network Simulator (NS-2)

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

- With the goal of providing high Bandwidth to support the modern applications/services, institute had recently subscribed to 155 Mbps (1:1) internet connectivity from Aircel. Moreover major network infrastructural development plans were taken up from last two years. Under this KJSCE backbone data network was migrated on 10 Gbps optical fiber from Core to Distribution Level with the aid of high end Cisco Catalyst switches.

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- Institute has a long term goal of becoming leading IT enabled State level Private University with international collaborations and thus has planned various upgradations to IT infrastructure and services.
- Although at present the Internet BW is 155 Mbps on optical fiber (with backup of 80 Mbps on RF), it is from single service provider. The institute has discussions / plans to upgrade the BW to 255 Mbps with redundant connection from other service provider, so as to handle any failures.
- Enhance the backbone network capacity by replacing the fast Ethernet based connectivity between distribution to core with Gigabit Ethernet (or optical fibre).
- Provide students with remote access to online learning material like Video lectures, e-books, journals etc. from home.
- Create state of art Audio Visual conferencing facility so as to arrange interactive lecture sessions conducted by reputed national and international Universities/Institutes e.g IITs, MIT etc.
- To develop high performance computing facility to support research and development in the contemporary areas like Virtual/Augmented Reality, Cloud computing etc.

4.3.4 Give details on access to online teaching and learning resources and other knowledge, and information provided to the staff and students for quality teaching, learning and research.

- LMS
- Google APPS - Somaiya management has subscription to all Google Apps
- Youtube Channel
- OPAC ebook Subscription
- eJournals subscription
- NPTEL lectures
- Collaboration with IITB Library
- CDEEP IITB remote centre
- Virtual labs
- MOOCS

4.3.5 Give details on the ICT enabled classrooms/learning spaces available within the College and how they are utilized for enhancing the quality of teaching and learning.

- LCD Projectors are mounted in all the classrooms. The classrooms have internet connections and screen.

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- Laptops and VGA cables are given to each faculty member in all the departments.
- Computer Labs in all the departments. All the computers have internet connection and the required softwares installed. Faculty members are given training on the new softwares procured.
- Well-equipped Seminar Rooms in all the departments have the required softwares installed on them.
- Each Faculty member is provided a personal official email and access to all Google apps like Calendar blog, Google drive, Google Classroom.
- All students are given the email IDs for all the official communication.
- Training for using these apps is provided and teachers and students are encouraged to use college email.
- PA Systems are available in the departments

4.3.6 How are the faculty facilitated to prepare computer aided teaching-learning materials? What are the facilities available in the college or affiliating University for such initiatives?

- All faculty members are given a separate laptop with LAN facility for their use.
- Faculty members can access library e-resources even from their homes.
- The faculty members are imparted training for using of the computers and softwares.
- NPTEL videos
- LMS
- Google classroom

4.3.7 Does the College avail of the National Knowledge Network Connectivity directly or through the affiliating University? If so, what are the services availed of?

Yes, College avails 10 lines of National Knowledge Network Connectivity.

4.3.8 Provide details on the provision made in the annual budget for update, deployment and maintenance of the computers in the college?

The provision is made periodically for the update, deployment and maintenance of computers which also includes computer accessories, Softwares and networking equipment in the college. The details of annual budget for three years for the same are as follows:

Table 4.3.3: Expenditure on update, deployment and maintenance of Computers

Year	Software (in Lacs)		Computer, Printer and Networking Equipment (in Lacs)	
	Recurring	Non-Recurring	Recurring*	Non-Recurring
2012-13	1.06	1.96	2.00	78.52
2013-14	46.54	18.70	5.00	3.20
2014-15	38.10	12.25	5.00	132.89
2015-16	65.28	29.34	5.00	144.90

***Approximate Figures as Recurring Costs for Computers/Printers are mixed with other repair and maintenance costs.**

4.4 Maintenance of Campus Facilities

4.4.1 Does the College have an Estate office/designated officer for overseeing maintenance of building, class-rooms and laboratories? If yes, mention a few campus specific initiatives undertaken to improve the physical ambience?

- Yes, Somaiya Vidyavihar has created common separate establishment called Project Office in the campus which takes cares of all maintenance like civil, electrical supply, water supply, general maintenance, and infrastructure and having a designated Engineers, Surveyors, Architectures, Plumbers, Electricians, carpenters along with the necessary support staff to do the day-to-day maintenance work.

4.4.2 Does the college appoint staff for maintenance and repair? If not, how are the infrastructure facilities, services and equipment maintained? Give details.

- The college has a full-fledged Project Office which takes care of civil maintenance works and repairs.
- The laboratory equipment are repaired and maintained by the laboratory staff with the help of vendors, if required.
- The college has the posts of electrician and carpenter. So small repair works are handled by them.
- For most of the maintenance and repair works, AMCs are given to different vendors.

CRITERION V
STUDENT SUPPORT AND PROGRESSION

5.1 Student Mentoring and Support

5.1.1 Does the College have an independent system for student support and mentoring? If yes, what are its structural and functional characteristics?

- **Proctor System**
 - KJSCE is sensitive to the academic and emotional needs of the students and has a proctor system for student support and mentoring.
 - Faculty member of every department is a mentor/proctor for a group of 20-25 students for the entire duration of their graduation. Especially, for the newly admitted students, the proctor provides a support to get adjusted with the new college environment, academic system and the changes there by.
 - Proctor system is implemented with following objectives.
 - Monitor the students' progress in terms of attendance, punctuality, performance and learning capabilities.
 - Pay attention to the problems arising at early stage, before they become chronic. Proctors' feedback can provide early warning for probable major issues.
 - Provide the parents of students a single window source of information about their wards.
 - Every department has one chief proctor who takes responsibility of allocation of proctors, keeping monthly class wise attendance record, communicating attendance related issues and actions regarding defaulters with proctors. The chief proctor maintains medical record of students who are absent on medical grounds and also arranges parent proctor meetings.
 - The students are free to approach the proctor with any academic or socio-emotional problems. The proctor may refer to the college level professional counselor if needed. The proctor recommends proctee for internship, higher studies and administrative issues like financial aid through various scholarships, etc.
 - KJSCE has appointed Dr. Shirang Joshi, a professional Psychiatrist who visits the college once a week to assist and work out a resolution for the issues of students and faculty members if any. He is also available in the campus on 3 other days and 24 hrs. on electronic media.

5.1.2 What provisions exist for academic mentoring apart from class room work?

- **Academic Monitoring:**

Apart from contact hours in Theory classrooms and laboratories, academic progress of students is monitored by following ways:

 - Students approach faculty in the faculty room / department for their queries informally.

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- Remedial classes for weak students are arranged, whenever needed, to improve their performance. Special slot as a make-up lecture is allotted in the timetable of each class.
- Students are encouraged to participate in events such as seminars, intercollegiate competitions, symposia, and workshops. They are encouraged to enroll in various professional societies like IEEE, ISTE, SAE, CSI, IETE, ISHRAE and participate in the events organized by them.
- To understand the concept, mini projects are given to the students for some of the courses. These projects are evaluated based on the rubrics defined by the faculty member. The objectives behind this activity are to improve level of understanding and to give hands on experience in fabrication, simulation, analysis etc.
- Self-learning is promoted amongst students wherever required. Home assignments, quizzes, seminars are the part of self-learning activity which motivates students enhancing their capabilities. Learning management system is used for all courses which supports students in studying. Series of NPTEL Video lectures and notes in pdf are available for the ready reference.
- Final Year Project is an important part of learning as it involves most of the Program Objectives. The quality of project is measured at different stages in project life cycle by appropriate processes such as selection of topic, development as per planning, results & conclusions and finally evaluation & feedback by examiners.
- KJSCE has an alumni mentorship program, where our alumni conduct training sessions with students on current issues and technologies. Alumni also provide hand holding in entrepreneurial activities and internships.
- KJSCE believes that Internships are of vital importance to engineering students who prepare for careers in industry, consulting, government and research. Internships bridge the gap between theory and practice, and provide students with practical, field-based, real-world experiences during their years of study. To promote students internship, the KJSCE has formulated internship cell where each department has a faculty in charge. The cell has a well-defined process for internship applications.
- RiiDL, the Research, innovation, incubation Design Lab of SVV, is another initiative at the campus to make students technically competent to become entrepreneurs and freelancers. Facilities like fast and reliable wireless Internet access, Lockers, Shared access to Printer and Scanner, Meeting and Conference Rooms, 3D Printer, Coffee Machine etc. are provided to students to carry on their projects. RiiDL focuses on Technology and Startup Incubation, provides access to a massive network of mentors, investors and advisors, holds competitions on the campus for funding and mentoring projects and promotes campus companies.

5.1.3 Does the College provide personal enhancement and development schemes for students? If yes, describe techniques employed e.g., career counselling, soft skill development, etc.

- **Development of Students**
 - KJSCE has Training and Placement Cell coordinated by a placement officer, who is supported by one faculty representative from each department.
 - In order to improve the placements and develop professional skills the following actions / initiatives are taken.
 - Inputs from Recruiter's feedback are taken to find the gaps between industry and academia.
 - Guest lectures are organized on career options.
 - Alumni sessions and trainings sessions are arranged for placement activity preparation.
 - Alumni mentorship program of one year duration is conducted.
 - Inputs from alumni about higher education are given to the students. These would typically be information about various universities, available programs & courses, possible scholarships, duration of education, help from admission counselors etc.
 - Different student activities such as mock placements, written test & group discussions along with workshops are conducted for the final year students.
 - MoU has been signed with Tata Institute of Social Sciences to help the students for handling eventualities, conflict management, etc.
 - Due to well-planned academic calendar students can take up 4 weeks and 6 weeks of internship in winter and summer respectively.
 - College Entrepreneurship cell, – BloomBox and Research Innovation Incubation Design Lab (RiiDL) organize various activities such as Expert talks, Startup visits, Workshops, Competitions, Team building and management activities apart from offering internship to the students.
 - Internships are also offered by faculty members of the department and the R&D Cell of the College.
- KJSCE believes that along with imparting technical knowledge; for becoming a competent Engineer, exposure to variety of fields and values making them a worthy contributor are also essential. Therefore College offers exposure courses in First year engineering and Audit courses from second and third year. There is a wide choice available for students. The objectives are to improve the overall personality of the student, introduce courses which complement engineering learning and release mental stress by engaging them in activity of their own choice.
- There are number of extra-curricular and co-curricular activities like symphony, sports, etc. Additionally KJSCE publishes college magazine KSHITIJ. Each department also publishes its department newsletter highlighting the various activities conducted in the department. All these

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activities covering fine arts, literature, dramatics, and sports focus towards overall personality development of students.

- The placement cell and library have purchased the number of books on aptitude and competitive exams. KJSCE has access of e journals and e books. The college library also has a collection of non-technical books.
- College has appointed a professional career counselor who is available to guide the students in their professional growth.

5.1.4 Does the College publish its updated prospectus and handbook annually? If yes, what are the activities / information included / provided to students through these documents? Is there a provision for online access?

• College Prospectus:

- The information about the College is included in the handbook published and distributed by the Directorate of Technical Education, Government of Maharashtra at the time of admission. However, the rules and regulations governing examinations of the courses run by KJSCE are made available to the students on the website of the College (www.somaiya.edu/kjsce).
- Website of KJSCE also contains:
 - Information about admission schedule, payment of fees, notices.
 - Information about the Departments, the authorities of the College, syllabus, academic calendar etc.
 - Examination policy, rules and Timetables.
 - Information about the various committees such as anti-ragging committee, Grievance Redressal Cell (Staff and students), Women Development Cell, Internal Complaints Committee, etc. (formed as per the norms defined by various competent authorities) and contact numbers of the persons to be contacted in case of emergency .
 - Information related to co-curricular and extra-curricular activities of students and the staff members.

5.1.5 Specify the type and number of scholarships / freeships given to students (UG/PG/M.Phil/Ph.D./Diploma/others in tabular form) by the College Management during the last four years. Indicate whether the financial aid was available on time.

• Scholarships / Financial aids to Students:

- KJSCE actively approaches many individuals, trusts and charitable Institutions for financial aid.
- Every year endowment prizes are given by the institute to toppers in subjects, class and overall topper.

KJSCE offers various scholarships to meritorious students and students in need. The detailed list of scholarships along with the qualifying body and sanctioning authority is shown in the table below:

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Table: 5.1.1 Authorities giving Financial Aid

Sr. No.	Type of Scholarships	Awarded by
1.	Post Matric Scholarship/Freeship for Reserve Category <ul style="list-style-type: none"> • SC Category student • VJNT & SBC Category student • OBC Category student 	Department of Social Welfare office, Govt. of Maharashtra
2.	Post Matric Scholarship/Freeship for Reserve Category (ST category student)	Tribal Development Department, Govt. of Maharashtra
3.	Minority Scholarship	i) Directorate of Technical Education, Govt. of Maharashtra ii) Central Govt.
4.	EBC (Economically Backward Class) Scholarship	Directorate of Technical Education, Govt. of Maharashtra
5.	J & K Scholarship	AICTE, New Delhi
6.	DHE Pune Central Sector (for Meritorious students)	Director of Higher Education, Govt. of Maharashtra
7.	National Talent	NCERT, New Delhi
8.	Ratan Tata Scholarship	Tata Trust
9.	JSW Scholarship	JSW Group of Companies
10.	Mohan T. Advani Centennial Scholarship	Blue Star Foundation
11.	PUSH, KJSCE	KJSCE PUSH Organisation (People United for Student Help)
12.	College Scholarship for 3 Electronics Engg. & 2 IT students	KJSCE Board of Management
13.	Tuition Fee Wavier Scheme	AICTE/DTE, Govt. of Maharashtra
14.	GATE Scholarship for Post-graduate students	AICTE, New Delhi

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The following is details of the financial aid given by the management to the students

Table: 5.1.2 Financial Aid given by Management

Year	PUSH	Meritorious Students Scholarships
2013-2014	3,25,000	8,89,000
2014-2015	5,23,567	12,78,629
2015-2016	6,70,000	15,47,720
Total	15,18,567	37,15,349

5.1.6 What percentage of students receives financial assistance from state government, central government and other national agencies? (e.g., Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellow, etc.)

- **Financial Assistance from State / Central Government**
 - Our undergraduate students have received financial assistance in the form of TATA scholarship and Narotam Sekhsaria scholarship. Also the M. Tech students get financial assistance of Rs. 8,000 per month from AICTE. The following is the details of the scholarship received from the government.

Table: 5.1.3 Scholarships received from Government

Year	Category	Sub Category	No. of Students	Amount (Rs.)	Total (Rs.)
2011-12	SC	Renewal	7	688550	5131169
		Fresh	1		
	VJNT	Renewal	3	697070	
		Fresh	5		
	SBC	Renewal	2	244545	
		Fresh	1		
OBC	Renewal	33	2082213		
	Fresh	16			
EBC	--	37	1418791		
2012-13	SC	Renewal	2	1216754	7626475
		Fresh	11		
	VJNT	Renewal	8	1195879	
		Fresh	4		
	SBC	Renewal	1	191080	
		Fresh	1		
OBC	Renewal	42	2525578		
	Fresh	11			

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Year	Category	Sub Category	No. of Students	Amount (Rs.)	Total (Rs.)
	ST	Renewal			
		Fresh	1	108875	
	EBC	--	50	2388309	
2013-14	SC	Renewal	2	452588	11357688
		Fresh	2		
	VJNT	Renewal	9	1490929	
		Fresh	5		
	SBC	Renewal	2	403850	
		Fresh	2		
	OBC	Renewal	39	2964617	
		Fresh	19		
EBC	--	60	3000879		
SGS	--	303	3044825		
2014-15	SC	Renewal	2	627595	16269312
		Fresh	3		
	VJNT	Renewal	14	1972960	
		Fresh	4		
	SBC	Renewal	2	351405	
		Fresh	1		
	OBC	Renewal	42	3324034	
		Fresh	16		
ST	Renewal				
	Fresh	1	109705		
EBC	--	67	3683613		
SGS	--	248	6200000		
2015-16	SC	Renewal	5	588865	16004801
		Fresh			
	VJNT	Renewal	8	912470	
		Fresh			
	SBC	Renewal	2	348865	
		Fresh			
	OBC	Renewal	43	3371791	
Fresh		14			
EBC	--	63	3657810		
SGS	--	285	7125000		

5.1.7 Does the College have an International Student Cell to cater to the needs of foreign students? If so, what measures have been taken to attract foreign students?

There is no international student cell. However, one faculty member has been looking after international admission. He regularly participates in international exhibitions held abroad to inform the prospective parents and candidates about educational facilities in our college.

5.1.8 What types of support services are available for:

- **Overseas students:**
Extra lectures are conducted for NRI students in the subjects of Mathematics, Physics, etc. so that they can cope up with the syllabus, if required.
- **Physically challenged / differently abled students:**
College is sensitive towards the needs of physically challenged and differently abled students.
 - Ramps at appropriate locations and elevators are available in College buildings.
 - With academic autonomy special examination schemes are followed for students with different disability. e.g. For visually challenged students, examination was conducted based on objective type questions and oral examination. Such students are helped by the Instructors during their mechanical workshop activity by using their other sensory organs. Personal attention is paid while conducting practical of such students.
 - For Physically challenged students assignments are given instead of workshop sessions. If the student is unable to perform various operations then a detailed (in depth) demonstration is given to such students by concerned Instructor. Students are then asked to write few extra assignments based on the contents.
 - Extra time or writer is given for examination of differently abled students as per norms.
 - Other students in the class are sensitized so that maximum possible assistance is given to such students wherever possible without compromising with the quality of education.
- **SC/ST, OBC and economically weaker sections:**
Financial aid is available for payment of fees to needy student – PUSH (People United for Student's Help)
As per the notification received from the Government, Special Cell is constituted as per the norms of competent authorities for addressing their problems.
- **Participation in various competitions/conferences in India and abroad:**

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- Student Development Committee (SDC) scrutinizes application forms received from students for funding some of their activities. It typically covers paper publication, project competition participation, team events, etc.
 - KJSCE provides support to students going to international competitions such as Orion racing, BAJA etc. during their sponsorship drives, by giving them seed money, etc.
 - On departmental day project exhibition and poster / paper presentation competitions are conducted for all the student's projects.
- **Health Centre, health insurance:**
- Psychological Counseling: Dr. Shirang Joshi, a Doctor and professional psychiatrist has been appointed as a counselor for the college. He visits once a week to assist in finding solutions for the issues of students, staff and faculty members.
 - Medical Facility: Medical facility is available in College Aryabhat building for medical emergency. Dr. Hemlata Kawade is available in college on selected days. She is also available in Somaiya Diagnostic Centre.
 - Students can also get services from the hospital and medical college run by the Somaiya trust.
 - In each department first aid box facility is available at various places.
 - The health camp, blood donation camps are conducted twice a year in association with Somaiya Hospital.
- **Skill development (spoken English, computer literacy, etc.):**
- KJSCE has Language Laboratory since 2009 and it has played an important role in developing relevant modules in the specialized areas such as English Language Teaching and Learning, Developing Proficiency in Basic and Professional skills in English, Spoken English, English for Special Purposes, Technical writing and Research Documentation.
 - The Laboratory is now aiming at projecting itself as a Centre for Training and Developing Human resource. It introduced two specialized courses in developing Proficiency in Basic English Skills and Professional Communication Skills of the college staff and students.
 - For example, an assignment on 'Listening Comprehension' was developed, which was conducted in Language Lab. Students were supposed to listen to an audio and answer the questions based on that audio. Also these students were taken to language lab to practice correct pronunciation of English words with the help of Linguaphone software.
 - The Laboratory is proposing to have its own a Library-cum-Media Centre, an Audio-Visual Room and a Group Discussion room for conducting the specialized courses smoothly.

- **Performance enhancement for slow learners / students who are at risk of failure and dropouts**
 - **Remedial Teaching:** Every year extra remedial lectures are conducted for unsuccessful first year students. Also extra lectures are conducted for direct second year students so that they can cope up with the regular students. Through in semester assessment weak students are identified. Remedial classes are arranged for them if required. The special slot as a makeup lecture is allotted in the time table of each class. Self-learning is promoted amongst students wherever required. Home assignments, quizzes, seminars are the part of self-learning activity which motivates students enhancing their capabilities. Also in the syllabus designed under the autonomous scheme some topics are defined as self-learning for the students.

- **Exposure of students to other institutions of higher learning/ corporates/business houses, etc.**
 - In the College much importance is given to Industry interaction. The primary aim of Industry Interaction held for several years is to understand the requirements of the industry and the way in which institute and industry can move ahead to bridge the gap.

 - Students' interactions with Industry happen in different ways as:
 - Industry experts/alumni being invited for guest lectures on contemporary issues and technology for students as well as faculty.
 - Organization and conduction of workshops/seminars through industry experts /alumni for the students as well as faculty.
 - Organization of Industrial visits for the students.
 - Industry experts being invited as examiner for UG/PG projects.
 - Industry experts offering and conducting exposure and audit courses for the students.
 - Alumni mentorship program where our alumni conduct training sessions with students on current issues and technologies.
 - UG/PG students are encouraged to undertake projects from industry.
 - College believes that Internships are of vital importance to engineering students who prepare for careers in industry, consulting, government and research. Internships bridge the gap between theory and practice, and provide students with practical, field based, real-world experiences during their years of study.

- **Publication of student magazines**

KJSCE involves and encourages students to publish materials like college magazine, wall magazines and other write-ups in the following ways

 - 'Kshitij' is an annual magazine of K J Somaiya College of Engineering. A faculty member is given the responsibility of guiding and supporting students in this activity. This magazine is an attempt to provide the

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students a platform to reveal their ideas, explore hidden talents and express their literary skills. The students' choice of articles ranges from a very scholarly exploration of ideas as per the student's intellectual curiosity, to a few techniques for aiding personality development and general issues.

- Moreover each of the College department is associated with various societies such as Computer Society of India (CSI), Electronics Engineers Students' Association (EESA), Institute of Electrical and Electronics Engineers (IEEE), Institute of Electronics & Telecommunication Engineers (IETE), Mechanical Engineering Students' Association (MESA), Society of Automotive Engineers (SAE). Many of these students' chapters publish their magazines annually eg. EESA magazine and the CSI Magazine.
- Students are encouraged to write wall magazines, departmental activities and various news regarding subject / faculty and display boards of all the departments.

5.1.9 Does the College provide guidance / coaching classes for Civil Services, Defense Services, NET/SLET and any other competitive examinations? If yes, what is the outcome?

• Competitive Examinations

- The students are informed about the various competitive examinations. A large number of our students appear for examinations such as GATE, GRE, TOEFL, etc. Regular coaching classes are not conducted but there are a good number of books available in our library, for example
 - Barons TOEFL material, Cambridge preparation for the TOEFL test.
 - A Student's Manual of Library and Information Science on the lines of Net Syllabus of UGC.
- A wide range of GATE coaching material for preparation of GATE exam is also available through the well-stacked college library. Teachers in their individual capacity help these students.
- College has a GATE Practice software having question papers of GATE in the past 17 years with more than 1,200 question of each branch of engineering installed on college server.

5.1.10 Mention the policies of the College for enhancing student participation in sports and extracurricular activities through strategies such as

- * **additional academic support, flexibility in examinations**
- * **special dietary requirements, sports uniform and materials**
- * **any other**

Extracurricular Activities

- The College has an active Students' Council through which students participate in various cultural activities organized by different colleges and University. Students are given concession in attendance at lectures and

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tutorials if they participate in various competitions on production of valid documents.

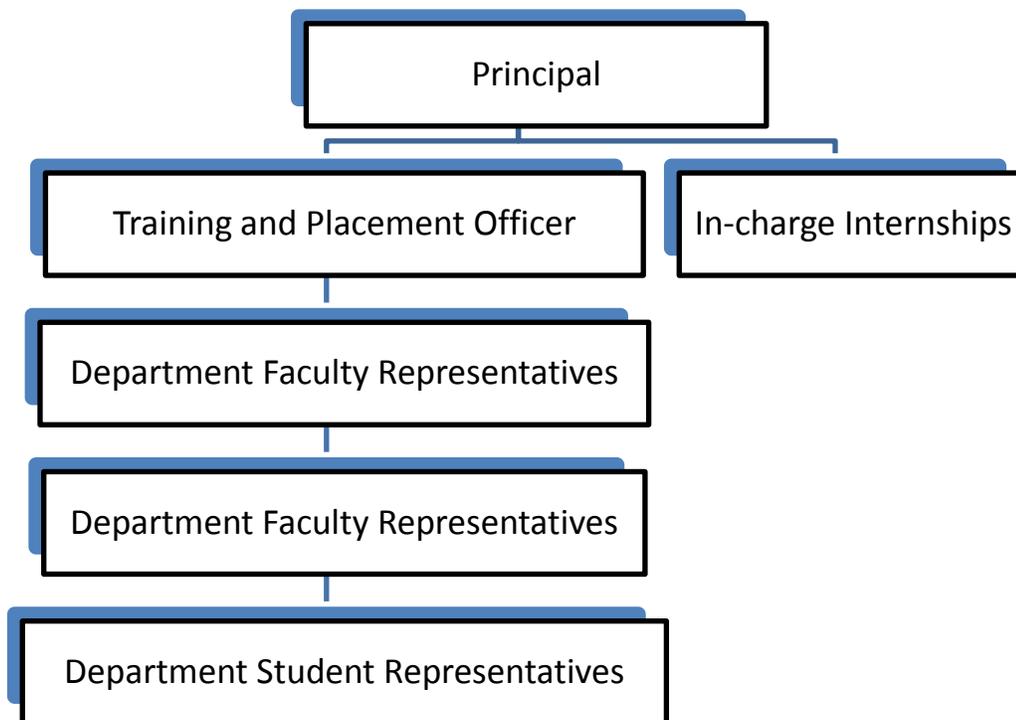
- These students are also provided with travelling allowance on actual basis and dearness allowance at fixed rate for three tournaments in a year. These students if they miss on any regular examination, they are given permission to appear for additional examination.
- The college has an annual budget of approximately 10 Lacs for the student sports activities which excludes the amount raised through sponsorship. The expenditure includes sports activities such as SKREAM (Annual Inter Collegiate Sports Festival), fee for coaches appointed for training in sports such as badminton and Table Tennis. Some part of the budget is spent on purchasing equipment (capital and consumables) required for all sport activities.
- The college has teams for sports such as cricket, football, badminton, chess, table tennis, carom and Fencing. The college provides jersey for all the members of the college team.
- Symphony, the annual cultural festival of KJSCE, has created its name and popularity among Engineering and Management institutes far and wide for the last decade. The main aim is to promote, encourage and exhibit the talents of the students on a common platform and create interest in the classical, vocal and instrumental music. Symphony hosts more than 5000 students every year.

5.1.11 Does the College have an institutionalized mechanism for placement of its students? What services are provided to help students identify job opportunities, prepare themselves for interview, and develop entrepreneurship skills?

• Placement

- The College has Training and Placement Cell working towards strengthening the interaction between College and Industry. The cell is coordinated by a placement officer, who is supported by one faculty representative from each department. Summer internships are also offered to for students which are useful for the students for their placements.
- The placement officer looks after the training, placement and internship (related to placements) of the students.
- The inputs from Recruiter's feedback help us to find the gaps between industry and academia.
- Students actively participate in the activities as volunteers while sometimes appearing for placement process simultaneously.

The Organization is as follows



Activities done through Training & Placement Cell are:

- Formulating/revising the policies and guidelines and informing them to the students.
- Keeping the students posted about company visits, criteria and registration process.
- Facilitating the placement process and maintaining records.
- Arranging Campus Interviews of various organizations for final year students for their recruitments.
- Arranging guest lecturers of Eminent Personalities from Industry for career counseling.
- Arranging mock interviews, written test & group discussions for the final year students.
- Signing MOUs with the companies to strengthen the relationship with industry and improve the teaching learning in the institute.
- Most of the students of KJSCE are placed before they actually complete their graduation. The placement activities are carried out when the students are in the final year. Number of companies visit and select the students through campus recruitment drives.

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5.1.12 Give the number of students selected during campus interviews by different employers (list the employers and the number of companies who visited the campus annually for the last four years).

Table: 5.1.4 No. of Companies Visited and Job Offers

Academic Year	Branch	No of Companies Visited			Job Offers	Total Job Offers
		Total	Consistent	New		
2011-12	COMP	11	4	7	125	555
	ETRX	7	2	5	78	
	EXTC	11	5	6	180	
	MECH	15	7	8	74	
	IT	8	2	6	98	
2012-13	COMP	21	3	18	123	458
	ETRX	12	4	8	79	
	EXTC	16	5	11	93	
	MECH	13	5	8	76	
	IT	17	3	14	87	
2013-14	COMP	30	7	23	126	539
	ETRX	17	7	10	92	
	EXTC	10	5	5	119	
	MECH	19	5	14	88	
	IT	20	7	13	114	
2014-15	COMP	52	10	42	202	714
	ETRX	31	5	26	111	
	EXTC	19	2	17	182	
	MECH	27	7	20	108	
	IT	28	7	21	111	
2015-16	COMP	60	17	43	214	745
	ETRX	52	14	38	123	
	EXTC	17	9	8	141	
	MECH	23	11	12	111	
	IT	19	10	9	156	

Table 5.1.5 List of Companies consistent for 3 or more years

Sr. No.	Name of consistent company	Core/IT	2015-16	2014-15	2013-14	2012-13
1	Morgan Stanley	Computer	✓	✓	✓	✓
2	Indus Valley Partners	Computer	✓	✓	✓	--
3	New Gen	Computer	✓	✓	✓	--
4	Inscripts	Computer	--	✓	✓	✓
5	Vistaar	Computer	✓	✓	--	--

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Sr. No.	Name of consistent company	Core/IT	2015-16	2014-15	2013-14	2012-13
6	Barclays Bank	Computer	✓	✓	✓	--
7	Seclore	Computer	✓	✓	✓	--
8	Mahindra Mahindra	Mech	✓	✓	✓	--
9	UHDE India	Mech	--	✓	✓	--
10	Accenture	IT	✓	✓	✓	✓
11	Infosys	IT	✓	✓	✓	✓
12	Mastek	IT	--	✓	✓	✓
13	Convonix	Non tech	✓	✓	✓	✓
14	Colgate Palmolive	Non Tech	✓	✓		✓
15	LnT Infotech	IT	✓	✓	✓	✓
16	LnT	Electronics Mechanical	✓	✓	✓	✓
17	Pangea3	Non Tech	--	✓	✓	✓
18	Godrej and Boyce	Electronics Mechanical	✓	✓	✓	✓

5.1.13 Does the College have a registered Alumni association? If yes, what are its activities and contributions to the development of the College?

• **Alumni association and Alumni Cell**

- The College has an alumni association registered with registrar of societies. The Name is "Association of Somaiya Engineering College Alumni" abbreviated as ASECA. It is registered on Jan 17, 2004 with registration number 2000/104 and is also registered with public trust office in 2007 with the registration number F- 37661.
- ⊖ The College also has an alumni cell consisting of the Student body, alumni in-charges and advisors and the faculty representatives. Objectives of this cell are:
 - To stay connected, maintain productive and mutual relationship with our esteemed Alumni using all available online and offline means extensively.
 - To build a bridge of communication for the alumni to interact and connect with the students to mentor them about career and life.
 - To build avenues for the alumni to utilize the resources of our institution.
 - To act as a facilitator between alumni and the institution for mutual benefits.
 - To provide a common platform for all KJSCE Alumni world-wide.
 - To promote interaction between the KJSCE institute and its Global Alumni, and promote the interest of the current, and future students of the institute.
 - To encourage establishment of similar national level KJSCE Alumni Chapters within, and outside India.

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- The feedback of the alumni is very useful for further development of the Institute. The alumni contribute to the overall development in the following ways.
 - Industry experts/alumni being invited for guest lectures on contemporary issues and technology for students as well as faculty.
 - Organization and conduction of workshops/seminars through industry experts /alumni for the students as well as faculty.
 - Alumni mentorship program, where our alumni conduct training sessions with students on current issues and technologies.
 - Alumni sessions and trainings for placement activity preparation.
 - Alumni mentorship program of one year duration. Inputs from alumni about universities they studied in regarding courses, scholarships, duration of education, admission counselors etc.

Table 5.1.6 List of activities conducted by Alumni Cell

Year	Expert Talks	Internship	Alumni Activities
2012-13	--	--	--
2013-14	Further studies by Anuj Modi Advanced Technology by Dr. Jonathan Joshi	--	Alumni Reunion – held in KJSCE on 18 th January 2014.
2014-15	On your Mark by Dhananjay Parchure.	--	Alumni Reunion – held in KJSCE on 21 st February 2015.
2015-16	10000 reasons to be an entrepreneur- Dhairya Pujara. Design thinking – Aditya B. R - Basic data structures and syntax – Kartik K.	Internship Expo during Abhyantriki 2015	Alumni Reunion – held in KJSCE on 16 th January 2016.
2016-17	Intellectual property by Mayuri Mahajan. 360 degrees of MS in US- Bhavdeep Sethi & Purna Shroff.	Internship Expo during Abhyantriki 2016	Alumni Reunion – held in New York on 9 th August 2016.

A few of the other notable activities are:

- **Mentorship Programme:**
Our Alumni have achieved huge success in life and to enrich the life of the students currently studying in KJSCE the Alumni Mentorship program was initiated. Two such programs were held – one on the 6th of September, 2014 & the other in March 2016.
The main aim of the programme is to provide the mentee students post graduate options advice and life guidance, through the sharing of the experience of the alum.

- **Entrepreneurships:**
KJSCE encourages budding entrepreneurs to take up various ventures. Support is provided by means of either seed money or infrastructure of even guidance from alumni or faculty members. Some notable ventures are:
 - Start up Saturday
 - SnackBar
 - Startup community
 - RiiDL

- **Audit Course Conduction:**
KJSCE provides the facility for alumni members to come and teach the current students in the college to enrich the teaching learning process and expose the students to various industry norms and regulations. Some notable courses taken by our alumni are:
 - Dramatics and corporate by Dhananjay Parchure
 - Corporate communication by Dhananjay Parchure
 - Sales and distribution management by Nimish Patki

5.1.14 Does the College have a student grievance redressal cell? Give details of the nature of grievances reported and how they were redressed.

- **Student grievance Redressal cell**
 - KJSCE has a Grievance Redress Committee: that ensures effective solution to the student's grievances of academic and administrative nature with an impartial and fair approach.
 - The aim of the Grievance Redress Committee is to sort out various grievances of the students judiciously. It desires to promote and maintain a conducive and unprejudiced educational environment. If the grievance is academic in nature most of the times it is resolved by the concerned Head of the Department.
 - Due to utmost transparency in various procedures and sensitivity of faculty and administrative staff towards students a good work-culture is developed in the college. Hence no major grievances have been reported till date.

5.1.15 Does the College have a cell and mechanism to resolve issues of sexual harassment?

- **Internal Complaints Committee**

The Internal Complaints Committee (ICC) is constituted under the powers conferred under the section 4 of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and redressal) Act, 2013.

The Constitution is as follows

- A Presiding Officer who is employed at a senior level at workplace from amongst the employees.
- More than 50% Women members
- One member from NGO

KJSCE ICC has 7 members including presiding officer and NGO

The ICC at the college provides mechanism to redress the complaints of sexual harassment of women at workplace.

- So far, there have been no case of sexual harassment reported in the college.
- The cell has also organized events such as workshop on sexual harassment awareness.
- Moreover women's day is celebrated each year by organizing lectures and activities by eminent speakers.

5.1.16 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?

- **Anti-ragging committee**

- As per the directives of the Honorable Supreme Court of India, UGC and AICTE the College has constituted anti-ragging committee.
- It is the duty of the Anti-Ragging Committee to ensure compliance with the provisions of these regulations as well as the provisions of any law for the time. The composition of the Anti-Ragging Committee is as follows.
- Since ragging is totally banned in the college there have been no instances of ragging in the college.

5.1.17 How does the College elicit the cooperation from all stakeholders to ensure overall development of the students considering the curricular and co-curricular activities, research, community orientation, etc. ?

KJSCE considers the cooperation from the stakeholders very vital for the overall development of the college.

- **Industry**

KJSCE has maintained good rapport with the industries from various fields. Various events are organized with the help of these industries for the students.

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They provide training to our students and also employ our students on regular basis. KJSCE also offers training programs / mock placement sessions for the students which are held by industry personnel.

- **Parents**

The Departments interact with the parents if necessary (particularly when their attendance is very low) to make them aware about the progress of their wards. Few parents visit the College and discuss about the progress of their sons/daughters with the respective Heads of the Departments, Proctors and/ or subject teachers. The parents can meet the Head of the Institute freely in case of any grievance of serious nature. Parents meeting is also called once a year in order to get inputs from the parents and also to make them aware of the developments in KJSCE.

- **Students**

The faculty members interact with the students on regular basis and help them in the development of skills, industrial visits, visits to exhibitions, etc. The students are also encouraged to present the papers in the National / International Conferences and to participate in various competitions organized by IITs, NITs and other colleges. The rectors of all the hostels take care of the students staying in the hostel. The Head of the Institute also calls meetings with the student council frequently in order to discuss their problems freely.

- **Employees**

There is an emphasis on maintaining mutual respect and cordial relationship between staff and students. Students are considered the most important part of the educational system and all employees take their proper care. They are helped in the conduction of various technical, cultural and sports activities.

- **Alumni**

KJSCE has an alumni association. Alumni meets are regularly organized by the institute and their inputs are considered vital for the development of the college. The alumni also help the college for organizing various events such as technical training sessions and expert lectures in various fields. Some of the alumni students have also contributed to help the needy students financially.

5.1.18 What special schemes/mechanisms are in place to motivate students for participation in extracurricular activities such as sports, cultural events, etc?

KJSCE has provided very good infrastructure to promote participation in sport activities as given below

- Facilities for outdoor games namely a football ground, a hand-ball court, jogging track, cricket ground,
- Badminton court, one of the very few among the colleges of Mumbai.

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- Chess boards, volley ball ground and court, basketball court, squash court, Athletics track and taekwondo court.
- Indoor facilities for carom, table tennis and chess.

Some additional facilities available for conduction of sports and cultural activities are

- **Amphitheater:** A platform through which students' talent is showcased. At a time more than 1000 viewers can be accommodated.
- **Auditorium:** Well-equipped auditorium, which can house 450 audiences. Named as Sakarben Karamshi Somaiya Sabhagruh.
- **Seminar Hall:** KJSCE houses 5 well equipped seminar halls for conduction of lectures, training programs, workshops etc. With an initiative of an alumnus, a seminar hall with the facility video conferencing has been set up.
- **Common Computing Facility (CCF):** Common Computing Facility (CCF) provides INTERNET access facility that augments to the computing facility of every department. It is equipped with sufficient PC's for students and faculty.

Some of the well-known college events are:

- **Abhyantriki:** Abhyantriki, a Sanskrit word for engineering, is the annual technical festival of the K.J. Somaiya College of Engineering. Abhyantriki organizes over 35 events ranging from workshops to exhibitions. It hosts a variety of engineering disciplines, with an aim to provide a platform worth enough to attract and nurture talent in the fields of science and technology.
- **Symphony:** Symphony, the inter-collegiate cultural festival of KJSCE, has gained its name and popularity among Engineering and Management institutes under Mumbai University for the last decade. Every year about 75 institutes and 5000 students participate in the programme. The main aim is to promote, encourage and exhibit the talents of the students on a common platform and create interest in the classical, vocal and instrumental music.
- **Prakalp:** The technical event PRAKALPA is a paper presentation and working model based competition being organized from past 11 years. ISTE Student Chapter of KJSCE is organizing such event. The most recent PRAKALP event was based on the theme Digital India which was very significant in the present era of Smart Cities and Make in India initiative. PRAKALP Eminent/experts are invited for judging the students for presentation on topic and project.

5.1.19 How does the College ensure participation of women in ‘intra’ and ‘inter’ institutional sports competitions and cultural activities? Provides details of sports and cultural activities in which such efforts were made?

KJSCE ensures participation of women in Intra and Inter institutional sports competitions and cultural activities. The College conducts various programs motivating the students to come forward for participation in all activities, both Intra and Inter collegiate level. The College conducts its inter-Departmental / inter-collegiate sports meet and annual social gathering every year.

- The participation of women students in these activities is very high.
- Particularly in cultural events like Drama, Dance, Musical Events their performances are also of very high level.
- KJSCE has women’s badminton team, football team, swimming and basketball team.
- KJSCE basketball team were runner ups at the intra college competition.
- KJSCE student has won medals in swimming competition held at the University level.

5.2 Student Progression

5.2.1 Provide details of programme-wise success rate of the College for the last four years. How does the College compare itself with the performance of other autonomous Colleges / universities (if available)

- KJSCE has been conferred ‘Autonomous’ status since July 2014. New Curriculum is implemented step by step and examination pattern is changed with a focus on continuous assessment.
- Our results are better than University results for last 5 years.

Table 5.2.1 Success Rate

BRANCH					
YEAR OF PASSING OUT	2016	2015	2014	2013	2012
Computer Engineering (COMP)	96.1	95.36	92.21	98.58	90.07
Electronics Engineering (ETRX)	87.662	81.081	88.732	83.803	85.211
Electronics & Telecommunication Engineering (EXTC)	93.2	93.5	94.6	90.1	91.4
Mechanical Engineering (MECH)	96.93	98.08	87	92.95	71.83
Information Technology (IT)	94	91.56	83.12	89.13	90.21

5.2.2 Providing the percentage of students progressing to higher education or employment (for the last four batches) highlight the observed trends.

Not all students opt for higher studies immediately after their undergraduate studies. Many of them join a company and after some time once again start higher studies.

Table 5.2.2 Higher Education and Employment Trend

Academic Year	Branch	Student progression %		
		UG to PG	Employed through Campus selection	Other than campus recruitment
2011-12	COMP	25.58	89.92	6.98
	ETRX	17.88	63.41	0
	EXTC	17.99	84.17	5.76
	MECH	-	47.13	0
	IT	1.4	63.64	0
2012-13	COMP	12.95	67.63	7.19
	ETRX	12.31	57.24	0
	EXTC	14.18	59.57	3.54
	MECH	8.58	42.2	0
	IT	4.35	56.52	0
2013-14	COMP	17.61	63.38	0
	ETRX	13.07	46.15	0
	EXTC	18.5	61.0	7.53
	MECH	8.38	44.37	0
	IT	6.67	68.89	0
2014-15	COMP	10.42	74.31	0.69
	ETRX	11.26	54.22	0.7
	EXTC	9.2	67.97	0
	MECH	11.53	59.23	0
	IT	3.87	57.42	0
2015-16	COMP	12.75	74.5	0
	ETRX	4.28	58.57	0
	EXTC	0	64.67	0
	MECH	9.2	52.2	0
	IT	2.64	64.24	0

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5.2.3 What is the Programme-wise completion rate/dropout rate within the time span as stipulated by the College/University?

Table 5.2.3 Percentage Drop Out Rate

Branch	2012-2016	2011-2015	2010-2014	2009-2013	2008-2012
Computer engineering	3.9	4.64	7.79	1.42	9.93
Electronics engineering	12.34	18.92	11.27	16.20	14.79
Electronics & telecommunication engg	6.8	6.5	5.4	9.9	8.6
Mechanical engineering	3.07	1.92	13	7.04	28.17
Information technology	6.00	8.44	15.79	9.42	9.79

5.2.4 What is the number and percentage of students who appeared/qualified in examinations like UGC-CSIR-NET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central / State services, Defense, Civil Services, etc.

Table 5.2.4 Qualified Students in Competitive Exams

Academic Year	Branch	Number of Students Qualified					Total Students
		GATE	GRE	CAT	GMAT	TOEFL	
2011-12	COMP	0	0	0	0	0	129
	ETRX	2	23	1	0	16	123
	EXTC	92					139
	MECH	17	32	11	0	5	CET= 3 142
	IT	1	3	0	0	3	XAT=1 143
2012-13	COMP	2	2	1	11	0	139
	ETRX	3	21	4	0	2	138
	EXTC	96					141
	MECH	26	46	7	0	6	CET=8 142
	IT	1	10	1	0	9	138
2013-14	COMP	2	19	2	2	11	142
	ETRX	8	20	5	0	17	130
	EXTC	10	26	8	1	0	GMAT=1 XAT=1 146
	MECH	5	12	3	0	15	CET= 5 155
	IT	0	14	0	0	14	135
2014-15	COMP	7	14	0	0	0	144
	ETRX	3	32	2	0	26	142
	EXTC	3	31	7	15	0	GMAT= 153

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Academic Year	Branch	Number of Students Qualified					Total Students	
		GATE	GRE	CAT	GMAT	TOEFL		
							1 XAT =1 CET = 2	
	MECH	18	27	4	0	-	CET= 8	156
	IT	1	7	2	0	8	Indian Air Force = 1	155
2015-16	COMP	14	15	0	0	0	IELT = 1	149
	ETRX	7	19	12	7	17	0	140
	EXTC	0	27	05	0	0	GMAT= 1 XAT =1	150
	MECH	2	12	0	0	12	CET=0	163
	IT	0	14	2	0	14	0	151

5.2.5 Provide details regarding the number of Ph.D/D.Sc./D.Litt. theses submitted, accepted, resubmitted and rejected in the last four years.

The Ph.D. program in Electronics Engineering started in the academic year 2013-14 whereas the Ph.D. program in Mechanical Engineering started in the year 2015-16. Since the Ph.D. program has started recently no student has reached the submission stage as yet. The details of the candidates re given in the table below:

Table 5.2.5: Candidates Registered for PhD

Academic Year	Department Name	Name of candidate
2013-14	Electronics Engineering	Ms. Anudeepa Kholapure
		Ms. Suvarna Bhise
		Ms. Jayashree Kundargi
2015-16	Mechanical Engineering	Mr. Abhijit Karmarkar
		Mr. Sandeep Langade
2016-17	Mechanical Engineering	Mr. Shinde Sachin Manohar
		Mr. Katala Ganesh Dhanaji
		Ms. Yerne Yogita Umesh
	Electronics Engineering	Mr. Gidaye Girish Babaji
		Ms. Choudhary Swati S.

5.3 Student Participation and Activities

5.3.1 List the range of sports and games, cultural and extracurricular activities available to students. Provide details of participation and program calendar.

- The students of the College are very enthusiastic about participating in sports, co-curricular and cultural activities. The activity calendar is put on the college website before the start of new semester. Some of the activities are:

Table 5.3.1: List of major extra-curricular activities

No	Name of activity	Brief description
1	Abhyantriki	Paper Presentation, Robotics Competition, Gaming Arenas, Project Competitions, debates
2	Kshitij	Annual magazine for scholarly exploration of ideas based on student's intellectual curiosity, for aiding personality development and general issues, etc.
3	Sports	Annual sports events for students and staff. Indoor games badminton court, table tennis, carom boards, and chess-boards. Well-equipped gymkhana and playgrounds on campus encourage to become sportspersons. Intercollegiate sports festival SKREAM organized every year
4	Symphony	Inter-collegiate cultural festival with participation of 75 institutes and 5000 students. Aims to promote, encourage and exhibit students' talent on a common platform, create interest in classical, vocal and instrumental music, etc.
5.	Prakalp	Paper presentation and working model based competition organized from past 11 years by ISTE Student Chapter of the college. Eminent/experts are invited for judging the students' performance

The following is the activity plan for curricular, co-curricular and extracurricular activities

Table 5.3.2 Calendar of curricular, co-curricular and extracurricular activities

Sr. No.	Month	Description of Activity	Organizing Members / Association/ Committee
1	August	Freshers' Eve/ College T-shirt Unveil	Students' Council
2	September	Teachers Day	Students' Council

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Sr. No.	Month	Description of Activity	Organizing Members / Association/ Committee
3	September	Symphony Shield Sports (Faculty & Staff)	Students' Council
4	September	Engineers day celebration	Students' Council
5	September	Symphony Shield Sports Students	Students' Council
6	October	Abhyantriki	Students' Council
7	October	Garba Eve	Students' Council
8	January	Degree Distribution passed out batch	COE and Students' Council
9	February	Skream	Students' Council
10	February	Symphony	Students' Council
11	March	Womens' Day	Women Development Cell & Students' Council
12	March	Traditional Day	Students' Council
13	March	Tie-Saree Day	Students' Council
14	March	Prakalpa	ISTE
15	March	Departmental Day and Prize Distribution	Departmental Organizing Committee
16	April	KJSCE Cup	Sports committee
17	April	BE Farewell	Students' Council

5.3.2 Provide details of the previous four years regarding the achievements of students in co-curricular, extracurricular activities and cultural activities at different levels: University / State / Zonal / National / International, etc

Table 5.3.3: Student Participation in Activities

Branch	2012-13	2013-14	2014-15	2015-16
Computers	20%	17%	16%	14%
Electronics	21%	20%	25%	19%
Electronics and Telecommunication	19%	23%	22%	25%
Information Technology	18%	19%	16%	15%
Mechanical	22%	21%	21%	27%

Percentages in table 5.3.3 indicate the number of participants from each branch to total number of participants over various sports and cultural events held during the academic year. There has been consistent participation from the students of all the five departments equally in the last four academic years.

