



Estd. 2001

Conferred Autonomous Status by University Grants Commission (UGC) for 10 years w.e.f. AY 2019-20

ISO 9001:2015
Certified
Institute

NBA
Accredited
Programs

NAAC Accredited
Institute
with 'A' Grade

AICTE-CII Survey rating
in Platinum category for
Industry linkages

Among Top 250
Colleges in NIRF
Ranking 2019-20 & 2020-21

68th & 78th in All India Rank by Outlook
survey published in June 2019 &
May 2018 respectively

Academic Performance Audit Report (A.Y. 2019-20)

by

External Peer Team
(Constituted as per UGC Guidelines
for Autonomous Colleges)

Yagdu Singh Charitable Trust's (Regd.)

THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY

Autonomous College Affiliated to University of Mumbai

Approved by All India Council for Technical Education(AICTE) and Government of Maharashtra

A - Block, Thakur Educational Campus, Shyamnarayan Thakur Marg, Thakur Village, Kandivali (East), Mumbai - 400 101

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Date: 09-07-2021

Academic Performance Audit by External Peer Team (27th July 2021)

I. Audit Purpose:

- To Review/Assess the *Academic performance* of the college and send yearly report to UGC for A.Y 2019- 20 & A.Y 2020-21.
- To Review/Assess the initiatives taken by the college after receiving “*Autonomous status*” & suggest potential areas of growth.

II. Constitution of “External Peer Team” as per UGC guidelines

- Dr. Anil Kumar Singh**, Former Professor IITB - Chairperson
- Dr. Harivasudevan**, Principal D. J Sanghvi College of Engineering – Member
- Dr. P.P. Bhave**, Associate Professor & HOD, Civil Engg., Dept., VJTI, Mumbai – Member

III. Audit Scope: Monitoring of Autonomous colleges as per point No. 8, page 5 & 6 of UGC guidelines 2018 for Autonomous colleges

To Review the progress and suggest improvements with regard to the following:

- The Curricular Aspects of the Academic programs offered by the college and its future plans
- The innovative processes adopted by the institution in Teaching, Learning and Evaluation along with the methodology/pedagogy adopted for enriching the Teaching Learning Process from online mode to blended mode of teaching.
- Examination, continuous evaluation and innovative methods of student assessment & the outcomes
- The initiatives taken to sensitize/promote Research, Entrepreneurial climate in the college.
- The student support services and their progression into industry, higher studies of learning and other areas.
- The outreach and extension initiatives with regard to programs offered of national relevance and importance.
- The innovations introduced during this academic year which have created a positive impact on the functioning of the Institution.

IV. Audit Methodology/Process:

The methodology/process is to assess the qualitative measures taken by the college through discussion/interaction/presentation with the top and middle level leadership and interaction with other stakeholders. To understand the strategic planning, design, deployment, measurements, outcomes, and innovations carried out for better offerings to the stakeholder's post autonomy and suggest improvements.

- To interact with Chairman Academic Council, Member secretary - Dean Academic Board.
- To interact/discussions with Deans/Controller of Examinations,
- To interact/meeting with Chairman -Board of Studies of various departments to understand their strategic planning towards future growth of their respective departments
- To share presentations, discussions with activity heads, section in-charges and students.
- To interact with members of Academic council, Board of studies, examination board, members of student council and understand their future plans/strategies towards institute growth.

Sd/-
Dr. B.K MISHRA
Principal

Re: Academic Performance Audit by "External Peer Team" as per UGC guidelines

Raghavendra Sedamkar <rr.sedamkar@thakureducation.org>

Sun 18-07-2021 20:59

To: Kamal Shah <kamal.shah@thakureducation.org>; lochan jolly <lochan.jolly@thakureducation.org>; Sanjay kumar <sanjay.kumar@thakureducation.org>; sheetal.rathi <sheetal.rathi@thakureducation.org>; Dr. Siddesh Siddappa <siddesh.siddappa@thakureducation.org>; payel.saha <payel.saha@thakureducation.org>; bijith.marakarkandy <bijith.marakarkandy@thakureducation.org>; harshali.patil <harshali.patil@thakureducation.org>; Seema Jagtap <seema.jagtap@thakureducation.org>; Dr. Sanjay Patil <sanjay.patil@thakureducation.org>; Sunita Pachori <sunita.pachori@thakureducation.org>; Sanjeev Ghosh <sanjeev.ghosh@thakureducation.org>; hemant.kasturiwale <hemant.kasturiwale@thakureducation.org>; anand.khandare <anand.khandare@thakureducation.org>; sangeeta.vhatkar <sangeeta.vhatkar@thakureducation.org>; Sanjeev Chaudhari <sanjeev.chaudhari@thakureducation.org>; Rajeshwar Deshmukh <rs.deshmukh@thakureducation.org>; rohitkumar.singh <rohitkumar.singh@thakureducation.org>; yogesh.bhalekar <yogesh.bhalekar@thakureducation.org>; krishnakant.mishra <krishnakant.mishra@thakureducation.org>