- **Student achievements in co-curricular, extracurricular activities and cultural activities at different levels: University / State / Zonal / National / International, etc.**

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Many students have done outstanding well in various co-curricular, extracurricular and cultural activities. Most notable achievements are:

- KJSCE Table Tennis Team (Boys): University Silver medallist (2016, 2015).
- Team ROBOCON: National level recognition in ROBOCON INDIA competition.
- TEAM ETA : International recognition for most fuel efficient vehicle and prototype design
- Team Gyration (KJSCE Dance Group): Winners of various cultural festival's dance competition.
- Multiple winners in PRAKALPA (project presentation competition) across the last four years

Student Achievers:

Table 5.3.4: Achievers in Sports, Cultural and Co-curricular Activities

Department	Number of Achievers (Combined sports, cultural and co-curricular)
Computer Engineering	32
Electronics Engineering	41
Electronics and Telecommunication Engineering	29
Information Technology	73
Mechanical Engineering	51

5.3.3 How often does the College collect feedback from students for improving the support services? How is the feedback used?

• Academic & Support System Feedback:

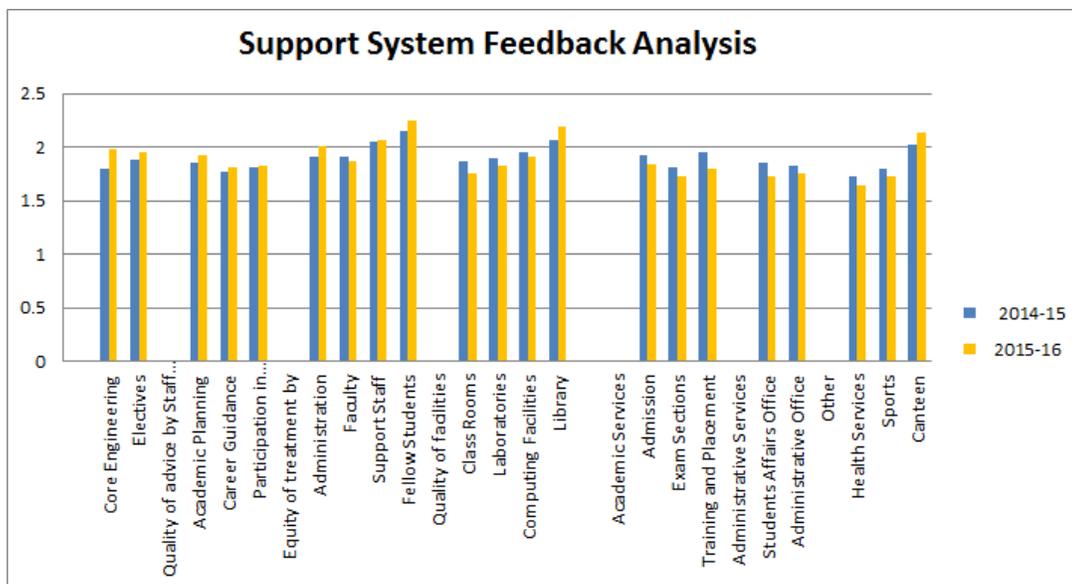
There are various feedbacks collected at KJSCE to understand the status of the academics and support system of the college and the actions that need to be taken to improve them. The various types of feedbacks collected for the improvement of the systems are listed in the table 5.3.5.

Table 5.3.5: Academic Feedback

Feedback Type	Feedback	Frequency of taking feedback	Collected by	Use
College Level Feedbacks	Feedback from Academician/ Industry	Twice in a year	Subject Board Meetings	Curriculum Development
Department Level Feedbacks	Faculty Feedback	Once in a semester	Head of the Department	Enhancing the student's experience of learning and teaching for faculty development.
	Course Feedback	Once in a semester	Course In Charges	Enhancing the course syllabus. Ensuring the effectiveness of course design. Enabling a communication with students.
	Alumni Feedback	Once in a year	Departmental alumni cell	To collect latest alumni information and achievements. To collect PEO attainment.
	Final Year Project feedback	Once in a year (from external Examiner)	Head of the Department	Determine the quality of final year projects from external project examiners

Support System Feedback is obtained from students every year since 2014-15. The average rating of students is above satisfactory level in both the years. (More than 1.5 on scale of 3)

In some parameters like quality of instructions in core and electives, quality of advice by staff, library etc. the satisfaction level has increased. Actions are planned for parameters where student's expectations are raised.



5.3.4 Does the College have a mechanism to seek and use data and feedback from its graduates and employers, to improve the growth and development of the College?

Feedback from graduates and recruiters:

There are various feedbacks collected from graduating batch and recruiters to understand the status of teaching learning, infrastructure, other services, etc. and to bring about improvement in the existing systems based on the pointers in the feedback.

Table 5.3.6: Feedback System for Graduates and Recruiters

Type of feedback		Frequency of taking feedback	Collected by	Purpose
College Level Feedback	Recruiters' Feedback	Once in a year	Placement cell	Bridge the gap between industry and academics
Department Level Feedback	Exit Batch Feedback	Once in years (From Final year Students)	Head of the Department	Improve the PO attainment.
	Facility Feedback	Once in a year	Head of the Department	Improving the infrastructure/facilities required by the students

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The college has an extensive system to collect feedback from various recruiters and take action to improve the areas that need attention, which is as shown in the table given below:

Table 5.3.7: Analysis of Feedback from Recruiters

Criterion	Core Companies	IT companies	Non IT/Core Companies	Actions Taken
Student Appearance and Presentation	Satisfied	Satisfied	Satisfied	
Personal Traits	Communication Skills needs improvement	Satisfied	Communication Skills needs improvement	More emphasis and detailed approach towards Business Communication via course for all students
Basic Technical Skills	Satisfied	Satisfied	Satisfied	
Advanced Technical Skills	Need to be update with current systems. Requires more emphasis	Satisfied	Business knowledge is weak and must be imparted.	Special audit courses on modern technologies as well as interdisciplinary courses and business audit courses initiated to better equip the students to enter into corporate world

The table below illustrates the actions taken as per the feedback from the recruiters and graduates:

Table 5.3.8: Corrective Actions on Feedback

No	Feedback	Action taken
1	Recruiters	<ul style="list-style-type: none"> • Arranging guest lectures • Training on communication skills
2	Exit Batch Feedback	<ul style="list-style-type: none"> • Implementation of online feedback system for maintaining anonymity. • Revision of questionnaire in feedback form at College

No	Feedback	Action taken
		level
3	Facility feedback	<ul style="list-style-type: none"> • Improvement in network connectivity & speed • Creation of seminar halls • Renovation of canteen • Use of Visual aids, Audio –PA system during classroom teaching • Improvement/additional infrastructure made available (LCD, Laptop) to promote use of audio-visual aids
4	External feedback final year projects	<ul style="list-style-type: none"> • Continuous monitoring of project • More emphasis on deliverables

5.3.5 How does the College involve and encourage students to publish materials like catalogues, wall magazines, College magazine, and other material? List the major publications/ materials brought out by the students during the previous academic session.

Student Publications

- KJSCE involves and encourages students to publish materials like wall magazines, college magazine and other material in the following ways.
 - An annual college magazine – Kshitij, is published by the college. The magazine is compiled, designed and created by a dedicated literary team – a part of the Students’ Council. The literary team works in conjunction with the principal and the magazine In-charges to curate the content and finalize the design of the college magazine.
 - The magazine majorly contains content submitted by the students in the form of articles or paintings, sketches or eve poetry. It also consists of various achievements and reports about the activities conducted throughout the year.
 - Students are encouraged to write wall magazines, departmental activities and various news regarding subject / faculty and display boards of all the departments.
 - The creation of the magazine involves a thorough process which is used to display the best the college students can offer. Firstly the literary team invites the contribution from the college students for the magazine. The content submitted may be themed or cover miscellaneous topics subject to the discretion of the literary team.
 - Once all the content is curated the magazine is published and distributed to all the students and faculty of the college to highlight the major happenings of the year.

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The college allots a separate fund for the annual magazine: Kshitij, which is illustrated below:

Table 5.3.9 Year wise Budget of Annual Magazine

	2012-13	2013-14	2014-15	2015-16	2016-17
Amt Allocated (Rs.)	2,08,140	1,70,100	1,92,000	1,97,379	2,02,230

Apart from the above mentioned publications each department publishes its department newsletter biannually.

The departmental newsletter covers the following faculty and student activities:

- **Student Activity**

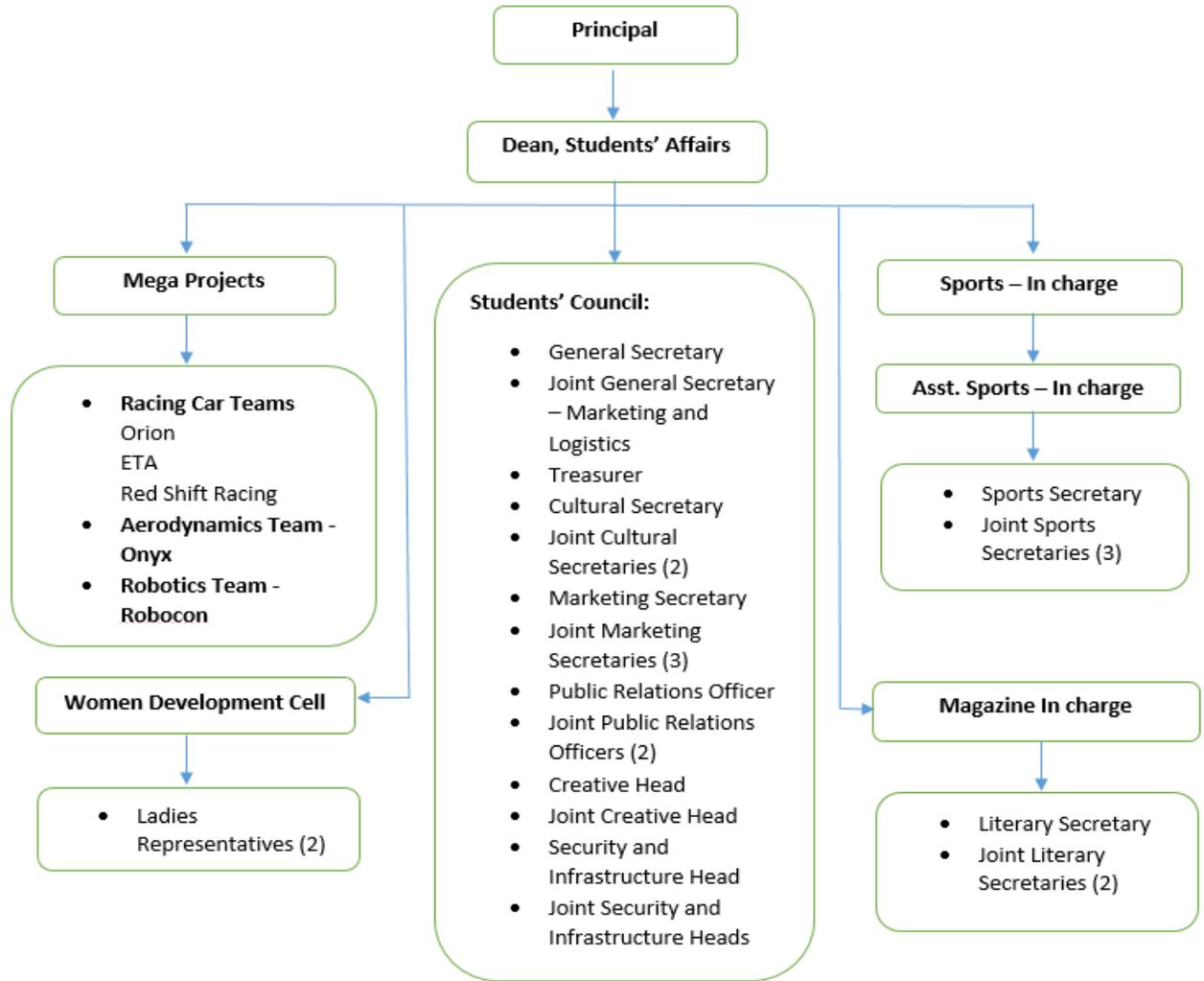
- Paper Publications in international/national Conferences.
- STTP/workshops/Conferences organized and attended.
- Extra – Curricular activities (sports, event etc.)
- Invited talk delivered and organized.
- Awards and Selections.
- Project Awards

5.3.6 Does the College have a Student Council or any similar body? Give details on its constitution, major activities and funding.

- **Student Bodies – their constitution, major activities and funding.**

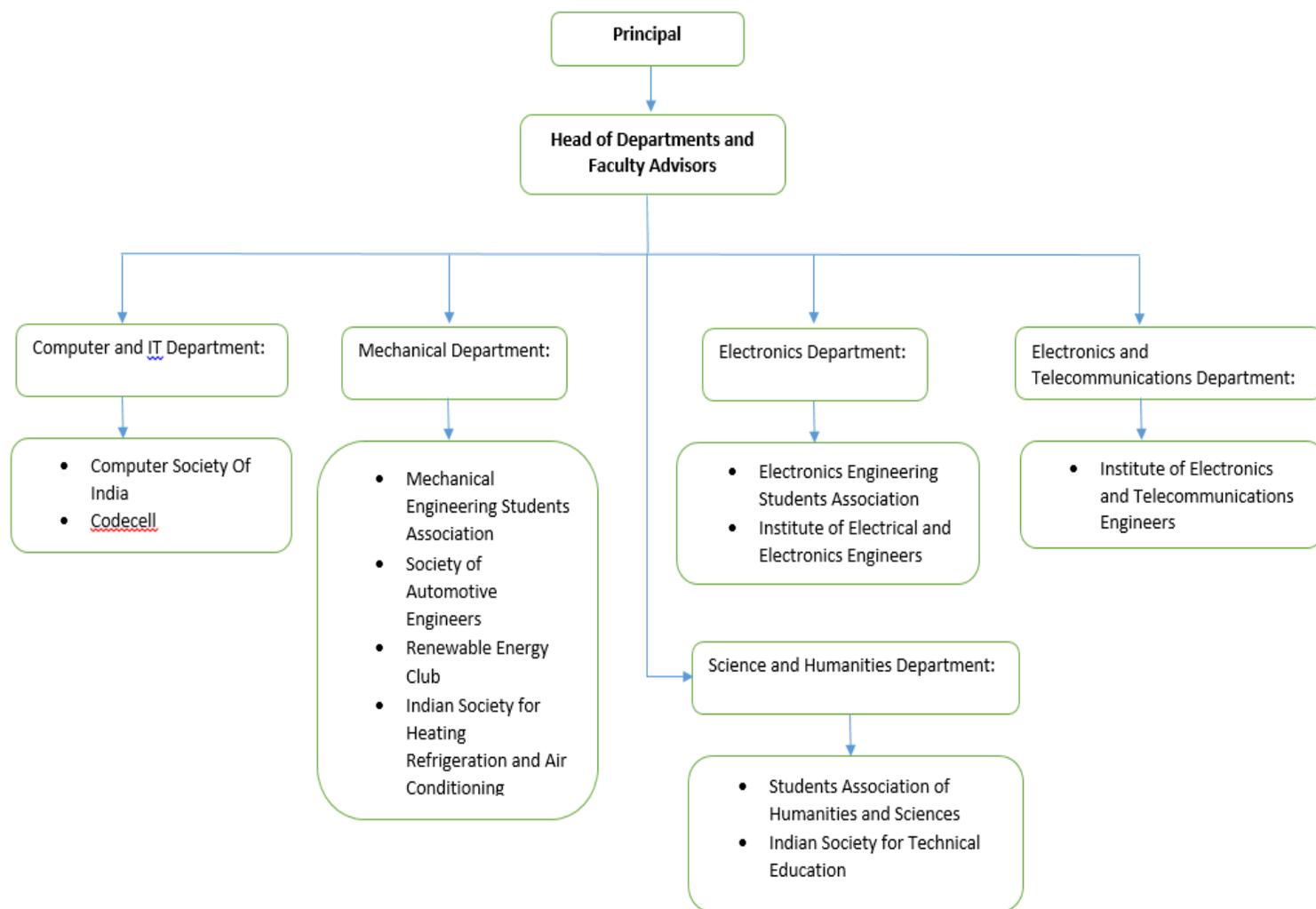
- KJSCE has a Student's Council. It is formed by a well-established process consisting of inviting applications from the students for the various posts of students' council and interviewing a selected set of students by a panel comprising of the Principal, Vice Principals and various Deans. The general constitution of the students' council is as follows:

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- There are various other councils that operate under the departments and are affiliated to various national and international bodies.
- These councils fall under the six departments of the college. Each of these councils is headed by the Head of the Department and the Faculty Incharges for the various councils.
- The constitution of each council is along the lines of that of the Students Council.
- The Students' Council works in conjunction with all the other councils to organize events and keep the students of the college involved in extra curricular activities.
- The various councils are:

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Major Activities:

Some of the activities organized by student organization are as follows:

Table 5.3.10: Activities organized by student organizations

Sr. No.	Name/Description of Activity	Organizing Members	Period of conduction
1	Placement preparation talk	ISTE Students Chapter/ CSI	June/July/August/ November/January
2	FE Orientation	Dean SA, Students' Council	August
3	M. Tech orientation	HODs & PG coordinators	August
4	Blood Donation Camp	Students' Council	August/September

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Sr. No.	Name/Description of Activity	Organizing Members	Period of conduction
5	Freshers' Eve/College Tshirt Unveil	Students' Council	August
6	Symphony Shield Sports (Faculty & Staff)	Students' Council	August-September
7	Symphony Shield Sports Students	Students' Council	September
8	Teacher's & Engineer's Day	Students' Council	September
9	Big Somaiya Debate	Students' Council	September
10	Ubiquitous	Students' Council, Mindbenders	September/ March
11	Abhyantriki: Technical fest	Students' Council	September/October
12	Garba Eve	Students' Council	October/November
13	Subject Board Meeting	Departmental Faculty & Student Representative	October
14	Convocation	Controller of Examination & Students' Council	January
15	SKREAM: Sports Fest	Students' Council	February/ January
16	SYMPHONY: Cultural Fest	Students' Council	February
17	Industrial Visit	IEEE	March
18	Women's' Day	Women Development Cell & Students' Council	March
19	Traditional Day & Tie-Saree Day	Students' Council	March
20	Tie-Saree Day	Students' Council	March
21	Departmental Day and Prize Distribution - Prakalpa - Tatva/Technext - Potential - 360 Degree - Oscillations	Departmental Organizing Committee ISTE CSI EESA IEEE IETE	March-April
22	BE Farewell	Students' Council	April

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• **Funding:**

- The college allocates significant funds to the various student bodies for the smooth conduction of all the major activities.
- However to ensure that the students receive a holistic development the college also encourages the various student bodies to market their various events to procure funds.
- The college cultural festival - Symphony is very heavily dependent on the marketing done by the Students' Council.
- The funding by the college and the funds obtained by the student bodies through marketing is displayed in a tabular format below.

Students' Council:

Table 5.3.11: Financial Provision of Students' Council

Year	Amount Allocated from College (in Rs.)	Amount gained from sponsorship (in Rs.)	Total Expenditure (in Rs.)
2012-13	4,92,119	5,10,640	10,02,759
2013-14	8,67,954	8,03,986	16,71,940
2014-15	15,57,995	9,55,773	25,13,768
2015-16	19,67,478	11,65,134	31,32,612

Team Red Shift:

Table 5.3.12: Financial Provision of Team Red Shift

Year	Amount Allocated from College	Amount gained from sponsorship	Total Expenditure
2012-13	3,00,000	4,86,512	7,86,512
2013-14	1,00,000	2,47,303	3,47,303
2014-15	6,24,832	3,32,164	9,56,996
2015-16	2,68,145	1,89,000	4,57,145

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Team Orion:

Table 5.3.13: Financial Provision of Team Orion

Year	Amount Allocated from College	Amount gained from sponsorship	Total Expenditure
2012-13	2,00,000	13,72,164	15,72,164
2013-14	2,00,000	9,83,442	11,83,442
2014-15	6,23,070	16,78,351	23,01,421
2015-16	--	11,85,828	11,85,828

Team ETA:

Table 5.3.14: Financial Provision of Team ETA

Year	Amount Allocated from College	Amount gained from sponsorship	Total Expenditure
2012-13	--	--	--
2013-14	3,00,000	2,48,779	5,48,779
2014-15	2,04,461	1,72,063	3,76,524
2015-16	3,72,091	1,43,059	5,15,150

Team Onyx:

Table 5.3.15: Financial Provision of Team Onyx

Year	Amount Allocated from College	Amount gained from sponsorship	Total Expenditure
2012-13	1,00,000	64,179	1,64,179
2013-14	1,68,887	1,35,549	3,04,436
2014-15	74,320	--	73,320
2015-16	40,927	--	40,927

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Team Robocon:

Tables 5.3.16: Financial Provision of Team Robocon

Year	Amount Allocated from College	Amount gained from sponsorship	Total Expenditure
2012-13	1,00,000	95,000	1,95,000
2013-14	1,50,000	91,749	2,41,749
2014-15	1,45,404	42,124	1,87,528
2015-16	1,70,414	--	1,70,414

5.3.7 Give details of various academic and administrative bodies that have student representatives on them. Provide details of their activities.

There is a student representative in every important academic and administrative body of the college (as per university statutes for autonomous colleges). The following academic and administrative bodies have student representatives on them:

Tables 5.3.17: Student Representation in Administration

Committee	Representation	Roles
Board of Management	Alumni of the College	1. Policy setting and strategic planning. 2. Monitoring the implementation of policy, strategy and plans
Subject Board	Alumni & Student Member for each department.	Giving inputs in framing the syllabus regarding the courses and contents from student's perspective.
Anti-Ragging Committee	Representative of students	To monitor and oversee the performance of anti-ragging squad in prevention of ragging in the institution.
Women's Development Cell	Representatives (Student Council)	To create general awareness about sexual harassment at the work place and encourage involvement through academic, cultural and outreach activities such as talks, seminars, workshops, community action, drama, street theatre, poster-making etc.

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Committee	Representation	Roles
Special Cell	Representative Student	Takes cognizance of the complaints received if any form backward class students and helps in redressing their grievances. However there have been no such instances till date.

- Regular meetings are conducted of the above mentioned committees throughout the year. The students participate is in the form of inputs for syllabus framing, and deciding the policies / rules and regulations for the working of respective committees of the college.

CRITERION VI
GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1 State the vision and mission of the College.

• **Vision:**

KJSCE envisages to become a world class centre of learning in the field of engineering sciences where pursuit of knowledge is imbued with human values of courage and compassion to produce engineers in the service of humanity.

Mission

- To be leading institution of learning in the field of Engineering Sciences with an activity engendered scholarly ambience, encouraging diversity of thought and expression.
- To provide an enabling environment for attaining excellence through an on-going dialogue with industry and benchmarking ourselves with the best amongst peer institutions.

6.1.2 Does the mission statement define the College's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, College's traditions and value orientations, vision for the future, etc.?

Mission statement focuses on diversity and creation of scholarly ambience. The college addresses this in the following ways:

- The student population is a blend of students coming from different religions because of the Gujarati Linguistic Minority status of the college.
- KJSCE holds student chapters of professional societies such as IEEE, CSI, IETE, SAE etc. Technical events are organized by these chapters regularly wherein the students exhibit their technical skills, project and research papers. This enables creation of scholarly ambience in the college.
- For overall development of the students the college provides all facilities and adequate financial support for multidisciplinary projects, co-curricular and extracurricular activities. Such activities help the students develop leadership, teamwork and communication skills.
- The curriculum is designed and upgraded from time to time for catering to the current industry requirements and enabling students to serve the society.
- **College's Tradition and Value Orientation**
 - Somaiya Vidyavihar Campus and KJSCE strongly believe inculcating values and ethics in the students. In order to achieve this, KJSCE is running many audit courses which are instrumental in imbibing the students' traditional values and appreciation for Indian culture and art

forms.

- KJSCE has an entrepreneurship cell which runs several courses for development of a student as entrepreneur, in line with the 'Make in India' movement of the nation.
- KJSCE would like to be leading institution in creating entrepreneurs who could work on societal needs / issues.

6.1.3 How is the leadership involved in?

- **Ensuring the organization's management system development, implementation, continuous improvement and interaction with stakeholders.**

- The organization has good decentralization of authorities, and the overall improvements are closely monitored.
- The administrative, academic and financial policies are well- defined, however appropriate inputs from various stake holders are incorporated as the case may be.
- Various committees have been constituted as per the UGC guidelines for autonomous colleges. These committees meet regularly and the minutes of the meetings are maintained.
- Academic activities are audited by internal and external committees.
- Feedbacks are obtained from various stakeholders periodically.

- **Reinforcing culture of excellence**

- KJSCE deputed faculty members in institutes of repute for improving their qualifications or for obtaining exposure to professional activities.
- Faculty members are encouraged to submit proposals to various funding agencies.
- Students are encouraged to participate in projects and competitions of national and international repute.
- Experts from institutes such as IIT/ NIT/ NITIE, participate in the curriculum development.
- Industry experts are invited to develop and deliver courses which are attended by faculty members so as to get exposure to current professional practices.

- **Identifying needs and championing organizational development (OD)?**

- The Principal attended a five day training programme on Organisation Management and Strategy Planning in Harvard Business School. This helped in creating a roadmap for the growth of the college.

6.1.4 Were any of the senior leadership positions of the college vacant for more than 3 year? If so indicate the reason.

- No. The senior leadership position of KJSCE never remained vacant for more than six months. The KJSCE administration is governed by a team comprising, Principal, Vice Principals, deans and Heads of the department. They are duly supported associates. Therefore, in case of any of these

positions becoming vacant; for whatever reasons, there is a seamless transition of responsibility to the next-in-line person.

6.1.5 Does the college ensure that the positions in its various statutory bodies are filled and conduct of meetings at the stipulated intervals.

- Yes. The regular stipulated meetings of various statutory bodies are conducted and necessary decisions for smooth functioning of college are given.

6.1.6 Does the college promote a culture of participative management? If yes indicate the levels of participative management.

- Yes. The Principal is the academic and administrative Head of the College. Principal is assisted by the Two Vice-Principals in various academic and administrative functions. Deans carry out defined responsibilities as per their portfolio.
- Each department is managed by the Head of the Department /Associate Head for the day-to-day administration which includes teaching, learning, co-curricular and extra-curricular activities. Departments have internal working committees to look into academic improvement, examination, student development, infrastructure, etc.
- The Office administration is supervised by the Administrative Officer, Registrar and Office Superintendent. The account section is headed by the Finance and Accounts Officer. Various administrative duties are assigned to the support staff of the office and are supervised by Administrative officer.
- It is ensured that all mandatory committees are formed as per norms of UGC incorporating appropriate members.
- The board of management has the top most authority comprised Chairman of the Management (or his nominee), secretary of the Management or his nominee, three local members representing different fields (and nominated by the Management), three teachers elected by the teachers of the college, one non-teaching employee elected by the non-teaching employees of the college and the Principal of the college acting as the Member Secretary. The board of management plays a pivotal role in translating the college's vision into its multifarious activities. The college has various boards/committees such as Academic Board, Examination Committee, Finance Committee, Purchase Committee and Subject Boards for various Departments under the chairmanship of the Principal, as per the directives of the competent authority.
- KJSCE also has various committees like Time table, Admission, Examination, Women's Development, Student Development, Faculty Development, Anti-Ragging, Grievance Redressal, Student disciplinary, Magazine, Attendance Monitoring & Purchase Committee, in which faculty members carry out the defined responsibilities. There is a perfect blend of senior and junior faculty members in such committees.
- Committees such as, WDC, Grievance Cell, Special Cell, etc. have representatives of support staff to voice their relevant issues.

6.1.7 Give details of the academic and administrative leadership provided by the University to the College?

Table: 6.1.1: Participation of University in Administration

Name of Board / Committee	Participation from University
Subject Board COMP	Dr. Prachi Gharpure, Chairman Board of Studies, University of Mumbai
Subject Board ETRX	Dr. D. G. Borse, Chairman Board of Studies, University of Mumbai
Subject Board EXTC	Dr. Udhav Bhosale, Chairman Board of Studies, University of Mumbai
Subject Board IT	Dr. J.W. Bakal, Chairman Board of Studies, University of Mumbai
Subject Board MECH	Dr. S. M. Khot, Chairman Board of Studies, University of Mumbai
Examination Committee	Shri. Wasave Deepak Controller of Examination of University of Mumbai
Finance Committee	Shri A.A. Phalnikar The Finance and Account officer, University of Mumbai, Fort, Mumbai.
Board of Management	Dr. S.K.Ukarande Dean, Faculty of Technology, Member, Management Council Senate Academic Council, University of Mumbai.
	Dr. Prachi Gharpure Member, Academic Council, University of Mumbai.

Additionally representative faculty members from University participate in following activities

- Selection committees, PhD interviews
- Co-curricular activities,
- Examination for paper setting /moderator ,
- Expert lectures in Training Programs, academic and exam audit.

6.1.8 How does the College groom the leadership at various levels?

- In addition to statutory committees KJSCE has various functional committees for smooth functioning of college. The members of these committees are rotated typically after three years, with 50% members getting replaced. This helps in many faculty members shouldering the responsibility as a convener, which in turn helps in grooming leadership.
- Student leaders take the responsibility of leading various students associations and projects. Faculty advisors associated with their activities help them in planning and conduction of their activities. They are also trained on the financial management of their projects. All such activities nurture leadership qualities in students.

- KJSCE employees run a cooperative credit society which helps in rendering loans to members with low interest rates with minimal formalities. Support staff members are actively involved in such activities.

6.1.9 Has the College evolved any strategy for knowledge management? If yes, give details

- Yes. KJSCE has all necessary infrastructures to support use of modern technology for Teaching Learning.
- Faculty members encourage the students to use Flip Classroom, Learning Management System (Inpods), Google Classroom.
- Library has provided list of useful links through its subscription to various e-learning sources and provides these facilities to faculty members, students and researchers. The college also has access to NPTEL sites. Such study materials is available on YouTube. IIT e-outreach programmes are also held regularly.

6.1.10 How are the following values reflected in various functions of the College?

- **Contributing to national development**
 - The college promotes entrepreneurship in line with ‘Make in India’ movement.
 - KJSCE encourages faculty members and students to conduct research in the thrust areas promoted by National Level Funding Agencies such as DST, DBT and AICTE etc.
 - College runs PhD level research work in two departments to conduct research on socially relevant issues.
- **Fostering global competencies among students**
 - Every year, students succeed with good ranks in competitive exams of GRE, TOEFL. Alumni of the college help the students with necessary inputs.
- **Inculcating a value system among students**
 - The cultured and ethical behaviour of all faculty members and support staff members along with traditional campus imparts values and virtues in the students.
 - There are courses which add value to human life such as Appreciation of Visual art, Indian Classical Music, Dance, Painting and Sketching to name a few.
 - Students’ activities such as Blood donation camp, Street Play, ‘Parvaah’ (Social initiative), etc. are creating awareness of socially relevant issues.
- **Promoting use of technology**
 - The modernization activities are in line with advancement of technologies. Every year the internet bandwidth has been enhanced. All classrooms have been provided with ceiling mounted LCD projectors. Employee attendance system has been supported with bio metric attendance. Procurement of equipment is done through purchase

committee. Intranet system is strong by which e-learning is well promoted. The college carries out a scheme of removal of obsolescence on regular basis.

- **Quest for excellence**
 - KJSCE deputed faculty members in institutes of repute for improving their qualifications or for obtaining exposure to professional activities.
 - Faculty members are encouraged to submit proposals to various funding agencies.
 - Students are encouraged to participate in projects and competitions of national and international repute.
 - Experts from institutes such as IIT/ NIT/ NITIE, participate in the curriculum development.
 - Industry experts are invited to develop and deliver courses which are attended by faculty members so as to get exposure to current professional practices.

6.1.11 Give details of the UGC autonomous review committee's recommendations and its compliance.

- The college has been conferred fresh autonomy in 2014-15. Hence, the UGC autonomous review committee has not yet visited the college.

6.2: STRATEGY DEVELOPMENT AND DEPLOYMENT

6.2.1 Does the college have a Perspective Plan for development? If so, give the aspects considered in development of policy and strategy.

Yes. The College have perspective plan for development which is given below:

- **Teaching and Learning.**
 - Wider choice in course selection covering:
 - Core engineering courses
 - Management / entrepreneurship / Professionally inclined courses
 - Liberal art courses
 - Etc.
 - Choice in method of learning / assessment based on:
 - Pace of learning
 - Project based / Classroom
 - More choice in courses to be offered at UG and PG level for effective choice based
 - Flexibility in credits earned
 - Minimum requirement for enrolled degree
 - Minor degree
 - Honors degree
 - Research
 - Hands on Project
 - Provision of credit transfer
- **Research and Development.**

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- Creation of research ambience
 - Encouragement for participation in project competitions, paper presentations etc.
 - Budgetary provision for financial assistance
 - Encouragement to entrepreneurial activity
 - Encouragement to faculty members for pursuing research / higher education.
 - Sanction on duty leaves for attending faculty development programs, continuation education programs (by IIT Bombay), attending conference /seminars/ workshops, etc.
 - Encourage publications, send and present it at both national as well as international conferences.
 - Encourage filing of patents and IPR
 - Appreciation, felicitation for good contribution in research
 - Encourage submission of research proposals to funding agencies / joint research with other educational institutes / research organizations
 - Visit & interact with industry.
- **Community Engagement.**
 - Encourage students to engage in social activities such as educating underprivileged children, work with NGOs.
 - Create awareness of socially relevant issues through students' activities such as Blood donation camp, Street Play, 'Parvaah' (Social initiative), etc.
 - **Human Resource Planning and Development.**
 - Enhance the existing Faculty Development Policy to encompass more developmental activities.
 - Enhance activities of Students Development Cell (SDC) to promote research and projects.
 - Encourage Support staff for higher education.
 - **Industry Interaction:**
 - KJSCE is having a good interaction with the industry. Many students are doing their B.Tech/ M.Tech projects in industry. Students are carrying out internships to get an exposure to industries.
 - **Internationalization.**
 - KJSCE has NRI admissions within the sanctioned intake.
 - KJSCE plans to promote faculty member exchange with international Universities / Institutes.
 - KJSCE is working on possibility of student exchange with credit transfer with international universities.
 - Enhance the participation in international competitions.

6.2.2 Enunciate the internal organizational structure of the College for decision making processes and their effectiveness

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Sr. No	Title	Department	Status
4.	Accreditation (NBA)	All UG Programs	Accredited from 2013-15, Withdrawal of Reapplication in 2016.
5.	Faculty Development Policy	All Department	Ongoing
6.	Students Development Cell	All Department	Formulated
7.	Faculty Member Positions	EVS & Maths, Mechanical Engg. Audit Courses	Added, Extended.
8.	Patents	Mechanical Engineering	Registered and Published
9.	Computerized Admission system	All Department	Completed
10.	Annual Alumni meetings	All Department	Ongoing
11.	Slot wise Time Table System	All Department	Completed
12.	Renovations of Both building and Building repairs	All Department	Ongoing
13.	E-Yantra Laboratory	Electronics Engineering	Set up and Working
14.	Vehicle Lifting machine	Mechanical	Installed in IC Engine Laboratory
15.	WiFi Facility	All Department	Completed
16.	CCTV	All Department	Completed
17.	Computational lab Facility	All Department	Completed
18.	Laptops for all faculty members	All Department	Completed
19.	Rain water protection	KJSCE	Completed
20.	Badminton Court, Sports facility	KJSCE	Completed
21.	Auditorium , Seminal Halls	KJSCE	Completed
22.	Renovation of administrative offices	KJSCE	Completed

For on-going Research Proposals and completed Research Proposals please refer to Table No 3.2.3, 3.2.4, and 3.2.5 in criteria III.

For various proposals submitted to funding agencies please refer to following tables.

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Table 6.2.2 Minor Proposal submitted (2015-16)

Sr. No.	Faculty Member	Department	Title Proposal	Amount	Remark
1	Dr. K. N. Patil	Mechanical	Development of the Triple Utility Solar Concentrator Based Vapour Absorption System	4,95,000/-	Submitted
2	Dr. N. R. Gilke	Mechanical	Development of Self Contained Cabinet for Vaccination Box by Solar PV based System	2,30,000/-	Submitted
3	Dr. Lukman Muhammod	Mechanical	Manufacture and testing of Aluminum alloy metallic foams for improved impact properties	4,17,000/-	Submitted
4	Mr. S. S. Bhusnoor	Mechanical	Control of Fine Particles from Engine Exhaust using Particle Transport Mechanisms	5,00,000/-	Submitted
5	Dr. J. R. Satam	Science and Humanities	Development of magnetically separable nano-catalysts for the synthesis of medicinally important organic intermediates	3,55,000/-	Submitted
6	Dr. R. R. Lekurwale & Dr. K. N. Patil	Mechanical	Design and Development of Novel Floating Carriage for Salt Generation Trough Solar Concentrator	3,40,000/-	Submitted

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Sr. No.	Faculty Member	Department	Title Proposal	Amount	Remark
7	Prof. V. G. Dhore	Mechanical	Enhancing the compressive strength of hydraulic cement through the addition of ferromanganese slags and lime fines	3,42,000/-	Submitted
8	Dr. R. R. Lekurwale	Mechanical	Design and development of low cost abrasive water jet machine	3,80,000/-	Submitted
9	Dr. J. H. Nirmal	Electronics	Voice based Larynx cancer detection	85,000/-	Submitted
			Total Cost	31,44,000/-	

Table 6.2.3 Proposals submitted for University of Mumbai

Sr. No.	Faculty Member	Department	Title Proposal	Amount	Remark
1	Dr. Pushpendra Rai	Science and Humanities	Use of magnetically separable nanocatalysts for the degradation of azo dyes	50,000/-	Approved – 35,000/-
			Total Cost	50,000/-	35,000/-

Table 6.2.4 Proposal submitted to DST

Sr. No.	Faculty Member	Department	Title Proposal	Amount	Remark
1	Dr. Lukman Mahmood	Mechanical	Oxide mixtures as heat transfer fluid in Concentrating solar power plants	36,91,000/-	Approved – Nov 2016
2	Dr. D.N. Raut,	Mechanical	Plastic to liquid fuel, a	69,94,688/-	Submitted

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Sr. No.	Faculty Member	Department	Title Proposal	Amount	Remark
	(VJTI) Dr. Shinde . D. K.(VJTI) Dr. K. N. Patil (KJSCE)		novel process to create the Metal Matrix Composite product by Powder Injection Molding route		
3	Dr. J. H. Nirmal	Electronics	Laryngeal cancer detection and classification using speech processing with restoration of voice after total laryngectomy.	15,00,000/-	Submitted
	Total			1,21,85,688/- -	

Total amount submitted for Funding: UGC Grant + University Grant = 3144000+35000 + 12185688=1, 53, 64, 688/- **(One core Fifty Three Lakhs Sixty Four Thousand Six Hundred Eighty Eight)**

Table 6.2.5 UGC Major Proposal submitted

Sr. No.	Faculty Member	Department	Title Proposal	Amount	Remark
1	Dr. A G Bhawe	Mechanical	Development of receiver cum thermal storage cooking device for a parabolic dish concentrator type solar cooker	3,20,000/-	Granted by UGC

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Sr. No.	Faculty Member	Department	Title Proposal	Amount	Remark
2	Mr. N. S. Chandrashekhar	Mechanical	To design and fabricate a machine for creation of tactical objects using digital light processing Technology	2,60,000/-	Granted by UGC
	Total			5,80,000/-	

Total amount granted: UGC Minor Grant = **5, 80, 000/- (Five Lakhs Eighty Thousand)**

6.2.4 Does the college have a formally stated quality policy? How is it designed, driven, deployed and reviewed?

- Recently KJSCE has framed the quality policy and also has formed Internal Quality Assurance Cell (IQAC) for monitoring improvement in various processes in the light of quality.

6.2.5 How does the College 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 college constituted following various committees/cells based on the directives of competent authority like Mumbai University, Government of Maharashtra, State Government’s Department of Technical Education, All India Council For Technical Education, University Grant Commission (MU/Govt/DTE/AICTE/UGC) to resolve grievances/complaints effectively.
 - Grievance Redressal Committee (Students):
 - Anti-Ragging Committee (ARC):
 - Grievance Redressal Committee (Support Staff and Faculty Members):
 - Women Development Cell (WDC):Internal Complaint Committee (ICC)
 - Special Cell (SC):
- The members of the committees meet as per the need / typically once in a year to resolve any issues as per the guidelines of competent authorities.

6.2.6 Does the College have a mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?

- Yes, the college has a good mechanism for obtaining (on-line) students' feedback at end of every semester about the course, facility feedback at the end of the year and exit batch feedback from the final year students. Though the primary aim of this feedback is to invite student's opinion on teaching imparted by individual faculty member, the feedback also allows students to comment on institutional performance in general. The feedbacks are analyzed and actions are initiated accordingly. The faculty members whose performance is not satisfactory are identified and appropriate counselling is provided.
- Following corrective action has taken in the last three years based on the feedback
 - Use of Visual aids, Audio –PA system.
 - Availability of LCD, Laptop in the department
 - Enhancement of sports facility, canteen etc.

6.2.7 In what way the affiliating University helped the College to identify the developmental needs of the College?

University conducts / organizes various training programmes for faculty members, students and support staff of the college for their technical / soft skill developments. University invites the college to participate in various training programmes / seminars. University has promptly provided its services for procurement of research equipment by inviting research proposals.

6.2.8 Does the affiliating University have a functional College Development Council (CDC) or Board of College and University Development (BCUD)? If yes, in what way College is benefitted?

Every year the college applies for the grants and few of the faculty members receive the grants.

6.2.9 How does the College get feedback from non-teaching, teaching, parents and alumni on its functioning and how it is utilized?

- The college arranges the annual alumni meet and the collects feedback from the alumni. The feedback focuses on curriculum, teaching learning processes and learning outcomes.
- Constructive suggestions from the feedback are used in curriculum development and teaching-learning systems.

6.2.10 Does the College encourage Autonomy to its academic departments and how does it ensure accountability?

- Yes. Each of the departments has its Subject Boards for curriculum development. The decisions of the Subject Boards with minor changes are implemented. Final approval is taken from Academic Board. The Subject Boards and the faculty members in the department decide the course structure and electives to be offered to the students under the guidelines of the Dean (Academics). The departments manage implementation details

and arranges for the events like guest lectures, field visits, workshops etc. on priority basis.

- The heads of the departments are encouraged to prepare budget for infrastructure and laboratory development. The budget is sanctioned by Finance Committee and purchase of equipment is executed by departments under the guidelines of Purchase Committee.

6.2.11 Does the College conduct performance auditing of its various departments?

- Yes, Academic Audit has been conducted by experts from reputed institutes. A team of two/three members visits all the departments and interacts with Heads of departments, Faculty Members, Support Staff Members, and Students. They also visit entire infrastructure and observe overall environment. The suggestions are given for particular department/program as well as college. As per the report submitted necessary actions for improvement are planned in the college.
- Exam audit has been conducted every semester by experts in the relevant areas. The audit focuses on coverage of syllabus, focus of questions in the light of learning outcomes and the quality of questions to ensure the taxonomy of learning.

Criteria 6.3: Faculty Member Empowerment Strategies

6.3.1 What efforts are made by the College to enhance the professional development of teaching and non-teaching staff?

- College is making following efforts to enhance the professional development of teaching and support staff
 - Encouragement to pursue higher education either in-house or at reputed institutions.
 - College level Faculty Development Policy to encourage participation in Conferences, Workshops, Training Programs and Industrial training.
 - Department level, felicitation for overall excellence, rewards for publications in peer reviewed journals.
 - Encouragement to apply for funded projects.
 - Provision of Yearly book allowance to faculty members to augment teaching resources.
 - Organization of Cultural and Sport events for faculty members and support staff.
 - Non Compounded Basic increment to support staff for acquiring higher qualification
 - The Somaiya Trust has constituted Somaiya Vidyavihar Awards to recognize and honour hard work and the extra ordinary achievements of faculty members and support staff.

6.3.2 What is the outcome of the review of the Performance Appraisal Reports? List the major decisions.

- Feedback of faculty members is collected to identify strengths and weaknesses of individual member of teaching and non-teaching.

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- Every faculty member is evaluated by:
 - Every academic year faculty members fill a self-appraisal form and submits it to the appropriate higher authority. The form contains the contribution of the faculty member in teaching learning, academic matters as well as administrative responsibilities.
 - Performance of every faculty member and support staff is also evaluated by respective head on the basis of contribution of the individual to the department, willingness to assume additional responsibilities, regularity, etc.
 - At the end of every semester, students submit faculty member feedback which gives students perspective on knowledge and content delivery of the faculty member.
 - Performance of the faculty member during examination and related work is analysed at the completion of the examination.
- Faculty Members are communicated about the shortcomings pointed by any of the above feedbacks.

6.3.3 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?

- A detailed note on welfare schemes is given in best practices (7.3).
- In addition employees in KJSCE enjoy the following practices
 - Every year on the occasion of the founders Day the teaching and non-teaching faculties are felicitated for their exemplary contribution.
 - Campus level sports are being organized for teaching and non-teaching members.
 - Health check-up camps are organized for teaching and non-teaching members.
 - The K. J. Somaiya Engineering College runs “K. J. Somaiya College of Engineering Employee’s Co-operative Credit Society Ltd.” managed by the teaching and support staff, which provides loan facility on a short term and long term basis.

Table 6.3.1: Employee Welfare Schemes

Financial Year	Total employ ee	% of employees who availed the welfare schemes							
		LTC (Home town)	LTC (Maharashtra Darshan)	Group Insurance	Medical Reimbursement	Book Allowance	ML/ PL		
2011-12	301	7	1	100 % Non-Teaching Employees are covered	100 % Non-Teaching Employees are covered		0.65	--	
2012-13	301							3.48	4.65
2013-14	303	17	28					5.23	1.5
2014-15	310	36	2					4	--
2015-16	325							6	1.25

6.3.4 What are the measures taken by the College for attracting and retaining eminent faculty member?

Due care is taken during selection of faculty member so that he/she becomes asset to the college. An atmosphere conducive to professional growth, encouragement to pursue research interest or higher studies and entrustment of challenging roles and responsibilities are features to attract faculty members. Incentives and appreciation are given to the faculty members for their outstanding performance in academics, as well as retaining senior faculty members even after retirement. Few faculty members are also given campus accommodation. Faculty members appreciate the overall autonomy given to them by the management and hence continue to offer their services to the college.

6.3.5 Has the College conducted a gender audit during the last four years? If yes, mention a few salient findings.

Even though a formal gender audit is not conducted, the college, at its local level, has a rich tradition of providing equal opportunities to both the genders. The state government norms are followed in recruitments. KJSCE is headed by a Lady Principal over a decade. Around 60% of the faculty members and 40% of support staff in KJSCE are female members. Large number of female candidates is also in student population.

6.3.6 Does the College conduct any gender sensitization programs for its staff?

Women’s Day Celebration at college as well as Campus level is organized by Women Development Cell (WDC-KJSCE) every year. Following programmes were arranged by WDC-KJSCE:

Table 6.3.2: Programs by WDC-KJSCE

Sr. No.	Details of Programme	Month / Year
1.	Demonstration on self Defence (Taekwondo)	Symphony 2013
2.	Display of Poster presentation competition on the Theme "Save the girl child".	Symphony 2013
3.	Street plays against Women Harassment by students of K J Somaiya Institute of Technology, Sion	March 2012
4.	Talk on women's rights by Advocate Jayamala Godbole	March 08,2013
5.	"Sexual Harassment Awareness Workshop" by Ms. Elsamarie Dsilva, the Cofounder and Managing director of Safecity Campaign, who has also worked with Haiyya	July 23,2014
6.	Cultural program based on theme “Narike anek roop” consisting of songs, dances, skits	March 28, 2014

Sr. No.	Details of Programme	Month / Year
7.	Felicitation of India's first motor women Mrs. Surekha Yadav and Ms. Shaili Yadav- First Drilling Engineer of her company and a woman entrepreneur	March 7,2015
8.	Women's Day Celebration in KJSCE on the theme of the program- "Chaukhat se bahar"	March 7,2015
9.	Street play on "Gender equity and Gender sensitization"	March 8, 2016.

6.3.7 What is the impact of the University's UGC-Academic Staff College Programmes in enhancing competencies of the College faculty members?

Though college faculty members is not trained by University's UGC-Academic Staff College Programmes, several faculty members have attended Training Programmes / Conferences conducted by institutes of national repute.

6.4-Financial Management and Resource Mobilization

6.4.1 What is the institutional mechanism to monitor effective and efficient use of financial resources?

The institute follows the following mechanism for effective and efficient use of financial resources:

• **Budget Preparation**

- Focus of allocation of fund is to cater to the mandatory requirements, provide for the necessary expenditure and also plan for certain developmental activities.
- Accordingly, all the administrative and academic heads are requested to submit the budget required for the subsequent financial year in the month of November – December every year.
- These heads in turn, prepare a document in consultation with their laboratory in-charges considering following factors during allocation of funds.
- Requirements against removal of obsolesce.
- New requirements as per change in curriculum.
- Requirements for design of new experiment.
- Final consolidation of the budget is carried out in consultation with the senior faculty members, seeking justification for the need of budgeted item and its utilization.
- The heads then submit their requirements and associated budget In the Month of December to the Principal.

• **Budget finalization**

- Principal reviews the budgets received from all Heads of the Department. A draft budget of the College is prepared in consultation with all heads and senior faculty members of the

College, by giving due weightage to the long term -short term goals of the College, expansion plans and availability of funds.

- The budget is then put up by Principal to members of the Finance Board of the College for necessary amendments and then it is submitted to Board of Management (BOM) for approval.

- **Justification of Adequacy**

- During finalization of budget, fund allocation is carried out by considering purchase or maintenance of mandatory requirements of departments.
- Sometimes, some items are not listed and hence are not considered during the finalization process of the budget; but purchase of such items becomes absolutely mandatory; then additional provision can be made for such purchase by giving sufficient justification to get necessary approval from management.

6.4.2 Does the College have a mechanism for internal and external audit? Give details.

- Both Internal & External (Statutory) audits are done half yearly by the Somaiya Vidyavihar (SVV) Trust appointed Auditors.
- Detailed checking of vouchers, physical verification of cash and Fixed Deposit Receipts, stock registers etc. are verified.
- Observations are recorded and discussed with College Accounts department / Principal and clarifications obtained.
- A copy of the Internal Audit Report is forwarded to External Auditors also for discussion & finalization of Annual Accounts.
- Final audit report is compiled and then presented to BOM for approval.

6.4.3 Provide audited income and expenditure statement of academic and administrative activities of the previous four years.

Copies of Audited Accounts from 2011-12 to 2015-16 have been enclosed.

6.4.4 Have the accounts been audited regularly? What are the major audit objections and how are they complied with?

Yes, There are no major audit objections till date

6.4.5 Narrate the efforts taken by the College for resource mobilization.

- Faculty members are encouraged:
 - To write UGC research proposal for funding
 - To visit industries for probable consultancies
- Seed money has given to some of laboratory.

6.4.6 Is there any provision for the College to maintain the 'corpus fund'? If yes, give details.

No. Corpus & Reserve fund are part of SVV Trust Fund.

6.5 Internal Quality Assurance System

6.5.1 Does the college conduct an academic audit of its Departments? If yes, give details.

Yes. The college conducts the academic audit of each department. The audit is carried out by the experts from other colleges. The suggestions are given by peer team which are discussed and deliberated by the department for its overall improvement.

6.5.2 Based on the recommendations of academic audit what specific measures have been taken by the college to improve teaching, Learning and evaluation?

The academic audit was conducted on 26-07-2016. The committee has audited KJSCE entire academic system based on the following points and given their suggestion/observation to improve the existing system.

- **Points reviewed by the academic committee:**
 - Management approach for academic support and development
 - Central administration of the college
 - Examination rules and regulation to maintain academic progress and discipline
 - Library facility, rules and regulation to maintain academic progress and discipline
 - Department wise academic support system and process implementation for academic excellence

Observation/suggestion given by the committee based on the above mentioned points:

- **Observation**
 - Academic processes are well defined
 - Good infrastructure
 - Faculty members are motivated
 - Support staff is active.
- **Suggestion**
 - External evaluation for practical examinations
 - Provision for more number of books and book loan scheme
 - Students' awareness about Outcome Based Education system to be improved
 - Faculty Member interaction with industry and research initiatives needs to be promoted.
 - More focus on experimental/blended learning
 - Increase the count of industry sponsored project
 - Innovative teaching and learning methods to be documented.
 - Proper method to identify slow learners and action taken for improvement is required.

- The system to be developed to provide career guidance
- Students should be made aware about the importance and scope of the elective courses
- Relative grading system may be implemented in future
- Industry designed and conducted courses may be developed.

6.5.3 Is there a central body within the college to continuously review the teaching learning? Give details of its structure, methodologies of operations and outcome?

Yes. From academic year 2013-2014 College is following Outcome Based Education system and there is a mechanism within the college to continuously review the teaching learning process headed by Dean Academics. The process starts with preparation of academic calendar for semester and giving complete schedule regarding in - semester tests, End semester exam, extra practical turns, and Oral and Practical exam.

The teaching learning process includes the followings:

- Planning for Course Delivery (Theory Session)
- Teaching aids
- Laboratory Session
- Continuous Assessment
- Remedial Teaching
- Mini Project
- Self-learning
- Proctor Scheme
- LMS-Inpods.

6.5.4 How has IQAC contributed to institutionalizing quality assurance strategies and processes?

- Internal Quality Assurance Cells (IQAC) has been established at K.J.Somaiya College of Engineering (Vidyavihar-East) Mumbai 400077 on 1-6-2016 based on the guidelines given by UGC (http://www.ugc.ac.in/pdfnews/5172195_Guideline_IQACs.pdf).
- It was subsequently augmented by adding new members.
- Certain systems were already followed in the college. IQAC helped this in streamlining the activities.

6.5.5 Does the IQAC have external members on its committees? If so, mention any significant contribution made by such members.

One of external member from K. J. Somaiya Science and Commerce College suggested the methodology to maintain the documentation of NAAC.

6.5.6: Has the IQAC conducted any study on incremental academic growth of students from disadvantaged sections of society?

IQAC has been recently established hence such type of review is yet to be conducted.

6.5.7 What policies are in place for the periodic review of administrative and academic departments, subject areas, research centres?

There are various Boards/committees/in-charges constituted to review the progress of various administrative and academic activities. These include:

- **Boards:**
 - Academic Board
 - Finance Board
 - Subject Board

- **Committees**
 - Purchase Committee
 - Examination Committee
 - Anti-Ragging Committee
 - Attendance Monitoring Committee
 - Faculty Member Development Committee
 - Admission Committee
 - Canteen Audit Committee
 - HR Committee
 - Student Disciplinary Committee
 - Student Development Committee
 - Magazine Committee

- **Grievance Redressal System**
 - Grievance Redressal Cell: Faculty Members and Support Staff
 - Grievance Redressal Committee Students

- **Various In-charges:**
 - Quality Assurance
 - Website Updating
 - Alumni Activities
 - Internship
 - Sports
 - Industry Institution Interaction
 - Counsellor
 - E-Learning
 - Autonomy
 - Accreditation

CRITERION VII
INNOVATIONS AND BEST PRACTICES

7.1 Environment Consciousness

7.1.1 Does the College conduct a Green Audit of its campus?

Yes. Recently College has conducted a green audit with SENERGY systems in which students have participated. This audit included energy audit, water quality audit, waste production, audit of infrastructure usage etc. Suggestions given through the audit report will be considered for further action.

7.1.2 What are the initiatives taken by the College to make the campus eco-friendly?

KJSCE is located at Somaiya Vidyavihar campus, which is in the heart of Mumbai city known for its cement-concrete jungle. So the greenery of the campus landscaped with play grounds, gardens and lawns with trees placed along the borders; comes as a pleasant surprise for a visitor.

Though presence of this green cover enables improvement in quality of air inside the campus, its maintenance requires huge amount of water and manure. This demand is met with through following projects which are managed by the central administration team of the campus. This team also works towards preserving the environment and ambience, by regular plantation of trees, routine maintenance of the campus including recycling the garbage.

- **Energy conservation**

- KJSCE buildings are designed with a courtyard at the center. All rooms are provided with large windows which help in letting the daylight inside and circulation of natural air.
- The air-conditioners bought recently are all energy efficient machines.
- Pilot projects involving use of solar energy are conducted and have given successful results. Proposal for use of KJSCE terrace for production of electricity has been made by students under the guidance of a faculty member. Due to the huge finances involved, it is under consideration.
- Computers and Lab / office equipment are judiciously switched off when not in use.

- **Use of renewable energy**

- KJSCE has a up to date renewable energy laboratory wherein research work is carried out. The laboratory has received funds under AICTE MODROB scheme through which equipment worth 3.2 Lakh was purchased.
- Though the laboratory is part of Mechanical Engineering Department, students from different disciplines are also interested and have worked during their internships.
- Work is carried out on development of products such as solar driers, solar incinerators, solar refrigeration systems, solar storage system, solar heaters, solar cooker etc.
- Many of these products have been developed through student internships.

- **Rain water harvesting**

Rainwater from terraces, roads and garden is collected and diverted to the existing boring water tanks through advanced filters and recharge tanks. This water seeps through the bore wells deep down in the earth so that

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approx. 80 Lakh liters of as non-potable water can be made available for reuse over the year. The project was designed and implemented by D&D Ecotech Services.

- **Check dam construction** Not Applicable
- **Carbon neutrality**
 - Air pollution caused due to exhaust from vehicles is controlled by permitting only authorized vehicles entering the campus. Efforts are being made to make the campus vehicle free by creating parking lots outside the gates.
 - The Internal Combustion Engine lab of KJSCE is developing methodology and lab setup to capture particulate matter in vehicular exhaust.
- **Plantation** College has a green campus wherein plantation is a regular activity. Students have actively participated in conduction of survey of trees in the campus.
- **Waste recycling management**
 - Bio-degradable waste from the college canteen, dead leaves from the trees and reasonably large amount of paper and other solid waste is generated in the college. The green waste is usually not burnt but is collected centrally and is used up in the vermin composting setup of the campus. The output of this is used as manure for the gardens.
 - Hazardous waste from chemicals and acids are found in the Chemistry lab. Proper ventilation and adequate exhaust provision of chemistry lab drives out acid fumes.
 - Paper waste including shredded answer sheets are sold to licensed purchaser.
 - Students from the college make notebooks out of one side blank sheets and sell them in college and nearby institutes. The papers are recycled/ reused for printing
 - Metal scrap of the workshop is sold to scrap dealers.
 - Electric Incinerator is provided in one of the ladies toilet for disposal of sanitary napkins.
- **E-waste management**
 - Computers and peripherals are sorted and exchanged during new purchases.
 - Almost all equipment is used to its fullest, permitting usage of its parts in other suitable equipment or in student projects.
 - Due to constant updates in hardware as well as software, some equipment cannot be used by KJSCE labs but could be put to use by others who do not require technologically advanced equipment. Hence, such Sister institutes are encouraged to pick up these equipment.
 - All such electronic items which remain after the above procedure is executed, are sold to an e-waste management company.
- **Other aspects**
 - Fire extinguishers are charged periodically from outside licensed agency.
 - The administrative setup in KJSCE has become paperless to a great extent.
 - Use of Piped Natural gas has eliminated the use of LPG.

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7.2 Innovations

7.2.1 Provide details of innovations introduced during the last four years which have created a positive impact on the functioning of the College.

KJSCE has introduced following measures which have helped in creating a positive impact on the functioning of academics, administration and other levels of working.

1. Use of technology leading to paperless administration

- **Students section**
 - Fully automated and transparent admission process
 - Issue of unique email ID to each student in Somaiya domain, wherein he/she can receive all important mails, notices, circulars, etc.
 - Record keeping in student section including admission, scholarships, other important personal details required by various government agencies, etc.
 - Record keeping in Examination cell; right from checking eligibility in examination up to declaration of result and issue of mark sheet.
 - Provision of transcripts of a student directly being mailed on the official address of the University to which he/she is applying or sent to any requested address through courier.
 - Procedure for issuance of certificates such as College Leaving, Bonafied, etc.
 - Facility for online data verification of student and alumni by external agencies; leading to saving in time, cost, etc.
- **Office administration**
 - Attendance monitoring, leave management system linked to monthly salary
 - Information with details about monthly salary
 - Credit of monthly salary to individual bank account through RTGS
 - Payments to college via credit / debit card, NEFT/RTGS, payment-gateways, etc.
 - Intranet usage for notices, circulars, minutes of important meetings, etc.
 - Important notices mailed directly on unique mail id given to each employee in Somaiya domain.
- **Library management system**
 - Claim booking / Renewal of book
 - Intimations through emails & sms for a reminder on return of books
 - Payment of fine.
 - Kindle, e-books
 - Selective Dissemination of Information in the thrust area to specially PG students
- **Academic administration**
 - Google forms for load allotment (Dept of Electronics and Telecommunications)
 - Preparation of college Time-table through in-house developed software

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- Regular updates on KJSCE website for display of important information such as academic calendar, exam notices, college activities, etc.
- Google forms for Collection of course feedback , Support Systems feedback and Program Exit feedback
- **Academics**
 - On-line submission of term work
 - Courseware sharing
 - Teaching using flip classrooms, e-resources
 - Use of laptop-projector setup and access to internet (with good bandwidth) in every classroom to enable improvised teaching-learning

2. Learning through Megaprojects:

- Students participating in mega projects need to work on building a new prototype every year as per the specifications of the product given by the organizers, while they participate in national/international competitions.
- Through these interdisciplinary mega projects they develop technical skills, team spirit, organizational skills, financial management etc.
- Students of KJSCE have been participating in annual competitions like **Orion, Robocon, Onyx, Redshift** etc. since long time. They have received awards in various categories.
- **TEAM ETA:** This activity has started in 2013 by group of young inspired minds to design and build a car; all from scratch, that can revolutionize the concept of mileage and go beyond what cars offer today. They take this car to the SHELL ECO-MARATHON held annually and showcase it to the world.
They have already reached a milestone with first car-JUGAAD'13 which is India's most fuel-efficient car giving an astounding mileage of 300 km/pl.
They received international recognition for developing most fuel efficient vehicle and prototype design.
- Students of KJSCE have been participating in **eYantra Robotics Competition** held by IIT Bombay since 2012. eYantra Robotic Competition had themes like **Urban Farming , Urban Services, Smart Services** , etc. Following are the notable achievements of students
 - i. Position 4th and 5th for Room Cleaner and Pick Placer in 2012
 - ii. Position 1st and 2nd for Seed Sowing and Fertilizing in 2013
 - iii. Students have reached final stage in 2016
- Students of KJSCE did projects for **Anti-Corruption Bureau (ACB)**, Maharashtra, in order to bring more transparency in the service offered by them.
 - i. A project to track progress of the assigned cases and officer in-charges
 - ii. Website upgradation of ACB

iii. Facebook – creation of page, role management, solving queries, making sample digital posters for ACB etc.

- **Prakalpa:** State level project competition being organized by KJSCE annually since 2006.

Past four years, this competition included paper presentations and projects based on themes in sync with recent national agenda such as **Artificial Intelligence - Innovations towards Future, Digital India, Security Systems, Sustainable Development**. Every year large number of theme based papers and projects are showcased by students.

3. Focused efforts on creation of future entrepreneurs

In tune with National program of ‘Make in India’, the college encourages students to become future entrepreneurs, create jobs for others rather than getting employed, to build the nation of tomorrow.

To achieve this, college has taken efforts to lay foundation for their entrepreneurial endeavors.

Following initiatives have been taken by the college to convert a technocrat into an entrepreneur:

- Exposure to fields required for entrepreneurship is given to students through audit courses like Sales and Distribution management, product design and development, Advanced Accounting, Startups in IT etc.
- Alumni who are entrepreneurs are involved in Mentorship Programs
- Students are supported by RiiDL for technical entrepreneurship. RiiDL is managed by KJSCE Alumnus.
- Conduction of activities by BloomBox (Entrepreneurship cell for KJSCE): Sellathon, MasterChef, Financial Management etc.
- Encouragement to campus companies which helps them to shed inhibitions such as talking to a commoner, convincing and selling the product, etc.
- Students are encouraged to take up Social entrepreneurship to enable them to address the social evils.

4. Policy decisions related to examination

- Emphasis on continuous evaluation, increase in weightage of internal marks, change in passing norms.
- Some freedom given to teachers for choosing best method of evaluation of understanding of the student in the course taught. This forms the Internal Assessment component.
- Eligibility for passing a course or moving upwards in an academic year.
- Conduction of repeat examination for UG semester VIII and PG semester II exam so as to make students eligible for placements or projects respectively.
- Random selection of question paper to be printed on the day of exam out the eligible sets made available by paper setters which may include expert external to the college.

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- Proof reading of the question paper before printing on the day of exam to avoid any short comings. Necessary steps to be taken to ensure alignment of the paper with course outcomes.
- On-screen exam for Computer Graphics, Fundamentals of Computer Programming using 6 equivalent sets of question papers.
- Adoption of separate procedure for evaluation for visually impaired students.
- Creation of unbiased and objective assessment by introducing fair practices.
- Reformative measures for students engaged in malpractice during examination.

7.3 Best Practices

7.3.1 Give details of any two best practices which have contributed to better academic and administrative functioning of the College.

Following practices have contributed towards the achievement of the vision / mission and objectives as well as improvement of quality of various activities of KJSCE.

Best Practice-1

Title: Empowerment of needy students through financial assistance

- **Objective of the Practice:**
 - To financially assist students from weaker sections.
 - KJSCE is known for its quality education, however many-a-times, fees are not affordable to aspiring students coming from financially weaker section. The problem is even more pertinent when staying cost gets added for outside Mumbai students. So either they don't take admission or seek for support from charitable organizations.
 - KJSCE faculty members have been instrumental in raising funds in variety of ways to provide them financial assistance, which has resulted in savings in their time, energy and anxiety for funds. Involvement of student volunteers in entire process helps in developing a culture of handholding amongst students.
- **The context:**
 - Some time back, few like-minded employees of KJSCE came together to establish PUSH-KJSCE (**P**eople **U**nited for **S**tudents' **H**elp), which is now a regular practice. Contribution from various inspired stakeholders such as employees, students, alumni and well-wishers are collected to pay fees of deserving students.
 - From 2014, Management of KJSCE has announced 50% tuition fee waiver to five deserving students, right from admission to First Year till the end of their course.
 - College has been successful in getting financial assistance and mentorships from companies such as Blue Star, JSW Foundation, Ramlal Khetawat Foundation, etc.
 - Because they are KJSCE students and recommended to the company by college team based on well-defined scrutiny criteria, company officials do not hesitate in sanctioning substantial amount to these

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students without any other proof or mortgage. The financial assistance is continued till the end of the program, based upon their academic performance and sincerity.

• The Practice

Students, coming from family having gross annual income less than defined by various agencies, are encouraged to apply and avail the benefit from such initiatives.

- Information about these scholarships is made available in the college brochure as well as on the college website.
- Information regarding application forms and eligibility criteria are announced well in advance for students to apply in time.
- Students are required to submit necessary data as required in the application form.
- A thorough scrutiny of the application forms, based on defined guidelines, is carried out by student volunteers / associated faculty.
- Academic performance and other feedback of every student gathered from the proctor of respective student.
- For outside scholarships:
 - Application forms are forwarded to the respective institution.
 - Students are interviewed by the expert panel of that institution
 - College is informed about selected students.
 - A cheque with appropriate amount is sent to college with a note indicating aid for individual student.
 - The amount due to each student is adjusted against the fees.
- For KJSCE scholarships
 - Each student along with at least one parent or guardian is interviewed by a panel comprising senior teachers and mentors of PUSH.
 - The financial requirement of every student is decided during this interview process.
 - Finally amount of funding to be given to each student is decided depending upon the decision taken in the interview and availability of funds.
 - Funds for the selected student are disbursed towards tuition fee or towards other approved expenses.
 - An undertaking is collected from each student beneficiary of PUSH that he/she is expected to return the total amount paid towards his/her education as and when he/she starts earning. This amount would then be rolled over for future students.

• Evidence of Success

So far, in the last 4 years, more than 100 students have availed benefits from the college activity and have shown good progress in their academics.

Table 7.3.1: Beneficiaries of Scholarships

Type of scholarship	13-14	14-15	15-16	16-17
PUSH-KJSCE	17	14	17	14
KJSCE	--	05	10	15
Blue Star	--	05	11	12
JSW	--	--	--	8
Ramlal Khetawat	--	1	1	1

- **Problems encountered and resources required**
 - The students are expected to give truthful information about their family background. Especially in case of applicants for outside KJSCE funding, if any hidden information gets revealed during the interview process, it may create a problem for college in future funding from such institutions. So a thorough scrutiny of forms and documents needs to be carried out.
 - Students, after completion of their education, are expected to return the amount, paid towards their needs, as and when they can afford to pay. Since, the first batch of PUSH beneficiaries are yet to pass out, so far there has been no collection started.
 - However, in case if there are many defaulters, then the system may not be able to reach out a larger population as was envisaged. Any other problem that may occur will have to be dealt with as and when it is encountered.

Best Practice-2

Title: Creation of policies to enable professional development of faculty members

- **Objectives of the Practice:**

Technology is changing in leaps and bounds and it has become mandatory for every faculty member teaching in a professional college to keep pace with it. Attending refresher courses, presenting papers, discussions / interactions with peers, conducting research through funding agencies are some of the ways to achieve this. So college management took initiative to get appropriate policies drafted so that many faculty members could be motivated to take up these activities. The knowledge so acquired in-turn will be reflected in the teaching-learning process and prove beneficial to the student community.

- **Context:**

- Latest developments in technology have had tremendous impact on professional education.
- This would mean that unless the associated faculty member is up-to-date with these advances, there will not be a fruitful interaction during teaching-learning.
- Additionally, with a change in MHRD/ AICTE policies, conduction of active research has become important parameter for performance appraisal of faculty members. Also, holding a Ph.D. degree has become mandatory for acquiring higher posts.
- Understanding the need for such professional development of existing faculty members, the KJSCE management approved various policies which enabled faculty members to work on research papers or organize activities leading to research or take up higher studies. Many middle aged faculty members with family responsibilities were reluctant initially to upgrade themselves. However, they were attracted, especially to enrol for Ph.D., because of the financial provisions of these policies. The revisions in the policies were carried out depending upon requirements of the enrolling institute.

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- **Practice:**
 - In order to focus on the professional development of faculty members, Faculty Development Committee (FDC) is formed in the college, having representation each department and is supposed to carry out following tasks.
 - Define various policies for the Faculty Development Program (FDP) which would
 - a. Enable all round development of faculty members through higher studies, paper publication, presentation etc.
 - b. Enhance the teaching learning process by encouraging faculty members to participate in Short Term Training Programs / Workshops / Conferences / Symposiums, etc.
 - Define eligibility criteria / norms, procedures to be followed by the faculty members to avail benefit of these policies and make them easily accessible.
 - Encourage faculty members for higher studies leading to Ph.D. wherein faculty member is fully relieved for conduction of research related activities at least for a certain time. This would enable them to concentrate on research and produce quality outcome.
 - Suggest suitable revisions in the existing policy; as deemed fit, so as to make it beneficial to both; faculty members as well as the college.

Following table lists the various policies in place

Table 7.3.2: Features of Faculty Development Policy

Professional development / Higher study	Period	Salary / leave adjustments	Incentive
Attending seminar/work shop/conference etc	As applicable	7 days on-duty leave per annum	Reimbursement upto 12,000 for TA + registration Additional 10000 if international event
Credit Course	3 half days per week for one semester	With full pay Adjusted against 2 weeks of subsequent vacations	Reimbursement of fees maximum upto Rs 10,000 based on performance
Ph.D.	Total period: 3 years 5 months -5 months fully relieved -3 years with full load, with 1 additional day & 30 days of additional vacation	70% salary in fully relieved period 83% salary during full load time	Entire sum deducted paid in 5 equal annual instalments after completion of Ph.D.

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Professional development / Higher study	Period	Salary / leave adjustments	Incentive
Ph.D.	Total period: 3 years 5 months -12 months fully relieved -29 months with full load with 1 additional day & 30 days of additional vacation	70% salary in fully relieved period 83% salary during full load time	Entire sum deducted paid in 5 equal annual instalments after completion of Ph.D.
Ph.D.	Total period: 3 years Fully relieved	Full salary paid Permissible if admission only At IIT or IISc	Entire sum deducted paid in 5 equal annual instalments after completion of Ph.D.
Ph.D.	Total period: - 60 days contact period with full load - 3 years fully relieved	Full salary paid Permissible if admission only under QIP at IITs	Entire sum deducted paid in 5 equal annual instalments after completion of Ph.D.

• **Evidence of Success:**

- Most of the faculty members have utilised the on-duty leaves for attending workshops and conferences. List per department
- Partial deductions in salary paid during the study leave period and assurance that the amount deducted will be paid back has enabled approx. 27 faculty members to enrol for Ph.D. In fact, few of them have already submitted their thesis and would get their degrees in due course of time. Following table gives details of number of beneficiaries

Table 7.3.3: Faculty Members Enrolled for PhD / Submitted Thesis

Departments	COMP	ETRX	EXTC	IT	MECH	HSS
Enrolled for Ph.D./submitted thesis	5	5	6	2	6	3

• **Problems Encountered and Resources:**

- Many workshops/ conferences are organized during working semester. Also, large on of faculty members may want to enroll for Ph.D. So, constraint in the form of no. of faculty members on-duty leave or study leave at any given time needs to be imposed in the light of loss of teaching-learning.
- If many senior faculty members have enrolled for Ph.D., temporary faculty members need to be appointed to maintain head count. This not only affects teaching learning, but also adds to the expenditure.
- As per provisions of study leave policy for Ph.D., distinct amount is deducted from monthly salary of faculty member and upon completion

of Ph.D. the same needs to be given back to them as incentives. This requires additional maintenance of appropriate individual records, both of deductions and payments when due.

Best Practice -3**Title: Employee welfare schemes**

- **Objectives of the Practice:**

- Infrastructure, students, and employees (faculty members and support staff) form the pillars of any educational institute. In fact, given the responsibilities that they handle, many-a-times an institute gets defined by its employees. Efficient and well-managed welfare schemes for employees are effective ways of reducing staff turnover and increasing loyalty amongst the employees.
- KJSCE management extends following benefits to its employees as a part of service conditions. In addition, employees can also be rewarded through performance based incentive schemes.

- **Process:**

- **For availing benefits:**

- The following list of benefits is available on the college website as well as it is made known by college administration as well as through colleagues.
- In order to avail a particular benefit, necessary data / declarations need to be submitted as required by respective authorities.
- These details are verified by the college administration and processed for suitable action.

Table 7.3.4: Benefits extended to employees

Sr. No.	Scheme	Eligibility for benefits	Benefits
1	Leave Travel Concession	All confirmed Faculty members & Support staff	Travel to native place if in Maharashtra.
2	Maharashtra Darshan	All confirmed Support staff	Reimbursement for travel in Maharashtra once in 4 years
3	Book Allowance	All confirmed Faculty members	Rs 1000/- per annum or Rs 2000/- over 2 years or between 2 members
4	Leave encashment	Confirmed Faculty members & Support staff on retirement or resignation	Calculations as per defined rules
5	Diwali gift	All employees on roll	As decided by HR committee
6	Gift at retirement	All confirmed employees on retirement	Cash or Gold or Silver coin worth Rs 10000/- as per wish of employee
7	Laptop	All confirmed Faculty	For personal usage till

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Sr. No.	Scheme	Eligibility for benefits	Benefits
		members	leaving college
8	Reimbursement of telephone bill	Heads & Asso Heads of Dept, Deans, Vice Principal, Principal, Admin Officer, Registrar, Accounts Officer, PA to Principal, TPO, CoE, and few other office bearers.	Typically Rs 500 per month
9	Employees credit Co-operative Society	By membership Only for confirmed employees	Quick disbursal of short term loan or long term loan with less interest and without mortgage
10	Fee concession	Support staff having annual income < Rs 5 L	If child admitted to KJSCE, 50% tuition fee waiver
11	Medical allowance	All confirmed Support Staff	Rs 3500/- per annum towards medical expenses
12	Medical Group Insurance	All confirmed Support Staff along with admissible dependents	Annual cover of Rs 2 L
13	Diwali Festival advance	All confirmed Support Staff having GP of Rs 4500 or below	Rs 10000/- to be recovered in 12 equal installments
14	Uniform Washing allowance	All confirmed class IV employees	Set of two pairs once in two years with stitching charges Rs 50/- per month disbursed in the salary
15	Safety shoes	Foreman, all instructors, & Operators, Electricians and attendants in Workshop	1 pair once in 2 years
16	Encouragement for higher education	Any confirmed Support staff enrolling for a short term certificate course related to job profile with a prior approval	Reimbursement upto Rs 10,000/- after successful completion of course
17	NCB for continuation of education	Any confirmed Support staff completing higher qualification related to job profile after joining service in college	1 non compound increment

- **For availing incentives**
 - Notice is put up inviting applications from all those who are aspiring for the applicable incentive.
 - A committee comprising appropriate experts, Principal and Management Representative reviews the applications in the light of complying norms and the past performance of the applicant.
 - Based on the recommendations of the committee, employee is granted the incentive applied for.

Incentives extended to employees

Table 7.3.5: Incentives extended to employees

No.	Scheme	Eligibility criteria	Nature of incentive
1	Time Bound Promotions (TBP)	Any confirmed Support staff after completion of 12 years in a scale based on performance in past 3 years	Change in grade pay with 1 additional increment
2	Career Advancement Scheme (CAS)	Any confirmed faculty member after complying with the norms of competent authorities	Change in grade pay with 1 additional increment if admissible

In addition to the above, KJSCE regularly observes following conventions:

- Rise in Dearness Allowance (DA) as well as arrears arising out of delayed declaration are credited to the employees account as and when declared by the State Government.
 - Faculty members who are allotted work during vacations or normal holidays of the college are sanctioned equivalent days of Earned Leave or Compensatory Offs respectively, the norms for which are made available to all.
 - Salary statement of each employee for each month is made available well in advance for any corrections. The actual disbursement of salary is not later than 5th of every month.
- **Evidence of Success:**
 - Since many of the above schemes; for both benefits as well as incentive, have been followed by the college over many years, the college administration has all the necessary details and data of employees who have availed them.
 - **Problems encountered**
 - There can be a tendency of some employees to consider “benefits as their right”, however there can be “negligence in performing their duties”. So administrators should deny few employees some of the benefits owing to their poor performance in duties.

Section D: Evaluative Reports – Department-wise

**Evaluative Report of
Department of Computer Engineering**

1. Name of the Department & its year of establishment:

Department of Computer Engineering

Year of Establishment: 1999

2. Names of Programs / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.):

Sr. No	Name of Program	Commencement Year	Intake
1	B E Computer Engineering	1999	60
2	B E Computer Engineering	2000	120
3	M E Computer Engineering	2011	18
4	B Tech Computer Engineering	2014	120
5	M Tech Computer Engineering	2014	18

3. Interdisciplinary courses and departments involved:

i) UG

Sr. No	Course	Department
1	Maths-III (Semester III)	Science & Humanities
2	Maths-IV (Semester IV)	Science & Humanities
3	Presentation and Communication Techniques (Semester V)	Science & Humanities
4	Business and Communication Ethics (Semester V)	Science & Humanities
5	German (Semester VI)	Science & Humanities
6	French (Semester VI)	Science & Humanities

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ii) PG

Sr No	Course	Department
1	Computer Network Management (Semester I)	Department of Information Technology
2	Object oriented Analysis and Design (Semester I)	Department of Information Technology
3	Parallel Computing (Semester I)	Department of Information Technology
4	Image Processing (Semester I)	Department of Information Technology
5	Network Design and Management (Semester I)	Department of Information Technology
6	Software Testing (Semester I)	Department of Information Technology
8	Management in Information Systems (Semester II)	Department of Information Technology
9	Decision Making and Adaptive Business Intelligence (Semester II)	Department of Information Technology
10	Storage Area Network (Semester II)	Department of Information Technology
11	Emerging Wireless Technologies and Future Mobile Internet (Semester II)	Department of Information Technology

iii) Interdisciplinary Courses

Interdisciplinary courses (IDC) are offered with effect from Academic Year 2016-17.

iv) Audit Courses

Year	Course Code No	Name of the Course Offered by Computer Department	No. of students enrolled from all the departments
Jul-2015	UCEA301	Object Oriented Programming Methodology	31 (Computer)
			11 (Electronics)
			9 (Electronics and Telecommunication)
			17 (Information Technology)
			2 (Mechanical)

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Year	Course Code No	Name of the Course Offered by Computer Department	No. of students enrolled from all the departments
Jul-15	UCEA303	Visual Arts	6 (Computer)
			2 (Electronics)
			5 (Electronics and Telecommunication)
			10 (Information Technology)
			12 (Mechanical)
Jul-2015	UCEA302	Web programming	29 (Computer)
			10 (Electronics)
			9 (Electronics and Telecommunication)
			19 (Information Technology)
			3 (Mechanical)
Jan-2016	UCEA402	Web Programming	16 (Computer)
			7 (Electronics)
			17 (Electronics and Telecommunication)
			24 (Information Technology)
			6 (Mechanical)
Jan-2016	UCEA401	Object Oriented Programming Methodology	02 (Computer)
			12 (Electronics)
			14 (Electronics and Telecommunication)
			42 (Information Technology)
			3 (Mechanical)
Jul-2016	UCEA301	Object Oriented Programming Methodology	3 (Computer)
			5 (Electronics)
			8 (Electronics and Telecommunication)
			9 (Information Technology)
			0 (Mechanical)
Jul-2016	UCEA302	Web programming	8 (Computer)
			4 (Electronics)
			3 (Electronics and Telecommunication)
			10 (Information Technology)
			0 (Mechanical)

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Year	Course Code No	Name of the Course Offered by Computer Department	No. of students enrolled from all the departments
Jul-2016	UCEA501	PC Hardware and Maintenance	6 (Computer)
			2 (Electronics)
			6 (Electronics and Telecommunication)
			5 (Information Technology)
			1 (Mechanical)
Jul-2016	UCEA502	Open source Tools laboratory	17 (Computer)
			2 (Electronics)
			1 (Electronics and Telecommunication)
			0 (Information Technology)
			0 (Mechanical)

4. Annual/ semester/choice based credit system:

Sr No	Academic Year / Semester	System
1	2007-11	Semester Marks based System
2	2008-12	Semester Marks based System
3	2009-13	Semester Marks based System
4	2010-14	Semester Marks based System
5	2011-15	Semester Marks based System
6	2012-16 onwards	Semester Credit based system

5. Participation of the department in the courses offered by other departments

Sr No	Academic Year / Semester	Course	Faculty	Teaching to Department
1	2011-12 (Sem VIII)	BE-Artificial Intelligence- Neural Network portion	Deepak Sharma, Kavita kelkar	Mechanical
2	2011-12(Sem VIII)	BE-Artificial Intelligence- Neural Network portion	Deepak Sharma, Kavita kelkar	Mechanical

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Sr No	Academic Year / Semester	Course	Faculty	Teaching to Department
3	2013-14 (Sem II)	ME IT IS Virtualization and Cloud Computing	Deepak Sharma	Information Technology
4	2014-15(Sem II)	ME IT IS Virtualization and Cloud Computing	Deepak Sharma	Information Technology

ii) Audit Courses

Departmental Faculty offers audit courses for the students of all departments at UG from the academic year 2015-16 .

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

Post	Sanctioned	Filled
Professors	5	0
Associate Professors	10	8
Asst. Professors	16	22

7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

Sr. No.	Name	Qualification	Designation	Specialization	No.Of yrs of Exp	No. of PG students guided for the last 4yrs
1	Ms. Bharthi Hassan	ME	HOD & Associate Professor	Computer Engineering	20	5
2	Mr. Uday Joshi	ME	Associate Professor	Electronics Engineering	27	5
3	Mr. Deepak Sharma	ME	Associate Professor	Computer Engineering	22	6

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Sr. No.	Name	Qualification	Designation	Specialization	No.Of yrs of Exp	No. of PG students guided for the last 4yrs
4	Mr. Manish Potey	ME	Associate Professor	Computer Science and Engineering	21	11
5	Ms. Kavita Kelkar	ME	Associate Professor	Information Technology	19	5
6	Ms. Jyothi Rao	MTech	Associate HOD	Computer Science and Engineering	16	3
7	Ms. Bhakti Palkar	ME	Associate Professor	Computer Engineering	14	1
8	Mr. Prasanna Shete	M. Tech	Associate Professor	Electronics and telecommunication	13	3
9	Ms. Rajani Pamnani	M. Tech	Assistant Professor	Computer Engineering	16	-
10	Mr. Gajanan Bherde	ME	Assistant Professor	Computer Engineering	15	-
11	Ms. Swati Mali	M. Tech	Assistant Professor	Computer Engineering	16	1
12	Ms. Grishma Sharma	ME	Assistant Professor	Computer Engineering	13	-
13	Ms. Mansi Kambli	ME	Assistant Professor	Computer Engineering	13	-
14	Ms. Suchita Patil	M. Tech	Assistant Professor	Computer Engineering	11	-
15	Ms. Poonam Bhogle	ME	Assistant Professor	Computer Engineering	11	-
16	Ms. Rohini Nair	ME	Assistant Professor	Computer Engineering	10	-

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Sr. No.	Name	Qualification	Designation	Specialization	No.Of yrs of Exp	No. of PG students guided for the last 4yrs
17	Ms. Sheetal Pereira	ME	Assistant Professor	Computer Engineering	10	-
18	Ms. Smita Sankhe	ME	Assistant Professor	Computer Engineering	9	-
19	Ms. Pradnya Gotmare	ME	Assistant Professor	Computer Engineering	16	-
20	Mr. Zaheed Shaikh	ME	Assistant Professor	Computer Engineering	10	-
21	Ms. Nirmala Shinde	M. Tech	Assistant Professor	Computer Engineering	10	-
22	Ms. Saideepti P.	M. Tech	Assistant Professor	Computer Engineering	10	-
23	Ms Shweta Chachra	M. Tech	Assistant Professor	Computer Engineering	5	-
24	Ms Archana Gupta	M. Tech	Assistant Professor	Computer Engineering	11	-
25	Mr. Gopal Sonune	M. Tech	Temporary Faculty	Computer Engineering	2.5	-
26	Ms. Leena Sahu	ME	Temporary Faculty	Computer Science	5	-
27	Mr. Rajesh Kannan.K	ME	Temporary Faculty	Computer Science and Engineering	4	-
28	Mr. Vaibhav Chunekar	M Tech	Temporary Faculty	Computer Engineering	8	-
29	Ms. Kavita Deshmukh	ME	Temporary Faculty	Information Technology	8	-
30	Ms. Anjali Chachra	ME	Temporary Faculty	Computer Engineering	2	-

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8. Percentage of classes taken by temporary faculty – programme-wise information

Program	% classes taken by temporary faculty				
	2011-12	2012-13	2013-14	2014-15	2015-16
Undergraduate programme	25.75	14.84	7.92	6.78	20.97
Post graduate programme	0	0	0	0	0

9. Programme-wise Student Teacher Ratio:

Program	Student- Teacher Ratio				
	2011-12	2012-13	2013-14	2014-15	2015-16
Undergraduate programme	17.75	18.59	17.26	17.11	15.16
Post graduate programme	10.98	8.11	5.33	10.59	9.57

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled:

Sr. No.	Post	Sanctioned and Filled
1	Computer Programmer	2
2	Network Administrator	3
3	Laboratory Assistant	10
4	Laboratory Attendant	2
5	Hamal	2

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise
Nil.

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received:
Nil.

13. Research facility /centre with:

- **State recognition :** University recognized P.G. Centre
- **National recognition :** NIL
- **International Recognition :** NIL

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14. Publications :

- i) **Number of papers published in peer reviewed journals (national /international) :- Nil**
- ii) **Monographs :- Nil**
- iii) **Chapter(s) in Books :- Nil**
- iv) **Editing Books :- Nil**
- v) **Books with ISBN numbers with details of publishers :- Nil**
- vi) **Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)**

Faculty Members Serving on Editorial Boards / Board of Reviewers

Sr. No.	Name of the faculty	on Editorial Boards / Board of Reviewers of International / National conferences
1.	Mr.Manish Potey	RACEM International Conference
		ICACCI International Conference
		ICCUBEA International Conference
2.	Ms.Swati Mali	Fr. C. Rodrigues Institute of Technology's conference - 2 nd Biennial International Conference on Nascent Technologies in Engineering
		Don Bosco International Conference
3.	Mr.Uday Joshi	Don Bosco International Conference
4.	Mr.Deepak Sharma	RACEM International Conference
		ICACCI International Conference
		ICCUBEA International Conference
5.	Mr.Prasanna Shete	ICACIT International Conference

15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated:

Sr. No.	Faculty Member	Project	Description
1	Ms. Suchita Patil Ms. Pallavi Kulkarni	Feedback Software	This software is to take Course Feedback and Faculty feedback which in turn helps in improving the course delivery. To bring the transparency in the process online feedback is collected.

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Sr. No.	Faculty Member	Project	Description
2	Ms. Pradnya Gotmare . Ms. Jyothi Rao	Admission Software	This software is to facilitate the admission process in the college. The rules, regulations and processes are changed from time to time. This in-house developed software gives us flexibility to accommodate the changes.
3	Ms. Bhakti Palkar	Time Table Software	This software is to Prepare timetable of faculty members with different constraints.
4	Ms. Suchita Patil Ms. Nirmala Shinde Ms. Sai Deepti Pabba Ms. Pallavi Kulkarni	Online University Examiner Panel	This software was developed for Mumbai University. This software maintains the data about the examiners with subject experience. This is helpful in searching and getting the data about the examiner for University oral exams
5	Ms. Swati Mali	ACB Project: DB Track	This project keeps track of cases assigned, their progress and officer incharges during lifetime of the case. It also generates alerts for deadlines for the incharge officers
6	Ms. Swati Mali	iSec Pvt. Ltd Mobile Computing location sensing and advising app	1.This project builds Interface to enter static alerts on database and fetch them on websites when required 2.This is android application for sending notifications based on location of user (dynamic)
		Comparing iSAT with available products and incorporations the newer features	3. Application for security tool updatation

17. Faculty recharging strategies:

- The Somaiya Trust has constituted Somaiya Vidyavihar Awards to recognise and honor conscientious hard work and the extra ordinary

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achievements of Faculty and Staff.

- At the departmental level, faculty are felicitated for overall excellence.
- Faculty are encouraged to pursue higher education either in house or at reputed institutions.
- College level Faculty Development Policy encourages faculty for participation in Conferences, Workshops, Training Programs and Industrial training.
- Faculty are rewarded for publications in peer reviewed journals.
- Faculty are encouraged to apply for funded projects.
- KJSCE is a remote center for courses by IIT faculty under National Mission on Education through ICT sponsored by MHRD, New Delhi; provides faculty with exposure to these courses.
- Provision of Yearly book allowance to faculty to augment teaching resources.
- Cultural and Sport events are organized for faculty and staff for to hone and promote their skills.

18. Student projects

- Percentage of students who have done in-house projects including inter-departmental.
- Percentage of students doing projects in collaboration with industries / institutes.

UG	2011-12	2012-13	2013-14	2014-15	2015-16
Internal%	98	100	95	92	98
External%	2	0	5	8	2
Interdisciplinary%	1	0	0	0	0
PG (Computer Engg)	2011-12	2012-13	2013-14	2014-15	2015-16
Internal%	100	100	92	78	89
External%	0	0	8	22	11
Interdisciplinary%	0	0	0	0	0

19. Awards / recognitions received at the national and international level by

- Faculty
- Doctoral / post-doctoral fellows
- Students

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Year	No. of students who received awards/ recognition at the	
	National level	International level
2011-12	26	-
2012-13	12	-
2013-14	36	-
2014-15	20	-
2015-16	31	-

20. Seminars/ Conferences/Workshops organized and the source of funding (national international) with details of outstanding participants, if any.

i) Faculty

Sr. No.	Year / Duration	Title	Funding Agency	Target audience
1	25 th -30 th May, 2015	Introduction to Design of Algorithms	IIT Kharagpur	University Teachers
2.	21 st -26 th Apr, 2014	Computer Programming	ISTE & IIT, Mumbai	University Teachers
3	21 st -31 st May,2013	Database Management Systems	ISTE	University Teachers
4.	2 nd -9 th Feb,2013	Research Methods in Education Technology	IIT Bombay	University Teachers
5.	25 th June-4 th July ,2012	Introduction to Research Methodologies	ISTE	University Teachers

21. Student profile course-wise:

Applications are received by DTE and not received or processed by KJSCE. Students are admitted as per DTE allotment.

Academic Year	Course	No. of candidates admitted	Selected		Pass percentage	
			Male	Female	Male	Female
2011-12	Undergraduate programme	141	98	43	89.85%	97.72%
	Post graduate programme	18	03	15	100%	100%

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Academic Year	Course	No. of candidates admitted	Selected		Pass percentage	
			Male	Female	Male	Female
2012-13	Undergraduate programme	141	91	50	100%	93.02%
	Post graduate programme	18	08	10	75%	100%
2013-2014	Undergraduate programme	154	99	55	93.75%	97.27%
	Post graduate programme	13	03	10	67%	100%
2014-15	Undergraduate programme	151	99	52	89.80%	100%
	Post graduate programme	18	06	12	In progress	In progress
2015-16	Undergraduate programme	154	101	53	91.70%	99.01%
	Post graduate programme	18	01	17	In progress	In progress

22. Diversity of Students:

Year	Name of the course	% of students from the college	% of students from the state	% of students from other states	% of students from other countries
2011-12	Undergraduate programme	0	98.01	0.66	1.32
	Postgraduate programme	0	100	0	0
2012-13	Undergraduate programme	0	98.7	0.65	0.65
	Postgraduate programme	0	100	0	0
2013-14	Undergraduate programme	0	96	0	4
	Postgraduate programme	0	100	0	0

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Year	Name of the course	% of students from the college	% of students from the state	% of students from other states	% of students from other countries
2014-15	Undergraduate programme	0	96.64	0	4.03
	Post graduate programme	0	100	0	0
2015-16	Undergraduate programme	0	95.04	0	4.96
	Post graduate programme	0	100	0	0

23. How many students have cleared Civil Services, Defense Services, NET SLET, GATE and any Other competitive exams.

	2011-12	2012-13	2013-14	2014-15	2015-16
GATE	-	4	02	07	06
GRE	28	2	19	14	15
TOFEL	-	-	11	-	14
CAT	3	1	02	-	-
CMAT	2	11	02	-	-

24. Student Progression

Student progression	Percentage against enrolled				
	2011-12	2012-13	2013-14	2014-15	2015-16
UG to PG	25.58	12.95	17.61	10.41	12.75
PG to Ph.D.	-	-	-	-	-
Employed					
● Campus selection	89.92	67.63	63.38	74.31	74.5
● Other than campus recruitment	--	--	--	0.7%	--
● Higher studies	6.98	7.19	--	0.69	--
Entrepreneurs	--	--	1.41	2.08	0.67

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25. Diversity of staff

Percentage of faculty who are graduates of the same parent university from other universities within the State from other universities from other States.