Cc: TCET Principal <tcet.principal@thakureducation.org>; TCET Vice-Principal <tcet.vice-principal@thakureducation.org>; sir.deven@gmail.com <sir.deven@gmail.com>; TCET TEACHING <tcet.teaching@thakureducation.org>

1 attachments (660 KB)

TCET Academic audit schedule-09-7-21.pdf;

Dear Sir/Madam,

PFA the Schedule of "Academic Performance Audit" scheduled on 27th July 21. The audit shall be conducted in face-to-face mode. As per the telephonic communication received from Dr. Anil Kumar Singh, Chairman of the committee, all concerned including the faculty members should be aware of the UGC guidelines for Autonomous Colleges.

This is for your information and necessary action at your end. Please sensitize all faculty members about the same.

Thanks & Regards,

**Dr. R R Sedamkar, Director - IQAC
Professor & HoD (Ph.D Programs)**

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TCET

From: Raghavendra Sedamkar

Sent: Tuesday, June 22, 2021 11:15 AM

To: Kamal Shah <kamal.shah@thakureducation.org>; lochan jolly <lochan.jolly@thakureducation.org>; Sanjay kumar <sanjay.kumar@thakureducation.org>; sheetal.rathi <sheetal.rathi@thakureducation.org>; Dr. Siddesh Siddappa <siddesh.siddappa@thakureducation.org>; payel.saha <payel.saha@thakureducation.org>; bijith.marakarkandy <bijith.marakarkandy@thakureducation.org>; harshali.patil <harshali.patil@thakureducation.org>; Seema Jagtap <seema.jagtap@thakureducation.org>; Dr. Sanjay Patil <sanjay.patil@thakureducation.org>; Sunita Pachori <sunita.pachori@thakureducation.org>; Sanjeev Ghosh <sanjeev.ghosh@thakureducation.org>; hemant.kasturiwale <hemant.kasturiwale@thakureducation.org>; anand.khandare <anand.khandare@thakureducation.org>; sangeeta.vhatkar <sangeeta.vhatkar@thakureducation.org>; Sanjeev Chaudhari <sanjeev.chaudhari@thakureducation.org>; Rajeshwar Deshmukh <rs.deshmukh@thakureducation.org>; rohitkumar.singh <rohitkumar.singh@thakureducation.org>; yogesh.bhalekar <yogesh.bhalekar@thakureducation.org>; krishnakant.mishra <krishnakant.mishra@thakureducation.org>; zahir.aalam <zahir.aalam@thakureducation.org>; anilk.vasoya <anilk.vasoya@thakureducation.org>; Vijaykumar Yele <vijaykumar.yele@thakureducation.org>

Cc: TCET Principal <tcet.principal@thakureducation.org>; TCET Vice-Principal <tcet.vice-principal@thakureducation.org>; sir.deven@gmail.com <sir.deven@gmail.com>

Subject: Academic Performance Audit by "External Peer Team" as per UGC guidelines

Dear Collogues,

As directed by the Principal, the IQAC-NAAC of TCET shall initiate the process to carry on with the required process to complete the Academic Audit as per UGC guidelines. In this connection, I would like to draw your attention to the point No. 8, page 5 & 6 of the document attached, "Monitoring of Autonomous Colleges" as specified in the UGC guidelines.

In view of the above a "**External Peer Team**" has been formed by IQAC of TCET to review/assess the performance of the college and send yearly report to UGC . The following is the composition of the committee :

Prof. Anil Kumar Singh, Former Professor IITB - Chairperson
Dr. HariVasudevan, Principal D. J Sanghvi College of Engineering, Mumbai - Member
Dr. P.P Bhawe, Associate Professor & HoD, Civil Engg. Dept., VJTI, Mumbai - Member

The committee is likely to visit in 2nd or 3rd week of July to carry out an "**Academic Audit**" of all the programs offered under Autonomy scheme for the AY 2019-20 and AY 2020-21. The committee has accepted to carry out the audit in face-to-face mode if the government regulations permit.