Percentage of faculty who are graduates	Percentage
of the same parent university	70.96%
from other universities within the State	9.67%
from other universities from other States	19.53%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period. : Nil

27. Present details about infrastructural facilities

a) Central Library

Opac: Web Opac online facility is provided wherein the students can renew the books at any point of time. They can also reserve book in advance. Also intimation is provided if the book is available.

Availability :

- i. IEEE electronics Library
- ii. Springer Electrical, Electronics, Computer Science and Mechanical Engineering Journals.
- iii. McGraw Hill Access Engineering Library
- iv. Elsevier SCIENCE DIRECT
- v. Six Kindle e-book readers
- vi. ASME Digital Library
- vii. ACM Digital Library
- viii. British Council Library,
- ix. IIT Bombay library

b) Internet facilities for staff and students

- Name of the Internet provider: Aircel Services

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- Available band width 155 Mbps
 - WiFi availability at 48 locations
 - Internet access in labs, classrooms, library and offices of all Departments
 - Security arrangements Kaspersky antivirus 1161 licenses, Fortinet Firewall for Internet
- c) Total number of U.G class rooms: 6, Tutorial Rooms: 1, U.G. Seminar Hall: 1, P.G Class room: 1, P.G. Seminar Hall: 1
- d) Class rooms with ICT facility : 6
- e) Students' laboratories: 12 + (1 UG + 1 PG Computer Centre)
- f) Research Laboratory : Nil

28. Number of students of the department getting financial assistance from College.

Year	Projects		Through PUSH	
	No of students	Amount (Rs)	No of Students	Amount (Rs)
2011-12	-	-	-	-
2012-13	-	-	-	-
2013-14	14	7684	1	15000
2014-15	50	50850	2	96067
2015-16	14	6000	5	280968

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

M E Computer Engineering program started in June 2011. Following assessment was done before establishing the program.

There are about 4000+ Computer Engineering students graduating every year from the University of Mumbai region. Out of which very few students get a chance to pursue master's degree due to insufficient avenues for the same. Hence there was a need to start post graduate courses.

The following contributions are made by Masters of Computer Engineering program:

1. Industrial Growth
2. Economic Growth
3. Technological Development: Increasing demand for intranet, internet and web

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based applications and services

4. Academic Growth of Computer Engineering

5. R and D, new project development

30. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

Yes

Faculty participates in design of syllabus scheme, contents by forming faculty teams in various subject areas. Subject board meeting is conducted every semester for inputs and improvements in syllabus schema and detailed syllabus.

b. Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

Yes

Students give faculty feedback, course feedback every semester for each subject. This feedback is analyzed and used for further improvement.

c. Alumni and employers on the programs and what is the response of the department to the same?

Yes

Alumni and Employers give the feedback once in a year. It is analyzed and used to understand current industry requirements and further to be implemented.

31. List the distinguished alumni of the department

Sr No	Alumni Name	Year of Graduation	Contribution
1	Madhav Avhad	2003	Project Examiner, Project competition judge
2	Trupti Varne	2003	Project Examiner, Project competition judge
3	Ashwin Iyer	2004	Project Examiner, Project competition judge, Involved in alumni cell activities
4	Yadnyesh Joshi	2005	Project Examiner, Project competition judge
5	Dr. Saket Mengle	2005	Expert Lectures
6	Anant Garg	2008	Involved in alumni cell activities like mentorship programs
7	Aditya Joshi	2008	Expert Lectures

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Sr No	Alumni Name	Year of Graduation	Contribution
8	Sunny Singh	2009	Project Examiner, Project competition judge, Involved in alumni cell activities
9	Saurabh Raje	2010	Expert Lectures, Project guidance to students
10	Rushal Ajmera	2012	Expert Lectures
11	Manav Sanghavi	2015	Expert Lectures

32. Give details of student enrichment programs (special lectures / workshops / seminar) with external experts.

Sr. No.	Type of Student Enrichment Programme	Academic Year				
		2011-12	2012-13	2013-14	2014-15	2015-16
1	Special Lecture/Seminar	5	4	1	4	11
2	Workshop	-	3	5	5	1
3	Internship	-	-	49	64	60

33. List the teaching methods adopted by the faculty for different programmes.

Teaching Methods:

To improve quality of teaching, the following methods are adopted:

1. Use of visual aids in lecture delivery is increased substantially
2. Public address system is also made available wherever necessary.
3. Series of NPTEL Video lectures and notes in pdf are available for the ready reference.
4. Experimental writeups and assignments if any are uploaded on intranet.
5. Regular faculty members are given laptops.
6. Teaching over and above syllabus by organizing Industrial Visits and expert lectures.
7. Innovative IA components added.
8. Innovative mini projects as well as final year projects.

Learning Management System (LMS) is a new concept and some faculties have used this application software tool during the teaching-learning process. Faculty uploaded lecture planning, lecture notes, tests, online quizzes, ppts etc. used it for CO analysis purposes

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

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Program outcomes assessment is performed at the end of each academic year (AY) using the tools as follows.

1. Information is collected for each course.

- Student performance assessment –direct assessment (TT (Term Test), IA(Internal Assessment), ESE (End Semester Examination), Laboratory work assessment)

- Student performance assessment-indirect assessment (course feedback)

2. Students placement records

3. Exit survey of the graduating batch

4. Alumni feedback

5. Recruiter feedback

6. Feedback from advisory boards

After collecting the data of direct and indirect assessment

7. Exit interviews, Alumni feedback are examined to collect information to identify weak areas, if any. In case of any such findings, discussion is held with students to identify specific problems.

8. Recruiter feedback are examined to collect information to identify current developments and requirements in industry,

9. Advisory board suggestions are considered to make changes in teaching learning process and modifications in curriculum.

10. Each program outcome attainment is calculated as averages of the results of assessment mentioned in step 1.

11. The Departmental committee reviews the program outcomes to decide if the changes are required as

a. Curriculum gap-A particular topic is required to be added to a particular course .Or can be covered up by arranging expert lecture, laboratory experiment, training, industrial visit, seminar. Identified by Course teacher.

b. Course gap- A new course needs to be added or Course contents are outdated due to development in technology. Usually it is not feasible to add or delete a course in university curriculum. Instead, greater depth of coverage of important topics is provided. Identified by Course teacher.

c. Program gaps-If the program is satisfying program specific criterion specified by IEEE and CSAB and there is enough flexibility in the program structure to meet the desired program educational objectives. Identified by program level departmental committee.

The departmental committee then summarizes the course and curricular gaps and recommendations by course teachers and other stake holders to decide whether modifications are required at course level or program level. The departmental committee also decides whether assessment procedure needs any changes for the next year.

12. The results are conveyed to all the faculty of the program for implementation.

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35. Highlight the participation of students and faculty in extension activities

Interaction with outside world

Year	2011-12	2012-13	2013-14	2014-15	2015-16
No. of faculty who have : given guest lectures outside the Institute	-	-	-	-	03
Member of University Staff Selection Committee	-	-	-	01	01

Workshops attended

Workshops attended	July 2011-June 2012	July 2012-June 2013	July 2013-June 2014	July 2014-June 2015	July 2015-June 2016
Number of Workshops	5	10	16	24	11

Sr No	Name of Faculty	Activity, date, number, subject	Venue
1.	Mr. Uday Joshi	Paper Reviewed,3, Nov 2014	Don Bosco International Conference
2.	Ms. Swati Mali	Paper Reviewed,2, Nov 2014	Don Bosco International Conference
3.	Mr. Uday Joshi	Guest lecture on Autonomy, July 2016	Vivekanand Education Society's Institute of Technology (VESIT)
4.	Mr. Zaheed Shaikh	Syllabus set for subject Computer Graphics, Computer network, 2012-2013	Mumbai University
5.	Ms. Pradnya S. Gotmare	Syllabus set for subject System Programming and Compiler Construction, 2012-2013.	Mumbai University

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**Co-curricular activities:
Student Extension activities**

Student Activities 2011-2012						
Sr. No.	Event	BE	TE	SE	FE	Total
1	In the JA India Titan Challenge 2012	-	-	2	-	2
2	Projects Competition Prkalp	24	-	-	-	25
3	Technical Paper Presentation Prkalp	4	-	-	-	4
4	CSI-KJSCE Tatva Convergence 2012	1	-	-	-	1
5	Certification Course	-	-	-	6	6
					Total	38

Student Activities 2012-2013						
Sr. No.	Event	BE	TE	SE	FE	Total
1	Project Competition (Hardware) & Theme based Projects	6	-	-	-	6
2	Code Swap	-	1	-	-	1
3	Lazer Tag	-	1	-	-	1
4	Inter collegiate competition CSI_CSI battlefield	-	1	-	-	1
					Total	9

Student Activities 2013-2014						
Sr. No.	Event	BE	TE	SE	FE	Total
1	Industrial training		2			2
2	App Preneur	2				2
3	Techmate 2013			1		1
4	Abhyantriki 2013		1	1		2
5	Aspire 2013			1		1
6	Internship	1				1
7	Quiz Contest	1				1
8	Project		1			1
9	Java SE 6 Programmer		2			2
10	SQL Certified		1			1

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Student Activities 2013-2014						
Sr. No.	Event	BE	TE	SE	FE	Total
11	Application Development IMP Contracts Managemnet		1			1
12	Anroid Apps Development		1			1
13	Technical Lead Developer		1			1
14	Prakalpa' 14	38	5			43
15	Tatva Convergence 2014		7	2		9
16	Aavishkar Project Competition	5				5
17	International Journal	8				8
18	National Conference	7				7
19	Present Working Model :Smart tracking & identification using mobile phone	3				3
20	Present Working Model :(N,I) Secret Sharing	3				3
21	Present Working Model :VMDC	2				2
22	Akash Android Application		3			3
23	Intership		1			1
24	Faculty Feedback		1			1
25	Present Working Model :MTS Mumbai Ticket Seva	4				4
26	Online Alumini Software Development		3			3
27	Intership and Foreign language				4	4
28	Anroid Workshop			1		1
29	Extra- curricular	2	8	4		14
					Total	128

Student Activities 2014-2015						
Sr. No.	Event	BE	TE	SE	FE	Total
1	Prakalp 2015	89	-	-	-	89
2	Tatva Convergence 2K15	36	-	-	-	36
3	ICON 2K15	1	-	-	-	1

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Student Activities 2014-2015						
Sr. No.	Event	BE	TE	SE	FE	Total
4	Itantra 2015	-	2	-	-	2
5	Rubix 2015	-	2	-	-	2
6	Anti Corruption Project Bureau	4	-	-	-	4
7	SQL Project	3	-	-	-	3
8	International Journal Publication	14	-	-	-	14
9	SAP Certification	1	-	-	-	1
10	Abhyantriki 2014	1	-	-	-	1
11	Elan 2014	-	1	-	-	1
12	Praxis 2014	-	1	-	-	1
13	Oracle Certification	-	1	-	-	1
14	ABAP Programming	1	-	-	-	1
15	Web Designing	1	-	-	-	1
16	Reliance	1	-	-	-	1
17	Introduction to computer science (Workshop)	-	1	-	-	1
18	Extra-curricular	9	10	-	-	19
					Total	179

Student Activities 2015-2016						
Sr. No.	Activity	BE	TE	SE	FE	Total
1	Digital Media Marketing	1	-	-	-	1
2	KJSCE CODING Challenge	1	-	-	-	1
3	Competitive Programming Seminar	1	-	-	-	1
4	National Summer Internship Program on Android Apps Development	-	1	-	-	1
5	File Manager Project	-	1	-	-	1
6	National Summer Internship Program on Embedded Systems & Robotics	-	1	-	-	1
7	Oracle Certification Program	-	1	-	-	1
8	National Summer Internship Program on Android Apps Development	-	1	-	-	1
9	Computer Programming Contest	2	-	-	-	2

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Student Activities 2015-2016						
Sr. No.	Activity	BE	TE	SE	FE	Total
11	CodeVIta Season IV	1	-	-	-	1
12	CodeVIta 2014 TCS Coding Contest	1	-	-	-	1
13	R Programming	1	-	-	-	1
14	The Data Scientist's Toolbox	1	-	-	-	1
15	Introduction to Computer Science and Programming Using Python	1	-	-	-	1
16	Introduction to Functional Programming	1	-	-	-	1
17	Web Design Fundamentals (Part 1)	1	-	-	-	1
18	Oracle Certification Program	-	1	-	-	1
19	FE Representative CSI Council	-	-	1	-	1
20	Legged iCell Botix	-	-	1	-	1
21	VFX and AFX Seminar	-	-	1	-	1
22	Ethical Hacking Seminar	-	-	1	-	1
23	Multimedia Workshop and Competition (TechNext)	-	-	1	-	1
24	Multimedia (TechNext)	-	-	1	-	1
25	Letter of Recommendation	-	-	1	-	1
26	DEV204x: Programming with C#	1	-	-	-	1
27	15.071x: The Analytics Edge	1	-	-	-	1
28	Tatva Convergence 2K15	1	-	-	-	1
29	10th National Conference	1	-	-	-	1
30	2nd National Level Project Exhibition cum Poster Presentation 2016	2	-	-	-	2
31	Abhyantriki-15 Crackathon	-	2	-	-	2
32	Cisco Certified Network Professional	-	1	-	-	1
33	Frapp- Campus Brand Manager	-	1	-	-	1
34	Internshala Student Partner Program	-	1	-	-	1
35	Oracle Certified Professional, JAVA SE 6 Programmer	-	1	-	-	1
36	Photoshop	-	1	-	-	1
37	Prakalpa	51	-	-	-	51

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Student Activities 2015-2016						
Sr. No.	Activity	BE	TE	SE	FE	Total
38	Praxis	-	1	-	-	1
39	Summer Internship	-	1	-	-	1
40	Tatva Convergence	2	-	-	-	2
41	TechNext	-	2	-	-	2
42	Techonovanza	-	-	2	-	2
43	Web Development – Internship	-	1	-	-	1
44	Extra-curricular	-	37	8	-	45
					Total	143

• **Workshops/events:**

Year	No of workshops organized by students (CSI/Codecell)
2011-12	7
2012-13	10
2013-14	11
2014-15	13
2015-16	11

36. Give details of “beyond syllabus scholarly activities” of the department.

**Beyond Syllabus Scholarly Activities
2013-2014**

Sr. No.	Topic	Subject	Resource Person	Class with Semester
1	Web Mining	Data warehouse and Mining	Jyothi Rao, Gajanan Bherde	TE VI
2	BI tools	Data warehouse and Mining	Jyothi Rao	TE VI
3	web mining	Data warehouse and Mining	Jyothi Rao Gajanan Bherde	TE VI
4	BI tools	Data warehouse and Mining	Jyothi Rao Gajanan Bherde	TE VI
5	Understanding OLAP	Data warehouse and Mining	Jyothi Rao Gajanan Bherde	TE VI

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Sr. No.	Topic	Subject	Resource Person	Class with Semester
6	Problem characteristics not given in syllabus	RAI	Swati Mali , Nirmala Shinde	BE VII
7	Simple examples for understanding Robot Kinematics not given (e.g. Two-axis drafter)	RAI	Swati Mali , Nirmala Shinde	BE VII
8	Not all AI programming languages included in syllabus	RAI	Swati Mali, Nirmala Shinde	BE VII
9	Students should understand concept Turing test concept	RAI	Swati Mali, Nirmala Shinde	BE VII
10	NS2 coverage in theory for Computer network	Computer network	Prasanna Shete	TE V
11	Risc and CISC processor architectures was not included in syllabus	Computer Organization and Architecture	P Saideepthi , Gajanan Bherde	SE III
12	Additional Real life examples	Data Structure	Jyothi Rao Nirmala Shinde	SE III
13	Android programming	MCC	Suchita Patil Bhakti Raul	BE VII
14	Feature extraction techniques for different computer vision	Computer Vision	Grishma Sharma	BE VIII
15	Real life impact in case of Non Functional Requirement	Software Architecture	Kavita Kelkar Bharathi H N	BE VI

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2014-2015

Sr.No.	Topic	Subject	Resource Person	Class with Semester
1.	Use of IDE Tools viz. Jcreator/Eclipse	OOPM	Suchita Patil, Smita Sankhe	SE III
2.	System program implementation	SPCC	Suchita Patil, Nirmala Shinde	TE VI
3.	Basic android frameworks for android application development	MCC	Prasanna Shete Suchita Patil	TE VI
4.	Probability Concepts	Computer Simulation & Modeling	Kavita Kelkar	BE VII
5.	Problem characteristics not given in syllabus	RAI	Swati Mali, Nirmala Shinde	BE VII
6.	Random number testing methods	Computer Simulation & Modeling	Kavita Kelkar	BE
7.	Problem characteristics with suitable example	RAI	Swati Mali, Nirmala Shinde	BE VII
8.	Robot Kinematics -two axis mini drafter robot to 4-axis SCARA robot	RAI	Swati Mali, Nirmala Shinde	BE VII
9.	Robotics sums handles with more example	RAI	Nirmala Shinde, Swati Mali , Gopal Sonune	BE VII
10.	Robotic Practical examples with Assignments	RAI	Nirmala Shinde	BE VII
11.	Agent Architectures and Design Components with Assignments	RAI	Swati Mali	BE VII
12.	AI programming using LISP	RAI	Swati Mali, Nirmala Shinde	BE VII
13.	Problem characteristics not given in syllabus	RAI	Swati Mali, Nirmala Shinde	BE VII
14.	Simple examples for understanding Robot	RAI	Swati Mali, Nirmala Shinde	BE VII

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Sr.No.	Topic	Subject	Resource Person	Class with Semester
	Kinematics (e.g. Two-axis drafter)			
15.	AI programming languages	RAI	Swati Mali, Nirmala Shinde	BE VII
16.	Contemporary Issues in Distributed operating system	DS	Deepak Sharma , Manish Potey	BE students
17.	Contemporary Issues in System Security	CS	Deepak Sharma & Manish Potey	BE students
18.	Associative memory	Soft Computing	Archana Gupta	BE VII

2015-2016

Sr. No.	Topic	Subject	Resource Person	Class with Semester
1.	Research Paper study on Contemporary issues in Security	CS	Deepak Sharma & Manish Potey,	BE VII
2.	Expert Lecture on Contemporary issues in Security	CS	Mr Amit Kumar , Co-Founder, Secure Layer-7, Pune	BE VII
3.	Sliding window protocol experimental demo to be shown on kits	Computer Network	Poonam Bhogale Prasanna Shete	TE V
4	Cisco packet tracer	Computer Network	Prasanna Shete	TE V
5.	More practicals on Cisco packet tracer	DCN &CN	Poonam Bhogale Prasanna Shete	SE IV TE V

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37. State whether the programme/ department is accredited/ graded by other agencies. Give details.

Yes. The department was accredited by National Board for Accreditation (NBA) as following.

Accredited by NBA in 2013 for 2 years.

Accredited by NBA in 2009 for 3 years

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strength

- Qualified, experienced and young and dedicated faculty members
- Consistently attracting good quality students.
- Good number of students placed and pursuing higher studies.
- Good student academic performance
- Use of Open source software and LMS Inpods, MOOC
- State of art infrastructure.
- Software development by Faculty & Students
- Student projects idea based on research paper.
- Good student participation in co-curricular activities.
- Special efforts for differently abled students.

Weakness

- Limited Research
- Limited Interaction with outside world

Opportunities

- Budgetary provision for Student & Faculty development.
- Industry participation in academic bodies.
- Young and enthusiastic faculties can pursue PhD is due course of time.

Challenges

- Uphold competency with remarkable universities with very good infrastructural facilities.
- Ever changing requirement of IT industry.

39. Future plans of the department.

Long term goals.

- To set up a center of excellence lab in Database.
- To organize conference in the field of Computer Engineering.
- Credit transfer and student exchange program with other universities.
- Inclusion of industry internship as credit course.
- Strengthen research among faculty and students.

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Short Term goals.

- To improve teaching learning by usage of ICT, LMS, virtual lab.
- Facilitate resources for conduction of certification exams.
- Conducting short term courses (STTPs) on department thrust areas.
- Inclusion of certification of faculty and student.
- Inclusion of multidisciplinary projects and industrial visit.
- Setting up specialized labs –Virtual reality lab, CUDA lab
- Technical training for lab assistants.
- Strengthen student publication.
- Strengthen student participation in inter institute events.
- Increase the internship opportunities of students
- Strengthen the mentoring of students’ entrepreneurship, career counselling, higher studies.

**Evaluative Report of
Department of Electronics Engineering**

1. Name of the Department & its year of establishment:

Department of Electronics Engineering

Year of establishment: 1983

2. Names of Programmes / Courses offered (UG, PG, and Ph.D.)

Sr. No.	Name of Program	Commencement Year	Intake
1	U.G (Electronics Engineering)	1983	60
		1985	90
		1994	60
		2001	90
		2002	120
2	P.G (Electronics Engineering)	2010	18
3	Ph. D	2013	10

3. Interdisciplinary courses and departments involved:

Year	Course	Semester	Department
2011-12	Digital System Design	M.E I	VJTI
	Discrete Time Signal Processing	M.E.I	EXTC
	Power Electronics	M.E II	EXTC
2014-15	Business Communications and Ethics	V	HSS
	Information Technology for management of enterprise	VI	S.K.S.C.of Arts, Science & Commerce
	Business Communications and Ethics	V	HSS
2015-16	Information Technology for management of enterprise	VI	Information Technology

Interdisciplinary courses (IDC) will be offered with effect from Academic Year 2016-17.

Audit Courses

Year	Course code	Name of the course offered by Electronics Department	No. of students enrolled from all the departments
2015-16	UEXA301	Energy Conservation: Principles and Methods	28= 05 (July 2015)+ 23 (Jan 2016)

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Year	Course code	Name of the course offered by Electronics Department	No. of students enrolled from all the departments
	UEXA302	Introductory Course on Mathematical Software and Virtual Instrumentation	50= 28 (July 2015)+ 22 (Jan 2016)
	-	e-Yantra Robotics Workshop	90 = 37(ETRX)+25 (EXTC)+ 22(Comp)+ 5(IT)+ 1(MECH)

4. Annual/ semester/choice based credit system:

Semester- Credit based grading system.

Upto 2011-15 batch, it was Semester/ Marks Based System.

From 2012-16 batch, Semester/ Credit based grading system started.

5. Participation of the department in the courses offered by other department:

Credit Courses

Year	Class	Department	Subjects
2011-12	Second Year	Mechanical	Industrial Electronics
2012-13	Second Year	Mechanical	Industrial Electronics
2013-14	Second Year	Mechanical	Industrial Electronics
2014-15	Second Year	Mechanical	Industrial Electronics
	Third Year	Mechanical	Mechatronics
	Third Year	EXTC, ETRX	ARM University Program Training Course on Embedded system design and programming, Internet of Things
	Final Year	Mr.C.Prakash, (Industry expert)	Lectures on Soft skill "Campus to Corporate"
	Final Year	Mr. Rahul Deshpande (TCS- Industry expert)	Business Communication and Ethics
	M.E /M.Tech	Mechanical (Energy Engineering)	Foundation of Energy Engineering, Advanced Solar Photovoltaic

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Year	Class	Department	Subjects
2015-16	Second Year	Mechanical	Industrial Electronics
	Third Year	Mechanical	Mechatronics
	M.E /M.Tech	Mechanical (Energy Engineering)	Foundation of Energy Engineering, Advanced Solar Photovoltaic

Audit Courses offered by all departments

Department faculty participates in the Audit Courses for students of all departments at UG.Level from 2015-16

List of Audit Courses

July- November 15

Sr. no	Name of Audit Course	Abbreviation
1	Vector Mechanics	VM
2	Introduction to Solar Energy	ISE
3	Renewable Energy	RE
4	Basics of Web Programming	BOWP
5	Object oriented programming methodology	OOPM
6	Web Programming	WP
7	Visual Arts	VA
8	Energy Conservation	EC
9	Introductory Course on Mathematical software and virtual instrumentation	ICMSVI
10	Numerical Methods	NM
11	Virtual Lab	VL
12	Nature and Culture Appreciation	NCA
13	A Survey of Mumbai's History and Architecture	ASOMHA
14	Basic Mathematics	BM
15	Solar Photovoltaic & PV System	SPPVS
16	Basics of Accounting	BOA
17	Future of Internet	FOI

Jan- April 2016

Sr. no	Name of Audit Course	Abbreviation
1	Corporate Communication	CC
2	A Survey of Mumbai's History and Architecture	ASOMHA
3	Basics of Web Programming	BOWP
4	Object oriented programming methodology	OOPM
5	Web Programming	WP
6	Virtual Lab	VL

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Sr. no	Name of Audit Course	Abbreviation
7	Energy Conservation principles and methods	ECPM
8	Introductory Course on Mathematical software and virtual instrumentation	ICMSVI
9	Basics of Accounting	BOA
10	Future of Internet	FOI
11	Entrepreneurship	E
12	Introduction to thermal and fluid system	ITFS
13	From A Prototype To Product	FPTP
14	Introduction to Sales and Distribution Management	ISDM
15	Data Modeling	DM
16	Dramatics and Corporate	DAC

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

Year 2016-17

Designation	Sanctioned	Filled
Professors	4+1(U.G + P.G)	01
Associate Professors	8+2 (U.G + P.G)	11
Assistant Professors	16 (U.G)	18

7. Faculty Profile:

Year 2016-17

Sr. No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of P.G/Ph.D Students guided (5 years data)
1	Dr. Jagannath H. Nirmal	Ph.D	Professor	Electronics Engineering	17	7
2	Mrs. Lekha Das	M.E	Associate Professor (HOD)	Electronics Engineering	30	3
3	Mr. Anil. S. Thosar	M.E	Associate Professor	Electrical Engineering	31	3

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Sr. No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of P.G/Ph. D Students guided (5 years data)
4	Mr. Uday. P. Chhatre	M Tech	Associate Professor	Instrumentation & Control Engineering	Industrial - 5 Teaching - 25	-
5	Mr. Shirish S Halbe	M.E	Associate Professor	Electronics	Industrial - 8 Teaching - 25	7
6	Mrs. Arati S Phadke	M Tech	Associate Professor	Electrical Engineering	Industry: 2.5 Teaching : 24.5	7
7	Mr. Milind S Marathe	M.E	Associate Professor	Electrical Engineering	25	7
8	Mrs. Sudha R. Gupta	M.E	Associate Professor	Electronics and Telecommunication Engineering	Industry: 01 Teaching : 19	11
9	Dr. Samidha Kulkarni	M.E	Associate Professor	Electrical Engineering	29	-
10	Mrs. Annu Abraham	M Tech	Associate Professor	Systems & Control Engineering	Industrial - 2 Teaching - 26	1
11	Mrs. Rajashree Daryapurkar	M Tech	Associate Professor	Electronics Engineering	16	5
12	Mr. Sandeep. A Hanumante	M.E	Associate Professor	Electronics Engineering	29	-
13	Mrs. Kirti Sawlani	M Tech	Asst. Professor	Electronics Engineering	16	1
14	Mr. Makarand. G. Kulkarni	M Tech	Asst. Professor	Electronics and Telecommunication	15	-

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Sr. No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of P.G/Ph. D Students guided (5 years data)
15	Mrs. Sushma Kadge	M Tech	Asst. Professor	Electronics Engineering	16	1
16	Mrs. Seema Talmale	M Tech	Asst. Professor	Electronics Engineering	14	-
17	Mrs. Amrita Naiksatam	M.E	Asst. Professor	Electronics Engineering	10	-
18	Mrs. Shobha Gopalkrishnan	M Tech	Asst. Professor	Electrical Engineering	Industrial :1 Teaching :5	-
19	Mrs. Shila Dhande	M.E	Asst. Professor	Electronics Engineering	11	-
20	Mrs. Bharati Khedkar	M.E	Asst. Professor	Electronics and Telecommunication Engineering	Teaching 19 Industry 4	-
21	Mrs. Bhargavi Kaslikar	M.E	Asst. Professor	Electronics Engineering	Teaching 08 Industry 02	-
22	Mrs. Deepa Jain	M.E	Asst. Professor	Embedded Systems	06	-
23	Mrs. Sonia Joshi	M Tech	Asst. Professor	Radio Frequency Design technology	07	-
24	Mrs. Megha Sharma	M.E.	Asst. Professor	Control Systems	08	-
25	Mr. Nilesh Lakade	M.E	Asst. Professor	Electronics and Telecommunication Engineering	14	-
26	Mrs. Pritam Salankar	M.E	Asst. Professor	Electronics (Specialization in Computer Technology)	11	-

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Sr. No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of P.G/Ph. D Students guided (5 years data)
27	Mrs. Pragya Gupta	M.E	Asst. Professor	Electronics Engineering	Teaching 02 Industry 08	
28	Mrs. Esther Jennifer.G (Temporary)	M.E	Asst. Professor	Electronics Engineering	6	-
29	Mrs. Anagha Raich (Temporary)	M.E	Asst. Professor	Computer Science	7	-
30	Mrs. Sujata Jadhav (Temporary)	M.E	Asst. Professor	Electronics Engineering	1	-

8. Percentage of classes taken by temporary faculty *:

Programme-wise information

Program	% classes taken by temporary faculty				
	2011-12	2012-13	2013-14	2014-15	2015-16
Undergraduate programme	23.78%	23.06%	10.22%	6.67%	13.33%
Post graduate programme	10%	11.85%	12.5%	16.66%	0%
Ph.D programme	-	-	100%	100%	100%

*Includes faculty from other departments of the Institute as well.

9. Programme-wise Student Teacher Ratio

Program	Student- Teacher Ratio				
	2011-12	2012-13	2013-14	2014-15	2015-16
Undergraduate programme	17.31	16.87	17.22	19.98	17.11
Post graduate programme	7.67	6.35	4.68	4.85	9.27
Ph.D programme	-				

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10. Number of academic support staff (technical) and administrative staff:

Academic support staff	Number (sanctioned and filled)
Lab Assistant	11
Lab attendant	3
Peon	2

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

Year 2013-14

Sr. No.	Name of the project	Name of the Faculty	Name of the funding agency	Total grant received
1	Design / development of Data acquisition and control system for material recovery system (Phase II)	Mr. B. R. Prabhu	BARC	Rs. 98887/-
2	Repair/ maintenance of Thermal diffusivity measurement system (Anter , USA make)		BARC	Rs. 48000/-

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received: Nil

13. Research facility / centre with:

- o state recognition : University recognized Centre for UG & PG, Research Centre (Ph.D (Tech))
- o national recognition : Nil
- o international recognition : Nil

14. Publications:

Number of papers published in peer reviewed journals (national / international)

Year	2011-12	2012-13	2013-14	2014-15	2015-16
No. of papers published in International Journal	-	-	1	3	2

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Year	Paper details
2013—2014	Dr. J.H. Nirmal 1. “A Novel Voice Conversion Approach Using Admissible Wavelet Packet Decomposition”, EURASIP Journal on Audio, Speech, and Music Processing, Springer, vol. 28 issue 1, pp. 1-10, 2013. (SCI listed).
2014-15	Ms. Sudha Gupta 1. “Support Vector Machine based Proactive Cascade Prediction in Smart Grid using Probabilistic Framework” IEEE Transactions on Industrial Electronics, Vol.62, issue-4, pp. 2478-2486, April 2015. Dr. J.H. Nirmal 1. “Voice Conversion Using General Regression Neural Network”, Applied Soft Computing, Elsevier Publication, vol. 24, pp. 1-12, 2014 (SCI listed) 2. “Voice Conversion System Using Salient Sub bands and Radial Basis Function” Neural Computing and Application, Springer, ISN (0941-0643), pp. 1-14, 2015 (SCI Listed)
2015-16	Dr. J. H. Nirmal 1. “MFCC Based Speech Alignment and Wavelet Decomposed Residual Conversion using Radial Basis Function” Neurocomputing, Elsevier, DOI (http://dx.doi.org/10.1016/j.neucom.2016.07.048) Ms. Sudha Gupta 1. “Augmenting WAMPAC with machine learning tools for early warning and mitigation of blackout events”, Journal of Humanitarian technologies, Inderscience Publishers UK. April 2016.

* Monographs :Nil

* Chapter(s) in Books :Nil

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- * Editing Books :Nil
- * Books with ISBN numbers with details of publishers :Nil
- * number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) :Nil
- * Citation Index – range / average
- * SNIP :Nil
- * SJR :Nil
- * Impact factor – range / average
- * h-index

Sr. No	Name	Citation	H Index	1-10 index
1	Dr. Jagannath H Nirmal	66	5	3
2	Mrs. Sudha Gupta	130	6	3

15. Details of patents and income generated:

Year 2014-15

Application for Patent submitted to:

Patent Office, Intellectual Property Building, Government of India

Sr. No.	Name of student	Name of Organisation	Title of patent	Patent no. (Provisional)
1	Vishwaprakash Shukla	WINLAR ELECTRIC POWER SYSTEM	Electric Energy and Fossil Fuel Powered Series Hybrid Vehicle Apparatus	3193/MUM/2014

16. Areas of consultancy and income generated:

Year 2013-14

Sr. No.	Name of the project	Name of the Faculty	Name of the funding agency	Total grant received
1	Design / development of Data acquisition and control system for material recovery system (Phase II)	Prof. B. R. Prabhu	BARC	Rs. 98887/-
2	Repair/ maintenance of Thermal diffusivity measurement system (Anter , USA make)		BARC	Rs. 48000/-

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17. Faculty recharging strategies:

- The Somaiya Trust has constituted Somaiya Vidyavihar Awards to recognise and honor conscientious hard work and the extraordinary achievements of Faculty and Staff.
- At the departmental level, faculty is felicitated for overall excellence.
- Faculty is encouraged to pursue higher education either in house or at reputed institutions.
- College level Faculty Development Policy encourages faculty for participation in Conferences, Workshops, Training Programs and Industrial training.
- Faculty is rewarded for publications in peer reviewed journals.
- Faculty is encouraged to apply for funded projects.
- The institute is a remote center for courses by IIT faculty under National Mission on Education through ICT sponsored by MHRD, New Delhi; provides faculty with exposure to these courses.
- Provision of Yearly book allowance to faculty to augment teaching resources.
- Cultural and Sport events are organized for faculty and staff for to hone and promote their skills.

Year	2011-12	2012-13	2013-14	2014-15	2015-16
No. of faculty who attended Orientation courses/workshops/seminars	17	10	31	24	51

18. Student projects

Course	Projects	2011-12	2012-13	2013-14	2014-15	2015-16
B.E. /B.Tech.	Internal (%)	90.4	97.87	92.68	94.74	95.35
	External (%)	9.6	2.13	7.32	5.26	2.32
	Interdepartmental (%)	Nil	Nil	nil	Nil	2.32
M.E. /M.Tech.	Internal (%)	94.44	88.89	76.92	80	80
	External (%)	5.56	11.11	23.08	20	20
	Interdepartmental	Nil	Nil	nil	Nil	Nil

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19. Awards / recognitions received at the national and international level by:**Students**

Year	No. of students who received awards/ recognition at the:	
	National level	International level
2011-12	19	01
2012-13	10	05
2013-14	13	01
2014-15	27	05
2015-16	09	03

20. Seminars/ Conferences/Workshops organized and the source of funding (national /international) with details of outstanding participants, if any.**Faculty data:**

Year	Number of Seminars/ Workshops	Organized by	Funding agency	Date	Target Audience
2011-12	01	ISTE Workshop on Basic Electronics	IIT Bombay and KJSCE remote center	June 28 - July 8, 2011	University Teachers, ME students
2012-13	01	ISTE Workshop on Analog Electronics	IIT Kharagpur and KJSCE remote center	June 4-14, 2013	University Teachers
2014-15	02	ISTE approved STTP on "Speech, Music Processing and Machine Learning: Fundamentals, Applications and Trends"	KJSCE	December 29, 2014 - January 3, 2015	Participants from different college of Maharashtra
		Workshop on "LABVIEW(Core 1 & Core 2)"	National Instruments and KJSCE	December 16- December 20, 2014	Faculty members of KJSCE and KJSIEIT

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Year	Number of Seminars/ Workshops	Organized by	Funding agency	Date	Target Audience
2015-16	02	Virtual Lab training programme	IITB and KJSCE	September 1-15,2015	UG Students all Branches SE, TE ,BE
		Workshop on Lab – View and Data Acquisition.	National Instruments and KJSCE	August 24-28, 2015	Faculties from KJSCE and KJSC poly technique

21. Student profile course-wise:

Applications Received: No relevant data available. Applications are received by DTE and not received or processed by KJSCE. Students are admitted as per DTE allotment.

Year	Name of the course	No. of candidates Admitted	Selected		Pass percentage	
			Male	Female	Male	Female
2011-12	Undergraduate programme	142	98	44	91.30%	100%
	Post graduate programme	18	6	12	66%	100%
2012-13	Undergraduate programme	142	115	27	89.74%	93.10%
	Post graduate programme	18	5	13	80%	92.30%
2013-14	Undergraduate programme	148	114	34	89.11%	100%
	Postgraduate programme	13	8	5	87.5%	80%
	Ph.D	-				
2014-15	Undergraduate programme	154	121	33	81.98%	83.87%
	Postgraduate programme	10	4	6	100%	100%
	Ph.D	3	-	3		
2015-16	Undergraduate programme	152	111	41	80.58%	89.18%
	Postgraduate programme	18	5	13		
	Ph.D	-				

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22. Diversity of Students

Admissions are governed by the rules of DTE.

Year	Name of the course	% of students from the college	% of students from the state	% of students from other states	% of students from other countries	J & K students
2011-12	Undergraduate programme		94.53	4.69	00	0.78
	Postgraduate programme	5.56	83.33	11.11	00	00
2012-13	Undergraduate programme		92.97	4.69	1.56	0.78
	Postgraduate programme		76.92	23.08	00	00
2013-14	Undergraduate programme		93.6	3.2	2.4	0.8
	Postgraduate programme		80	20	00	00
2014-15	Undergraduate programme		87.5	10.83	1.67	00
	Post graduate programme		70	30	00	00
2015-16	Undergraduate programme		83.47	13.22	3.31	00
	Post graduate programme	15.38	84.62	00	00	00

23. How many students have cleared GATE, GRE, CAT/ GMAT and any other competitive examinations?

Year	No. of students clearing the examination					Total
	GATE	GRE	CAT	GMAT/CMAT	TOEFL	
2011-12	2	23	1	-	16	42
2012-13	3	21	4	-	1	29
2013-14	8	19	5	-	16	48
2014-15	3	34	2	-	26	67
2015-16	7	19	12	7	17	62

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24. Student progression

Student progression	Percentage against enrolled				
	2011-12	2012-13	2013-14	2014-15	2015-16
UG to PG	17.88%	12.31%	13.07%	11.26%	4.28%
PG to Ph.D.	-	-	-	-	-
Employed	63.41%	57.24%	46.15%	54.22%	58.57%
<ul style="list-style-type: none"> ● Campus selection 	--	--	--	0.7%	--
<ul style="list-style-type: none"> ● Other than campus recruitment 	17.88%	12.31%	13.07%	11.26%	4.28%
<ul style="list-style-type: none"> ● Higher studies 					
Entrepreneurs	-	-	3.57 %	7.8 %	9 %

Entrepreneurship data:

Year	2011-16	
Name of the start-up	No. of students' associated with each start up	Names of students
Infivention Technologies Pvt. Ltd.	11	Atur Mehta Bhavya Gohil Nishit Bavishi Noel Cordeiro Kevin Zatakia Malay Nagda Dharna Nar Rohit Shetty Vivek Somani Noel Cordeiro Allen Mendes
HoRo	5	Sunil Seth Kaustubh Mahtre Farhan Khan Dvijen Trivedi Shreyansh Kotak
OFFEE	2	Yogesh Tamhane Vishwa Prakash Shukla

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Year	2011-16	
Name of the start-up	No. of students' associated with each start up	Names of students
EcoMapers	6	Dhiraj Ghelot Amit Yadav Soham Desai Vaisakh Haridas Anay Gondhalekar Aatman Doshi
Live Fiesta	3	Kunal Jain Bharat Galeda Narajan Acharya

a) Diversity of staff

Percentage of faculty who are post graduates	
Of the same parent university	73.33%
From other universities within the state	3.33%
From other universities outside the state	6.67%
From other National Institutes	16.67%

b) Number of faculty who were awarded Ph.D. during the assessment period:

Degree awarded	No. of Staff	Name of Staff	Year of awarding Ph. D
Ph. D	2	Prof. J.H.Nirmal	2015 (NIT Surat)
		Dr. Samidha. S. Kulkarni	2016 (V.J.T.I, Mumbai)

c) Present details about infrastructural facilities

1. Central Library

Opac: Web Opac online facility is provided wherein the students can i renew the books at any point of time. They can also reserve book in advance. Also intimation is provided if the book is available.

Availability :

i. IEEE electronics Library

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- ii. Springer Electrical, Electronics, Computer Science and Mechanical Engineering Journals.
- iii. McGraw Hill Access Engineering Library
- iv. Elsevier SCIENCE DIRECT
- v. Six Kindle e-book readers
- vi. ASME Digital Library
- vii. ACM Digital Library
- viii. British Council Library,
- ix. IIT Bombay library

2. Internet facilities for staff and students

Name of the Internet provider: Aircel

- Available band width 155 Mbps
- WiFi availability at 48 locations
- Internet access in labs, classrooms, library and offices of all Departments
- Security arrangements Kaspersky antivirus, Fortinet Firewall for Internet

- a) Total number of U.G class rooms: 6, Tutorial Rooms: 1, U.G. Seminar Hall: 1,
P.G Class room: 1, P.G. Seminar Hall: 1
- b) Class rooms with ICT facility : 7 + 2 Seminar Halls
- c) Students' laboratories – 16
- d) Research Laboratories – 1

Laboratory Summary

Sr. No.	Laboratory Name	Cost of Equipments (excluding software) (Rs.)	Furniture	Total cost (Equipments+Furniture)
1	Circuit Laboratory	1185497	155591	1341088
2	Microprocessor Laboratory	1079122	195714	1274836
3	Digital Design Laboratory	1242214	152474	1394688
4	VLSI Laboratory	754395	145765	900160

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Sr. No.	Laboratory Name	Cost of Equipments (excluding software) (Rs.)	Furniture	Total cost (Equipments+Furniture)
5	Electrical Engg Laboratory	1208947	123224	1332171
6	Signal Processing Laboratory	925689	161185	1086874
7	Department Computer Center	187600	65709	253309
8	Image Processing Laboratory	926769	140352	1067121
9	Control & Instrumentation Laboratory	2035748	152604	2188352
10	Design and Development Laboratory	778246	15616	793862
11	Power Electronics Laboratory	1184078	144364	1328442
12	Project Laboratory	867639	138262	1005901
13	Basic Communication Laboratory	2620507	201806	2822313
14	Robotics Laboratory	935105	192881	1127986
15	ME Computer Centre	718734	126869	845603
16	PCB Laboratory	188151	90183	278334
17	LabVIEW Laboratory	3894854	131872	4026726
	Total Cost (Rs.)	20733295	2334471	23067766

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Major Equipments

Sr. No.	Equipment
1	Logic Analyzer & pattern Generator
2	LTS-01 LAN Trainer Kit
3	PLC TRAINER
4	PID Trainer and Software
5	Measurement of Torque using Dynamometer
6	Dell precision T3610 workstation
7	Spectrum Analyser
8	Satellite Trainer
9	Microwave Bench X Band
10	Variable Frequency Antenna Trainer Kit
11	Microwave Bench (NkystronV 9000)
12	CDMA
13	i-ARM VER 1.1 4axis Robotics handling Training System (Teaching Set)
14	HS-05 Robotics Training System
15	Digital Storage Oscilloscope
16	Wireless sensor network Test-bed Lab
17	Electrohydraulic Trainer

Softwares

SI No	Name of the software	Quantity	Cost in Rs
1.	Timit	5	16864
2.	ADS Simulation	2	441000
3.	Keil	10	234527
4.	Microwind 3.1	20	676000
5.	Proteus	23	464440
6.	Matlab	Campus License	
Total Cost (Rs.)			1832831

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National Instruments (Software & Hardware)

No	Name of the equipment / Instrument	Quantity	Cost in Rs
1.	LabVIEW Software	50 License	519798
2.	Smart Camera Evaluation Kit	1	302738
3.	USB -6008 12 Bit 10 kS/s	10	116790
4.	USB -6009 14 bit 48 KS/s	4	76486
5.	USB-6008/09,Access-4	14	33663
6.	NI-9207-8ch (Current)+ 8ch(Voltage)combo module	1	42250
7.	NI-9923 37 Pin D sub Terminal Block	1	8931
8.	NI-9263 4 channel,16 bit analog O/P Module	1	26793
9.	cDAQ-9174,Compact DAQ Classic	1	47975
10.	Ni-ps-15 power Supply	1	14999
11.	Power Cord 250 V/10 A	1	2175
12.	Replacement Power Supply Mode	1	3091
13.	CDAQ -9174 Compact DAQ Chasis(4slot USB	5	307432
14.	Power Cord ,250V,10A	5	15457
15.	NI 9201 Screw Terminal	5	161445
16.	NI Strain relief & operator protection for 10-Pos screw Term	5	12022
17.	NI myRIO-1900 for university purchase only	5	400750
18.	NI 9401 8 channel 100ns TTL Digital I/O module	5	115072
19.	NI 9924 25 pin D sub terminal Block for screw Terminal	5	41220
20.	NI myRIO-1900 Includes WIFI and MSP Connector Bundle 1. NI myRIO Kits : Starter Kit 2. NI myRIO Kits : Mechatronics Kit 3. NI myRIO Kits : Embedded Kit	5	400000
21.	QUBE Servo with myRIO Connection	1	250000
22.	Stratom CAN Adapter for myRIO	1	10700
23.	CRIO-9076 Integrated controller NI 9219,NI 9972, NI 9244, NI 9969, NI9234, NI 9403, NI 9923	1	688600
Total Cost (Rs.)			35,98,387

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28. Number of students of the department getting financial assistance from College.

Year	Through Projects		Through PUSH		Through Need cum Merit	
	No of students	Amount (Rs)	No of Students	Amount (Rs)	No of Students	Amount (Rs)
2011-12	5 (U.G)	25000	-	-	-	-
2012-13	4 (U.G)	20000	-	-	-	-
2013-14	-	-	2	50000	-	-
2014-15	--		1	30000	3	164661
2015-16	1(P.G) +2(U.G.)	18381	2	30000	3	372600

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

M E Electronics Engineering program started in June 2010. Following assessment was done before establishing the program. There are about 4000+ Electronics Engineering students graduating every year from the University of Mumbai region. Out of which very few students get a chance to pursue master's degree due to insufficient avenues for the same. As per AICTE requirements, it was mandatory for all faculty members without post-graduation, to enhance their qualifications. Hence there was a need to start post graduate course. KJSCE management was willing to grow vertically which was possible due to availability of infrastructure.

The following contributions are made by Masters of Electronics Engineering program

1. Academic Growth
2. Industrial Growth
3. Technological Development
4. R and D, new project development
5. Economic Growth

30. Does the department obtain feedback from

(a) faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

- University Syllabus Revision Committee members
- University Subject Board
- Autonomous Institute
- From Course Information Sheet, suggestions given are considered while making the rubrics for the next academic year.

(b) students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

Faculty Feedback collection process:

- Design of questionnaire for feedback form at institute level to maintain uniformity.
- Feedback forms for all faculty members for their respective courses are generated.
- Feedback committee executes the feedback process during each semester.
- Till 2014 Feedback procedure was conducted manually.
- After that in year 2015 onwards online systems were implemented to collect and analyze feedback data.
- The students rate the performance of the faculty on a scale of 10.

Percentage of students who participated:

- approx. above 75% (online)
- approx. 50% (manual)

Faculty Feedback Analysis process:

- Online feedback report generation for individual faculty.
- Average performance index in the scale of 10 is generated for each course faculty.
- Till January 2014 manually weighted analysis was done by the faculty.
- Currently Analysis is done by using feedback software.

Basis of reward / corrective measures:

- With due consideration to student rating and comments, HOD discuss the feedback with the faculty.

Faculty felicitation policy is designed in September 2015

(c) alumni and employers on the programmes and what is the response of the department to the same?

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Types of Feedback:

Feedback Type	Feedback	Frequency of taking feedback	Initiated by	Use/response of department
Institute level feedback	Recruiters' Feedback	Once in a year	Placement cell	Bridge the gap between industry and academics
Department level Feedbacks	Faculty Feedback	Once in a semester	Head Of the department	<ul style="list-style-type: none"> ● Enhancing the student's experience of learning and teaching. ● For faculty development.
	Course Feedback	Once in a semester	Course in-Charges	<ul style="list-style-type: none"> ● Enhancing the course syllabus. ● Ensuring the effectiveness of course design. ● Enabling a communication with students.
	Exit Batch Feedback	Once in 4 years (Final year Students)	Head Of the department	<ul style="list-style-type: none"> ● Improve the PO and PEO achievement.
	Facility Feedback	Once in a year	Head Of the department	<ul style="list-style-type: none"> ● Improving the infrastructure/facilities required by the students
	Alumni Feedback	Once in 4 years (Final year Students)	Departmental alumni cell	To collect latest alumni information and achievements
	Final Year Project feedback	Once in a year (from external Examiner)	Head of the department	Determine the quality of final year projects from external project examiners

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31. List the distinguished alumni of the department (maximum 10)

Sr. No.	Name	Year of Passing	Addition Qualifications	Current Status	Email id
1.	Mr. Hemant Shidore	1989	Nil	Entrepreneur, Data Center Solutions & UPS	hemant@tekexcel.com
2.	Mr Amit Rao	1989	M.Tech from IIT Bombay	Software Architect , MPHASIS	amit.rao@mphasis.com
3.	Dr Mukesh Khare	1991	MTech From IIT Bombay PhD from Yale University	Project Manager at IBM research	kmukesh@us.ibm.com
4.	Rahul Deshpande	1996	MMS in 1999	Associate Manager in Accenture Services Pvt Ltd	rahuldp2006@yahoo.com
5.	Dr. Parijat Oak	1996	MTech from IIT Bombay PhD	Associate director at PANGEA3	parijat.oak@pangea3.com
6.	Kedar Gangal	1997	MS in 2000	Software Engineer at TheNextRound, Inc	Kedar.gangal@gmail.com
7.	Gaurang P Mehta	2000	MS in 2002	Software Programmer/Analyst in USC Information Sciences Institute	mehtagaurang@gmail.com
8.	Shirodkar Darshan Arvind	2006	M Tech in 2008 from IISc Bangalore	Senior software engineer at Pubmatic.	darshanshirodka@gmail.com

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Sr. No.	Name	Year of Passing	Addition Qualifications	Current Status	Email id
9.	Sumedh Bhadkamkar	1987	Nil	Enterprenur, Nippon technologies	sumedh@nipponinstruments.com
10.	Aditya Gokhale	2002	MS in 2004	Assistant manager-Embedded software/FPGA development at Transasia Bio-Medicals Ltd	gokhlae@gmail.com

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

Student data

Sr. No	Type of student enrichment programme	Academic Year				
		2011-12	2012-13	2013-14	2014-15	2015-16
1	Special Lectures	3	10	8	5	3
2	Workshops	2	1	3	5	1

33. List the teaching methods adopted by the faculty for different programmes.

To improve quality of teaching, the following methods are adopted:

1. Use of visual aids in lecture delivery is increased substantially
2. Public address system is also made available wherever necessary.
3. Series of NPTEL Video lectures and notes in pdf are available for the ready reference.
4. Experimental writeups and assignments if any are uploaded on intranet.
5. Regular faculty members are given laptops.
6. Teaching over and above syllabus by organizing Industrial Visits and

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expert lectures.

7. Innovative IA components added.
8. Innovative mini projects as well as final year projects.
9. Learning Management System (LMS) is a new concept and some faculties have used this application software tool during the teaching-learning process. Faculty uploaded lecture planning, lecture notes, tests, online quizzes, ppts etc. used it for CO analysis purposes.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

In outcome based education, Course Outcomes (CO) for every course is formulated based on the Programme Outcome (PO) and other needs. Attainment level of PO's is measured from attainment of CO's. Result of attainment of each course outcome for the course can be further reviewed and analyzed. Action plan to improve any weakness can be identified and implemented in the following semester.

Processes for direct and indirect attainment of the Program Outcomes

a. Direct attainment

Direct attainment level of a PO is determined based on the courses and projects.

● Assessment of Program Outcomes through courses:

For each course some course outcomes are defined. These outcomes are mapped to related program outcome. Hence every course has some program outcomes mapping to it. Through assessment of course outcomes we get level of attainment of mapping program outcomes in the range of 1 to 3.

e.g. Batch wise attainment of program outcomes is considered. For year 14-15 passed out batch, data of semester V and semester VI from the academic year 13-14 is considered as the batch was in third year during this period. Similarly semester VII and semester VIII data is of academic year 14-15 is considered as this batch was in final year during this period.

● Assessment of Program Outcomes through Projects:

Projects CO's are mapped to program outcomes. Various rubrics are used for assessment of project in semester VII and semester VIII and an attainment is obtained in the range of 1 to 3 for mapping program outcomes.

b. Indirect attainment

Indirect attainment level of a PO is determined based on the student exit surveys, co-curricular activities, extracurricular activities etc.

● Assessment of PO through extracurricular activities and Co-Curricular activities:

As per the activity, attainment target is set i.e. expected number of student participation in the activity. Based on actual participation data, the attainment levels are considered.

● Assessment of PO through Program Exit Survey:

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In an exit survey, some questionnaire mapping to program outcomes is prepared and final year student's feedback is taken through Google form. This feedback is analyzed to get attainment in the range of 1 to 3 which is mapped with program outcomes.

- **Assessment of PO through Employer Survey:**

In employer survey a standard format asking for placed student's feedback is shared with the employers. The questionnaire is mapped with program outcomes and analyzed to get attainment in the range of 1 to 3 which is to mapped program outcomes.

- Final attainment is calculated by taking $0.8 \times \text{direct attainment}$ and $0.2 \times \text{Indirect attainment}$. If attainment level of any PO is below 1 then that is considered as not attained. Then we look in to the direct and indirect contributors of CO for that PO and the weak contributor is improved by applying corrective measures. e.g. If CO is not attained or very low for laboratory, for next year we try to improve list of experiments by including more experiments. Sometimes if CO is not attained through the used assessment tools then we try some more tools of assessment. For some advanced topics we arrange expert talks.

35. Highlight the participation of students and faculty in extension activities.

Student data

Student Activities 13-14

Activity	BE ETRX	TE ETRX	SE ETRX	FE ETRX	TOTAL
Bloombox Activities	01	11	08		20
Extra-Curricular Activities	5	32	22		59
Co-curricular Activities	78	102	08		188

Student Activities 14-15:

Activity	BE ETRX	TE ETRX	SE ETRX	FY ETRX	TOTAL
Bloombox Activities	01	11	08		20
Extra-Curricular Activities	14	29	53	01	97
Alumni Cell : Formed in 2014		03			03
Internship		29	22		51
Co-curricular Activities	115	162	28		305

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Student Activities 15-16:

Activity	M. Tech	BE ETRX	TE ETRX	SY ETRX	FY ETRX	TOTAL
Extra-Curricular Activities		19	41	23	06	89
Alumini Cell		05		04		09
Internship	17		10	26		53
Co-curricular Activities		34	04	-		38

● **Workshops/events:**

Year	No of workshops organized by students (EESA/IEEE/ISTE)
2015-16	4
2014-15	8
2013-14	8
2012-13	4
2011-12	7

● **Multidisciplinary mega projects (assessment at international events)**

Students of the department are working on mega projects, which are multidisciplinary ones. Since their inception these projects are being assessed at international events and students are consistently improving on the quality of their output. Also all these projects being sponsored ones, speak of the presentation and communication skills of the students.

Orion racing

The Orion racing team has been participating in an international event 'Formula Student Germany' for last 11 years and is consistently improving their performance. In 2012, the team secured 8th rank in the event for innovative use of electronics.

SAE (FORMULA STUDENT GERMANY)

Year	2011-12	2012-13	2013-14	2014-15	2015-16
No. of Students	-	3	4	2	2
Names of students		Chintan Vasa Ameya Bhat Karan Thakker	Akash Joshi Yash Joshi Kushal Choksi Arnav Kavadia	Ankur Vaidya Harsh Gogri	Dhaval Desai Parth Nayak

Robocon

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The Robocon team participated in an international competition organized by Asia Pacific Broadcasting Union, cosponsored by Doordarshan in India at Pune on March 1, 2 & 3, 2012. This was their second year of participation and they improved their all India rank from 28 to 10. They stood first in Mumbai and outscored many leading institutes of the country.

TEAM KJSCE ROBOCON

Year	2011-12	2012-13	2013-14	2014-15	2015-16
No. of Students	1	5	7	7	1
Names of students	Yash Sukhatme	Jigar Passad Karthik Menon Yogesh Tamhane Roshan Cherian Jahnvi Mange	Rashmi Vaidya Priyank Sanghavi Sunil Sheth Vishwa Prakash Shukla Devan Nair Ronak Dedhia Nimish Gujrati	Kaustubh Mhatre Farhan Khan Sachin Mane Krishna Modi Jinal Chothani Aniket Nimkar Sridar Matkar	Pratik Gheewalla

Faculty

Interaction with outside world

Year	2011-12	2012-13	2013-14	2014-15	2015-16
No. of faculty who have : given guest lectures outside the Institute	7	11	1	6	4
reviewed transaction papers	-	-		2	4
Session chair of International Conference outside the Institute	-	1	1	1	1
PC Member of International Conference outside the Institute	-	-	-	-	1

Workshops attended

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Workshops attended	July 2011- June 2012	July 2012- June 2013	July 2013- June 2014	July 2014- June 2015	July 2015- June 2016
Total count	17	10	31	24	51

36. Give details of “beyond syllabus scholarly activities” of the department.

- Seminars/Workshops Organized**

Workshops Organized for faculty and students	July 2011- June 2012	July 2012- June 2013	July 2013- June 2014	July 2014- June 2015	July 2015- June 2016
Total count	5	17	11	18	15

- Gap identified in the syllabus and measures taken**

2013-14

Sr No	Gap identified	Action Taken
1	DCD: SE: Enough practice for HDL code writing and exposure to FPGA/ CPLD program was missing.	A course on VHDL was conducted for interested students
2	BEC: SE: Less exposure to modern tools	Started lab experiments on Spices
3	EIM: SE: Better understanding on constructional details of measuring instruments was needed	Industrial visit was arranged-MECO
4	AIS: TE: Usage of modern tools required	VI using LabVIEW was taught in (nutshell) class room and experiments were set for its actual usage.
5	DSPP: TE: Lack of real time application	Students are asked to do mini projects for better understanding
6	Exposure to students for practical designing of circuits is required.	Mini-project or extra experiment were developed
7	R & A: BE: The topic on PLC should be included in Industrial Automation. Some part on Robotics joint control should be added in the curriculum	Students were asked to present application based seminars

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Sr No	Gap identified	Action Taken
8	MSD: BE: Curriculum does not cover advancements in processor architecture	Students were given advanced features for study and presentation
9	AVLSI: BE: Lack of exposure on equipments of technology development.	Industrial visit was arranged. (IIT-FABlab)
10	EPD: BE: Lack of idea of finished product.	3D printing workshop
11	Modern tools usage with facility of data acquisition from real circuits and simulation needs to be incorporated	workshop on basics of LabVIEW was conducted
	Modern tools usage with facility of data acquisition from real circuits and simulation needs to be incorporated	PSOC workshop was arranged

2014-15

Sr. no	Gap identified	Action Taken
1	Circuit theory:SE: More practice on problem solving is required	Tutorials are added in the syllabus of 201516
2	Digital Circuit Design :SE:less coverage of HDL	Introduced laboratory course in HDL
3	OOPM:SE:Tutorials were missing	Added tutorials in new syllabus
4	AMIII: SE: Relevance of Laplace transform and Fourier series in Electronics engineering applications.	Tutorials linking mathematical theory with electrical networks and control systems
5	DCD: SE: Enough practice for HDL code writing and exposure to FPGA/ CPLD program was missing.	A course on VHDL was conducted for interested students
6	BEC:SE: Less exposure to modern tools	Lab experiments were performed on Spice
7	Basic VLSI Design :TE: Fabrication lab is not available	Visit to IITFABlab
8	EMAG:TE:Tutorial were missing	Added tutorial in curriculum
9	Added tutorial in curriculum	Included IA, study of IEEE paper
10	CCN:BE:Real time application is required to understand the concept of networking	A visit to Somaiya Vidyavihar data center is included in the

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Sr. no	Gap identified	Action Taken
		practical's along with presentation
11	Need for more practice on VHDL programming was felt by students	A course on VHDL was conducted for interested students
12	Modern tools usage with facility of data acquisition from real circuits and simulation needs to be incorporated	Two day Workshop on "LabVIEW"
13	More practice in programming is required	Summer Industrial training on "Embedded System on Chip"

2015-16

Sr. No.	Gap identified	Action Taken
1	Circuit Theory: More practice on problem solving is required	Tutorial are added in the syllabus of 2015-16
2	Computer Communication Network (CCN): Real time application is required to understand the concept of networking	A visit to KJSCE data center is included in the practical's along with presentation
3	Electromagnetic Engineering: Tutorial were missing	Planned to add tutorial in curriculum
4	Basic VLSI Design (VI SEM): Syllabus is very vast didn't get time to cover clocking & interconnect	In the new Syllabus, this module has been removed and will be added in the final year autonomy syllabus
5	Digital Circuit Design: less coverage of HDL	Introduced laboratory course in HDL
7	MCA: Case studies for understanding of applications were not covered well	Including IA study of IEEE paper

37. **State whether the programme/ department is accredited/ graded by other agencies. Give details.**

Dates of Accreditation visit	Status of Accreditation
10,11 and 12 April 2009	Accreditation granted for 3 years
September 21,22,23, 2013	Accreditation granted for 2 years

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38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department:

Strengths

- Good Infrastructure: Laboratories, Computing Facility.
- Faculty Retention: Updating the knowledge
- Students—Involved in Mega projects like Orion Racing, Robocon, RiiDL
- Good placement
- PhD (Tech) since Jan 2014

Weakness

- Research and Consultancy
- Industry Interaction
- Cadre ratio
- Faculty Qualification

Opportunities

- Internship
ARM and Cypress
- Audit Course
- Exposure to Projects
Proposals to recognized funding agencies
Projects for societal needs
Interdisciplinary Projects
- Placements
- Career advancement

Challenges

- Core Industry Placement
- Student intake, number and quality

39. Future plans of the department.

- Provide all possible support to promote research and development activities.
- Adapt to upcoming technologies to solve real life problems in society.

Evaluative Report of Department of Electronics and Telecommunication Engineering

1. Name of the Department & its year of establishment

Electronics and Telecommunication Engineering

Year of Establishment: 2000

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)

Sr. No	Name of Program	Commencement Year	Intake
1	B. E., Electronics and Telecommunication Engineering	1996	60
2	B. E., Electronics and Telecommunication Engineering	2000	120
3	M. E., Electronics and Telecommunication Engineering	2010	18
4	B. Tech., Electronics and Telecommunication Engineering	2014	120
5	M. Tech., Electronics and Telecommunication Engineering	2014	18

3. Interdisciplinary courses and departments involved:

Sr. No.	Name of Course	Semester	Year	Department Involved
UG		Nil		
Inter Disciplinary course (IDC): Will be offered from Academic Year 2016-17 for UG, semester VI.				
PG		Nil		
Inter Disciplinary course (IDC): Will be offered from Academic Year 2016-17 for PG, semester II to be shared with Electronics Engineering department.				

4. Annual/ semester/choice based credit system

- Semester- Credit based system.
- Upto 2011-15 batch, Semester- Marks Based System.
- From 2012-16 batch, Semester- Credit based System.

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5. Participation of the department in the courses offered by other departments

The department extends support in the courses offered by other departments as per requirement.

Participation of faculty in courses for PG Programme:

Course Code	Course Name	Academic Year	Offered by department	Faculty
-	Discrete Time Signal Processing	2011-12	ETRX ME I	Ms.S.S.Kulkarni
-	Power Electronics	2011-12	ETRX ME II	Dr.R.G. Karandikar
PEEE2041	Advanced Solar Energy	2015-16	Mechanical Engineering M.Tech., (Energy)	Mr. M.B.Zalte
IPEEC101	Foundation of Energy Engineering for Mechanical Systems.	2016-17	Mechanical Engineering M.Tech., (Energy)	Ms. R.A.Jadhav

The departmental faculty participate in Audit courses attended by students of all departments at Undergraduate level and Postgraduate level.

Audit Course Code	Course Name	Semester	Faculty	Academic year
UETA 301	Solar Photo Voltaic and EV system	III	Mr. M.B.Zalte	2015-16
UETA 302	Numerical Methods	III	Mr. A.D.Khivsara	2015-16
UETA 401	Entrepreneurship	IV	Ms. H.N. Mundra	2015-16
UETA 301	Entrepreneurship	III	Ms. H.N. Mundra	2016-17
UETA 302	Numerical Techniques	III	Mr. A. D. Khivsara	2016-17
UETA 501	Biomedical Instrumentation	V	Ms. S.S.Kulkarni	2016-17
UETA 502	Signal Processing with Matlab	V	Mr. V.N.Chedda	2016-17
1PETA101	Research Methodology	M.Tech SEM I	Dr.R.G. Karandikar	2016-17

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6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

	Sanctioned	Filled
Professors	4+1(U.G + P.G)	1
Associate Professors	8+2 (U.G + P.G)	8
Assistant Professors	16	20

7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

(For year 2015-16)

Sr. No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of P.G./Ph.D. Students guided for the last 4 years
1	Dr. R. G. Karandikar	Ph.D.	Professor	Electrical	26	8/5 (ongoing)
2	Ms. R A Deshpande	M.E.	Associate Professor	Electronics	27	8/-
3	Ms.J.M.Kundargi	M.E. (Pursuing Ph.D.)	Associate Professor	Electronics	26	7/-
4	Ms.R.A.Jadhav	M.E. (Pursuing Ph.D.)	Associate Professor	Control System	27	4/-
5	Ms.S.S.Mahajan	M.E.	Associate Professor	Digital Techniques and Instrumentation	22	7/-
6	Mr.M.B.Zalte	M.E. (Pursuing Ph.D.)	Associate Professor	Electronics and Telecommunication	14	6/-
7	Ms.B.A.Singh	M.E. (Pursuing Ph.D.)	Associate Professor	Electronics and Telecommunication	22	8/-

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Sr. No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of P.G./Ph. D. Students guided for the last 4 years
8	Ms.S.S.Kulkarni	M.E.	Associate Professor	Electronics	25	5/-
9	Ms.J.M.Varavadekar	M.E.	Associate Professor	Electronics	17	9/-
10	Dr. A. K. Naik	Ph.D.	Assistant Professor	Electronics	10	8/1(Ongoing)
11	Mr.N.S.Nagori	M.E.	Assistant Professor	Electronics and Telecommunication	15	1/-
12	Mr.D.P.Kulkarni	M.E.	Assistant Professor	Electronics and Telecommunication	14	1/-
13	Ms.S.C. Raut	M.E.	Assistant Professor	Electronics and Telecommunication	15	--
14	Ms. A.S.Kholapure	M.E. (Pursuing Ph.D.)	Assistant Professor	Electronics and Telecommunication	14	--
15	Ms.V. J. Satam	M.E. (Pursuing Ph.D.)	Assistant Professor	Electronics and Telecommunication	11	--
16	Ms.H.N.Mundra	M.E.	Assistant Professor	Electronics and Telecommunication	12	--
17	Ms.S.P.Deshmane	M.E.	Assistant Professor	Electronics and Telecommunication	11	--
18	Ms. R.P.Patil	M.E. (Pursuing Ph.D.)	Assistant Professor	Electronics	9	--
19	Mr.S.R.Sainkar	M.Tech.	Assistant Professor	Electronics	12	--
20	Mr.V. N. Chheda	M.Tech.	Assistant Professor	Digital Signal Processing	5	--

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Sr. No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of P.G./Ph. D. Students guided for the last 4 years
21	Ms.S.N.Vatkar	M.E.	Assistant Professor	VLSI	9	--
22	Ms. B. A. Bose	M.E.	Assistant Professor	Mobile Communication and Network Technology	7	--
23	Mr.K.V.Ajetrao	M.E.	Assistant Professor	Electronics and Telecommunication	12	--
24	Mr. A. D. Khivsara	M.Tech.	Assistant Professor	Measurement and Instrumentation	4.5	--
25	Mr. A. S. Gawade	M.E.	Assistant Professor	Electronics and Telecommunication	6	--
26	Ms. S. S. Salve	M.E.	Assistant Professor	Electronics and Telecommunication (Temporary Faculty)	4	--
27	Mr. L. Jain	M.E.	Assistant Professor	Electronics and Telecommunication (Temporary Faculty)	4 months	--
28	Mr. K. R. Patel	M.E.	Assistant Professor	Electronics and Telecommunication (Temporary Faculty)	6 months	--
29	Ms. C. J. Ingale	M.E.	Assistant Professor	Electronics and Telecommunication (Temporary Faculty)	4.5	--

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8. Percentage of classes taken by temporary faculty – programme-wise information

Name of Programme	Percentage of classes taken by temporary faculty				
	2011-12	2012-13	2013-14	2014-15	2015-16
B.E./B.Tech., Electronics and Telecommunication Engineering (UG)	7.65	4.24	0	4.83	13.81
M.E./M.Tech., Electronics and Telecommunication Engineering (PG)	-	-	-	4.0	-

9. Programme-wise Student Teacher Ratio

Name of Programme	Programme-wise Student Teacher Ratio				
	2011-12	2012-13	2013-14	2014-15	2015-16
B.E./B.Tech., Electronics and Telecommunication Engineering (UG)	17.71	16.67	17.06	18.35	17.83
M.E./M.Tech., Electronics and Telecommunication Engineering (PG)	10.06	9.26	7.16	8.70	7.38

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Support staff	Sanctioned 2015-16	Filled 2015-16
Laboratory Assistant	10	10
Laboratory Attendant	03	03
Peon	02	02

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise : Nil

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12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received

Name of Funding Agency	Project details
Mumbai University	Real Time Automatic Biometric Recognition using DSP. Amount Sanctioned: Rs. 25,000/- Academic Year: 2009-2010 Principal Investigator: Dr. Ameya K. Naik
Mumbai University	Examiner Authentication and Paperless Data Compilation Using Smart Card and Biometrics Amount Sanctioned: Rs. 20,000/- Academic Year: 2012-2013 Principal Investigator: Mr. Nitin S. Nagori Co-investigator: Dr. Ameya K. Naik

13. Research facility / centre with

- state recognition
 - PG recognized center by Mumbai University since 2010
- national recognition : Nil
- international recognition : Nil

14. Publications:

* Number of papers published in peer reviewed journals (national / international)

Year	Paper details
2012-13	Ameya Kishor Naik, Raghunath Sambhaji Holambe , “Design of Low-complexity High performance Wavelet Filters for Image Analysis”, IEEE Transactions on Image Processing., May 2013, 22(5), pp. 1848-1858.
2014-15	Ameya Kishor Naik, Raghunath Sambhaji Holambe , ”New Approach to the Design of Low Complexity 9/7 Tap Wavelet Filters With Maximum Vanishing Moments”, IEEE Transactions on Image processing 23(12),pp 5722-5732,Dec 2014.
2015-16	Ameya Kishor Naik, Raghunath Sambhaji Holambe , “Joint Encryption and Compression scheme for a Multimodal Telebiometric System”, Science Direct, Neurocomputing, Volume 191, May 2016,pg.69-81.

Name of Faculty	Citation	h-index
Dr. A.K. Naik	31	3

* Monographs : Nil

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- * Chapter(s) in Books :Nil
- * Editing Books :Nil
- * Books with ISBN numbers with details of publishers :Nil
- * number listed in International Database (For *e.g.* Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) :Nil
- * Citation Index – range / average
- * SNIP :Nil
- * SJR :Nil
- * Impact factor – range / average
- * h-index

15. **Details of patents and income generated** : Nil

16. **Areas of consultancy and income generated** :Nil

17. **Faculty recharging strategies**

- The Somaiya Trust has constituted Somaiya Vidyavihar Awards to recognize and honor conscientious hard work and the extra ordinary achievements of Faculty and Staff.
- At the departmental level, faculty are felicitated for overall excellence.
- Faculty are encouraged to pursue higher education either in house or at reputed institutions.
- College level Faculty Development Policy encourages faculty for participation in Conferences, Workshops, Training Programs and Industrial training.
- Faculty are rewarded for publications in peer reviewed journals.
- Faculty are encouraged to apply for funded projects.
- KJSCE is a remote center for courses by IIT faculty under National Mission on Education through ICT sponsored by MHRD , New Delhi; provides faculty with exposure to these courses.
- Provision of Yearly book allowance to faculty to augment teaching resources.
- Cultural and Sport events are organized for faculty and staff for to hone and promote their skills.

Year	2011-12	2012-13	2013-14	2014-15	2015-16
No. of faculty who attended Orientation courses/ workshops/ seminars	7	54	50	19	39

18. **Student projects**

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B.E./B.Tech, U.G.	2011-12	2012-13	2013-14	2014-15	2015-16
Internal(%)	97.37	97.56	92.5	95.24	97.37
External(%)	2.63	2.44	7.5	4.76	2.63
Inter-departmental(%)	0	0	0	0	0
M.E./M.Tech., P.G.					
Internal(%)	100	72.22	88.88	83.33	94.44
External(%)	0	27.77	11.11	16.66	5.55
Inter-departmental(%)	0	0	0	0	0

19. Awards / recognitions received at the national and international level by

- Faculty
 - Dr. A.K. Naik: Biography included in Marquis Who's Who in the World, 27th Edition.
- Doctoral / post doctoral fellows : Nil
- Students

Year	National/ International	Date	Name of the students and year of study	Title/The me of event/ Name of Competition	Organization	Awards
2011-12	National Level	26 th February 2012	Hardik Vasa, Vinish Chirmani S.E. (EXTC)	Paper titled "Autonomous Intelligent Multi-Terrain Copter" at Geomatrix '2012 "An International Conference"	IIT Bombay	Best Idea

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Year	National/ International	Date	Name of the students and year of study	Title/The me of event/ Name of Competition	Organization	Awards
				Geopsatial Technologies and Applications”		
		14 th – 15 th February 2012	Harshal Talathi, Jinal Patel, Kakoli Laha (B.E. EXTC)	Paper titled ‘Identification of Tuberculosis Bacilli Using Image Processing’ National Conference (NCNTE12)	Fr. C. Rodrigues Institute of Technology, Vashi, Mumbai	3 rd Prize
	International Level	31 st July – 5 th August, 2012	Nimit Desai (T. E. EXTC)	Orion 2011, Team Member, Formula Car	Formula Student Germany Event, Hockenheim, Germany	Responsibility as Electronics Head
2012-13	-	-	-	-	-	-
2013-14	-	-	-	-	-	-
2014-15	National Level	16 th – 20 st November, 2014	Hitarth Patel, M. Tech., EXTC	Project Samay-Sancharak: Cell phone and Wearable Wrist Watch for	Department of Science and (DST), AICTE, CII (Confederation of Indian Industry)	India Innovation Initiative-13 award 2014

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Year	National/International	Date	Name of the students and year of study	Title/The me of event/ Name of Competition	Organization	Awards
				Blind	and I4C at Knowledge Park, Greater Noida.	
		3rd Jan 2015	Aditya Pawar (S.E. E.X.T.C)	E-DoorMat	Thinkerner -Techfest IIT-B	2 nd prize
2015-16	National Level	2016	Siddesh Pawar	Wreckage	Technozion 16, NIT-Warangal	1 st position
		25-28 February, 2016	Siddesh Pawar	Full Throttle Grand Prix	APOGEE2 016, BITS Pilani	1 st position
		1 st – 4 th September, 2016	Siddesh Pawar	Burnout, Robotics	Techniche 2016, IIT Guwahati	2 nd position
		18 th – 20 th March, 2016	Siddesh Pawar	Powerdrift	Cognizance 2016, IIT Roorkee	3 rd position

20. Seminars/ Conferences/Workshops organized and the source of funding (national/international) with details of outstanding participants, if any.

Year	Activity- Title	Duration	Source of Funding	Eminent Resource Person
2011-12	Teachers Training Program —Solar Photo Voltaic	December 12- 22, 2011	MHRD, Govt. of India	Faculty-IITB
	Workshop-Writing Effective Conference Papers	February 12-19, 2012	MHRD, Govt. of India	Faculty-IITB

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Year	Activity- Title	Duration	Source of Funding	Eminent Resource Person
2012-13	Workshop- Introduction To Research Methodology	June 25 – July 4, 2012	MHRD, Govt. of India	Faculty-IITB
	STTP- Tools and Techniques for Effective Technical Writing	May 13-17, 2013	Self - Financed	Faculty- IITB, SNDT, VJTI
	STTP- Advances in Antenna and RFIC/ MMIC Design	June 24- 28, 2013	Self - Financed	Faculty- IITB, IIT Kharagpur, SAMEER, Mumbai
	Workshop: Solar Photovoltaic System	17th December 2012	MITCON Ltd., Pune	KJSCE –Faculty of Mechanical and EXTC department

21. Student profile course-wise:

Applications are received by DTE and not received or processed by KJSCE.

Students are admitted as per DTE allotment.

Name of the Course	Applications Received *	Selected			Pass percentage	
		Year	Male	Female	Male	Female
B.E./B. Tech., U.G.						
Admitted in 2008-09, Passed in 2011-12	--	First Year	92	29	91.48	90.56
		Direct Second Year	15	5		
		Total	107	34		
Admitted in 2009-10, Passed in 2012-13	--	First Year	84	37	85	95.35
		Direct Second Year	15	6		
		Total	99	43		
Admitted in 2010-11, Passed in 2013-14	--	First Year	101	20	89.25	92
		Direct Second Year	19	6		
		Total	120	26		
Admitted in 2011-12, Passed in 2014-15	--	First Year	89	36	92.2	94.9
		Direct Second Year	12	13		
		Total	101	49		

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Name of the Course	Applications Received *	Selected			Pass percentage	
		Year	Male	Female	Male	Female
Admitted in 2012-13, Passed in 2015-16	--	First Year	89	36	92.15	89.58
		Direct Second Year	12	13		
		Total	101	49		
M.E./M. Tech., P.G.						
Admitted in 2010-11, Passed in 2011-12	--	First Year	2	14	100	100
Admitted in 2011-12, Passed in 2012-13	--	First Year	6	12	83.33	100
Admitted in 2012-13, Passed in 2013-14	--	First Year	8	10	87.5	100
Admitted in 2013-14, Passed in 2014-15	--	First Year	9	9	100	100

- Admissions are governed by DTE centrally, hence institute level data not available.

22. Diversity of Students

Admissions are governed by DTE rules. More than 99% students are from State. Some seats are reserved for J & K students as per DTE rules.

Name of the Course	Academic Year	% of students from the college	% of students from the state	% of students from other States	% of students from other countries	% of students from J & K
B.E./B. Tech., U.G., EXTC	2011 – 2012	00	89.77	4.72	4.72	0.8
	2012 – 2013	00	95.20	2.40	2.40	00

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Name of the Course	Academic Year	% of students from the college	% of students from the state	% of students from other States	% of students from other countries	% of students from J & K
	2013 – 2014	00	92.80	3.20	3.20	0.8
	2014 – 2015	00	91.20	6.40	2.40	00
	2015 – 2016	00	76.80	19.20	4.00	00
M.E./M.Tech., P.G., EXTC	2011 – 2013	00	77.78	22.22	00	00
	2012 – 2014	00	100	00	00	00
	2013 – 2015	5.55	77.78	16.67	00	00
	2014 – 2016	5.55	83.34	11.11	00	00
	2015 – 2017	00	94.44	5.56	00	00

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

Exam	No. of Students cleared				
	2011-12	2012-13	2013-14	2014-15	2015-16
GATE	38	23	10	3	1
GRE	10	25	26	31	27
CAT	19	15	8	7	5
CMAT	-	-	1	15	-
GMAT	-	-	1	1	1
XAT	-	-	1	1	1
CET	-	-	-	2	-

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24. Student progression

Student Progression	Percentage against enrolled				
	2011-12	2012-13	2013-14	2014-15	2015-16
UG to PG	17.73	13.99	18.49	9.1	2
PG to M.Phil.	N.A.	N.A.	N.A.	N.A.	N.A.
PG to Ph.D.	--	--	--	--	--
Ph.D. to Post-Doctoral	--	--	--	--	--
Employed					
• Campus selection	82.98	60.84	60.96	67.53	64.67
• Other than campus recruitment	5.67	3.5	7.54	0	0
Entrepreneurs	--	--	--	--	--

25. Diversity of staff

Percentage of faculty who are post graduates(For year 2015-2016)	
Of the same parent university	63.79%
From other universities within the state	22.41%
From other universities outside the state	3.45%
From other National Institutes	10.35%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period.

Degree awarded	No. of Staff	Name of Staff	Year of awarding Ph. D
Ph. D.	01	Dr. A.K. Naik	2015 (SGGSIE, S.R.T.M. University)

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27. Present details about infrastructural facilities

a) Central Library

Opac: Web Opac online facility is provided wherein the students can renew the books at any point of time. They can also reserve book in advance. Also intimation is provided if the book is available.

Availability :

- i. IEEE electronics Library
- ii. Springer Electrical, Electronics, Computer Science and Mechanical Engineering Journals.
- iii. McGraw Hill Access Engineering Library
- iv. Elsevier SCIENCE DIRECT
- v. Six Kindle e-book readers
- vi. ASME Digital Library
- vii. ACM Digital Library
- viii. British Council Library,
- ix. IIT Bombay library

Library space and ambience, timings and usage, availability of a qualified librarian and other staff, library automation, online access, networking, etc.

b) Internet facilities for staff and students

Name of the Internet provider: Aircel Services

- Available bandwidth 155 Mbps
 - WiFi availability at 48 locations
 - Internet access in laboratories, classrooms, library and offices of all Departments
 - Security arrangements: Security arrangements: Kaspersky antivirus licenses, Fortinet Firewall for Internet
- c) Total number of class rooms
 - U.G. : 6 + 1 Tutorial room +1 Seminar hall
 - P.G. : 1+1 Seminar hall
 - d) Class rooms with ICT facility
 - U.G. : 6+ 1 Tutorial room +1 Seminar hall
 - P.G. : 1+1 Seminar hall
 - e) Students' laboratories

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- U.G. : 14, P.G. : 1

There are total 14 laboratories which are used for UG and PG programs.

Following are some details of the laboratories.

f) Research laboratories : Nil

Departmental laboratory details: (As on June 2016)

S r. N o.	Laboratory Name	Cost of Equipmen ts (excluding software) (Rs.)	Furnitu re (Rs.)	Total cost
				(Equipments+soft ware+Furniture) (Rs.)
1	Antenna Laboratory	11,15,532	1,31,496	23,21,238
2	Optical Fiber Communication Laboratory	17,07,789	1,43,919	18,57,972
3	Integrated Circuit Laboratory	11,59,781	1,63,487	13,23,268
4	Communication Engineering Laboratory	35,89,139	1,26,002	37,66,997
5	Wireless Communication Laboratory	4,38,530	86,982	5,25,512
6	Software Simulation Laboratory	12,49,370	1,53,930	21,34,445
7	Project Laboratory	11,71,846	1,33,329	21,02,426
8	PCB Laboratory	1,03,581	9,284	1,12,865
9	Microwave Laboratory	24,56,787	1,02,236	25,59,023
10	Electrical Engineering Laboratory	6,76,429	1,24,214	10,38,143
11	Instrumentation & Control System Laboratory	12,15,393	1,19,808	15,69,622
12	Digital Signal Processing Laboratory	16,73,207	1,66,507	24,78,402
13	Microprocessor Laboratory	16,07,114	1,53,177	19,61,329
14	Circuits Laboratory	8,15,531	1,20,960	10,27,121
15	PG Computing center Laboratory	2,68,000	50,175	3,18,175
16	Administration	22,03,657	9,31,134	42,66,077
Total Cost (Rs.)		2,14,51,686	27,16,640	2,93,62,615

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28. Number of students of the department getting financial assistance from College.

The institute level initiative by faculty, PUSH(People United for Student Help) has extended financial support to the needy students for tuition and hostel fees.

Year	For UG Projects		For PG Projects and Paper publication		Through PUSH for tuition and hostel fees	
	No. of students	Amount (Rs.)	No. of Students	Amount (Rs.)	No. of Students	Amount (Rs.)
2011-12	9	13,982		-	-	-
2012-13	7	3,529		-	-	-
2013-14	4	5,000	-	-	2	55,000
2014-15	-	-	11	24,400	5	2,27,500
2015-16	4	5,000	3	2,500	3	1,50,000

29. Was any need based assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

M E Electronics and Telecommunication Engineering program started in June 2010. Following assessment was done before establishing the program.

There are about 4000+ Electronics and telecommunication Engineering students graduating every year from the University of Mumbai region. Out of which very few students get a chance to pursue master's degree due to insufficient avenues for the same. As per AICTE requirements, it was mandatory for all faculty members without post-graduation, to enhance their qualifications. Hence there was a need to start post graduate course. KJSCE management was willing to grow vertically which was possible due to availability of infrastructure.

The following contributions are made by Masters of Electronics and Telecommunication Engineering program

1. Academic Growth
2. Industrial Growth
3. Technological Development
4. R and D, new project development
5. Economic Growth

30. Does the department obtain feedback from

a) Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it? **YES**

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b) Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same? **YES**

c) Alumni and employers on the programmes and what is the response of the department to the same? **YES**

- i. At the end of semester faculty identifies gaps in the curriculum and provides suggestions for improvement in curriculum and teaching learning process.
- ii. Feedback is obtained from departmental advisory board for improvement in curriculum and teaching learning process.
- iii. Feedback is sought from Academic Audit under the guidance of experts.
- iv. In autonomy, syllabus is formulated with discussion and feedback from departmental syllabus committee, alumni, and subject board members and approved by Academic board members.

Faculty Feedback collection process

- Design of questionnaire for feedback form at institute level to maintain uniformity.
- Feedback forms for all faculty members for their respective courses are generated.
- Feedback committee executes the feedback process during each semester.
- Till 2014 Feedback procedure was conducted manually.
- After that in year 2015 onwards online systems were implemented to collect and analyze feedback data.
- The students rate the performance of the faculty on a scale of 10.

- Percentage of students who participated:
 - approx. above 75% (online)
 - approx. 50% (manual)
- Faculty Feedback Analysis process:
 - Online feedback report generation for individual faculty.
 - Average performance index in the scale of 10 is generated for each course faculty.
 - Till January 2014 manually weighted analysis was done by the faculty.
 - Currently Analysis is done by using feedback software.

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Basis of reward / corrective measures :

- With due consideration to student rating and comments, HOD discusses the feedback with the faculty.
- Faculty felicitation policy is designed in September 2015.

Different Types of Feedback and their utilization:

Feedback Type	Feedback	Frequency of taking feedback	Initiated by	Use
Institute level feedback	Recruiters ' Feedback	Once in a year	Placement cell	<ul style="list-style-type: none"> • Bridge the gap between industry and academics
Department level Feedbacks	Faculty Feedback	Once in a semester	Head of the department	<ul style="list-style-type: none"> • Enhancing the student's experience of learning and teaching. • For faculty development.
	Course Feedback	Once in a semester	Course in-Charges	<ul style="list-style-type: none"> • Enhancing the course syllabus. • Ensuring the effectiveness of course design. • Enabling a communication with students.
	Exit Batch (Survey) Feedback	Once in 4 years (Final year Students)	Head of the department	<ul style="list-style-type: none"> • Improve the PO and PEO achievement.
	Facility Feedback	Once in a year	Head of the department	<ul style="list-style-type: none"> • Improving the infrastructure/facilities required by the students
	Alumni Feedback	Once in 4 years (Final year Students)	Department al alumni cell	<ul style="list-style-type: none"> • To collect latest alumni information and achievements
	Final Year Project feedback	Once in a year (from external Examiner)	Head of the department	<ul style="list-style-type: none"> • Determine the quality of final year projects from external project examiners

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31. List the distinguished alumni of the department (maximum 10)

Sr. No.	Name	Batch	Education	Job profile
1	Mr. Apurva Turakhia	2000	MS, University Of Michigan, Signal Processing & wireless communication	Entrepreneur
2	Ms. Meghana Shah Karmakar	2000	NMIMS- MMS- Marketing	Entrepreneur, Aromatics- Mfg. of Chemicals and Oils
3	Mr. Manoj Kathrani	2000	MS, UMass Lowell, Computer Engineering	Manager- Recruiting Vencesoft Inc.
4	Mr. Anand Iyer	2002	MS, Illinois Institute of Technology- Chicago- Electrical & computer Engg	Senior Software Engineer, Motorola Solutions
5	Mr. Ramgopal Rajan	2003	MS, University of Toronto, Telecommunications Cambridge Judge Business School- MBA Global Business	Sr. Product Manager Self Service Registration Fulfilled Amazon, Luxembourg
6	Mr. Kushagra Merchant	2003	MBA, IIM- Calcutta	Consultant
6	Ms. Aruna Nayak	2004	MBA, IIM- Kozhikode- PGDBM, Finance Marketing ESCP Europe, Finance INSEAD, Singapore	Consultant – Accenture Consulting Management
8	Mr. Nissim Nabar	2006	MBA ,IIM- Ahmedabad MTech. ,IISc	Associate-Quantitative Research, Photon Capital Advisors
9	Dr. Jonathan Joshi	2006	MS, University of Southern California, Electrical & Electronics PhD- Electrical	Director, Eduvance
10	Mr. Rounak Moondra	2007	MS, Illinois Institute of Technology- Finance	Sr. Quant Analyst Evermore Stock Broker Ltd

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32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

	Activity- Title	Duration	Eminent Resource Person
2011-12	Guest lecture: Debugging Tools for Microcontroller based Projects	26 th March, 2012	Mr. Shishir Joshi, Director- Applied Digital Microsystems
	Guest lecture: Biometrics	1 st October, 2011	Mr. Santosh Soni, Senior Scientist-CDAC, Mumbai.
2012-13	Guest lecture: Cell Tower Radiations: It's Hazards and Solutions.	5 th March, 2013	Dr. Girish Kumar, IIT Bombay
	Guest lecture: Network Management	19 th March, 2013	Mr. Nishikant Joshi, TCS
	Guest lecture: Use of Social Media and Open source platform to Learn Wireless Networks	10 th March, 2014	Dr. Saurabh Mehta, VIT, Mumbai
	Guest lecture: ISDN & Broadband Technology	6 th March, 2014	Ravindra Choudhari, Dy. Manager, MTNL, Prabhadevi, Mumbai.
	Guest lecture: Research areas in Analog Electronics	29 th September, 2013	Dr. Uday Pandit Khot, St. Francis Institute of Technology, Borivali
2014-15	Summer Industrial Training: Hands on experience on Embedded System Design	May, 2015 (20 days)	Dr. Jonathan Joshi, Director , Eduvance
	Guest lecture: Wireless Network Security	9 th March, 2015	Mr. Milind Nayan, Telelabs Wireless Technology
2015-16	Guest Lecture: Frequency Generation and Energy Harvesting	13 th August, 2015	Dr. Ajay K. Poddar Chief Scientist Synergy Microwave Corp., USA.
	Guest Lecture: VLSI Design	30 th March, 2016	Dr. Jonathan Joshi, Director-Eduvance

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	Activity- Title	Duration	Eminent Resource Person
	Summer Industrial Training: Hands on experience on Embedded System Design	May, 2016 (20 days)	Dr. Jonathan Joshi, Director , Eduvance

33. List the teaching methods adopted by the faculty for different programmes.

To improve quality of teaching, the following methods are adopted:

1. Use of visual aids in lecture delivery is increased substantially
2. Public address system is also made available wherever necessary.
3. Series of NPTEL Video lectures and notes in pdf are available for the ready reference.
4. Experimental writeups and assignments if any are uploaded on intranet.
5. Regular faculty members are given laptops.
6. Teaching over and above syllabus by organizing Industrial Visits and expert lectures.
7. Innovative IA components added.
8. Innovative mini projects as well as final year projects.
9. Learning Management System (LMS) is a new concept and some faculties have used this application software tool during the teaching-learning process. Faculty uploaded lecture planning, lecture notes, tests, online quizzes, ppts etc. used it for CO analysis purposes.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

A primary process was designed and followed in 2013-14 and over period of one year it got matured. Hence a well-defined process is in place for the program from academic year 2014-15.

The process used to identify compliance of the University curriculum for attaining program outcomes:

- Program outcomes assessment is done at the end of each academic year using the tools as follows:
 1. Information is collected for each course in the form of CIS (Course Information Sheet)
 - a. Student performance assessment –direct assessment ((Test 1& 2), IA (Internal Assessment), ESE (End Semester Examination), Laboratory work assessment

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- b. Student performance assessment, indirect assessment (course feedback)
 2. Program Exit survey of the graduating batch
 3. Recruiters feedback
 4. Extracurricular and co-curricular activities
- Each Program Outcome attainment is calculated as averages of the results of direct (70%) and indirect (30%) assessment.
 - Exit interviews, Alumni feedback are examined to collect information to identify weak areas, if any. In case of any such findings, discussion is held with students to identify specific problems.
 - Recruiters' feedback are examined to collect information to identify current developments and requirements in industry,
 - Suggestions from members of Subject Board and Academic Board are considered to make changes in teaching learning process and modifications in curriculum. The departmental committees then summarize curricular gaps and recommendations by course teachers to decide whether modifications are required at course level or program level. Then those changes are put forth to Subject Board for approval. The departmental committee also decides whether assessment procedure needs any changes for the next year. (e.g. Changes or modifications in various feedback forms, exit survey of graduating batch, Usage of Modern Tools, Industrial visits to be arranged for the required courses)

Assessment tools and Processes used for Program Outcome (PO) assessment:

Direct Assessment:

Assessment of PO through courses:

Following points describe the assessment processes used to gather the data upon which the evaluation of each of the program outcome is based:

- Every individual faculty prepares the course information sheet for the course he/she teaches.
- Course information sheet includes course outcomes (CO) and their direct assessment tools (test, experiment, assignment, mini project) and indirect assessment tool (course exit survey).
- Each faculty maintains the data of continuous assessment in direct assessment tool. Rubrics are followed for continuous assessment.
- In each assessment tool as per the percentage target set by the individual faculty, CO attainment is calculated.
- Each faculty keeps the record of percentage of student achieving particular CO through direct and indirect assessment.
- 70% weightage is given to the CO achieved through direct assessment tool and 30% weightage is given to indirect assessment tool and average assessment of each CO is calculated.
- For each course, defined CO is mapped with the twelve program outcomes (PO)

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- While mapping CO with PO, three levels of mapping are defined.
- For each course, average attainment level of program outcome through course outcome is calculated.
- For each course, attainment of PO is calculated and tabulated.
- Direct attainment level of PO is calculated by taking average across all the courses addressing that PO.