A consolidated report based on the inputs received from all the departments and sections will be presented to the **Team** and the **Team** is likely to interact one2one with all concerned to understand the **planning, design, deployment, measurements, outcomes, and innovations carried out for better offerings to the stakeholder's** post autonomy and suggest improvements if any.

All are requested to take note of the same and do the preparations accordingly as per the direction of the with Principal's office. You may feel free to talk to me personally in my office on first floor or virtually through the link for any clarifications/suggestions :

TCET-WFH Meetings/Discussions/Guidance (Prof. R R SEDAMKAR)
June 16 – October 30, 2021
Google Meet joining info
Video call link: <https://meet.google.com/bmw-nnxa-bwf>
Or dial: (US) +1 929-238-0675 PIN: 287 954 986#

Thanks & Regards,

Prof. (Dr.) R R Sedamkar, Director - IQAC
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TCET

Proforma for Progress Report of College (Autonomous)

Progress Report for the Academic Year: 2019-20

Thakur College of Engineering & Technology (TCET) since its inception has been instrumental in offering quality technical education to aspiring students through System-Driven-Student-Centric approach. In the last decade, it has put its best efforts to focus on broad based education leading to holistic student development as per international graduate attributes. TCET aspires to strengthen its program offerings to make our budding engineers “Globally Competent, Locally Relevant and Skill Oriented.”

After receiving Autonomous status in the year 2019, TCET has implemented Choice Based Credit Grading System with Holistic Student Development (CBCGS – H 2019), which is based on AICTE model curriculum and UGC (Minimum standards of instruction for grant of First Degree through Formal Education) Regulations, 2003. The Autonomy Scheme includes Scholastic, Co-scholastic and Non-scholastic Credits which are compulsory for every student. Additional Credits are assigned for the Student Achievers under Specialization (optional credits in Emerging Areas) and Achievers' credits (National/International level). The curriculum also focuses on promoting Holistic Student Development (HSD) which includes courses like Activity Based Learning which involves inculcating human values and courses on personality development. In addition to that, the Professional Skills with focus on Basic Technology Skills and Industry/Research/Entrepreneurship Skills are also part of the scheme with credits. The students are also encouraged to take up Internships at core companies which would enhance their skills and make them updated with the current industry needs. The Examination Scheme is revised keeping in view the kind of pressure a student undergoes during continuous evaluation. The curriculum scheme would help students to grow academically, professionally.

Process of getting reports validated from Departments/ Section In-charges

The institute follows ISO 9001:2015 norms and guidelines. The reports are received from different departments/ sections. These reports are initially proposed by the respective process In-Charges and then checked by the Heads of the Department (HoDs/ Section In-Charges). The reports are further reviewed by the Vice-Principal, who then recommends these reports to the Principal for his consideration and final approval. Such validated and approved reports are then shared with the IQAC members along with the Coordinator- and the Director-IQAC. The integrated reports are then put up in the quarterly IQAC meetings for discussion on action-taken points of the last quarter and also suggestions for actionable points for the next quarter.

1. Academic and Research Activities Undertaken:

1.1 Academic Activities

1.1.1 Curriculum Design and Development

Since inception, the engineering curriculum in UG Programmes was offered with Semester Pattern to students under the affiliated system of University of Mumbai (UoM). The university curriculum included basic and foundation courses, core engineering courses, design and development, engineering and technological applications and other supporting courses along with projects/ thesis/ dissertation. After getting autonomy in July 2019, the curriculum is redesigned at institute to bring learning simplicity, flexibility, learning diversity, and Holistic Students Development (HSD). This change widened the scope of providing beyond curriculum components viz. Activity Based Learning (ABL), Project Based Learning (PBL) & Research Based Learning (RBL). Moreover, the bridge courses, design-based experiments, mini projects, case studies etc. are also enriched. The objective was to develop course specific technical

knowledge with strong analytical skills, critical thinking, and innovative mindset among students. The curriculum designed in AY 2019-20 was with the theme to include core, multidisciplinary, industry linked, research-based learning and value-based HSD under an autonomous system. With all the above components in curriculum, Choice Based Credit Grading System with Holistic and Multidisciplinary Education (CBCGS-H) was implemented with the offering of major and minor courses with additional credits and the recognition for national and international achievements through credits and citations. The similar pedagogy was offered for PG programmes and Ph.D. programmes, following UGC guidelines.