Assessment of PO through Projects:

- For each project, mapping of these COs with POs and their level of contribution is evaluated.
- Evaluation of the projects is based on the rubrics defined.
- Direct and indirect assessments are done.
- While mapping CO of each project with POs, three attainment levels are defined as mentioned earlier.
- Average attainment level of PO through COs of all the projects is calculated.

Indirect Assessment:

Assessment of PO through Program Exit Survey:

- For program exit survey, questions pertaining to each PO are framed. Students are asked to respond the level of satisfaction they achieved, at the end of the program.
- Four different scales are set with their respective weights as 4, 3, 2 and 1. This data is collected through Google form.
- Based on the data collected weighted average is calculated indicating the indirect attainment of PO.
- Average value of attainment of PO is converted into levels 1, 2 and 3.

Assessment of PO through Employer Survey:

- Questions are framed for evaluating technical and nontechnical capability of the students by the employer.
- Every question is mapped with the relevant PO.
- Every employer is requested to rate the student on the scale excellent, good, average and poor.
- Levels are decided as Excellent: 3, Good: 2, Average: 1 and Poor: 0.
- After collecting the data from all the employers and corresponding mapping with the POs, average value of attainment level of each PO is decided.

Assessment of PO through extracurricular/ Co-curricular activities:

- Student participation in extracurricular and co-curricular activities is compiled.
- Level of attainment (3, 2 and 1) is given to each activity based on type of activity and the number of participants.
- Each activity is mapped with the Program outcome.
- Average attainment level of the entire activity mapping with each PO is calculated.

35. Highlight the participation of students and faculty in extension

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activities.

Participation of faculty in extension activities*

Activity	2011-12	2012-13	2013-14	2014-15	2015-16
Activities attended by faculty:					
CEP Course	-	1	-	1	1
Conference	1	-	2	-	6
Short Term Training Program	-	3	6	6	8
Workshop, Training program	6	15	24	12	21
Seminar, Expert lecture, Orientation program, Tutorial	-	35	18	-	3
Faculty participation in extension activities:					
Peer journal review	-	-	3	2	3
Resource person for Expert Lecture	1	4	1	4	8
Invited Board of studies / Advisory board member	-	1	1	1	1
Conference Session Chairperson , Judge, Chief guest, Panel member	2	4	3	4	5
Conference paper review	-	3	4	4	-
Syllabus committee member/ARC coordinator	-	1	-	-	-
P.G. Examiner at reputed institutes	-	1	3	2	-

*No. of Faculty who participated in the activity.

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Participation of students in extension activities*

Activity	2011-12			2012-13			2013-14			2014-15			2015-16		
	SE	T E	B E	S E	T E	B E	S E	T E	BE	S E	T E	B E	S E	T E	B E
Technical Event: Technical Paper Presentation, Project, Workshop	67	65	07	71	70	13	29	134	134	12	33	48	2	53	15
Internship	-	-	-	-	-	10	23	9	15	57	36	16	19	54	34
Sports	16	37	02	18	18	-	5	5	6	14	4	17	23	20	8
Cultural	03	05	-	03	02	-	45	1	3	26	21	7	9	36	4
Others : Student Council member, Participation in Social service	24	38	04	26	34	25	-	-	-	38	-	-	36	35	5

*No. of students who attended the event

36. Give details of “beyond syllabus scholarly activities” of the department.

Beyond syllabus activities for students	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Guest lecture	2	5	1	1	2
Industrial visit	3	4	-	-	-
Workshop	-	3	-	1	1

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Year	Activity	Target Student audience	Resource person with designation	Date
2011-12	Industrial visit: Pratham – IIT Bombay Student Satellite	S.E., T.E.	-	19 th March , 2012
	Industrial visit: The Centre of Excellence in Nanoelectronics (CEN), IITB	T.E., B.E.	-	24 th March , 2012
	Industrial visit: Giant Meterwave Radio Telescope (GMRT) , Narayangoan	B.E.	-	13 th April, 2012
2012-13	Industrial visit: Panasonic Experience Center, Andheri	T.E., B.E.	-	2,3 rd March , 2013
	Industrial visit: IMD (Weather Department) , Colaba.	T.E.	-	6 th March , 2013
	Industrial visit: Giant Meterwave Radio Telescope (GMRT) , Narayangoan.	B.E.	-	22 nd March, 2013
	Industrial visit: The Centre of Excellence in Nanoelectronics (CEN), IITB	T.E.	-	6 th April , 2013
	Guest Lecture: Discrete Event Network Simulations	B.E.	Mr. Gokul Bhat (Alumni pursuing Ph.D)	9 th January, 2013
	Workshop: Scilab Tutorial on “Scilab for Linux users”	T.E.	Spoken tutorial Team, IIT Bombay	14 th August, 1 st September, 2012

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Year	Activity	Target Student audience	Resource person with designation	Date
	Workshop: Python Tutorial	B.E.	Spoken tutorial Team, IIT Bombay	11 th , 15 th September, 2012
	Workshop: NEC-Open source software	T.E.	EXTC Department faculty	2 nd February, 2013
2013-14	Guest lecture: Placement preparation	T.E.	Mrs. Anuradha Sawant, General Manager, HRD, H & R Johnson India	15 th March, 2014
2014-15	Workshop: LATEX	B.E.	EXTC Faculty	8 th January, 2015
2014-15	Business Communication and Ethics	B.E.	Mr. Rahul Deshpande (TCS- Industry expert)	One semester weekly course
2015-16	Guest Lecture and workshop: R software for Data Analysis	S.E., T.E.	Mr. Kartik Srinivan (Alumni, Pursuing Ph.D.)	17 th , 24 th July, 2015

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.

UG Program got Accredited: Three times (2004, 2009, 2013)

Present Status of Accreditation of UG Program :
Provisionally Accredited in November 2013 (For two years)

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

- Strengths:
 - Consistent academic performance of the students.
 - Good placement of UG and PG students.

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- Good alumni interaction.
- Adequate number of laboratories with internet and intranet facility.
- Adequate usage of major equipment.
- Good team work among faculty.
- Weaknesses:
 - Poor industry interaction.
 - Few industry based projects.
 - Consultancy, R&D activities are less.
 - Less number of interdisciplinary student projects.
- Opportunities:
 - Faculty training at reputed institutes and industries in vicinity.
 - Internships / Industrial training for students.
 - Start of Ph.D. research Centre in the department.
- Challenges:
 - Keeping pace with fast changing industrial technology.
 - Lesser availability of placements in core industries.

39. Future plans of the department.

- Industry based projects to be encouraged.
- Industry tie up for laboratory development.
- Increase in research proposals by faculty.

**Evaluative Report of
Department of Information Technology**

- 1. Name of the Department:**
Department of Information Technology
Year of establishment: 1999

- 2. Names of Programmes :**

Sr. No.	Name of Program	Commencement Year	Intake
UG			
1	B.E(Information Technology)	1999	40
2	B.E (Information Technology)	2000	90
3	B.E(Information Technology)	2001-2013	120
4	B.Tech (Information Technology)	2014 till date	120
PG			
1	M.E (Information Security)	2013	18
2	M.Tech (Information Security)	2014 till date	18

- 3. Interdisciplinary courses and departments involved :**

Sr. No.	Name of Course	Semester	Year	Department Involved
UG				
1	Financial Accounting	IV	2008 –13	K J Somaiya Institute of Management Studies and Research
2	Manufacturing Processes, Planning and Systems	V	2009- 13	Mechanical, KJSCE
PG				
1	Law of data security and investigation	II	2013-14	Vicky Shah, Eagle Eye
2	Advanced computer forensic analysis (Lab)	II	2013-14	Mr. Malla Reddy Donapati, Consultant, Aujas – Managing Information Risk, Mumbai
3	Virtualization and cloud Computing	I	2013-15	Computer Engineering, KJSCE

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- Interdepartmental courses will be effective from Academic Year 2016-17 for semester VI.
- Audit courses offered by other department for IT student

Year	Name of the Audit course offered by other departments	No. of students enrolled from our department		
		July 2015	Jan 2016	Total
2015-16	Web Programming	19	24	43
	Object Oriented Programming Methodology	17	42	59
	Entrepreneurship	-	2	2
	Virtual Lab	-	1	1
	Dramatics and Corporate	-	3	3
	Corporate Communication	-	10	10
	Introduction to Sales and Distribution Management	-	1	1
	Prototype to Product	-	13	13
	Vector Mechanics	3	-	3
	Basics of Accounting	8	11	19
	A Survey of Mumbai's history and architecture	3	1	4
	Introduction to solar energy	2	-	2
	Introductory Course on mathematical software and virtual instrumentation	4	-	4
	Numerical Methods	1	-	1
	Renewable Energy	3	-	3
Solar photovoltaic and PV system	5	-	5	
Visual Arts	10	-	10	

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4. Annual/ semester/ choice based credit system :

Academic year of Admission	System
2011-12	Semester wise Mark Based System
2012-2013 onwards	Semester wise Credit Based Grading System

5. Participation of the department in the courses offered by other departments :

Sr. No.	Subject Name	Sem	Year	Faculty Name	Institute / Department Involved
UG					
1	Digital Signal and Image Processing	V	2012-13	<ul style="list-style-type: none"> ● Ms. Sonali Patil ● Ms. Sujata Pathak 	K. J. Somaiya college of Science and Commerce
2	Information technology for management of Enterprise	VI	2015-16	<ul style="list-style-type: none"> ● Ms. Anupam Jain ● Ms. Garima Rawat 	Electronics Engineering, KJSCE
PG					
3	Parallel Computer Architecture	I	2011-12	● Ms. Sonali Patil	Computer Engineering, KJSCE
4	Network Protocol & Networking	I	2011-12	● Ms. Nandana Prabhu	
5	Algorithms & Complexity	I	2011-12	● Mr. Irfan Siddavatam	
6	Object Oriented Analysis & Design	I	2011-12	● Ms. Sangeeta Nagpure	
7	Image Processing	II	2011-12	<ul style="list-style-type: none"> ● Ms. Sonali Patil ● Ms. Nandana Prabhu 	
8	Management Information System	II	2011-12	<ul style="list-style-type: none"> ● Mr. Irfan Siddavatam ● Ms. Sangeeta Nagpure 	
9	Advanced Algorithms and Complexity	I	2012-13	● Mr. Irfan Siddavatam	
10	Network Design & Management	I	2012-13	<ul style="list-style-type: none"> ● Ms. Nandana Prabhu ● Ms. Shailaja Gogate 	
11	Software Testing	I	2012-13	● Ms. Sangeeta Nagpure	

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Sr. No.	Subject Name	Sem	Year	Faculty Name	Institute / Department Involved
12	High Performance Computing	I	2012-13	• Mr. Ravindra Divekar	
13	Decision Making and Adaptive Business Intelligence	II	2012-13 2013-14	• Mr. Irfan Siddavatam	
14	Emerging wireless Technologies and Future Mobile Internet	II	2012-13	• Ms. Shailaja Gogate	
15	Storage Area Network	II	2012-13	• Ms. Neelkamal Surve • Ms. Manjitsing Valvi	

The department faculty offer audit courses to all departments for UG level from 2015-16.

Year	Name of the course offered by IT Dept.	No. of students enrolled from various department									
		July 2015					Jan 2016				
		COMP	ETRX	EXTC	IT	MEC H	COMP	ETRX	EXT C	IT	MECH
2015-16	The Future of The Internet	18	5	12	24	7	8	11	8	14	8
	Web Programming Basics	5	22	9	22	12	23	6	12	17	9
	Data Modeling	-	-	-	-	-	15	6	3	7	0

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

Post	Sanctioned	Filled
Professors	5	-
Associate Professors	10	6
Assistant Professors	16	24

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7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

Sr No	Faculty Name	Qualification	Designation	Specialization	No. of years of Experience	No. of PG students guided for last 4 years
1	Ms. Sangeeta Nagpure	M.E.	Associate Prof.	Computer Science & Engineering	15	3
2	Ms. Nandana Prabhu	M.E.	Associate Prof.	Electronics	24	3
3	Ms. Sonali Patil	M.E.	Associate Prof.	Electronics	13	4
4	Mr. Irfan Siddavatam	M.E.	Associate Prof.	Computer Engineering	15	2
5	Ms. Shailaja Gogate	M.E.	Associate Prof.	Computer Engineering	30	2
6	Mr. Ravindra Divekar	M.E.	Associate Prof.	Computer Science	24	2
7	Ms. Kiran Kumari Sinha	M.E.	Asst Professor	Computer Engineering	15	0
8	Mrs. Nilkamal More	M.E.	Asst Professor	Computer Engineering	14	1
9	Ms. Sujata Pathak	M.E.	Asst Professor	Computer Engineering	14	2
10	Ms. Pooja Malhotra	M.E.	Asst Professor	Computer Engineering	16	0
11	Ms. Suchitra Patil	M.E.	Asst Professor	Computer Engineering	10	0

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Sr No	Faculty Name	Qualification	Designation	Specialization	No. of years of Experience	No. of PG students guided for last 4 years
12	Ms. Purnima Ahirao	M.E	Asst Professor	Computer Engineering	10	0
13	Ms. Ashwini Dalvi	M.Tech	Asst Professor	Computer Engineering	9	1
14	Ms. Ujwala Bhangale	M.E.	Asst Professor	Computer Engineering	9	0
15	Ms. Sunayana Jadhav	M.E.	Asst Professor	Computer Engineering	8	0
16	Ms. Yogita Borse	M.E.	Asst Professor	Computer Engineering	8	0
17	Mr. Manjeetsing Valvi	M.E.	Asst Professor	Computer Engineering	9	0
18	Ms. Deepti Patole	M.E.	Asst Professor	Computer Engineering	9	0
19	Ms. Era Johri	M.E.	Asst Professor	Computer Engineering	9	0
20	Ms. Khushi Khanchandani	M.E.	Asst Professor	Computer Engineering	6	0
21	Ms. Avani Sakhapara	M.E.	Asst Professor	Computer Engineering	6	0
22	Mr. Sanjay Vidhani	M.E.	Asst Professor	Computer Engineering	20	0
23	Ms. Dipti Pawade	M.E.	Asst Professor	Embedded sys & computing	7	0

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Sr No	Faculty Name	Qualification	Designation	Specialization	No. of years of Experience	No. of PG students guided for last 4 years
24	Ms. Aprajita Sharma	M.Tech MBA	Asst Professor	Information Technology	2.5	0
25	Ms. Anupam Jain	M.Tech	Asst Professor (Temporary Faculty)	Computer Engineering	3	0
26	Ms. Garima singh Rawat	M.Tech	Asst. Professor (Temporary Faculty)	Computer Engineering	5	0
27	Mr. Sagar Korade	M.E.	Asst. Professor (Temporary Faculty)	Embedded system and Computing	3	0
28	Ms. Ujwala Bhanarkar	M.E.	Asst. Professor (Temporary Faculty)	Computer Engineering	7	0
29	Ms. Priyanka Shingane	M.E.	Asst. Professor (Temporary Faculty)	Embedded system and Computing	7	0
30	Ms. Anooja Joy	M-Tech	Asst. Professor (Temporary Faculty)	Cyber security	2	0

8. Percentage of classes taken by temporary faculty – programme-wise information

Program	% classes taken by temporary faculty				
	2011-12	2012-13	2013-14	2014-15	2015-16
Undergraduate programme	13.99	10.37	6.09	20.43	20.66
Post graduate programme	-	-	5	0	0

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9. Programme-wise Student Teacher Ratio

Program	Student- Teacher Ratio				
	2011-12	2012-13	2013-14	2014-15	2015-16
Undergraduate programme	20.08	17.71	17.89	17.38	16.65
Post graduate programme	-	-	4.51	3.65	9.31

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Supporting staff	Sanctioned	Filled
Lab assistant	10	10
Lab Attendant	01	01
Peon cum lab attendant	01	01
Hamal	02	02

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. : Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received : Nil

13. Research facility / center with

- International recognition: Nil
- State recognition: Nil
- National recognition: Ni
- International recognition: Nil

14. Publications:

- Number of papers published in peer reviewed journals (national / international):

Year	Number of Papers Published in National Journal	Number of Papers Published in International Journal	Total
2011-12	0	3	3
2012-13	0	9	9
2013-14	1	7	8
2014-15	0	9	9
2015-16	0	10	10

- Monographs: Nil
- Chapter(s) in Books: Nil

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- Editing Books: Nil
- Books with ISBN numbers with details of publishers :

Sr. No	Faculty Name	Book Title	Publisher	ISBN Number	Year of publication
1	Ms. Suchitra Patil	Analog and Digital Circuits	NANDU	978-93-85241-08-6	2015-16
2	Ms. Dipti Pawade	Fuzzy logic unveiled	LAP LAMBERT Academic Publishing	3659232610	March 4, 2014
3	Ms. Suchitra Patil	Digital Logic Design and Analysis	NANDU	-	2014

- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- Citation Index – range / average
- SNIP
- SJR
- Impact factor – range / average
- h-index

15. Details of patents and income generated : Nil

16. Areas of consultancy and income generated :

Our faculties are involved in software development is being used in our institute.

Sr. No.	Software Developed	Faculty Name
1.	Time table software	Ms. Nilkamal More
2.	Exam software	Ms. Nilkamal More
3.	Admission software	Ms. Ujwala Bhangale
4.	Payment gateway for fees submission	Ms. Ujwala Bhangale
5.	Dream Admission App	Mr. Irfan Siddavatan Ms. Ashwini Dalvi

17. Faculty recharging strategies :

- The Somaiya Trust has constituted Somaiya Vidyavihar Awards to recognise

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and honor conscientious hard work and the extraordinary achievements of Faculty and Staff.

- At the departmental level, faculties are felicitated for overall excellence.
- Faculties are encouraged to pursue higher education either in house or at reputed institutions.
- College level Faculty Development Policy encourages faculty for participation in Conferences, Workshops, Training Programs and Industrial training.
- Faculties are rewarded for publications in peer reviewed journals.
- Faculties are encouraged to apply for funded projects.
- KJSCE is a remote center for courses by IIT faculty under National Mission on Education through ICT sponsored by MHRD, New Delhi; provides faculty with exposure to these courses.
- Provision of Yearly book allowance to faculty to augment teaching resources.
- Cultural and Sport events are organized for faculty and staff for to hone and promote their skills.

STTP/ Workshop/ Orientations attended by faculty:

Year	Workshops	STTP	Orientation	FDP	Total
2011-12	16	1	0	0	17
2012-13	15	6	6	2	29
2013-14	36	3	3	3	45
2014-15	37	4	3	11	55
2015-16	56	18	0	2	76

18. Student projects

- Percentage of students who have done in-house projects including inter-departmental
- Percentage of students doing projects in collaboration with industries / institutes

B.E./B.Tech, U.G.	2011-12	2012-13	2013-14	2014-15	2015-16
Internal (%)	97.96	96.16	97.96	100.00	100.00
External (%)	2.04	3.84	2.04	0	0
M.E./M.Tech., P.G.					
Internal (%)	-	-	-	0	0
External (%)	-	-	-	100.00	100.00

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19. Awards / recognitions received at the national and international level by

- o Faculty

Name of the Faculty	Year	Award
Ms. Nandana Prabhu	2013-14	Best Teacher by Somaiya Trust
Ms. Nandana Prabhu	2015-16	Longest continuous SBC by CSI India

- o Doctoral / post-doctoral fellows NA
- o Students

	2011-12	2012-13	2013-14	2014-15	2015-16
Number of Award/Recognition received	-	01	09	17	03

20. Seminars/ Conferences/Workshops organized and the source of funding (national /international) with details of outstanding participants, if any

Year	Event Title	Year/Duration	Number of participants	Source of funding	Target Audience
2011-12	Workshop on “Software Development Techniques for Teachers of Engineering and science Institute”	5th Nov-4th Dec 2011 (Weekends)	16	MHRD, Govt. of India (By IITB at KJSCE remote centre)	Faculty Members from academics and Industry
2012-13	Workshop on “Database management Systems”	21st – 31st May, 2013	14	MHRD, Govt. of India (By IITB at KJSCE remote centre)	Faculty Members from academics and Industry
	STTP on “Tools and Techniques for effective technical writing”	13th -17th May 2013	35	Self financed ISTE approved	Faculty Members from academics and Industry
2013-	Workshop	30 th June – 5 th	12	MHRD,	Faculty

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Year	Event Title	Year/Duration	Number of participants	Source of funding	Target Audience
14	on Computer Networking	July 2014		Govt. of India (By IITB at KJSCE remote centre)	Members from academics and Industry
2015-16	STTP on "Internet of Things"	4th Jan – 8th Jan	26	Self financed ISTE approved, sponsored by Lab Systems and Ninja online services	Research Scholars, Faculty Members from academics and Industry
	STTP on "Digital Security"	27th June- 2nd July 2016	18	Self financed ISTE approved, sponsored by Bank of Baroda	Research Scholars, Faculty Members from academics and Industry

21. Student profile course-wise:

Number of application received is not applicable since applications are received by DTE and not received or processed by KJSCE. Students are admitted as per DTE allotment.

Undergraduate (UG):

Academic Year	Admitted to FE/SE	Total No of students admitted	Number of students		Pass percentage	
			Male	Female	Male	Female
2011-12	FE	127	83	44	97.40	100.00
	SE	27	14	13		
2012-13	FE	126	86	40	100.00	100.00
	SE	24	10	14		
2013-14	FE	126	82	44	96.90	100.00
	SE	28	13	15		
2014-15	FE	126	87	39	92.86	96.43
	SE	31	12	19		
2015-16	FE	124	95	29	97.94	100.00
	SE	25	16	09		

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Post Graduate (PG):

Academic Year	Admitted to PG	Total No of students admitted	Number of students		Pass percentage	
			Male	Female	Male	Female
2013-14	ME	8	5	3	100.00	100.00
2014-15	M Tech	9	4	5	25.00	80.00
2015-16	MTech	18	12	6		

22. Diversity of Students

Admissions are governed by DTE rules.

Name of the course	Academic year	Total admitted	Percentage of students from same state		Percentage of students from other state		Percentage of students from other country		J & K student	
			Total	%	Total	%	Total	%	Total	%
UG	2011-12	127	114	89.76	8	6.30	5	3.94	0	0.00
	2012-13	126	121	96.03	2	1.59	3	2.38	0	0.00
	2013-14	126	111	88.10	10	7.94	4	3.18	1	0.79
	2014-15	126	110	87.30	10	7.94	6	4.76	0	0.00
	2015-16	124	111	89.52	8	6.45	5	4.03	0	0.00
PG	2013-14	8	7	87.50	1	12.50	0	0.00	0	0.00
	2014-15	9	8	88.89	1	11.11	0	0.00	0	0.00
	2015-16	18	17	94.44	1	5.56	0	0.00	0	0.00

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

Exam Name	TOEFL	GRE	CAT	GATE	XAT	INDIAN AIR FORCE	TOTAL
2011-12	03	03	00	01	01	00	08
2012-13	09	10	1	1	00	00	21
2013-14	14	14	00	00	00	00	28
2014-15	08	07	02	01	00	01	19
2015-16	14	14	02	00	00	00	30

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24. Student progression

Name of the Department: Information Technology					
Student Progression	2011-12	2012-13	2013-14	2014-15	2015-16
Total No. of Students (A)	143	138	135	155	151
	Percentage	Percentage	Percentage	Percentage	Percentage
UG to PG	1.4	4.35	6.67	3.87	2.64
PG to Ph.D.	0	0	0	0	0
Employed through Campus selection	63.64	56.52	68.89	57.42	64.24
Other than campus recruitment	0	0	0	0	0
Entrepreneur	0	0	0.04	0.05	15.23

25. Diversity of staff

Percentage of faculty who are graduates	Percentage
Of the same parent university	53.33
From other universities within the State	23.33
From other universities from other States	20.00
From other universities from outside India	3.33
From other national institute (NIT/IIT)	0.00

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period. Nil

27. Present details about infrastructural facilities

a. Central Library

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Opac: Web Opac online facility is provided wherein the students can renew the books at any point of time. They can also reserve book in advance. Also intimation is provided if the book is available.

Availability :

- I. IEEE electronics Library
- II. Springer Electrical, Electronics, Computer Science and Mechanical Engineering Journals.
- III. McGraw Hill Access Engineering Library
- IV. Elsevier SCIENCE DIRECT
- V. Six Kindle e-book Readers
- VI. ASME Digital Library
- VII. ACM Digital Library
- VIII. British Council Library,
- IX. IIT Bombay library

Zero deficiency report received by the Institution: AICTE has conferred Zero deficiency for all the assessment years.

b) Internet facilities for staff and students

- Name of the Internet provider: Aircel Services
- Available band width 155 Mbps
- WiFi availability at 48 locations
- Internet access in labs, classrooms, library and offices of all Departments
- Security arrangements Kaspersky antivirus 1161 licenses, Fortinet Firewall for Internet

c) Total number of classrooms :

6 (UG) +1(PG)+ 1 (Tutorial Room)+ 1 (UG Seminar Hall)+1(PG Seminar Hall)

d) Class rooms with ICT facility :

6 (UG) +1(PG) + 2 (Laboratory)

e) Students' laboratories : (Annexure III)

12 +1 (Computer Center for PG)

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28. Number of students of the department getting financial assistance from College.

Year	SDC		Through PUSH		Need cum Merit	
	No of students	Amount (Rs)	No of Students	Amount (Rs)	No of Students	Amount (Rs)
2011-12	-	-	-	-	-	-
2012-13	-	-	-	-	-	-
2013-14	4	4900	4	80000		
2014-15	63 (UG)+1 (PG)	42900	1	50000	02	124200
2015-16	3 (UG)+1(PG)	1500	-	-	02	142364

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology. (Refer Annexure I)

30. Does the department obtain feedback

There are various feedbacks taken at institute and department level for improvement in the existing systems.

Feedback Type	Feedback	Frequency of taking feedback	Initiated by	Use/response of department
Institute level feedback	Recruiters' Feedback	Once in a year	Placement cell	<ul style="list-style-type: none"> ● Bridge the gap between industry and academics
Department level Feedbacks	Faculty Feedback	Once in a semester	Departmental Feedback Committee	<ul style="list-style-type: none"> ● Enhancing the student's experience of learning and teaching. ● For faculty development ● As parameter for Best Faculty award
	Course Feedback	Once in a semester	Course in-Charges	<ul style="list-style-type: none"> ● Enhancing the course syllabus. ● Ensuring the effectiveness of course design. ● Enabling a communication with

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Feedback Type	Feedback	Frequency of taking feedback	Initiated by	Use/response of department
				<p>students.</p> <ul style="list-style-type: none"> ● Bridging gap ● Improvement in teaching learning process.
	Exit Batch (Survey) Feedback	Once in 4 years (Final year Students)	Departmental Feedback Committee	<ul style="list-style-type: none"> ● Improve the PO and PEO achievement.
	Facility Feedback	Once in a year	Departmental Feedback Committee	<ul style="list-style-type: none"> ● Improving the infrastructure/facilities required by the students
	Alumni Feedback	Once in 4 years (Final year Students)	Departmental alumni cell	<ul style="list-style-type: none"> ● To collect latest alumni information and achievements ● Their comments has been considered while syllabus designing. For ex. Comment was “give more stress on practical exposure” so programming courses are introduced as lab courses
	Final Year Project feedback	Once in a year (from external Examiner)	Departmental Project Committee	<ul style="list-style-type: none"> ● Determine the quality of final year projects from external project examiners
	Parent Feedback	Once in a semester	Proctor Committee	<ul style="list-style-type: none"> ● Improvement in infrastructure and curriculum

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31. List the distinguished alumni of the department (maximum 10)

Sr No	Name	Year Of Passing	Email_ID	Mobile No	Organization	Designation	Job Location
1	Rohan Thakker	2003	rohan@wisdmlabs.com	9890808085	Wisdmlabs	Entrepreneur	Mumbai
2	Bhushan Pendharkar	2005	bhushan.pendharkar@outlook.com		Citrix Systems	Sr. Software Engineer	United States
3	Ashish Kaluskar	2005	ashish.kaluskar@gmail.com		Symantec	Software Engineer	Los Angeles
4	Damini Sidhwani	2005	Daminisidhwani@gmail.com	201_850_2222	Epsilon	Senior Database Developer	Chicago
5	Pradeep Chandiramani	2006	pradeepchandiramani@gmail.com	9930071280	MSCI Investment Banking	Vice President at MSCI	Mumbai
6	Sonia Chib	2006	sonia.c.chib@gmail.com	9722076014	Ericson	program manager	Plano, TEXAS
7	Rajiv Nair	2006	rajivnv@gmail.com	9821952139			Dubai
8	Amar Daxini	2008	amardaxini@gmail.com	9833825574	Yogi Software	Software Craftsman & Ruby On Rails Geek	Mumbai
9	Prashant Rathi	2008	prashant@karmikpictures.com	9321068542	Karmik Pictures	founder	Mumbai
10	Roshni Mohandar	2010	roshni.mohandar@yahoo.com	9619851412	Crisil Limited	Credit Analyst	Mumbai

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32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

SN	Type of Student Enrichment Program	Academic Year				
		2011-12	2012-13	2013-14	2014-15	2015-16
UG						
1	Expert/Guest Lecture	03	03	04	05	09
2	Workshop	-	-	-	-	02
3	Industrial Visit	-	-	-	01	01
4	Internship	02	04	04	25	20
5	Trainings	-	-	-	02	06
PG						
1	Expert/Guest Lecture	-	-	-	-	02
2	Workshop	-	-	-	-	02
3	Industrial Visit	-	-	-	-	01

33. List the teaching methods adopted by the faculty for different programmes.

To improve quality of teaching, the following methods are adopted:

- Use of visual aids in lecture delivery is increased substantially.
- Public address system is also made available wherever necessary.
- Notes in pdf are available for the ready reference.
- Experimental writeups are uploaded on intranet.
- Faculty members are given laptops.
- Teaching over and above syllabus by organizing Industrial Visits and expert lectures.
- Innovative IA components added.
- Mini projects.
- Learning Management System (LMS) is used by faculties for the teaching-learning process. Faculty uploaded lecture planning, lecture notes, tests, online quizzes, ppts etc. used it for CO analysis purposes

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

In outcome based education Course Outcomes (CO) for every course are formulated based on the Programme Outcomes (PO) and other needs. Attainment level of PO's is measured from attainment of CO's and other activities. Result of attainment of each course outcome for the course can be further reviewed and analyzed. Action plan to improve any weakness can be identified and implemented in the following semester*.

Processes for direct and indirect attainment of the Program Outcomes

a. Direct attainment

Direct attainment level of a PO is determined based on the courses and projects.

- **Assessment of Program Outcomes through courses:**

For each course some course outcomes (CO's) are defined. These outcomes are mapped to related program outcome (PO's). Hence every course has some program outcomes mapping to it. Through assessment of course outcomes we get level of attainment of mapping program outcomes in the range of 1 to 3.

e.g Batchwise attainment of program outcomes is considered. For year 14-15 passed out batch, data of semester V and semester VI from the academic year 13-14 is considered as the batch was in third year during this period. Similarly semester VII and semester VIII data is of academic year 14-15 is considered as this batch was in final year during this period.

- **Assessment of Program Outcomes through Projects**

Projects CO's are mapped to program outcomes. Various rubrics are used for assessment of project in semester VII and semester VIII and an attainment is obtained in the range of 1 to 3 for mapping program outcomes.

b. Indirect

Indirect attainment level of a PO is determined based on the student exit surveys, co-curricular activities, extracurricular activities etc.

- **Assessment of PO through extracurricular activities and Co-Curricular activities**

As per the activity, attainment target is set i.e. expected number of student participation in the activity. Based on actual participation data the attainment levels are considered.

- **Assessment of PO through Program Exit Survey**

In an exit survey some questionnaire mapping to program outcomes is prepared and final year student's feedback is taken through google form. This feedback is analyzed to get attainment in the range of 1 to 3 which is mapped with program outcomes.

- **Assessment of PO through Employer Survey.**

In employer survey a standard format asking for placed student's feedback is shared with the employers. The questionnaire is mapped with program outcomes and analyzed to get attainment in the range of 1 to 3 which is mapped program outcomes.

Final attainment is calculated by taking 0.8*direct attainment and 0.2*Indirect attainment.

*If attainment level of any PO is below 1 then that is considered as not attained. Then we look in to the direct and indirect contributors of CO for that PO and the weak contributor is improved by applying corrective measures.

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e.g if CO is not attained or very low for laboratory in for next year we try to improve list of experiments by including more case studies, hands on or virtual lab based experiments.

Some times if CO is not attained through the used assessment tools then we try some more tools of assessment.

For some advanced topics we arrange expert talks.

35. Highlight the participation of students and faculty in extension activities.

Name	Paper reviewed in Journal/ conference/ Book reviewed
Ms. Sangeeta Nagpure	<ul style="list-style-type: none">Chapter reviewed in book on Software Project Management by Hughes published by McGraw Hill Publication
Ms. Nandana Prabhu	<ul style="list-style-type: none">International Conference on Interdisciplinary applications of Remote sensing Geographical Information Systems (ICRTET 2013) organized by D.J.SCOE, Mumbai.International Conference on Advanced Computing Technologies and Applications (ICACTA-2015) organised by DJSCE Mumbai.
Ms. Ujwala M. Bhangale	<ul style="list-style-type: none">International conference on advanced computing technologies and applications (ICACTA 2015) (D. J. Sanghvi College of Engg.)Third International Symposium on Women in Computing and Informatics (WCI-2015)Advances in technology and management (NCATM 2016) (A. C. Patil college of Engg.)Fourth International Symposium on Women in Computing and Informatics (WCI-2016)Fifth International Conference on Advances in Computing, Communications and Informatics (ICACCI-2016)
Ms. Era Johri	<ul style="list-style-type: none">Third International Symposium on Women in Computing and Informatics (WCI-2015)Fourth International Symposium on Women in Computing and Informatics (WCI-2016)
Ms. Dipti Pawade	<ul style="list-style-type: none">International Journal of Emerging Technology and Advanced Engineering
Ms. Pooja Malhotra	<ul style="list-style-type: none">Chapter reviewed in book on software testing by Oxford publication

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Participation in University/other institute

Name	Responsibility
Ms. Nandana Prabhu	<ul style="list-style-type: none"> ● Convener-Elective Subject in Revised Syllabus ● Expert Committee -MOC NBA at K C College of Engineering ● Selection Committee member at Shah & Anchor ● PG examiner for Pune University
Mr. Sanjay Vidhani	<ul style="list-style-type: none"> ● Member of syllabus revision committee ● Paper setter for NMIMS
Ms. Ujwala Bhangale	<ul style="list-style-type: none"> ● Designed GIS syllabus
Mr. Sagar Korade	<ul style="list-style-type: none"> ● Member (Chief Adviser for Computer Science Subject) Academic Advisory board of Shankarrao Bande Art & Science Junior College, Warud, Amravati.

Workshop/ Guest Lecture Conducted

Name	Topic	Date	Venue
Ms. Shailaja Gogate	Session on “Session on IT Acts”	1 July 2016	ISTE approved STTP on “Digital Security”
Mr. Irfan Siddatvatam	Session on “introduction to R Analytics Perspective”	7 th Jan 2016	ISTE approved STTP on “Internet of Things”, KJSCE
	Session on “Cyber Physical Security”	30 June 2016	ISTE Approved STTP on “Digital Security”, KJSCE
Ms. Ashwini Dalvi	Session on “Security in IOT”	30 June 2016	ISTE approved STTP on “Digital Security”, KJSCE
	Session on ” Future of IoT”	8 th Jan 2016	ISTE approved STTP on “Internet of Things”, KJSCE
Ms. Dipti Pawade	Seminar on “Web Security”	28 th Jan. 2016	K. J. Somaiya College of Engineering., Mumbai
Ms. Ujwala Bhangale	Session on “Application of IoT Analytics”	8 th Jan 2016	ISTE approved STTP on “Internet of Things”, KJSCE
	Workshop on “GPU	5 th – 6 th Nov	Pimpri Chinchwad

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Name	Topic	Date	Venue
	computing”	2015	College of Engg. Nigdi
	Session on “HPC Technology” in STTP on “Big data and Hadoop”	8 th Feb 2015	SNDT, Mumbai
Prof. Dipti Pawde Prof. Era Johri	Workshop on “Ethical Way of Research Paper Writing”	20 Aug, 2015	K.J. Somaiya College of Engineering, Mumbai
Mr. Sanjay Vidhani	Seminar on “RAID”	9 th Oct 2015	K. J. Somaiya College of Engineering., Mumbai
Ms. Yogita Borse Ms. Deepti Patole	Workshop on “LaTex – a tool for technical writing ”	20th August, 2014	K. J. Somaiya College of Engineering., Mumbai
Ms. Era Johri	Expert lecture on “File Handling in C using Ubuntu”	2 nd Apr, 2014	K. J. Somaiya College of Engineering., Mumbai
Ms. Suchitra Patil	Workshop on “Google Forms”	15 th Mar, 2014	K. J. Somaiya College of Engineering., Mumbai
Mr. Irfan Siddavtam Ms. Ashwini Dalvi Ms. Deepti Patole	Workshop on “PCB Layout Making Using diptrace Software”	1 st Sep. 2013	K. J. Somaiya College of Engineering., Mumbai
Mr. Irfan Siddhavatam	Seminar on “CSS Advanced”	4 th ,18 th March 2013	K. J. Somaiya College of Engineering., Mumbai

STTP/ Workshop/ Orientations attended:

Year	Workshops	STTP	Orientation	FDP	Total
2011-12	16	1	0	0	17
2012-13	15	6	6	2	29
2013-14	36	3	3	3	45
2014-15	37	4	3	11	55
2015-16	56	18	0	2	76

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Participation of students in extension activities

Activity	2011-12			2012-13			2013-14			2014-15			2015-16		
	No of students			No of students			No of students			No of students			No of students		
	S E	T E	B E												
Leadership(In different Students councils and Events)	--	03	--	--	07	--	--	04	--	02	04	--	01	01	--
BloomBox	--	--	--	01	01	--	--	01	01	--	05	--	06	02	01
Professional Council(IEEE,ISTE, CSI,Codecell)	02	14	00	01	10	02	05	13	01	03	14	01	04	06	00
Events conducted by students under CSI and IT Dept.	02	12	01	--	10	--	04	18	--	03	12	02	02	02	--

36. Give details of “beyond syllabus scholarly activities” of the department.

2011-12

Sr No	Title	Resource Person	Class	Date-Month-Year
1	Seminar on “Information Security”	Mr. Sudarshan Pishupati	TE	29 Mar 2012
2	Seminar on “Android Computing”	Mr. Abhijit Panchal, Accenture Ltd.	TE	21 Mar, 2012
3	Seminar on “Cloud Computing”	Mr Vijay, Accenture Ltd.	TE	20 Mar, 2012

2012-13

Sr. No.	Title	Resource Person	Class	Date-Month-Year
1	Seminar on “CSS Advanced”	Prof. Irfan Siddhavatam	SE	4 ,18 Mar, 2013

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Sr. No.	Title	Resource Person	Class	Date-Month-Year
2	Seminar on “ Inside Web Request”	Gaurang Parrekh, system engineer, TCS	SE	14 Mar 2013
3	Seminar on “Project Selection And Development- An Industry Perspective”	Manjit Gandhi, Kazen Barcode PLtd.	TE	7 Mar 2013
4	Seminar on “Future Trends in Higher Studies”	Mr. Rajiv Nair	TE	6 Aug 2012

2013-14

Subject	Class	Activity	Date-Month-Year	Resource Person
DWMBI	BE	Implemented Research paper as a lab experiments.	Odd 2013-14	Ms. Nilkamal More
ADC	SE	Mini project	OCT-2013	Ms. Ashwini Dalvi
GAP	BE	For more Hands on exposer Expt no 8: double buffering, rotating square (opengl), Expt no 9: Robot Arm (opengl) and Expt no 10 A solar System manual Attendance are added	Even 2013-14	Mr. Sanjay Vidhani
SE	TE	Only theory was mentioned in syllabus along with it we Explored the tool (Cost based estimation) and case study industry process model (all documents done)	Even 2013-14	Ms. Ashwini Dalvi

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Subject	Class	Activity	Date- Month- Year	Resource Person
MEC	BE	Payment modes were missing so conducted exp no. 2 and 10 on payment modes	Even 2013-14	Ms. Ujwala Bhangale
SPA	FE	Expert lecture on “File Handling in C using Ubuntu”	2 Apr, 2014	Prof. Era Johri IT dept. KJSCE, Mumbai
CN	SE	Seminar on “Advance Computer Networks”	27 Mar, 2014	Mr. Mukesh Jain Vice President, Reliance Jio Infocomm Ltd.
	TE	Seminar on “Career guidance and BE Projects”	17 Jan, 2014	Mr. Mukesh Jain Vice President, Reliance Jio Infocomm Ltd.
SPM	BE	Seminar on “Importance & Application of pmbok© guide – a Best Practice”	16 Jan, 2014	Mr. Somadev Singh Head-program mgmt office, NCR, Mumbai Mr. Jagroop Singh Regional Transition

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Subject	Class	Activity	Date-Month-Year	Resource Person
				manager, NCR, Mumbai
ADC	SE	Workshop on “PCB Layout Making Using diptrace Software”	1 Sep. 2013	Prof. Irfan Siddavtam Prof. Ashwini Dalvi Prof. Deepti Patole

2014-15

Subject	Class	Activity	Date-Month-Year	Resource Person
PADC	SE	Case study on different types of communication was introduced as exp no 11	OCT 2014	Mr. Sanjay Vidhani
AIT	TE	Explored tools of SEO this topic was theory oriented in Syllabus. We have introduced practical approach by adding following experiment no 6 : Searching engines optimization techniques & tools	Even 14-15	Ms. Ashwini Dalvi
WP	SE	Guest lecture on “Server side programming using ASP.Net”	20 Mar, 2015	Chirag Panchal CMP infotech
AIT	TE	Seminar “JSON alternative to XML”	4 Mar, 2015	Bro. Javed Khatri Bro. Mandar Sawant Student, BE, Computer Department ,

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Subject	Class	Activity	Date- Month- Year	Resource Person
				KJSCE
AIT	TE	Seminar on “Seminar “AJAX and REST”	11 Mar, 2015	Bro. Javed Khatri Bro. Mandar Sawant Student, BE, Computer Department , KJSCE
	BE	Industrial Visit to “SDSC SHAR”, Shriharikota	1 Oct, 2014	Prof. Shaileja Gogate
ADC	SE	Seminar on “Introduction to VHDL”	12 Sep, 2014	Prof. Kalpesh Modi, Xavier Institute of Technology Mumbai

2015-16

Subject	Class	Activity	Date- Month- Year	Resource Person
CGVR	TE	To explore 3-D tool, experiment is done on 3-D Animation Using various tools	ODD- 2015-16	Ms. Sujata pathak
DSIP	BE	Presentation were taken on IEEE paper study which is based on application of image processing	ODD- 2015-16	Ms.Sonali patil
OS	TE	Seminar on “RAID”	9 Oct, 2015	Mr. Sanjay Vidhani

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Subject	Class	Activity	Date- Month- Year	Resource Person
ADBMS	TE	Lecture conducted on Spatial and temporal databases .	ODD- 2015-16	Ms. Ujwala Bhangale
OST	TE	Seminar on “Android application”	18 Sep,2015	Bro Pritesh Jhaveri Bro Shubham Jayawant Bro Vignesh Pradeepkumar , BE Student
OS, OST	TE	Seminar on “Android ”	11 Sep,2015	Prof. Bhushan Jadhav
SPM	BE	Guest Lecture “Project Management: An Industrial Perspective”	22 Sep,2015	Ms. Jayashree Ravi COO, Tattva Consultancy, Mumbai
--	BE, ME	Industrial Visit to SDSRC, SHAR, Shriharikotta	11-15 Oct,2015	Prof. Sujata Pathak
--	FE	Workshop on “U & INGO Introduction”	25 Jan,2016	Mr. Anuj Kothari Volunteer Fellow, U & I, Bangalore.

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Subject	Class	Activity	Date- Month- Year	Resource Person
--	All	Seminar on "Life in US"	22 Jan,2016	1. Mr. Bhavdeep Sethi Sr. Software Engineer at TextIQ, San Francisco, California 2. Ms. Prerna Shraff Customer Technical Support Lead at Indigo BioAutomation Bloomington, Indiana Area
BDA	BE	Seminar on "Big Data Analytics"	04 Feb,2016	Mr. Deepak Nair JPMorgan Chase & Co., Accenture
--	FE	Seminar on "Cyber crime awareness and prevention"	10-11 Feb 2016	Mr. Anuj Kothari Volunteer Fellow, U & I, Bangalore.
STQA	BE	Workshop on "Software testing tool"	20 Feb 2016	Mr. Mohit Shroff Software Engineer, Tech Mahindra, Mumbai Mr. Shehzad Malik Momin Software Engineer, Tech Mahindra, Mumbai

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Subject	Class	Activity	Date- Month- Year	Resource Person
PL II	SE	Automatic Evaluation of JAVA program through online Judge	01 Mar, 2016	Ms. Mansi Jain Ms. Krushi Gada Mr. Vrishabh Lakhani Codecell Team Members, TE IT, KJSCE
AIT	TE	Seminar on “Open Source Web Frameworks and Web Services”	01 Mar, 2016	Mr. Akshay Patwardhan, Founder of Ninja Online Services
PLII	SE	Seminar on “Test Driven Programming Approach”	08 Mar, 2016	Ms. Mansi Jain Ms. Krushi Gada Mr. Vrishabh Lakhani Codecell Team Members, TE IT, KJSCE
WP II	SE	Seminar on “Web development and web management”	14 Mar, 2016	Mr. Mihir Kulkarni Mr. Sagar Jape Mr. Rahul Balsubramanian TE,IT, KJSCE
DS	TE	Guest lecture on “Service Oriented Architecture Deployment”	12 Apr, 2016	Mr. Akshay Patwardhan, Founder of Ninja Online Services

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37. State whether the programme/ department is accredited/ graded by other agencies. Give details. :

UG Program got accredited: Two times (2009, 2013)

Present Status of Accreditation of UG Provisionally Accredited in January 2014 (For two years)

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strengths

- Comprehensive and Trending Curriculum
- PG Program with Specialization in Information security
- Active Industry Interaction
- Young, hardworking and dynamic faculty.
- Well-equipped laboratories
- Exuberant Student activities
- Well defined processes
- Student

Weaknesses

- Faculty cadre ratio
- Focused Research
- Consultancy

Challenges

- Dynamic technologies
- Influence of job market on student Intake
- Service oriented job profiles

Opportunities

- Growing Interdisciplinary opportunities
- Offer Specialized PG program (for eg. Cyber Security ,Digital Forensic etc)
- Industrial / academic collaboration
- Industry oriented courses.

39. Future plans of the department.

- Centre of Excellence
- Research grants from Government agencies such as DST, UGC
- Consultancy

Long Term Goal

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- Centre of excellence
- Credit transfer and student exchange program with other universities.
- Inclusion of industry internship as credit course.
- Strengthen research among faculty and students.

Short Term Goal

- Encourage multidisciplinary projects and industrial visit.
- Facilitate resources for industrial training.
- Organizing short term courses / Conference
- Setting up specialized labs
- Technical training for lab assistants.
- Strengthen student publication
- Strengthen student participation in inter institute events.
- Increase the internship opportunities of students
- Research centre

Annexure I

29.Exercise undertaken before the development of new program(s)



Somaiya Vidyavihar

K J Somaiya College of Engineering
(Permanently affiliated to the University of Mumbai & accredited by NBA-AICTE)

August 30, 2012

Justification for starting M.E. IT (Information Security) Course

Information Security is a specialized field of Information Technology that focuses on the security aspects in the design of robust Information Systems. These systems are expected to be able to deal with possible sources of attacks on their information. These attacks can be from natural disasters or malicious activities by the people.

The proposed M.E.(Information Security) program will prepare students about protecting this information, it's management, it's security technology, it's legal and policy aspects. The course is aimed at creating skilled information security professionals.

This program is conceived acknowledging that information security is a multi-disciplinary field which includes security measures in the design, development, implementation, deployment, management, and operation of the information and communication technology systems.

The course of M.E. IT (Information Security) is newly introduced at Mumbai university at PG level and is not available in any of the Engineering Colleges within 15 kms area from our institute.

The college is established in 1983 and is successfully conducting five UG courses and four PG courses. The department of Information technology was accredited by National Board of Accreditation for three years from May 2009.

M.E. IT (Information Security) is highly specialized course. It has great demand not only in academic institutes but also in industry.


Dr. Shubha Pandit
Principal



Vidyanagar, Vidyavihar, Mumbai-400 077, India. Telephone: (91-22) 66449191 Fax: (91-22) 21025272
email: info@engg.somaiya.edu Web: www.somaiya.edu

**Evaluative Report of
Department of Mechanical Engineering**

1. Name of the Department & its year of establishment

Department of Mechanical Engineering,

Year of establishment: 1983

**2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D.,
Integrated Masters; Integrated Ph.D., etc.)**

Programs offered:

Sr. No.	Program	Intake	Year
1.	B.E.	60	1983- 2000
2.	B.E	120	2001
3.	M.E. (CAD/CAM & Robotics)	18	2009
4.	M.E (Energy Engineering)	18	2013
5.	B. Tech (Mechanical Engineering)	120	2014
6.	M. Tech (Mechanical Engineering specialization in CAD/CAM & Robotics)	18	2014
7.	M. Tech (Mechanical Engineering specialization in Energy Engineering)	18	2014
8.	Ph. D Mechanical Engineering	10	2015

3. Interdisciplinary courses and departments involved

- **Mechatronics** – Jointly by Department of Mechanical & Electronics Engineering.
- **Artificial Intelligence** - Department of Mechanical & Electronics Engineering.
- **Industrial Electronics** – Department of Electronics Engineering.
- **Fundamentals of Energy Engineering** – Department Of Mechanical

&Electronics Engineering.

- **Advanced Solar Photovoltaic** - Department of Mechanical & Electronics Engineering.
- **Advanced Solar Energy** – Department of Mechanical and Electronics Engineering.
- **Inter Disciplinary course (IDC)** Will be offered from Academic Year 2016-17 for semester VI.

4. Annual/ semester/choice based credit system

- Semester Wise “Mark Based System” for students admitted up to academic year 2011-2012
- Semester Wise “Credit Based Grading System” (CBGS) for students admitted from academic year 2012-2013 Onwards.

5. Participation of the department in the courses offered by other departments

- a. Manufacturing process planning and systems, Semester-V, Information Technology in the scheme of 2007-2012 Mumbai University
- b. Departmental Faculty offers audit courses for the students of all departments at UG from the academic year 2015-16 and PG level from the academic year 2016-17.

The details of the audit courses offered to the **SE (III) MECH** students by the Mechanical Engineering department for the academic year 2015-16 are as follows.

Sr. No.	Course Code	Name of the Audit Course	Course co-coordinator name with Room. No. and email id.
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1.	UMEA301	Basic Engineering Mathematics	Prof. A. S. Desai Room. No. A-212 (email: algondadesai@somaiya.edu)
2.	UMEA302	Vector Mechanics	Prof. S. Rajnarsimha Room. No. A-211 (email: rajnarsimha.sangam@somaiya.edu)
3.	UMEA303	Introduction to solar energy	Dr. A. G. Bhave Room. No. A-309 (email: agbhave@somaiya.edu)
4.	UMEA304	Renewable Energy	Dr. K. N. Patil Room.No.-A-117 (email- kashinath@somaiya.edu)

The details of the audit courses offered to the **SE (IV) MECH** students by the Mechanical Engineering department for the academic year 2015-16 are as follows.

Sr. No.	Course Code	Name of the Audit Course	Course co-coordinator name with Room. No. and email id.
1.	UMEA401	Steelmaking – Principles and Practices	Dr. Luckman Muhmood Room. No. B-011 (email: luckman@somaiya.edu)
2.	UMEA402	Introduction to Thermal and Fluid Systems	Prof. V. H. Shinde Room. No. B-010 (email: vijayshinde@somaiya.edu)
3.	UMEA403	Advanced Strength of Materials	Prof. B. M. Pradhan Room No. A-310 (email: bhushanpradhan@somaiya.edu)

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors) (2015-16)

	Sanctioned	Filled
Professors	6(4+1+1)	2
Associate Professors	12 (8+2+2)	11
Asst. Professors	18	24

7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

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Sr. No.	Name	Highest Qualification	Designation	Specialization	No. of Years of Experience	No. of PG/Ph. D. Students guided for the last 4 years
1	Dr. S. S. Bhusnoor	Ph. D. (Tech.)	Professor & HOD	Energy Engineering	21.5	02
2	Dr. Ramesh Lekurwale	Ph.D (Tech.)	Asso. Professor & Associate HOD	Production Engineering	23	04
3	Dr. A. G. Bhave	Docteur-Ingenieur (Thermique Industrielle)	Professor	Energy Engineering	07 years Teaching	04
4	Mr. B. M. Pradhan	M. E. (Mech.)	Asso. Professor	Mechanical Engineering	28	01
5	Dr. N. R. Gilke	Ph. D. (Tech.)	Professor	Mechanical Engineering	28	09 (PG) 02 (Ph. D on going)
6	Mr. N. S. Chandrasekhar	M. E. (Mech.)	Asso. Professor	Mechanical Engineering	27	02
7	Mr. A. K. Gangrade	M. Tech (Design Engg.)	Asso. Professor	Design Engineering	25	02
8	Mr. P. S. Yelpale	M. Tech. (Mech.)	Asso. Professor	Manufacturing Engineering	24	--
9	Mrs. Ramola Sinha	M. E. (Thermal Engg.)	Asso. Professor	Mechanical Engineering	18	02
10	Mr. V. S. Narwane	M. E. (Mech.)	Asso. Professor	CAD/CAM	12	14
11	Mrs. S. N. Bansode	M. Tech. (Mech.)	Asso. Professor	Mechanical Engineering	23	10
12	Dr. Kashinath Patil	Ph.D. (Energy)	Professor Dean R & D	Energy Engineering	15	08

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Sr. No.	Name	Highest Qualification	Designation	Specialization	No. of Years of Experience	No. of PG/Ph. D. Students guided for the last 4 years
13	Dr. Luckman Muhmood	Ph. D. (Mat.)	Asso. Professor	Materials Process Science	07	02
14	Mr. M. A. Palsodkar	M.Tech, M.B.A	Workshop Supdt.	CAD/CAM & Automation	14	--
15	Mr. V. M. Khaparde	M.E. (Mech.),	Asst. Professor	Production Technology & Management	28	--
16	Mr. Prashant Jain	M. Tech. (Ind. Engg.)	Asst. Professor	Industrial Engineering	24	04
17	Mr. Rajesh Pansare	M. E. (Mech.),	Asst. Professor	CAD/CAM & Robotics	11.5	--
18	Mrs. Shivangi Thakker	M. E. (Mech.)	Asst. Professor	CAD/CAM & Robotics	11	--
19	Mr. Avinash Prabhudesai	B. E. (Mech.)	Asst. Professor	Mechanical Engineering	09	--
20	Mr. Vilas Dhore	M. E. (Mech.)	Asst. Professor	Machine Design	18	--
21	Mr. Vijay Shinde	M. Tech. (Thermal & Fluids Engg.)	Asst. Professor	Thermal & Fluids Engineering	09	--
22	Mr. Vijay Bhosale	M. E. (Mech.)	Asst. Professor	CAD/CAM	14	03
23	Mrs. Shilpa Bhambure	M. E. (Mech.)	Asst. Professor	CAD/CAM & Robotics	12	--
24	Mrs. Chitra B. Menon	M. E. (Mech.)	Asst. Professor	CAD/CAM & Robotics	07	--

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Sr. No.	Name	Highest Qualification	Designation	Specialization	No. of Years of Experience	No. of PG/Ph. D. Students guided for the last 4 years
25	Mr. Abhishek Bhadauria	M. Tech. (Mech.)	Asst. Professor	Automobile Engineering	06	--
26	Mr. S. Raj Narsimha	M. Tech. (PEST)	Asst. Professor	Production Engineering System Technology	22	01
27	Mr. Dinesh Chawde	M. E. (Mech.)	Asst. Professor	Machine Design	17	--
28	Mr. Sandeep Chopade	M. Tech. (Mech.)	Asst. Professor	Mechanical Engineering	15	--
29	Dr. S. R. Nikam	Ph. D. (Mechanical)	Asst. Professor	Thermal & Fluid Science	18	01
30	Mr. Atul Saraf	M. Tech. (Mech.)	Asst. Professor	CAD/CAM & Automation	18	--
31	Mrs. Priyanka Patil	M. Tech. (Design.)	Asst. Professor	Design Engineering	02	--
32	Mr. Abhijeet U. Karmarkar	M. E. (Mech.)	Asst. Professor (Temporary Faculty)	CAD/CAM & Robotics	01 year 08 months	--
33	Mr. Abhilash C. Nair	M. E. (Mech.)	Asst. Professor (Temporary Faculty)	CAD/CAM & Robotics	01 year 06 months	--
34	Mr. Sachin Oak	M. E. (Mech.)	Asst. Professor (Temporary Faculty)	CAD/CAM & Robotics	1	
35	Mr. Pramod	M. Tech (Mech.)	Asst. Professor	Thermal Engineering	05	

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Sr. No.	Name	Highest Qualification	Designation	Specialization	No. of Years of Experience	No. of PG/Ph. D. Students guided for the last 4 years
	Kewale		(Temporary Faculty)			
36	Ms. Srishti Sharma	M. E. (Mech.)	Asst. Professor (Temporary Faculty)	CAD/CAM & Robotics	1	
37	Mr. Sachin Sheravi	M. Tech (Mech.)	Asst. Professor (Temporary Faculty)	Design Engineering	05	--

8. Percentage of classes taken by temporary faculty – program-wise information

Program	Percentage load taken by Temporary Faculty				
	2011-12	2012-13	2013-14	2014-15	2015-16
UG	7.31	9.67	8.46	5.29	13.33
PG (CCR)	47.78	0	0	0	2.62
PG (EE)	NA		4.48	0	0
Ph.D	NA				0

9. Program-wise Student Teacher Ratio

Program	Student-Teacher Ratio (STR)				
	2011-12	2012-13	2013-14	2014-15	2015-16
UG	18.86	18.16	17.73	17.66	16.80
PG (CC)	4.58	5.55	3.35	4.92	3.02
PG (EE)	NA		3.54	6.45	3.15
Ph.D	NA				2.00

Program	Year	Total no. of Students enrolled	Total number of Faculty	STR
UG Mechanical	2011-12	432	22.91	18.86

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Engineering	2012-13	432	23.16	18.16
	2013-14	432	24.36	17.73
	2014-15	432	24.46	17.66
	2015-16	432	25.71	16.80
PG Mechanical (CAD/CAM and Robotics)	2011-12	12	2.61	4.58
	2012-13	11	1.98	5.55
	2013-14	4	1.19	3.35
	2014-15	10	2.03	4.92
	2015-16	18	5.92	3.02
PG Mechanical (Energy Engineering)	2013-14	5	1.407	3.54
	2014-15	12	1.66	6.45
	2015-16	18	5.71	3.15
Ph. D Mechanical	2015-16	02	1	2

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Post	Sanctioned	Filled
Lab Assistant + Draftsman + CNC operator	09	09
Lab Attendant	06	06
Workshop Instructor	09	09
Workshop Foreman	01	01
Hamal + sweeper	02	02
Peon cum Lab Attendant	02	02
Total	29	29

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

Total Grants received from National funding agencies – Rs. 6, 45, 000/-

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S. No.	Title of Project	Principal Investigator	Funding Agency	Amount (INR)	Year	Status
1	Development of Engine Fine particle Control System	Dr.S S. Bhusnoor	University of Mumbai	25,000/-	2013-14	Completed
2	MODROBs of Renewable Energy Laboratory	Prof. B M Pradhan/ Dr. A. G. Bhave	AICTE	3,20,000/-	2013-14	Completed
3	Metal Matrix composite form Al waste	Dr. K. N. Patil	ATE Industries	1,50,000/-	2014-15	Ongoing
4	Modification in sugarcane harvesting machine for performance improvement	Prof. A. A. Prabhudesai	Godavari Bio-Refineries	3,00,000	2014-15	Completed
5	Development of receiver cum thermal storage cooking device for a parabolic dish concentrator type solar cooker	Dr. A. G. Bhave	UGC	3,00,000/- (Amount sanctioned)	2015-16	Ongoing
6	To design and fabricate a machine for creation of tactical objects using digital light processing Technology	Prof. N. S. Chandrashekar	UGC	2,60,000/- (Amount sanctioned)	2015-16	Ongoing

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received : Rs. 6, 45, 000/-

Proposals Sanctioned

S. No.	Title of Project	Principal Investigator	Funding Agency	Amount (INR)	Year	Status
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1	MODROBs of Renewable Energy Laboratory	Prof. B M Pradhan/ Dr. A. G. Bhawe	AICTE	3,20,000/-	2013-14	Completed
2	Development of Engine Fine particle Control System	Dr.S S. Bhusnoor	University of Mumbai	25,000/-	2013-14	Completed
3	Metal Matrix composite form Al waste	Dr. K. N. Patil	ATE Industries	1,50,000/-	2014-15	Ongoing
4	Modification in sugarcane harvesting machine for performance improvement	Prof. A. A. Prabhudesai	Godavari Bio-Refineries	3,00,000/-	2014-15	Completed
5	To design and fabricate a machine for creation of tactical objects using digital light processing Technology	Prof. N. S. Chandrashekar	UGC	2,60,000/- (Amount sanctioned)	2015-16	Ongoing
6	Development of receiver cum thermal storage cooking device for a parabolic dish concentrator type solar cooker	Dr. A. G. Bhawe	UGC	3,00,000/- (Amount sanctioned)	2015-16	Ongoing

Proposals Submitted

1) **UGC Minor Research Proposal**

Sr. No.	Faculty Member	Title Proposal	Amount	Remark
1	Dr. K. N. Patil	Development of the Triple Utility Solar Concentrator Based Vapor Absorption System	4,95,000/-	Submitted 2015-16

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2	Dr. N. R. Gilke	Development of Self Contained Cabinet for Vaccination Box by Solar PV based System	2,30,000/-	Submitted 2015-16
3	Dr. Lukman Mahammad	Manufacture and testing of Aluminum alloy metallic foams for improved impact properties	4,17,000/-	Submitted 2015-16
4	Dr. S. S. Bhusnoor	Control of Fine Particles from Engine Exhaust using Particle Transport Mechanisms	5,00,000/-	Submitted 2015-16
5	Dr. R. R. Lekurwale & Dr. K. N. Patil	Design and Development of Novel Floating Carriage for Salt Generation Trough Solar Concentrator	3,40,000/-	Submitted 2015-16
6	Mr. V. G. Dhore	Enhancing the compressive strength of hydraulic cement through the addition of ferromanganese slags and lime fines	3,42,000/-	Submitted 2015-16
7	Dr. R. R. Lekurwale	Design and development of low cost abrasive water jet machine	3,80,000/-	Submitted 2015-16
Total Cost			27,04,000/-	

2) DST Research Proposal

Sr. No.	Faculty Member	Title Proposal	Amount	Remark
1	Dr. Luckman Mahmood	Oxide mixtures as heat transfer fluid in Concentrating solar power plants	36,91,000/-	Approved, Nov 2016
2	Dr. D.N. Raut, (VJTI), Dr. D. K. Shinde(VJTI) Dr. K. N. Patil (KJSCE)	Plastic to liquid fuel, a novel process to create the Metal Matrix Composite product by Powder Injection Molding route	69,94,688/-	Submitted 2015-16
Total			1,06,85,688/-	

13. Research facility / Centre with :

- o State recognition – University recognized Ph. D and P.G. Centre
- o National recognition - Nil
- o International recognition – Nil

14. Publications:

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- Number of papers published in peer reviewed journals (national / international)

Year	No. of Papers Published in National Journal (Peer review)	No. of Papers Published in International Journal (Peer review)	Total
2011-12	0	1	1
2012-13	1	1	2
2013-14	1	2	3
2014-15	1	4	5
2015-16	4	2	6

- Monographs - Nil
- Chapter(s) in Books - Nil
- Editing Books – Nil
- Books with ISBN numbers with details of publishers: Nil

Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

Department of Mechanical Engineering	Details Citation Index (Range/Average), SNJP, SJR, Impactor Factor (Range/Average), h-index				
	Citation Index (Range/Average)	SNJP	SJR	Impactor Factor (Range/Average)	h-index
Dr. Ramesh Lekurwale	5	NIL	NIL	0.5-1.7	1
Dr. Luckman Mahmood	159	NIL	NIL	01-02	6

Faculty Members Serving on Editorial Boards / Board of Reviewers

Sr.No.	Name	International
1	Dr. K.N. Patil	1. Iranian Journal of Mechanical Engineering
		2. International conference on Recent Trends in Engineering & Technology (ICRTET 2014)
2	Dr.Luckman Muhmood	1. Metallurgical and Materials Transactions B
		2. Philosophical Magazine
		3. Steel Research International, Wiley
		4. Industrial & Engineering Chemistry Research,

		ACS
		5. Journal of The American Ceramic Society
		6. Transactions of the Indian Institute of Metals
		7. International Journal of Heat and Fluid Flow
3	Dr Ramesh Lekurwale	1. International Journal of Supply and Operation Management (Print ISSN 2383-1359 Online ISSN 2383-2525)
		2. International Journal of Industrial and Systems Engineering (Inderscience Publication) ISSN online: 1748-5045 ISSN print: 1748-5037
		3. International conference on Transformation in Engineering Education

15. Details of patents and income generated

1. Patent filed by K. J. Somaiya College of Engineering, on the basis of work done by Prof. A. A. Prabhudesai (Asst. Professor, Department of Mechanical Engineering.)
2. Patent filed (Radiator Grill, 3489/MUM/2013) and published in Indian Government Patent Journal on October 30, 2015.
3. Patent filed (Radiator Grille, PCT/IN2014/000698) and published in World Intellectual Property Organization (WIPO) Gazette in June 2015.
4. Patents (Radiator Grill with amendment) filed in USA, Publication No. US 2016/0257193 A1.
5. Patent filed in Germany. Publication No. DE 11 2014 005 016 T5.
6. Patent filed in Japan in April 2016. Application No. 2016-551115. - Approved
7. Patent (Radiator Grill with amendment) filed in South Korea in May 2016. Application No. 10-2016-7014523.

16. Areas of consultancy and income generated

Sr. No.	Faculty Member	Title Proposal	Amount	Remark
1	Dr. K. N. Patil	Metal Matrix composite form Al waste	1,50,000/-	ATE Industries (2014-15)
2	Mr. A. A. Prabhudesai	Modification in sugarcane harvesting machine for performance improvement	3,00,000	Godavari Biorefineries (2014-15)

Total	4,50,000/-
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17. Faculty recharging strategies

- The Somaiya Trust has constituted Somaiya Vidyavihar Awards to recognize and honor conscientious hard work and the extraordinary achievements of Faculty and Staff.
- At the departmental level, faculties are felicitated for overall excellence.
- Faculties are encouraged to pursue higher education either in house or at reputed institutions.
- College level Faculty Development Policy encourages faculty for participation in Conferences, Workshops, Training Programs and Industrial training.
- Faculties are rewarded for publications in peer reviewed journals.
- Faculties are encouraged to apply for funded projects.
- KJSCE is a remote center for courses by IIT faculty under National Mission on Education through ICT sponsored by MHRD, New Delhi; provides faculty with exposure to these courses.
- Provision of Yearly book allowance to faculty to augment teaching resources.
- Cultural and Sport events are organized for faculty and staff for to hone and promote their skills.

Year	2011-12	2012-13	2013-14	2014-15	2015-16
No. of faculty who attended Orientation courses/workshops/seminars	37	11	27	8	8

18. Student projects

UG	2011-12	2012-13	2013-14	2014-15	2015-16
Internal%	87.32	79.03	73.58	93.10	86.67
External%	00	00	00	00	00
Interdisciplinary%	12.68	20.97	26.42	6.9	13.33
PG (CCR)					
Internal%	37.50	45.46	36.36	0	75
External%	62.50	54.54	63.64	100	25
Interdisciplinary%	00	00	00	00	00
PG (EE)					

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Internal%	-	-	-	80	58
External%	-	-	--	20	42
Interdisciplinary%	-	-	--	00	00

19. Awards / recognitions received at the national and international level by

• Faculty :

Sr no	Name of Faculty	Awards / recognitions received
1	Dr. Luckman Muhmood	1.Awarded the 12th Willy Korf award for young excellence at the AMM Steel Success Strategies Congress (SSS XXVI), June, 2011 at New York, USA. 2.Won the best paper award by a postdoctoral fellow at CSIRO, Australia in Feb 2014 3.Awarded C .J. Yngstroms scholarship for conducting research work at Carnegie Mellon University, Pittsburgh, USA. 4.Was one of the nominees for the Henry Marion owe/Marcus A. Grossman Young Author Award by ASM International in the year 2012 5.Co - recipient of 2016 TMS (The minerals, materials and metal society) Extraction & processing division science award.
2	Dr. K N Patil	1.Best Thesis Award by IIT Bombay for 2013 with cash prize of Rs 20000=00 2.Stood first in final year BE (Mechanical) and won gold medal of merit.
3	Dr. R R lekurwale	1.Availed UGC Travel Grant (file No 6-412/2013/TG) of Rs. 82803/- for presenting the paper in IEEM at Bankok
4	Dr. S R Nikam	1.Availed UGC Travel Grant (file No 6-172/2014/TG) of Rs 1,60609/- for presenting the paper in USA.
5	Dr. A. G. Bhave	1.Worked as a member of Interview panel for appointment of Lecturer in Mechanical Engineering, Government Polytechnic, Maharashtra Public Service Commission.

- Faculty - **Nil**
- Doctoral / post-doctoral fellows – **Nil**

Awards / recognitions received at the national and international level by Students

Year	2011-12	2012-13	2013-14	2014-15	2015-16
Number of students who received Awards /	3	4*	3	5	4

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recognitions at the national and international level (Incudes whole team as well as individual students)					
*Letter of Appreciation, dated 2 March 2013, received from the Hon'ble Chief Minister of Maharashtra Prithviraj Chavan by our Onyx Team for participating in SAE Aeromodelling Competition held in USA.					

20. Seminars/ Conferences/Workshops organized and the source of funding (national/international) with details of outstanding participants, if any.

Details of CNC Training conducted at KJSCE

Sr. No.	Name of Course	Resource Person	Duration	Dates	No. of Participants	Fund Generated
1.	Course on CNC Milling Programming	Mr. Kishor Kadam	03 Days	09/08/16 to 11/08/2016	22	32500
2.	Ace CNC Lathe Programming	Mr. Kishor Kadam	03 days	20/01/2016 to 22/01/2016	25	33750
3.	Ace CNC Lathe Programming	Mr. Kishor Kadam	03 days	26/05/2015 to 28/05/2015	25	33750
4.	Ace CNC Lathe Maintenance Training	Mr. Digvijay Singh	02 Days	26/08/2014 to 27/08/2014	25	22500
5.	Course on CNC Programming	Mr. V.S. Narwane Mr. Avinash	04 Days	18/06/2014 to 21/06/2014	06	18000
6.	Course on CNC Programming	Mr. V.S. Narwane Mr. Avinash	2 weeks	08/02/2014 to 21/02/2014	20	40000
7.	Course on CNC programming	Mr. V.S. Narwane Mr. Avinash	04 days	06/01/2014 to 09/01/2014	11	33000

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Sr. No.	Name of Course	Resource Person	Durati on	Dates	No. of Participant s	Fund Generate d
8.	Course on CNC Lathe Programming	Mr. V.S. Narwane Mr. Avinash	04 days	19/12/2012 to 22/12/2012	17	40755
9.	Ace CNC Lathe Programming	Mr. Kishor Kadam	03 days	29/08/2012 to 31/08/2012	29	26310
10.	Ace CNC Lathe Maintenance Training	Mr. Kishor Kadam	02 days	26/04/2013 to 27/04/2013	28	22500

Details of Renewable Energy Training Programs conducted for MITCON

KJSCE in RE Lab

Sr. No.	Name of Course	Resource Person	Durati on	Dates	No. of Participant s	Fund Generate d
1.	Solar Energy	Dr. A G Bhave Prof Marathe Prof Patawardhan	01 Days	13/03/2013	25	13000/-
2.	Solar Energy	Dr. A G Bhave Prof Marathe Prof Zalte Prof Bhusnoor	01 days	09/01/2013	25	13000/-
Sr. No.	Name of Course	Resource Person	Durati on	Dates	No. of Participant s	Fund Generate d
3.	Solar Energy	Dr. A G Bhave Prof Marathe Prof Patawardhan Prof Zalte Prof Bhandari	01 days	17/10/2012	25	13000/-
4.	Solar Energy	Dr. A G Bhave Prof Marathe Prof Zalte	01 Days	31/03/2012	25	7000/-

21. Student profile course-wise:

Applications are received by DTE and not received or processed by KJSCE. Students are admitted as per DTE allotment.

Academic year 2015-16

Name of the Course	Academic year (year of Admission)	Applications Received and Students Selected	Enrolled		Total Pass		Total Enrolled	Total Passed	Pass percentage
			Male	Female	Male	Female			
UG	2011-12	Admission process is as per the rules and regulation of DTE	143	13	140	13	156	153	98.08
	2012-13		149	14	146	12	163	158	96.93
	2013-14		147	11	NA	NA	158	Now in BE	NA
	2014-15		146	11	NA	NA	157	Now in TY	NA
	2015-16		141	15	NA	NA	156	Now in SY	NA
PG (CCR)	2011-12	Admission process is as per the rules and regulation of DTE	7	5	4	5	12	9	75.00
	2012-13		10	1	10	1	11	11	100
	2013-14		3	1	3	1	04	04	100
	2014-15		7	3	6	3	10	9	90.00
	2015-16		18	0	-	-	18	-	-
PG (EE)	2011-12	Admission process is as per the rules and regulation of DTE	This course started from Academic year 2013-14						
	2012-13		5	0	5	0	5	5	100
	2013-14		11	1	5	0	12	5	41.6
	2014-15		15	3	-	-	18	-	-
	2015-16		This course started from Academic year 2015-16						
Ph.D	2011-12	Admission process is as per the rules and regulation of DTE	This course started from Academic year 2015-16						
	2012-13		This course started from Academic year 2015-16						

22. Diversity of Students

Admissions are governed by rules of eligibility defined by Department of Technical Education (Maharashtra state) from time to time.

Name of the	Academic	Total admitt	Percentage of	Percent age of	Percent age of	Percent age of
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Course	year	ed	students from same state		students from other state		students from other country		students J and K	
			Total	%	Total	%	Total	%	Total	%
UG	2011-12	130	121	93.07	3	2.31	5	3.85	1	0.77
	2012-13	135	125	92.59	4	2.96	5	3.7	1	0.74
	2013-14	134	115	85.82	12	8.95	6	4.48	1	0.75
	2014-15	133	126	94.74	0	0	7	5.26	0	0
	2015-16	132	111	84.09	9	6.82	11	8.33	1	0.76
PG (CCR)	2011-12	13	11	84.61	2	15.3	0	0.0	0	0.000
	2012-13	12	12	100.0	0	0.00	0	0.00	0	0.000
	2013-14	4	4	100.0	0	0.00	0	0.00	0	0.000
	2014-15	10	9	90.00	1	10.0	0	0.00	0	0.000
	2015-16	18	18	100.0	0	0.00	0	0.00	0	0.000
PG (Energy)	2011-12	Programme started from 2013-14								
	2012-13									
	2013-14	6	5	83.33	1	16.6	0	0.00	0	0.000
	2014-15	12	10	83.33	2	16.6	0	0.00	0	0.000
	2015-16	18	17	94.44	1	5.55	0	0.00	0	0.000

23. How many students have cleared Civil Services, Defense Services, GRE, TOEFL, GATE and any other competitive examinations?

Exam	No. of Students cleared				
	2011-12	2012-13	2013-14	2014-15	2015-16
GATE	17	26	05	18	02
GRE	32	46	12	27	12
GMAT	N.A.	-	-	-	0
CAT	11	7	03	04	00
CET	3	8	05	08	00

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TOEFL	5	6	15	-	12
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24. Student progression

Student progression (passed out year)	Percentage against enrolled				
	2015-16	2014-15	2013-14	2012-13	2011-12
UG to PG	--	22/156=14.1%	18/155=11.61%	25/163 = 15.33%	--
PG to Ph.D.	1/18=5.5%	---			
Ph.D. to Post-Doctoral	Relevant data not available				
Employed (Job offered/ Unique offer) ➤ Campus selection ➤ Other than campus recruitment	106/81	106/93	88/71	76/68	74/74
Entrepreneurs	Relevant data not available				

25. Diversity of staff (2015-16)

Percentage of faculty who are graduates	No of Faculty / Total	Percentage
of the same parent university	22/37	59.46%
from other universities within the State	7/37	18.92%
from other universities from other States	1/37	2.70%
from other National Institutes (IITs/NITs)	5/37	25.70%
from other universities from outside India	2/37	15.02%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period.

Degree	No. of	Name of Faculty	Year of awarding Ph. D
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awarded	Faculty		
Ph. D	04	Dr. N. R. Gilke	2013-14 (University of Mumbai)
		Dr. R. R. Lekurwale	2014-15 (VJTI, Mumbai)
		Dr. S. S. Bhusnoor	2015-16 (IIT Bombay)
		Dr. S. R. Nikam	2015-16 (IIT Bombay)

27. Present details about infrastructural facilities

a) Central Library

Opac: Web Opac online facility is provided wherein the students can renew the books at any point of time. They can also reserve book in advance. Also intimation is provided if the book is available.

Availability:

- i. IEEE electronics Library
- ii. Springer Electrical, Electronics, Computer Science and Mechanical Engineering Journals.
- iii. McGraw Hill Access Engineering Library
- iv. Elsevier SCIENCE DIRECT
- v. Kindle Six licenses
- vi. ASME Digital Library
- vii. ACM Digital Library
- viii. British Council Library,
- ix. IIT Bombay library

b) Internet facilities for staff and students:

- Number of systems with configuration : **1494**
- Computer-student ratio : **1:1 (in Laboratories)**
- Dedicated computing facility: **Yes in CCF, 40 PCs**
- LAN facility: For **All Desktop computers**
- WiFi facility: **At all common places throughout KJSCE, with the help of 48 Access Points**
- Propriety software / Open source softwares: Proprietary-48, Open Source 8
- Number of nodes/ computers with internet facility: All computers have Internet access
- Any other: Dedicated Data Centre to take care of KJSCE's Networking and Computing needs.

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- Backbone Network comprising of 10 Gbps optical fiber connectivity, from Core to Distribution Level. Entire network is based on Cisco Switches; high speed Nexus as the Core switch and Cisco Catalyst switches at the distribution.
- Two Rack Servers: Dell Power Edge R 720; Intel Xenon E5-2620 v2, 2.1 GHz, 15MB Cache, 2*16 GB RAM, 4 TB storage with integrated RAID controller.
- 2 Dell Power Edge T 300, Quad Core Xenon-Pro L3353, 12MB cache, 2.66 GHz, 4GB RAM, 300GB*2 HDD.
- Proprietary Private Cloud that supports 64 VMs with 1GB RAM.

c) Total number of U.G class rooms: 6, Tutorial Rooms: 1, U.G. Seminar Hall: 1,

P.G Class room: 2, P.G. Seminar Hall: 1

d) Class rooms with ICT facility: 6

e) Students' Laboratories: 17(UG) +02(PG) = 19

f) Research Laboratories: 04 (I.C. ENGINE,RE, Engg. METALLURGY, CAD/CAM)

28. Number of students of the department getting financial assistance from College.

Financial assistance is provided to the students through PUSH (People United for Student Help)

Year	No. of Students received Financial Assistance under PUSH Scheme	Total Financial Assistance disbursed	SDC/Project	Total no of students
2015-16	07	2,80,000	Proposal submitted, u/approval.	Proposal submitted, u/approval.
2014-15	04	1,20,000/-	Not Applicable	Not Applicable
2013-14	07	1,25,000/-	Not Applicable	Not Applicable
2012-13	Relevant data not available		Not Applicable	Not Applicable
2011-12	Relevant data not available		Not Applicable	Not Applicable

29. Was any need assessment exercise undertaken before the development

of new program(s)? If so, give the methodology.

M E Mechanical Engineering (CAD/CAM and Robotics) program started from Academic Year 2009-10 and M E Mechanical Engineering (Energy Engineering) started from 2013-14. Following assessment was done before establishing the program.

There are about 1200+ Mechanical Engineering, Automobile Engineering and Production Engineering students graduating every year from the University of Mumbai region. Out of which very few students get a chance to pursue master's degree due to insufficient avenues for the same. As per AICTE requirements, it was mandatory for all faculty members without post-graduation, to enhance their qualifications. Hence there was a need to start postgraduate course. Due to industry requirement of computer aided design and manufacturing it was decided to start PG course with specialization in CAD/CAM. Energy Engineering & Management is need of the day and hence specialization in Energy engineering was started to cater this requirement. KJSCE management was willing to grow vertically which was possible due to availability of infrastructure.

The following contributions are made by Masters of Mechanical Engineering program:

1. Academic Growth
2. Industrial Growth
3. Technological Development
4. R and D, new project development
5. Economic Growth

30. Does the department obtain feedback from

- a) Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?
- b) Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?
- c) Alumni and employers on the programmes and what is the response of the department to the same?

● **Feedback collected for all courses: YES**

1. **Philosophy of feedback system**

There are various feedbacks taken at institute and department level for improvement in the existing systems.

Feedback Type	Feedback	Frequency of taking feedback	Initiated by	Use
Institute level feedback	Recruiters' Feedback	Once in a year	Placement cell	Bridge the gap between industry and academics
Department	Faculty	Once in a	Head of the	Enhancing the student's

Feedback Type	Feedback	Frequency of taking feedback	Initiated by	Use
level Feedbacks	Feedback	semester	department	experience of learning and teaching. For faculty development.
	Course Feedback	Once in a semester	Course in-Charges	Enhancing the course syllabus. Ensuring the effectiveness of course design. Enabling a communication with students.
	Exit Batch (Survey) Feedback	Once in 4 years (Final year Students)	Head of the department	Improve the PO and PEO achievement.
	Facility Feedback	Once in a year	Head of the department	Improving the infrastructure/facilities required by the students
	Alumni Feedback	Once in 4 years (Final year Students)	Departmental alumni cell	To collect latest alumni information and achievements
	Final Year Project feedback	Once in a year (from external Examiner)	Head of the department	Determine the quality of final year projects from external project examiners

2. Faculty feedback collection process

- Design of questionnaire for feedback form at institute level to maintain uniformity.
- Feedback forms for all faculty members for their respective courses are generated.
- Feedback committee executes the feedback process during each semester.
- Till 2013 feedback procedure was conducted manually. The feedback forms were circulated by the feedback coordinator and students used to fill

it. From year 2014 onwards online systems were implemented to collect and analyze feedback data.

- The smooth working and above 60% participation of students.
- The students rate the performance of the faculty on a scale of 10.

3. Percentage of students who participated:

Approx. above 75% (online)

Approx. 50% (manual)

4. Faculty Feedback Analysis process:

- Online feedback report generation for individual faculty.
- Average performance index in the scale of 10 is generated for each course faculty.
- Till January 2014 manually weighted analysis was done by the faculty. Currently Analysis is done by using feedback software.

5. Number of corrective actions in the last three years:

Some of the corrective actions taken based on the students comments in feedback form:

- Use of Visual aids, Audio –PA system.
- Availability of LCD, Laptop in the department with every Faculty.

31. List the distinguished alumni of the department (maximum 10)

Sr. No.	Name	Batch	Education	Job profile
1	Swadesh Khetavat	1987	B.E.(Mech.)	Entrepreneur
2	Ramaswamy Krishnan	1989	B.E. (Hons) M.M.S	MD, Aspire Infinite
3	Nipun J. Mehta	1989	B.E.(Hons) - Production	Director - Sphere Engineers Pvt Ltd
4	Dhananjay Parchure	1989	BE, MMS	Business
5	Sudish Sukumaran	1996	B.E (Mech) , Masters in Engineering (Manufacturing) , University of Michigan	Director (Technical) . Elmach Packages India Pvt. Ltd.
6	Amit K. Mahajan	1997	B.E.(Hons.) - Production	Proprietor – Aspire Publicates
7	Raghunandan Jagdish	2001	B.E.Mech	Business, Nandan Enterprises

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8	Nikhil Dodecha	2004	BE Mech, MBA-Post Graduate Diploma in Industrial Management – from NITIE	Principal Consultant at ITC Infotech
9	Preyank Sheth	2007	BE Mech, Penn State University M.S., Mechanical Engineering	Thermodynamics Engineer at Gulfstream Aerospace
10	Kashyap Pal	2009	BE Mech, Coventry University Masters, Mechanical Engineering	Director at KP Aerodynamics Ltd, Bentley Motors Ltd

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.**Academic Year 2013-14**

Sr. No	Special Lecture /Workshop /STTP	Title	Details about the Special Lecture /Workshop /STTP	Name of Resource Person and Organization	Date and Duration
1	Workshop	Automotive IC Engine Design and Development	All Mechanical Students	IIT Bombay	02 Days
2	Special Lecture	Computational Fluid Dynamics	M.Tech. (Energy Engg.) and BE Mech	Dr. Prasanna Nambiar, Don Bosco, Vashi	05-10-2013
3	Workshop	Energy Conservation and Management	M.Tech. (Energy Engg.) and BE Mech	PCRA	07-03-2014

Academic Year 2014-15

Sr. No	Special Lecture /Workshop /STTP	Title	Details about the Special Lecture /Workshop /STTP	Name of Resource Person and Organization	Date and Duration
1.	Workshop	SolidWorks	All Mechanical Students	SAE Council Students	06-09-2014
2.	Workshop	Automobile and Vehicle Dynamics	All Mechanical Students	SAE Council Students	30-31 Aug 2014
3.	Special Lecture	Power Plant Engineering	M.Tech. (Energy Engg.) and BE Mech	Dr. MVJJ Suresh, GE	12-02-2014
4.	Workshop	Programmable Logic Controls and Servo Systems	M.Tech. (CAD/CAM and Robotics)	Mr. Avinash Nagpure Mitsubishi Electric	09-10 June 2015
5.	Special Lecture	Enterprise Resource Planning	BE Mech	Mr. Anuj Anup, Mr. Devendra Koppikar	03-02-2015
6.	Special Lecture	Challenges in Precision Engg	All Mechanical Students	Mr. AVP Godrej	04-03-2015
7.	Special Lecture	Technical Paper Writing	All Mechanical Students	Dr. Ramesh Lekurwale, KJSCE	23-03-2015
8.	Special Lecture	Decentralised Renewable Power Systems	M.Tech. (Energy Engg.) and BE Mech	Mr. Anand Narayan, Selio Labs	19-01-2015
9.	Special Lecture	EDM/ECM	M.Tech. (CAD/CAM and Robotics)	Prof. Rane	

Academic Year 2015-16

Sr.No	Special Lecture /Workshop /STTP	Title	Details about the Special Lecture /Workshop /STTP	Name of Resource Person and Organization	Date and Duration
1.	Special Lecture	Response surface Methodology	M.Tech. (CAD/CAM and Robotics)	Dr. V.S.Bilolikar Fr. Agnel COE Bandra	23-03-2016 (3Hrs) (10.30am-1.30pm)
2.	Special Lecture	Sensors	M.Tech. (CAD/CAM and Robotics)	Dr. Kiran Bhole S.P.C.O.E., Andheri	19-10-2015 () (2.15 pm – 3.15 pm)
3.	Special Lecture	Computational Fluid Dynamics	M.Tech. (CAD/CAM and Robotics)	Dr. Prasanna Nambiar, Don Bosco, Vashi	03-11-2015 (10.00 am – 1.00 pm)
4.	Workshop	CFD (ANSYS Certified)	B.E.(Mech), M.Tech (CAD/CAM and Robotics), M.Tech (Energy Engg)	Ms. ARK	14-19 Dec 2015 (06 days)
5.	Workshop	Solar PV	M.Tech (Energy Engg)	Dr. C S Solanki IIT Bombay	01-09-2015 (4.15 pm – 5.15 pm)
6.	Expert Lecture	Design, operation, Maintenance and Diagnostics of feed water heaters	TY Mech	Mr. Himanshu Marmat Tata Power	30-09-2015 (10.30 am – 12.30 pm)
7.	Expert Lecture	CFD Open Source Software	TY and BE Mech	Mr. Rahul Joshi IIT Bombay	Aug 2015 (10.30 am – 1.30)

Sr.No	Special Lecture /Workshop /STTP	Title	Details about the Special Lecture /Workshop /STTP	Name of Resource Person and Organization	Date and Duration
		(OPENFOAM)			pm)
8.	Special Lecture	Production Process	SY Mech	Mr. Mahesh Babu Godrej, Vikhroli	02-03-2016 (3.15 pm – 4.30 pm)
9.	Special Lecture	How to develop Research Aptitude	Ph.D Scholars	Dr. Vishal Sardeshpande	05-07-2016
10.	Special Lecture	Fuel Cells	M.Tech (Energy Engg)	Dr. Dayadeep Monder IIT Bombay	24-02-2016
11.	Special Lecture	Energy management in Thermal power stations	M.Tech (Energy Engg)	Mr. A A Bhat Tata Power	22-04-2016
12.	Special Lecture	Rankine cycle simulation	SY Mech	Mr. K Dey, Mr. H Raut IIT Bombay	23-09-2016

33. List the teaching methods adopted by the faculty for different programmes.

To improve quality of teaching, the following methods are adopted:

1. Use of visual aids in lecture delivery is increased substantially
2. Public address system is also made available wherever necessary.
3. Series of NPTEL Video lectures and notes in pdf are available for the ready reference.
4. Experimental write ups and assignments if any are uploaded on intranet.
5. Regular faculty members are given laptops.
6. Teaching over and above syllabus by organizing Industrial Visits and expert lectures.
7. Innovative IA components added.
8. Innovative mini projects as well as final year projects.

Learning Management System (LMS) is a new concept and some faculties have used this application software tool during the teaching-learning process. Faculty uploaded lecture planning, lecture notes, tests, online quizzes, ppts etc. used it for CO analysis purposes.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

Program outcomes assessment is performed at the end of each academic year (AY) using the tools as follows.

1. Information is collected for each course.
 - Student performance assessment –direct assessment (TT (Term Test), IA(Internal Assessment), ESE (End Semester Examination), Laboratory work assessment)
 - Student performance assessment-indirect assessment (course feedback)
2. Students placement records
3. Exit survey of the graduating batch
4. Alumni feedback
5. Recruiter feedback
6. Feedback from advisory boards

After collecting the data of direct and indirect assessment

7. Exit interviews, Alumni feedback are examined to collect information to identify weak areas, if any. In case of any such findings, discussion is held with students to identify specific problems.
8. Recruiter feedback are examined to collect information to identify current developments and requirements in industry,
9. Advisory board suggestions are considered to make changes in teaching learning process and modifications in curriculum.
10. Each program outcome attainment is calculated as averages of the results of assessment mentioned in step 1.
11. The Departmental committee reviews the program outcomes to decide if the changes are required as
 - a. Curriculum gap-A particular topic is required to be added to a particular course .Or can be covered up by arranging expert lecture, laboratory experiment, training, industrial visit, seminar. Identified by Course teacher.
 - b. Course gap- A new course needs to be added or Course contents are outdated due to development in technology. Usually it is not feasible to add or delete a course in university curriculum. Instead, greater depth of coverage of important topics is provided. Identified by Course teacher.
 - c. Program gaps-If the program is satisfying program specific criterion specified by ASME and there is enough flexibility in the program structure to meet the desired program educational objectives. Identified by program level departmental committee.

The departmental committee then summarizes the course and curricular gaps and recommendations by course teachers and other stakeholders to decide whether modifications are required at course level or program level. The departmental committee also decides whether assessment procedure needs any changes for the next year.

35. Highlight the participation of students and faculty in extension activities.

Participation of faculty

	2011-12	2012-13	2013-14	2014-15	2015-16
CEP Course	-	2	1	-	-
Conference	-	2	5	3	6
Short Term Training Program	-	2	15	10	8
Workshop	-	2	3	-	3
Journal	-	1	1	-	1
Consortium	-	3	-	-	2
Resource person for Expert Lecture	-	-	3	10	12
Board of studies member	1	1	1	-	-
PG Examiner	2	3	7	7	9
Expert for paper review	-	-	-	2	3
Faculty members on Peer journal review board	-	-	-	2	3

Participation of Students

Activity	2011-12			2012-13			2013-14			2014-15			2015-16		
	SE	TE	BE												
Technical Event: Technical Paper Presentation, Project, Workshop	-	-	14	-	8	3	2	20	15	-	-	29	-	5	-
Internship	-	-	-	-	4	-	7	3	-	25	34	3	25	29	3
Sports	08	05	08	-	08	04	13	1	1	6	11	1	5	13	6
Cultural	10	02	-	06	05	-	01	03	01	08	12	05	10	05	01

Faculty Members Serving on Editorial Boards / Board of Reviewers

Sr.No.	Name	International
1	Dr. K.N. Patil	1. Iranian Journal of Mechanical Engineering 2. International conference on Recent Trends in Engineering & Technology (ICRTET 2014)
2	Dr.Luckman Muhmood	1. Metallurgical and Materials Transactions B 2. Philosophical Magazine 3. Steel Research International, Wiley 4. Industrial & Engineering Chemistry Research, ACS 5. Journal of The American Ceramic Society 6. Transactions of the Indian Institute of Metals 7. International Journal of Heat and Fluid Flow
3	Dr Ramesh Lekurwale	1. International Journal of Supply and Operation Management (Print ISSN 2383-1359 Online ISSN 2383-2525) 2. International Journal of Industrial and Systems Engineering (Inderscience Publication) ISSN online: 1748-5045 ISSN print: 1748-5037 3. International conference on Transformation in Engineering Education

Co-curricular activities:

In KJSCE, we have different councils and professional societies active during every academic year like Students Council, CSI, IEEE, ISTE chapter. In addition to this in Department of Mechanical Engineering we have following student bodies:

SIGMA – Students integrated group of Mechanical and allied areas: The department has main students’ activity representative body SIGMA that acts as head of all students bodies under Mechanical branch.

MESA - Mechanical Engineering students’ association - Mechanical department students’ body that organizes various activities for Mechanical students throughout the year.

SAE - Society of Automotive Engineers- International association KJSCE Chapter.

ISHRAE - KJSCE Students chapter- Indian Society of Heating, Refrigeration and Air conditioning Engineers - An associate of ASHRAE.

Students participate in various fields’ right from managing these bodies and conducting various competitions and events held round the year. KJSCE provides students infrastructure and financial support to conduct and manage these events. KJSCE also supports students to participate in intercollegiate, state, national, International events financially and taking care of their academics simultaneously. Some of the co-curricular and extracurricular activities are as follows:

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	Events	Description
1	Prakalp	State level project competition
2	Abhyantriki	Technical events at college level includes seminar, workshops, Robotics etc
3	RiiDL	RiiDL an innovation centre is another initiative at Somaiya Vidyavihar campus to make students technically competent to become freelancers.