a) Syllabus revision carried out during the academic year

Name of Programme	Programme Code	Date of Revision
F.E. All UG Programmes	Choice Based Credit Grading Scheme with Holistic Student Development (CBCGS -H 2019)	01-08-2019
S.E. (Computer Engineering)		10-07-2019
S.E. (Information Technology)		
S.E. (Electronics and Telecommunication Engineering)		
S.E. (Electronics Engineering)		
S.E. (Mechanical Engineering)		
S.E. (Civil Engineering)		
T.E. (Computer Engineering)		
T.E. (Information Technology)		
T.E. (Electronics and Telecommunication Engineering)		
T.E. (Electronics Engineering)		
T.E. (Mechanical Engineering)		
T.E. (Civil Engineering)		
B.E. (Computer Engineering)		
B.E. (Information Technology)		
B.E. (Electronics and Telecommunication Engineering)		
B.E. (Electronics Engineering)		
B.E. (Mechanical Engineering)		
B.E. (Civil Engineering)		
M.E. (Computer Engineering) – First Year	Choice Based Credit Grading Scheme (CBCGS 2019)	
M.E. (Information Technology) – First Year		
M.E. (Electronics and Telecommunication Engineering) – First Year		

b) Programmes/ courses focussed on employability/ entrepreneurship/ skill development during the academic year

Programme with Code	Course with Code	Date
S.E. (Computer Engineering) (CBCGS -H 2019)	Employability Skill Development - I (ESD-CS-301)	22-07-2019
	Employability Skill Development - II (ESD-CS-401)	
	Professional Skills-III (PS-CS301)	
	Professional Skills-IV (PS-CS401)	
	Seminar / Workshop (SI301)	
	Activity Based Learning-III (HSD-CSABL301)	
	Summer Internship (SI-CS301)	
	Project Based Learning - II (HSD-CSPBL301)	
	Summer Internship (SI-CS401)	
	Project Based Learning - II (HSD-CSPBL401)	

Programme with Code	Course with Code	Date
S.E. (Information Technology) (CBCGS -H 2019)	Activity Based Learning-IV (HSD-CSABL401)	22-07-2019
	Employability Skill Development - I (ESD-IT-301)	
	Employability Skill Development - II (ESD-IT-401)	
	Professional Skills III (HSD-ITPS301)	
	Professional Skill IV (HSD-ITPS401)	
	Project Based Learning-I HSD-ITPBL301)	
	Activity Based Learning III (HSD-ITABL301)	
	Summer Internship (SI-IT301)	
	Project Based Learning-II (HSD-ITPBL401)	
	Activity Based Learning IV (HSD-ITABL401)	
S.E. (Electronics and Telecommunication Engineering) (CBCGS -H 2019)	Employability Skill Development - I (ESD-ETC 301)	22-07-2019
	Employability Skill Development - II (ESD-ETC-401)	
	Professional Skills III (HSD-ETCPS 301)	
	Summer Internship (SI-ETC301)	
	Employability Skill Development (ESD-ETC301)	
	Project Based Learning I (HSD-ETCPBL301)	
	Activity Based Learning III (HSD-ETCABL301)	
	Professional Skills IV (HSD-ETCPS 401)	
	Project Based Learning II (HSD-ETCPBL401)	
	Activity Based Learning IV (HSD-ETCABL 401)	
S.E. (Electronics Engineering) (CBCGS -H 2019)	Employability Skill Development - I (ESD-ELE-301)	22-07-2019
	Employability Skill Development - II (ESD-ELE-401)	
	Professional Skills-III (HSD-ELEPS301)	
	Seminar/ Workshop (SI-ELE302)	
	Project Based Learning-I (HSD-ELEPBL301)	
	Activity Based Learning-III (HSD-ELEABL301)	
	Summer Internship (SI-ELE402)	
	Professional Skills-IV (HSD-ELEPS401)	
	Project Based Learning-II (HSD-ELEPBL401)	
	Activity Based Learning-IV (HSD-ELEABL401)	
S.E. (Mechanical Engineering) (CBCGS -H 2019)	Employability Skill Development - I (ESD-ME-301)	22-07-2019
	Employability Skill Development - II (ESD-ME-401)	
	Seminar/ Workshop/Professional Training (SI-ME301)	
	Professional Skills- III (HSD- MEPS301)	
	Mini-Project I (HSD-MEPBL301)	
	Activity Based Learning III (HSD-MEABL301)	
	Professional Skills- IV (HSD- MEPS401)	
	Summer Internship (SI402)	
	Seminar/Workshop/Professional Training (SI ME402)	
	Project Based Learning - II (HSD-MEPBL401)	
Activity Based Learning IV (HSD-MEABL401)		
S.E. (Civil Engineering) (CBCGS -H 2019)	Employability Skill Development - I (ESD-CE-301)	22-07-2019
	Employability Skill Development - II (ESD-CE-401)	
	Seminar/Workshop (SI 301)	
	Professional Skills III (Auto CAD) (HSD-CEPS301)	
	Project Based Learning - I (HSD-CEPBL301)	