EXTRA-CURRICULAR ACTIVITIES

Students from Department of Mechanical Engineering participated in following activities

- Student Council
- Symphony Organizing Committee
- SKREAM event heads
- SKREAM organizing committee
- Team Octavium
- Team Rhapsody
- Team Gliteratti
- Team Gyration
- Symphony Shield Representatives
- SKREAM Volunteers

36. Give details of “beyond syllabus scholarly activities” of the department.

(2013-14)

Sr. No.	Gap	Action taken	Date-month-year	Resource person with designation	No. of students
1	Topics such as influence coefficients for simply supported and cantilever beams required for analysing transverse vibrations (MV-VI)	Conducted lecture on Holzer method using programme in excel sheet	As per class time table	S Rajnarsimha,	60
2	CFD (ME energy)	Conducted lecture on CFD	5/10/13	Dr. Prasanna Nambiar DBIT	All ME energy
3	Energy Audit and Conservation (NCES-VIII)	One day training programme	07/03/14	Mr. Datar PCRA	50

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(2014-15)

Sr. No.	Gap	Action taken	Date-month-year	Resource person with designation	No. of students (%)
1	Special topics such as Green Supply Chain, Green Manufacturing, Occupational Stress etc. (IEERP-VIII)	Arranged Guest Lecture by EBTS	03/2/2015 from 2.15 to 3.30 pm in B113	Mr. Anuj Anup & Mr. Devendra Koppikar (EBTS Partners)	40 (25%) students
2	Rotating Equipments & its evaluation (PED-VII)	Guest lecture by industry expert	20/3/15	Mr. Rajesh Shekatkar-Udhe india Pvt. Ltd	70 (43%) students
3	Solving Problems using MATLAB, work bench environment (FEA-VIII)	Training by faculty	17-04-2015	S Rajnarsimha, S.N.Bansode, P.P.Patil	160 (100%) students
4	Exposure to various environment in Ansys is required (FEA-VI)	Taken one of the IA component as command based program.	As per class time table	S Rajnarsimha, S.N.Bansode, P.P.Patil	160 (100%)
5	Development in Power plant Engineering (PPE-VII)	Guest lecture by industry expert	12/09/14	Dr. MVJJ Suresh (G E Banglore)	15
6	Implementation of renewable energy projects (NCES-VIII)	Guest lecture by industry expert	19/01/15	Mr. Anand Narayan (SELCO Labs)	35
7	Students did not have the sufficient exposure on microstructure and phase quantification	Experiment is added on image analysis software	Jan 2015	Dr Luckman Muhmood	100%

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(2015-16)

Sr. No.	Gap	Action taken	Date-month-year	Resource person with designation	No. of students
1	Rankine cycle optimization	Lecture on Heat balance diagram & cycle optimization using ST Pro s/w	23/9/15	Mr. Kaustava Dey & Mr. Sanjay Raut Tata power	60
2	Fuel Cells	Lecture on Fuel Cells	24/2/16	Dr. Dayadeep Monder IIT Bombay	ME energy
3	Energy Management	Lecture on Energy Management in thermal power station	22/4/16	Mr. A.A. Bhat Tata Power	ME energy
4	"Jominy End Quench Technique" to show how quench can harden the surface of a steel sample.	Added an experiment	Jul-nov 2015 & Jul-nov 2016	Dr Luckman Muhmood	All SE students
5	Upgraded the heat treatment experiments to incorporate microstructures so that the students can link the microstructure of the sample with the property (hardness)	Added an experiment	Jul-nov 2015 & Jul-nov 2016	Dr Luckman Muhmood	All SE students
6	Special topics such as ERP, Sustainable Manufacturing, Kaizen, JIT etc.	Added topics	Jul-nov 2015 & Jul-nov 2016	Prashant Jain	All BE students
7	Special topics such as FMS, GT & Automation etc. (PP III)	Added topics	Jul-nov 2015 & Jul-nov 2016	V M Khaparde	All TE students
8	SAP R/3 Software (ERP Elective)	Added topics	Jul-nov 2015 & Jul-nov 2016	V M Khaparde	All BE students

37. State whether the programme/ department is accredited/ graded by other agencies. Give details:

UG Program got Accredited: Four times (1998, 2003, 2009, 2013)

Present Status of Accreditation of UG Provisionally Accredited in November 2013 (For two years)

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

➤ **Strength of the department:**

- Brand Reputation
- Faculty:
 1. Retention 94% (2013-2015)
 2. Qualification
 - Ph.D 19% (7/37)
 - Pursuing 22% (8/37)
- Laboratory equipped with latest software and equipment's having research facility
- Market leader in mega projects (Formula Student Car, Baja SAE, Robocon)
- Good number of publications and patent
- Good campus recruitment
- High rank students prefer this programme for seeking admission.
- Collaboration with International faculty for teaching a course.
- Recognized Research center by University of Mumbai.
- Running successfully a unique Post Graduate programme of Energy engineering.

➤ **Weakness of the department**

- R and D activity, IPR activity, Consultancy
- Externally Funded project (DST, UGC,AICTE, CSIR etc)
- Less Students placement in core company
- Less conference/STTP activity
- Publication in peer reviewed journal

➤ **Opportunity of the department**

- To change the curriculum based on the need/feedback of the stakeholders (Students/parent/industry)
- Collaboration with external agencies (Industry and Peer Institution like IITB/SVNIT/VNIT)
- Scope for entrepreneurship as the college is located in the center place of Mumbai
- Chances of growth in emerging education market.

➤ **Challenges to the department**

- Rapid change the technology and demand of the industry.

- Entry of Foreign/private universities in education field
- Increase in educational expenses (rising in fees for the students and revision of Pascale for employee)

39. Future plans of the department

Future Plan

- Address the weaknesses.
- Placement of students in Core Company through alumni interaction.
- Collaboration with external agencies for research activities, training and internship programme.
- Laboratory development to enhance the research and consultancy facility.

Evaluative Report of Department of Science and Humanities

1. Name of the Department: Department of Science & Humanities

Year of establishment: 1st August 1998

2. Names of Programs / Courses offered: No program is offered by

Department of S & H, it caters the following courses for all First Year B. Tech undergraduate programs.

Sr. No	Name of Course	Department Involved / Year
1	Applied Chemistry I and II	All Programs (First Year)
2	Applied Physics I and II	All Programs (First Year)
3	Applied Mathematics I and II	All Programs (First Year)
4	Applied Mathematics III and IV	All Programs (Second Year)
5	Communication Skills	All Programs (First Year)
6	Environmental Studies	All Programs (First Year)
7	Business Communication and Ethics (BCE)	All Programs (Third Year) University Syllabus
8	Professional Communication Skills (PCS)	All Programs (2 nd and 3 rd Year B. Tech)

3. Interdisciplinary courses and departments involved: FY courses for all departments.

No	Name of Course	Department Involved
1	Engineering Mechanics	Mechanical Engineering (First Year)
2	Engineering Graphics	Mechanical Engineering (First Year)
3	FCP	Computer Engineering. (First Year) Information Technology (First Year)
4	BEEE	Electronics Engineering. (First Year) Electronics & Telecommunications Engineering (First Year)

4. Annual/ semester/choice based credit system:

Sr. No.	Academic Year / Batch Admitted	System
1	2011-12	Semester Marks based System
2	2012-13	Semester / Credit Based Grading System (CBGS)
3	2013-14	Semester / Credit Based Grading System (CBGS)
4.	2014-15 onwards	Semester / Credit Based Grading System (CBGS) (Autonomous)

5. Participation of the department in the courses offered by other departments:

S & H Department caters to all other programs in the college as Supporting Department

No	Course	Department Involved
1	ME course (Energy)	Mechanical Engineering
2	Coursework for PhD. Research Scholars	Mechanical and Electronics Engineering
3	Audit courses	All
4	Maths Sem-III & Sem-IV	All

The department faculty offer audit courses for students of all departments at UG courses level from 2015-16.

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

Post	Sanctioned	Filled
Associate Professors	2	2
Asst. Professors	20	20
Temporary	3/ (2 + 1*)	3/ (2 + 1*)

*Represents the post sanctioned and filled for Odd Semester

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7. 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 (Teaching + Industry)	No. of Ph.D. Students guided
Mr. S.R. Chawade	M.Sc. (APP. PHY), DAVV INDORE	Associate Professor	APP. PHY	22	--
Mr.S.A. Mani	M.Sc. (PHY), MUMBAI	Asst. Professor	PHY	15	--
Dr. Archana Sharma	PHD (PHY)	Asst. Professor	(Experimental Condensed Matter) PHY	3.5	--
Dr. Pushpendra Rai	PHD (CHEM) UICT	Asst. Professor	Analytical Chem	7	--
Dr. Jitendra Satam	PHD (CHEM) ICT	Asst. Professor	Inorganic Chem	3.5	--
Dr. Bharati Choudhari	PHD INSTITUTE OF SCIENCE MUMBAI	Asst. Professor	Organic Chem	2.5	--
Dr. Druman Utekar	Ph D. (CHEM), (NET)	Asst. Professor	Organic Chem	2.5	--
Ms. Anima P. Nishant	M.A., M. Phil (NET)	Asst. Professor	English (Literature)	2	--
Mr. Anand B.Bodhale	M. Phil (ENG) , MA, B.Ed	Asst. Professor	English (Language and Literature)	13	--
Ms. Suwarna Suryawanshi	M. Phil, M.A.	Asst. Professor	English (Literature)	10	--
Dr. Kanaklata Tiwari	P.HD. (Kanpur University)	Asst. Professor	English (Literature)	20	--
Mr. A.S. Desai	M.Sc. Mumbai , M. Phil shivaji Univ	Associate Professor	Applied Mathematics	31	--

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Name	Qualification	Designation	Specialization	No. of Years of Experience (Teaching + Industry)	No. of Ph.D. Students guided
Mr. Y.M. Thakkar	M.Sc. Mumbai	Asst. Professor	Applied Mathematics	14	--
Ms. D.S. Phalak	M.Sc. Mumbai	Asst. Professor	Applied Mathematics	16	--
Mr. R.B. Salvi	M.Sc. Mumbai , M.Phil	Asst. Professor	Applied Mathematics	14	--
Ms. D.P. Saxena	M.Sc. Lucknow , M.Phil Mumbai	Asst. Professor	Applied Mathematics	10	--
Ms. R.V. Desai	M.Sc. surat , B.Ed.	Asst. Professor	Applied Mathematics	11	--
Mr. V.E.Kharpu de	M.Sc. IIT Kharakpur, (NET)	Asst. Professor	Applied Mathematics	6	--
Ms. Ashwini Sankhe--	M.Sc. Mumbai	Asst. Professor (Temporary Faculty)	Applied Mathematics	3	--
Ms. N.A.Rai	M.Sc. Mumbai , (NET)	Asst. Professor	Applied Mathematics	13	--
Ms. P.C. Khanolkar	M.Sc. (EVS) Institute of Science (SET)	Asst. Professor	EVS	3	--
Ms. Samina Sayyad	M.Tech (EVS)	Asst. Professor	EVS	4	--
Ms. Sreyashi Gupta	M.A. (English)	Asst. Professor	English	1	--
Mr. Jawahar Desai	M. Sc. (Phy)	Asst. Professor (Temporary Faculty)	Physics (Electronics)	2	--

8. Percentage of classes taken by temporary faculty-program-wise information:

Program / Course	2011-12	2012-13	2013-14	2014-15	2015-16
Applied Physics	19.16	38.7	26.7	0	47.5
Applied Chemistry	35	14.5	18.3	0	0
Applied Mathematics	2.85	8.6	25	0	22.9
Communication Skills	0	0	0	0	0
Environmental Studies	0	70	0	100	100

9. Program-wise Student Teacher Ratio:

Department	2011-12	2012-13	2013-14	2014-15	2015-16
MECH	20.08	20.25	18.89	19.41	18.87
COMP	19.37	20.29	17.89	20.12	19.11
EXTC	17.84	20.22	18.80	17.71	18.44
ETRX	19.31	19.55	18.70	18.51	19.27
IT	19.93	19.95	19.18	20.50	19.90

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Lab Assistant	2	2
Office Clerk	1	1
Lab Attendant	1	1
Hamal	1	1

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

Name Of the Project	Duration	Name of the Funding Agency	Total Grant
National (Minor Research project)	2015-16	University of Mumbai	30000 Rs.

Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received:
NIL

12. Research facility / centre with :

- o state recognition: **NIL**
- o national recognition: **NIL**
- o international recognition: **NIL**

13. Publications (Papers Published in Journals):

Year	No. of papers published (Peer Reviewed Journals)
2011-2012	1
2012-2013	2
2013-2014	1
2014-2015	5
2015-2016	3

Sr. No.	Year	Author	Title	Details of Journal Publications (I.F. = Impact factor)
Department of Science and Humanities				
1	2011-12	Dr. Veena Naik	Novel Materials as Interlayer Low-K Dielectrics for CMOS Interconnect Applications	Applied Mechanics and Materials, Vols. 110-116, pp. 5380-5383, 2012 (I.F.= 0.55)
2	2012-13	Dr. Veena Naik	Thermal decomposition mechanism of synthesized Copper Octoate	Journal of Thermal Analysis & Calorimetry. April 2013, Vol. 112 Issue 1, pp. 187-192. (I.F.= 1.55)
3	2012-13	Dr. Kanaklata Tiwari	Identity Crisis-Indian English fiction of post 1980's	International Journal of English and Literature Vol. 4 (1) pp. 6-10 ISSN2141-2626
4	2013-14	Dr. Kanaklata Tiwari	The Real feminists in Indian English writing : Kamala Das and Imtiyaz Dharkar	International Journal of English and literature, Vol. 4 (10) pp. 542-548 (ISSN 2141-2626 Academic Journal) December 2013

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Sr. No.	Year	Author	Title	Details of Journal Publications (I.F. = Impact factor)
5	2014-15	Dr. Kanaklata Tiwari	Untouchable by Mulkraj Anand is a novel of social protest	International Journal of English language and literature. ISSN 2347-312 Print I 23407-3134 (online) Issue 5 PP, 8-13
6	2014-15	Mr. Anand Bodhale	‘Critical Perspectives on Multiple Exploitation and Abuse of Dalit Female Characters In Sharan Kumar Limbale’s <i>The Outcaste</i> ’	‘Journal of Higher Education & Research Society: A Refereed International Journal’. ISSN 2349-0209 Issue-1 Vol.-30.
7	2014-15	Santosh A. Mani	Synthesis and Characterization of Liquid Crystal Elastomer	Materials Sciences and Applications, 2015, 6, 527-532 DOI:10.4236/msa.2015.66056 (IF 1.08)
8	2014-15	Santosh A. Mani	Spectroscopic and Thermo-mechanical studies of Liquid Crystal Elastomer	Key Engineering Materials (Trans. Tech. Publications) Vol. 659 (2015) pp.495-499 DOI:10.4028/www.scientific.net/KEM.659.495. (IF 0.39)
9	2014-15	Santosh A. Mani	Thermo-optical Studies of Nematic Liquid Crystal Elastomer	American Institute of Physics (AIP) Con. Pro. 1620, 456 (2014); DOI: 10.1063/1.4898281
10	2015-16	Santosh A. Mani	Effect of CNT on Liquid Crystal Elastomer”	IEEE Xplore DOI: 10.1109/INDICON.2015.7443387 (IF 0.039)
11	2015-16	Rachana Desai	Note on Generalized Mittag-Leffler function	SpringerPlus (2016) 5:683 DOI:10.1186/s40064-016-2299-x (IF 1.51)
12	2015-16	Santosh A. Mani	Thermo-elastic behaviour of liquid crystal elastomer	American Institute of Physics (AIP) Con. Pro. 1665, 040027 (2015). DOI:10.1063/1.4917640

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- * Monographs-NIL
- * Chapter(s) in Books – NIL
- * Editing Books - NIL
- * Books with ISBN numbers with details of publishers : 2

Sr No	Name of Faculty	Book Title	Publisher and Volume	Year of Publication and ISSN No
1.	Dr Kanak Lata Tiwari	Unsulajhe Prashn	Bhashkar Publications	2014 ISBN-978-93-82301-66-0
2.	Dr Kanak Lata Tiwari	Alice Malsenior Walker-A compilation	Bhashkar Publications	2015 ISBN-978-93-82301-67-7

- * Number listed in International Database (For *e.g.* Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- * Citation Index –8 (From 2012) [Prof. Santosh Mani]
- * H-index - 1
- * SNIP
- * SJR
- * Impact factor – range / average :0.03-1.55

15. Details of patents and income generated: NIL

16. Areas of consultancy and income generated : NIL

17. Faculty recharging strategies (Refer Annexure I for details)

The faculty of the department participates in Seminars and Workshops organized by other Institutes / Universities.

Year	Conferences	Workshops/ Orientation	STTP
2015-16	6	7	18
2014-15	8	8	1
2013-14	9	18	13
2012-13	0	27	5
2011-12	0	7	1

18. Student projects: EVS projects (Details)

- Percentage of students doing projects in collaboration with industries / institutes : **NIL**
- Percentage of students who have done in-house projects including inter-departmental -

Year	Class	In-house	Industrial
2014-15	F. Y. B. Tech	50	NIL
2015-16	F. Y. B. Tech	50	

19. Awards / recognitions received at the national and international level by : NIL

- Faculty: **NIL**
- Doctoral / post-doctoral fellows: **NIL**
- Students: **NIL**

20. Seminars/ Conferences/Workshops organized and the source of funding (National/ International) with details of outstanding participants, if any.

No	Title	Year / Duration	Funding Agency	No of Participants
1	Engineering Physics (2 week STTP)	08 th Dec. – 18 th Dec. 2015	MHRD	9
2	Technical Communication for STEM Faculty organized by IITB (2 week STTP)	08 th Oct- 05 th Dec, 2015	MHRD	20
3	"Career Planning for Engineering Students" at the NSS Special Camp of Engineering Students organized by Terna Engineering College, Nerul (W), Navi Mumbai	27 th Feb. 2015	NSS	45
4	One-Day Workshop on "Voice Culture"	15 th Nov. 2014	ISTE	25
5	Orientation Programme on Revised Syllabus for(CBGS) AM-III (Comp, IT)	27 th July 2013 (2013-14)	KJSCE	24
6	Orientation Programme on Revised Syllabus	December 2013	KJSCE	65

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No	Title	Year / Duration	Funding Agency	No of Participants
	for(CBGS) AM-IV (ETRX, EXTC)	(2013-14)		
7	Seminar on Solar Chulha	19 th January 2013 (2013-14)	KJSCE	42
8	Orientation Programme on Applied Mathematics-I & II	6 th September 2012 (2012-13)	KJSCE	74
9	Seminar on 'Energy scenario in India' [Study circle activity]	3 rd March 2012 (2011-12)	KJSCE	15

21. Student profile course-wise: (Applied and selected)

YEAR	Students Admitted			Students Passed			Pass Percentage		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2011-12	496	143	639	487	140	627	98.2%	97.9%	98.1%
2012-13	481	160	641	481	150	631	100.0%	93.8%	98.4%
2013-14	490	146	636	479	139	618	97.8%	95.2%	97.2%
2014-15	504	125	629	478	115	593	94.8%	92.0%	94.3%
2015-16	477	146	623	457	145	602	95.8%	99.3%	96.6%

22. Diversity of Students: Academic Year 2015-16

Academic Year	Branch	Total admitted	Percentage of students from same state		Percentage of students from other state		Percentage of students from other country	
			Total	%	Total	%	Total	%
2011-12	COMP	127	120	94.488	4	3.150	2	1.575
	ETRX	128	121	94.531	6	4.688	0	0.000
	EXTC	127	114	89.764	6	4.724	6	4.724
	IT	127	114	89.764	8	6.299	5	3.937
	MECH	130	121	93.077	3	2.308	5	3.846
2012-13	COMP	127	125	98.425	0	0.000	1	0.787
	ETRX	128	119	92.969	6	4.688	2	1.563
	EXTC	125	119	95.200	3	2.400	3	2.400
	IT	126	121	96.032	2	1.587	3	2.381
	MECH	135	125	92.593	4	2.963	5	3.704
2013-14	COMP	126	110	87.302	10	7.937	6	4.762

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Academic Year	Branch	Total admitted	Percentage of students from same state		Percentage of students from other state		Percentage of students from other country	
			Total	%	Total	%	Total	%
	ETRX	125	117	93.600	4	3.200	3	2.400
	EXTC	125	116	92.800	4	3.200	4	3.200
	IT	126	111	88.095	10	7.937	4	3.175
	MECH	134	115	85.821	12	8.955	6	4.478
2014-15	COMP	125	108	86.400	11	8.800	6	4.800
	ETRX	120	105	87.500	13	10.833	2	1.667
	EXTC	125	114	91.200	8	6.400	3	2.400
	IT	126	110	87.302	10	7.937	6	4.762
	MECH	133	126	94.737	0	0.000	7	5.263
2015-16	COMP	121	104	85.950	11	9.091	6	4.959
	ETRX	121	101	83.471	16	13.223	4	3.306
	EXTC	125	96	76.800	24	19.200	5	4.000
	IT	124	111	89.516	8	6.452	5	4.032
	MECH	132	111	84.091	9	6.818	11	8.333

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations? NA

24. Student progression: NA

25. Diversity of staff :

Percentage of faculty who are graduates	PG
of the same parent university	58.33 %
from other universities within the State	16.66 %
from other universities from other States	25.01 %

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period.

Degree awarded	No. of Staff	Name of Faculty	Year of awarding Ph. D
Ph. D	1	Dr. Druman Uttekar	2016 (ICT, Mumbai)

27. Present details about infrastructural facilities

a. Library

Facility Description	Utility
Carpet Area of library (in sq m)	1140 Sq. m.
Reading Space(in sq. m)	570 sq. m.
Number of seats in reading space	185 plus
No. of users (issue book) per day	150 students (approximately)
No. of users (reading space) per day	500 students (approximately)
Timings During working day, weekend and vacation	9.30 a.m. to 9.00 p.m.
Number of library staff	12
Number of library staff with a degree in Library Management	5

a) **Central Library**

Opac: Web Opac online facility is provided wherein the students can renew the books at any point of time. They can also reserve book in advance. Also intimation is provided if the book is available.

Availability:

- a. IEEE electronics Library
- b. Springer Electrical, Electronics, Computer Science and Mechanical Engineering Journals.
- c. McGraw Hill Access Engineering Library
- d. Elsevier SCIENCE DIRECT
- e. Six Kindle e-book Readers
- f. ASME Digital Library
- g. ACM Digital Library
- h. British Council Library,
- i. I I T Bombay library

Effective availability/purchase records

The library has an extensive collection of books 35000+ in volumes covering all aspects of engineering and also related areas like social sciences, humanities, etc. Reference collection of library consists of reference books, handbooks, technical data books, encyclopedias, dictionaries, directories, almanacs, atlases, autobiographies, Indian standards, syllabus, question papers archive, CDs etc.

Titles and volumes per title

Total Number of titles = 18760

Number of volumes = 37430

Year	Number of new titles	Number of new editions	Number of new volumes
2016-17	455	188	987+ 21 ebooks
2015-16	891	478	1844+ 132 ebooks
2014-15	1304	415	2526
2013-14	1442	445	2640

The periodical section is a vital source for academic research and up-to-date information. Journals & Magazines both national and international, Bound volumes, newspapers are made available for reference.

Scholarly journal subscription

Year	Journals	Magazines	e-Journals
2015-16	90	23	7
2014-15	90	25	8 e-journals databases
2013-14	90	25	8 e-journals databases

b) Internet facilities for staff and students

- Name of the Internet provider: Aircel Services
 - Available band width 155Mbps
 - WiFi availability at 48 locations
 - Internet access in labs, classrooms, library and offices of all Departments
 - Security arrangements Kaspersky antivirus 1161 licenses, Fortinet Firewall for Internet
 - Laptop with internet connection is provided to the faculty
 - Students use common facility
- c) Total number of class rooms - 10
- d) Class rooms with ICT facility - 7
- e) Students' laboratories - 3
- f) Research laboratories – **NIL**

28. Number of students of the department getting financial assistance from College:**Need cum Merit (For selected programs Electronics and IT)**

The process of Need cum merit Scholarship (2016-17) was initiated but now it is suspended due to Govt. of Maharashtra EBC new rules. This will further initiate after completion of Government's EBC procedure

(2014-15)

Sr. No.	Branch	Name of the student	Roll No.
1	FE ETRX	Gouda Arat	1412028
2	FE ETRX	Chauhan Ajay	1412010
3	FE ETRX	Nar Dharna	1412035
4	FE IT	Komal Naik	1414035
5	FE IT	Smit Upadhyay	1414022

(2015-16)

Sr. No.	Branch	Name of the student	Roll No.
1	FE ETRX	Het Manek Hemant Darshana	1512028
2	FE ETRX	Jugal Vaja Deepak kumar Nayana	1512113
3	FE ETRX	Ashish Dodamani Ashok Anita	1512074
4	FE IT	Kaushal Shah Tarun Rekha	1514110
5	FE IT	Aliraza Lakhani Rafiqe Farida	1514026

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology: NIL**30. Does the department obtain feedback from**

- a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

Yes, Due to autonomy the curriculum is designed by taking into consideration the recent market needs and trends. The curriculum is reviewed by Academic and Industry experts and changes are incorporated accordingly

- v. At the end of semester faculty identifies gaps in the curriculum and provides suggestions for improvement in curriculum and teaching learning process.
- ii) Feedback is sought from Academic Audit under the guidance of experts.
- iii) In autonomy, syllabus is formulated with discussion and feedback from departmental syllabus committee, alumni and subject board members and approved by Academic board members.
- iv) Gap identified will be taken into consideration at the time of revision of the syllabus.

- **Feedback collected for all courses:** YES

1. Philosophy of feedback system

There are various feedback taken at institute and department level for improvement in the existing systems.

Feedback Type	Feedback	Frequency of taking feedback	Initiated by	Use
Department level Feedbacks	Faculty Feedback	Once in a semester	Head of the department	<ul style="list-style-type: none"> ● Enhancing the student's experience of learning and teaching. ● For faculty development.
	Course Feedback	Once in a semester	Course in-Charges	<ul style="list-style-type: none"> ● Enhancing the course syllabus. ● Ensuring the effectiveness of course design. ● Enabling a communication with students.

2. Faculty feedback collection process

- A common feedback form is designed at institute level to maintain uniformity.
- Feedbacks are analyzed by the faculty and reports are prepared which are maintained in the department in files.
- Although, till 2015 feedback procedure was conducted manually. The feedback forms were circulated by the feedback coordinator and students used to fill it. This year onwards online systems were implemented to collect and analyze feedback data.
- The smooth working and above 70% participation of students.
- The performance of the faculty is evaluated on a scale of 1-10.
- Faculty members do the self-analysis of the feedback and take the help of senior faculty members for self-improvement.

3. Percentage of students who participated:

Approx. above 75% (online)
Approx. 60% (manual)

4. Faculty Feedback Analysis process:

- Online feedback report generation for individual faculty.
- Average performance index in the scale of 10 is generated for each course faculty.
- Till January 2014 manually weighted analysis was done by the faculty. Currently Analysis is done by using feedback software.

5. Number of corrective actions in the last three years:

Some of the corrective actions taken based on the students comments in feedback form:

- Use of Visual aids, Audio –PA system.
- Availability of LCD, Laptop in the department.

31. List the distinguished alumni of the department : NA

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

No.	Topic	Date-month-year	Resource person with designation	No. of Students
1	Advances in Optics Lecture on, Micelsons Interferrometer to laser interferometer gravitational wave observatory (LIGO)	1 st March 2016	Dr. Radha Srinivasan (University of Mumbai)	45
2	Seminar on Evaluation System	5 th November 2015	Anita Kuntute	500
3	Emfinity - Applications of Mathematics	19 th March 2015	Dr. S. S. Sane (IITB)	76
4	Seminar on, Credit and grading system for First year students	25 th September 2012	Dr. R. G. Karandikar	64
5	Seminar on, Windows 8	1 st October 2012	Mr. Aviraj Ajarekar	200

33. List the teaching methods adopted by the faculty for different programs.

Initiatives in Teaching Learning:

1. Initiatives in improving instruction methods
2. quality of lab experiments encouraging bright students
3. assisting weak students
4. Use of visual aids in lecture delivery is increased substantially
5. Series of NPTEL Video lectures and notes in pdf are available for the ready reference.
6. Experimental write-ups and assignments if any are uploaded on intranet.
7. Regular faculty members are given laptops.

8. Teaching over and above syllabus by organizing Industrial Visits and expert lectures.
9. Innovative IA components added.

Sr. No.	Method	Implementation	Remarks
1	Teaching Methods	1. Chalk-Talk method 2. Power point presentations 3. INPODS - LMS 4. Group Discussions	--
2	Quality of Lab Experiments	Few new experiments are introduced in labs as per rubrics	--
3	Encouragement to bright students (Internal)	1.Prizes to meritorious students 2.Certificate to Topper students	--
4	Encouragement to bright students from outside agency	Scholarships	Narotam Sekhsaria Scholarships (TATA Scholarship)
5	Expert Lectures	For Better understanding of subject and practical knowledge	Experts from industries, University and renowned institutes like IIT Bombay

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

The department follows Outcome Based Education (OBE) system as per National Board of Accreditation (NBA) it can also be called as Outcome based Teaching Learning (OBTL)

- a. Continuous Internal Assessment
- b. Students Feedback
- c. Regular Departmental Meetings of Faculty
- d. Classroom Seminar Sessions
- e. Remedial lectures for weak students

35. Highlight the participation of students and faculty in extension activities.

We have different councils and professional societies active during every academic year like Emfinity, SAHAS etc.

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Student Participation			
No.	Events	Year	Description
1	Departmental day (Zeal-12)	March, 2012	Felicitation of FE toppers.
2	Departmental day (Zeal-13)	March, 2013	Felicitation of FE toppers.
3	Departmental day (Zeal-14)	March, 2014	Felicitation of FE toppers.
4	PICOMANIA, Subway boat, Short Circuit	2014-15	Fun Event held in Abhiyantriki
5	PICOMANIA	2015-16	Fun Event held in Abhiyantriki
6	Problem solution session	2015-16	Helped the weak students
7	Eco-ethno trek	20 th September	Generating awareness for heritage conservation
8	Departmental day (Zeal-15)	14 th March, 2015	Felicitation of FE toppers.
9	Departmental day (Zeal-16)	19 th March, 2016	Felicitation of FE toppers.

Faculty Participation		
No.	Faculty Name	Faculty in extension activities
1.	Mr. A.S. Desai	ARC Coordinator Faculty for Ph.D Course work Result moderation Committee
2.	Dr. K.L.Tiwari	Member of Board of Management
3.	Mr. Ravindra Salvi	Institute level Sports In-charge, Secretary of PUSH KJSCE
4.	Mr. Anand Bodhale	College Literary Committee
5.	Mr. Shrikant Chawde	Unfair means Committee

36. Give details of “beyond syllabus scholarly activities” of the department.

No.	Topic	Date-month-year	Resource person with designation	No. of students
(2016-17)				
1	Applications of Laplace transform and Fourier series	31 st August 2016	Dr. Narendra kumar Dasare	47
2	Treasure Hunt in Mathematics	1 st September 2016	-	120
(2015-16)				
3	Treasure Hunt in Mathematics	24 th Sept 2015	-	288
4	Abhyantriki - Event held by Emfinity	29 th Sept 2015	Shoot at Sight	100
5	Advances in Optics Lecture on, Micelsons Interferrometer to laser interferometer gravitational wave observatory (LIGO)	1 st March 2016	Dr. Radha Srinivasan (University of Mumbai)	45
6	Art Competition	19 th March 2016	Mr. Arati Phadke	14
7	Game of Maths	22 nd Feb 2016	-	49
(2014-15)				
8	Android rooting and customization	6 Feb. 2015	Mayank Raj	50
9	Maths Quiz	11 Feb. 2015	-	24
10	Emfinity - Applications of Mathematics	19 th March 2015	Dr. S. S. Sane (IITB)	76
(2012-13)				
11	Industrial visit to Silvasa for first year and second year students	2 nd -3 rd March 2013	Neelkamal Industries Sudhir generators Madhuban drums Parle International	140

Details of Exposure Courses:

(2015-16)			
No.	Topic	Resource person with designation	No. of students
1	Creative writing	Dr. Kanaklata Tiwari	43
2	Community services	Mr. Hetal Mundra	36
3	Painting and Sketching	Mr. Arati Phadke	40
5	Ancient Indian Wisdom	Nutan Dhuri / Mr. Nandana Prabhu	68
6	Organic Solar Cells (On line Course)	Annemarie Zand Scholten	97
7	Sports		(339) Total
7. i	Table Tennis	Mr. Manas Karmarkar	67
7. ii	Badminton	Mr. Kaustubh Virkar	149
7. iii	Football	Mr. Ashish Bhoir	92
7. iv	Athletics	Mr. Dinesh Rajak	31
(2014-15)			
No.	Topic	Resource person with designation	No. of students
1	Creative writing	Dr. Kanaklata Tiwari	19
2	Community services	Mr. Hetal Mundra	49
3	Painting and Sketching	Mr. Arati Phadke	20
4	Gita Modern times / Ancient Indian Wisdom	Nutan Dhuri / Mr. Nandana Prabhu	191
5	Solid Sciences (On line Course)	Annemarie Zand Scholten	38
6	Sports		(294) Total
6. i	Table Tennis	Mr. Manas Karmarkar	72
6. ii	Badminton	Mr. Kaustubh Virkar	162
6. iii	Football	Mr. Ashish Bhoir	46
6. iv	Athletics	Mr. Dinesh Rajak	14
7	Computer Hardware (Fundamental Installation)	-	21

37. State whether the programme / department is accredited/ graded by other agencies. Give details: NA

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department: (SWOC)

Strength

- We are implementing Outcome Based Teaching Learning.
- Achievement by students in, in-house & externally organized Co-curricular and Extracurricular activities
- Exposure courses introduced
- We have upgraded the syllabus as per industry needs and consultation with experts and stakeholders.
- We have started with various Interdisciplinary projects / Internships.
- We have got one University Minor Research Proposal Sanctioned.
- Language lab
- Special efforts were made for differently abled students.

Weakness

- Less Research activities are performed, No Industry Consultancy projects.
- No projects granted yet from leading External Funding Agencies like DRDO, SERB, DST, UGC, AICTE, CSIR etc.
- Publications in peer reviewed journal
- Less supporting staff (Non-teaching)

Opportunities

- Collaborative projects with different funding agencies and industries.
- Modify the curriculum based on the need/feedback of the stakeholders (Students / parents / industry)
- Collaboration with external agencies (Industry and Peer Institutions like IITB/SVNIT/VNIT) [MOUs].
- Interdisciplinary projects / Internships activities to be taken seriously.
- Common facility for Research

Challenges

- Entry of Foreign/private Professional Universities in education field
- CO attainment of Electronics student
- Students doesn't take basic science subjects, Environmental studies seriously
- Enhancement of POs attainment by improving COs attainment

39. Future plans of the department:

- a. Address the weaknesses.
- b. Collaboration with external Funding agencies for research activities.
- c. Laboratory development to enhance the Research and Consultancy facility.
- d. Interdisciplinary Research activities

(Annexure-I)

No.	Name of Faculty	Event	Date & Duration	Organized by
Year (2015-16)				
1	Mr. A. S. Desai Mr. Yogesh Thakkar Mr. Ravindra Salvi Mr. Nandini Rai Mr. Suwarna Suryawanshi Mr. Dipali Phalak	STTP on 'Use of Open Source Software in Research'	27 th June-1 st July 2016 (One week)	Vidyalankar Institute of Technology, Wadala, Mumbai
2	Mr. Yogesh Thakkar Mr. Ravindra Salvi Mr. Deepti Saxena Mr. Nandini Rai Mr. Anand Bodhale Mr. Suwarna Suryawanshi	ISTE STTP on "Self-Transformation and Management"	04 th Jan- 8 th Jan, 2016 (One week)	K. J. Somaiya Polytechnic, Vidyavihar
3	Mr. Jitendra Satam	ISTE STTP on "Technical Communication for STEM Faculty"	A) 08 th Oct- 11 th Nov, 2015 (Online activity) B) 30 th Nov - 05 th Dec, 2015 (Physical participation) (Two Week)	IIT Bombay at Remote Centre K.J. Somaiya College of Engineering
4	Mr. Vinayak Kharpude	Pedagogical Training for Mathematics Teachers	02 nd Nov- 7 th Nov, 2015 (One week)	Department of Mathematics , ICT, Mumbai
5	Mr. Algonda Desai Mr. Rachana Desai	STTP on "Fractional Calculus, Integral Transforms, Special functions and their	30 th Sep - 4 th Oct, 2015 (One week)	SVNIT, Surat

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No.	Name of Faculty	Event	Date & Duration	Organized by
		computations in engineering and sciences		
6	Mr. Shrikant Chawade	ISTE & QIP STTP for Coordinators on “Engineering Physics”	7 th Sep-11 th Sep, 2015 (One week)	IIT Bombay
7	Mr. Anand Bodhale	ISTE STTP for Coordinators on “Technical Communication”	24 th Aug-28 th Aug, 2015 (One week)	IIT Bombay
8	Mr. Jitendra Satam	ICSMC-2015 (International Conference)	2 days / November 2015	University of Mumbai
9	Mr. Anand Bodhale	International Conference on "Latest Trends in English and Research" at	one Day / April 2015	Rayat’s Sadguru Gadage Maharaj College, Karad
10	Mr. Santosh Mani	STTP on “Engineering Physics”	December 8 - 18, 2015, Two week	IIT Bombay
11	Mr. Santosh Mani	International Conference, Materials Science & Technology	March 1 - 4, 2016 4 days	University of Delhi, Delhi
12	Mr. Santosh Mani	International Conference, 12 th IEEE INDICON	December 17 - 20, 2015 4 days	Jamia Millia Islamia, New Delhi
13	Mr. Santosh Mani	National Conference, Applied Sciences and Humanities (6th Annual International Conference and Workshop)	February 26-27, 2016. Two days	Thakur College of Engineering and Technology, Mumbai
Year (2014-15)				
14	Mr. Anand Bodhale	International Conference on ‘Fourth World Literature & Culture’	2 days / September 2014	Pune

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No.	Name of Faculty	Event	Date & Duration	Organized by
15	Dr Kanaklata Tiwari	International Conference on "Latest Trends in English and Research"	One Day / July 2014	Rayat's Sadguru Gadage Maharaj College, Karad
16	Mr. Santosh Mani	Spectroscopic and Thermo-mechanical studies of Liquid Crystal Elastomer International Conference on Materials Science and Technology	Two days / 15 th -16 th Dec, 2014	Bangkok, Thailand
17	Mr. Anand Bodhale	Training Workshop on "Brainstorming on Equity and Social Justice Issues"	14th September 2014, One day	Yeswantrao Chavan Academy of Department Administration, Pune
18	Mr. Shrikant Chawade Mr. Nandini Rai Mr. Suwarna Suryawanshi Mr. Usha Padmanabhan Mr. Monish Deshpande	Workshop on, Evaluation of open ended activities through Rubrics	2 nd Aug 2014, (One day)	KJSCE
19	Mr. Shrikant Chawade Mr. Nandini Rai Mr. Suwarna Suryawanshi	NBA workshop on Outcome Based Accreditation	25 th - 27 th June 2014 (One week)	KJSCE
Year (2013-14)				
20	Mr. Santosh Mani	60 th Refresher Course in Experimental Physics	3 rd June - 18 th June 2014 (two week)	University of Mumbai
21	Mr. Suren Patwardhan	Indian Nanoelectronics Users' Programme	May 26-28, 2014 3 days	Electrical Engg. Dept, IIT Bombay

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No.	Name of Faculty	Event	Date & Duration	Organized by
		- Phase II Workshop		
22	Mr. Suren Patwardhan	Physics of Transistors	Jan-Apr 2014 (4 Months)	CEP, IIT Bombay
23	Mr. Algonda Desai Mr. Nandini Rai	STTP on Advanced Engineering Optimization Techniques	6 th - 13 th Feb , 2014, 4- Days	Department of Electronics Engg., KJSCE
24	Mr. Deepali Phalak Mr. Nandini Rai	TEQIP & NBHM - National Conference on Educational Interfaces Between Mathematics and Industry	23 rd -24 th January, 2014, 2 days	Institute of Chemical Technology , Mumbai
25	Mr. Anand Bodhale	Seminar on Research Methodology	11 th Jan 2014, (One day)	Department of English, Mumbai University
26	Mr. Yogesh Thakkar Mr. Deepti Saxena Mr. Deepali Phalak Mr. Ravindra Salvi Mr. Nandini Rai	ISTE-STTP on Applications of Mathematics in Science & Engineering	16 th -20 th December, 2013 (One week)	Saraswati College of Engineering, Kharghar New Mumbai
27	Mr. Algonda Desai Mr. Santosh Mani Mr. Anand Bodhale	TEQIP –STTP on Research Methodology- Concepts and Tools (REMECOAT-2013)	16 th -20 th December, 2013 (One week)	Govt. College of Engineering, Aurangabad, (under TEQUIP Phase II)
28	Mr. Santosh Mani	National Workshop on Python in Science Education	19 th - 20 th September 2013, (Two days)	Department of Physics, University of Mumbai
29	Mr. Usha Padmanabhan	Lecture on Stress Management	6 th August 2013 (Two days)	KJSCE
30	Mr. Yogesh	Orientation	27 th July 2013	KJSCE

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No.	Name of Faculty	Event	Date & Duration	Organized by
	Thakkar Mr. Ravindra Salvi Mr. Deepali Phalak Mr. Deepti Saxena Mr. Nandini Rai Mr. Vinayak Kharpude	Programme on Revised Syllabus for(CBGS) AM-III (COMP & IT)	One day	
31	Mr. Yogesh Thakkar Mr. Ravindra Salvi	Orientation Programme on Revised Syllabus for(CBGS) AM-III (MECH)	18 th July 2013 One day	Saraswati College of Engg , Kharghar
32	Mr. Algonada Desai	Orientation Programme on Revised Syllabus for(CBGS) AM-III (EXTC & ETRX)	10 th July 2013 One day	SAKE, Chembur
33	Dr. Kanaklata Tiwari Mr. Nandini Rai Mr. Rachana Desai Mr. Deepali Phalak	Workshop on Google Apps	10 th July 2013 One day	KJSCE
34	Mr. Yogesh Thakkar Mr. Nandini Rai Mr. A. S. Desai	Orientation Programme on Revised Syllabus for (CBGS) AM-III (EXTC & ETRX)	9 th July 2013 One day	Rajiv Gandhi Institute of Technology, Andheri
35	Mr. Santosh Mani	International Conference on Light, Optics' 14" during March 19 to 21, 2014	One day / March 2014	NIT Calicut, Kerala,
36	Mr. Santosh Mani	Symposium on Experimental Condensed Matter Physics	February 2014	IIT Bombay
37	Mr. Santosh	National	One day /	G.N. College of

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No.	Name of Faculty	Event	Date & Duration	Organized by
	Mani	Conference on Research Trends in Smart Materials	January 2014	Arts, Science and Commerce, Mumbai
38	Mr. Anand Bodhale	National Conference on Soft Skills & Personality Development at Parbhani	One day / January 2014	Shri Shivaji college of Arts, Science and Commerce.
39	Dr. Kanaklata Tiwari	International Conference on Humanities and Arts in Global World at Athens	One days / January 2014	Greece, the Athens Institute for Education and Research.
Year (2012-13)				
40	Dr. V.R. Naik	Workshop on “Tools and Techniques for effective Technical Writing”.	13-17 May-2011 (One week)	ISTE Teachers Chapter, KJSCE
		STTP on “Recent Technique in Renewable Energy”.	17-22 Jan-2013 (One week)	Sanjivan Engineering College, Kolhapur
41	Mr. S.S. Patwardhan	Workshop on “Tools and Techniques for effective Technical Writing”.	13-17 May-2013 (One week)	ISTE Teachers Chapter, KJSCE
42	Mr. Santosh Mani	“Laboratory Training Programme” on Material Testing and Characterization	April 15-20, 2013 (One week)	Shardha Analytical Services, Mumbai during
		Two days “COMPHY 2013@ Workshop on Computational Physics with Special emphasis to Parallel Computing”	January 11-12, 2013, (Two days)	K. J. Somaiya College of Science and Commerce, Mumbai
		Two days ISTE	November 11-	Bombay at

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No.	Name of Faculty	Event	Date & Duration	Organized by
		Workshop on “Aakash for Education”	12, 2012, (One week)	KJSCE, Mumbai
		STTP ‘Advanced Material Characterization Techniques’	3-7 June 2013 (One week)	Motilal Nehru National Institute of Technology, Allahabad
		National workshop on ‘Physics for energy and environment’	14-15 June 2013 (One week)	University of Mumbai
43	Mr. Y.M. Thakkar	Workshop on “Question Paper Pattern and Preparation of Blue Print”	21 st July 2012 (One week)	KJSCE
		Workshop on “Tools and Techniques for effective Technical Writing”.	13-17 May-2013 (One week)	ISTE Teachers Chapter, KJSCE
		Workshop on “Google Applications”	June-2013 (One week)	KJSCE
44	Mr. R.B. Salvi	Workshop on “Tools and Techniques for effective Technical Writing”.	13-17 May-2013 (One week)	ISTE Teachers Chapter, KJSCE
		Workshop on “Google Applications”	June-2013	KJSCE
45	Mr. Nandini Rai	Workshop on “Research Methodology”	25 th June - 4 th July 2012 (Two week)	IIT, Mumbai
		Workshop on “Tools and Techniques for effective Technical Writing”.	13-17 May 2013 (One week)	ISTE Teachers Chapter, KJSCE
46	Mr. A.B. Bodhale	Workshop on “Research Methodology”	25 th June to 4 July-2012 (Two week)	IIT, Mumbai

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No.	Name of Faculty	Event	Date & Duration	Organized by
		Seminar on "Syllabus designing: Theory and Practice (English Language and Literature)	8 th to 9 th Feb-2013 (2 days)	D.B.J. College, Chiplun
		Workshop on "Tools and Techniques for effective Technical Writing".	13-17 May-2013 (One week)	ISTE Teachers Chapter, KJSCE
		Workshop on "Writing Proposals"	11 th Dec-2013 one day	KJSCE
47	Mr. Rachana desai	Workshop on "Research Methodology"	25 th June to 4 July-2012 (One week)	IIT, Mumbai
		Workshop on "Tools and Techniques for effective Technical Writing".	13-17 May-2013 (One week)	ISTE Teachers Chapter, KJSCE
		Workshop on "Writing Proposals"	11 th Dec-2013 One day	KJSCE
48	Mr. A.S. Desai	Workshop on "Discussion and Preparation of Question Paper for F.E."	21 st July 2012 One day	KJSCE
49	Mr. A.S. Desai Mr. Shrikant Chawde Mr. Santosh Mani Mr. Suren Patwardhan Dr. Kanaklata Tiwari	Workshop on "Aakash Tablet"	10 th - 11 th Nov. 2012 Two days	IIT Mumbai (KJSCE Remote Centre)
50	Dr. Kanaklata Tiwari	Workshop on "Question Paper Pattern and Preparation of Blue Print"	21 st July 2012 One day	KJSCE

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No.	Name of Faculty	Event	Date & Duration	Organized by
		Workshop on “English Literature”	19 th May 2012 One day	Manav Rachana University Faridabad
51	Dr. Kanaklata Tiwari	“Identity Crisis in post 1980 Indian English Literature” in National Conference proceedings	May 2012	Manav Rachana University, Engineering College, Faridabad.
Year (2011-12)				
52	Mr. Rachana Desai Mr. Deepti Saxena	Workshop on “SCILAB”	13 -17 June 2011 (One week)	KJSCE
53	Mr. Rachana Desai	Workshop on “Advanced Graphics”	16 June-2011 One day	KJSCE
		STTP “Applied Optimization Through Intelligent Techniques”	2 nd - 6 th January 2012 One week	SVNIT
54	Dr. V.R. Naik	Workshop On “Material’s Characterization”	3 May-2012 One day	IIT, Mumbai
55	Mr. S.S. Patwardhan	Workshop on Solar Photovoltaics	(12-22) Dec. 2011 Two week	IIT, Mumbai
56	Mr. Santosh Mani	Workshop on “Conference Paper Writing”	(18- 19) Feb. 2012 Two days	IIT, Mumbai
57	Mr. Anand Bodhale	Workshop “Conference Paper writing”	(18-19) Feb. 2012 Two days	IIT, Mumbai