Programme with Code	Course with Code	Date
	Activity Based Learning III (HSD-CEABL301)	
	Summer Internship/Professional Training (SI 402)	
	Professional Skills-IV (HSD-CEPS401)	
	Project Based Learning - II (HSD-CEPBL401)	
	Activity Based Learning - IV (HSD-CEABL401)	

1.1.2 Academic Flexibility

The Choice Based Credit Grading System for Holistic Student Development (CBCGS – H 2019) is based on AICTE model curriculum and UGC (Minimum standards of instruction for grant of First Degree through Formal Education) Regulations, 2003. The proposed scheme/ syllabus is aligned with the model curriculum which offers courses on Basic Sciences, Engineering Sciences along with Humanities to impart the fundamental importance of science to the students which would later be useful for research in applied science and engineering. In addition to this, there was an inclusion of specialization courses, employability skills development, list of practical including beyond curriculum components viz. design based experiment, mini project, and technical paper writing. The students were allowed to opt for elective subjects at inter-department and institute level using department level optional courses (DLOC) and institute level optional courses (ILOC).

a) New programmes/ courses introduced during the Academic year

Programme/ Course	Date of Introduction
Choice Based Credit Grading Scheme with Holistic Student Development (CBCGS-H 2019)	22-07-2019
Seminar/ Workshop	
Environmental Studies	
Professional Skills III	
Project Based Learning - I	
Activity Based Learning III	
Summer Internship	
Value Education	
Professional Skills - IV	
Project Based Learning - II	
Activity Based Learning IV	

b) Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the College level during the Academic year

Name of Programme	Level	Date of Implementation
B.E. (Electronics and Telecommunication Engineering)	UG	22-07-2019
B.E. (Computer Engineering)	UG	
B.E. (Information Technology)	UG	
B.E. (Electronics Engineering)	UG	
B.E. (Mechanical Engineering)	UG	
B.E. (Civil Engineering)	UG	
M.E. (Electronics and Telecommunication Engineering)	PG	05-08-2019
M.E. (Computer Engineering)	PG	
M.E. (Information Technology)	PG	

1.1.3 Curriculum Enrichment

- a) Value-added courses imparting transferable and life skills offered during the academic year 2019-20

TCET provides quality in technical education since inception among engineering graduates with the background to always provide curriculum enrichment from time-to-time and felt the need to boost competitive edge among students. Thereby, proper planning and decision making plays a vital role for students to choose the right career by learning in their curriculum the beyond learning component viz. ABL, PBL, professional skills, RBL etc. In addition to it TCET has established the mechanism to support students to fulfil their competitive requirements to make the right career decision by providing a platform for getting support of online certification through NPTEL, Coursera and other MOOCs platform. The prime objective is to encourage students for higher qualification such as pursuing master level program in India and abroad, graded online courses and professional certification courses & competitive exams by providing students a roadmap which resulted in the continual growth among students.

Swayam-NPTEL:

Course Run	Enrolment	Present	Gold	Elite	Silver	Successful	Participation	Topper
Jan-Dec 2020	3242	103	7	27	29	21	19	10
Jul-Dec 2019	2525	256	3	83	76	43	51	13
Jan-Jun 2019	1274	71	3	21	23	21	3	8
Jul-Dec 2018	1539	101	5	55	0	34	7	6
Jan-Jun 2018	1656	130	3	70	0	52	5	9
Jul-Dec 2017	2978	152	7	76	0	50	19	12
Jan-Jun 2017	2376	161	1	71	0	69	20	11

Other Courses:

Value added courses	Duration	Number of students enrolled
COURSERA	July - June 2020	2190
Udemy	July 2019 - Dec 2020	28
EDX	July 2019- Dec 2020	1
Cisco	July 2019 - Dec 2020	2
Google Digital Garage	May - 2020	4
Tata Steel	April - May 2020	12
TCS iON	April - June 2020	2
Internshala	January - June 2020	3

- b) Internships undertaken:

Internships are carried out for students to improve their technical skills and have all round development to get the right career with the right type of job in all levels of organizations. The internship activities are used to enhance knowledge, skill, attitude and the right kind of aptitude to meet the manpower requirements of the industry. The internships are structured, short-term and supervised, which often focused on particular tasks or projects with defined timescales. The objectives to carry out an internship include the test of theoretical knowledge in the real world and gain practical knowledge. This will also ensure that the hands-on experience during Internship/Outhouse project will strengthen networking with industry personnel and understand Industry requirements and find role-models. The outcomes include practical experience in an organizational setup, gaining excellent opportunity to see how the

theoretical aspects learned in classes are integrated into the practical world, imparting on-floor experience provides much more professional experience which is often worth more than classroom teaching, helping students to decide if the industry and the profession is the best career option to pursue, providing opportunity to learn new skills and supplement knowledge, providing opportunity to practice communication and teamwork skills etc. The Training & Placement cell is a facilitator and counsellor for training and placement related activities of internship both at in-house and out-house. There has been a consistent growth in the students undergoing internships in their areas of interest during each academic year leading to improvement in their employability skills.

Academic Year	Number of Participants
2019-20	2106
2018-19	1022
2017-18	1139
2016-17	281
2015-16	185
Total	4733

Outhouse internship summary department-wise of the academic year:

	COMP	ELEX	E&TC	IT	MECH	CIVIL	Overall
Internship by Institute	11	1	1	8	0	0	21
Students selected internship by their Own	13	4	6	10	9	1	43
Total -A	24	5	7	18	9	1	64

In-House Internship Summary department wise, track-wise of the academic Year

Departments:	
ES&H	
Class-wise in-house internship carried out	Number of students who completed the internship
FE -CIVIL	82
FE-COMP	190
FE-ELEX	63
FE-E&TC	125
FE -IT	125
FE -MECH	122
Total	707
COMP	
Name of the internship tracks provided by department	Number of students who completed the internship
Machine Learning	66
Image processing	58
Information Security	54
Software Testing	39
UX Design	63
Data Science Using R	64
ELEX	

Name of the internship tracks provided by department	Number of students who completed the internship
Electronic Product Design (Simulation Lab)	28
IOT and Embedded Systems	31
Digital Systems Design using FPGA	38
E&TC	
Name of the internship tracks provided by department	Number of students who completed the internship
Arduino	40
IoT	33
Digital Marketing	50
Video Making	52
Data Networking & Cyber Security	46
IT	
Name of the internship tracks provided by department	Number of students who completed the internship
Website development	113
Database	68
Digital Marketing	35
MECH	
Name of the internship tracks provided by department	Number of students who completed the internship
Introduction to Finite Element Analysis	39
Fundamentals of I.C Engine & Automobile	54
Thermal System Design & Optimization	35
Mechanical Mechanism	42
Introduction to CNC Programming	33
Animation in Blender 2.8X	47
CIVIL	
Name of the internship tracks provided by department	Number of students who completed the internship
Maintaining physical and mental health in disaster condition	52
Interior design	60
Extreme civil Engineering	68
AUTOCAD/QCAD	11
Traffic Simulation	16
Total - B	2042

Total (A+B) students completed internship are:
64 (out house internship) + 2042 (In-house Internship) = 2106

Note: There is an increase in a total no. of 1084 students who have undertaken internship during the AY 2019-20 w.r.t A.Y 2018-19. There were total 28 different internship tracks from all departments conducted during AY 2019-20.

1.1.4 Faculty Profile and Quality

To facilitate the increase in the student's sanctioned intake and to deploy the changes in the "Autonomy Scheme", the need was felt to train the faculty to support the conduct of academics and other activities at the institute as per requirements. There has been a

consistent increase in gender ratio proportion, faculty qualification during their work period at institute. The faculty retention and appointments were the main focus for better quality offerings.

Gender Ratio																
	TCET				COMP				IT				E&TC			
	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17
Male	90	93	99	87	7	10	10	11	14	15	15	16	11	12	13	11
Female	82	82	90	83	21	21	24	21	14	13	15	14	17	18	18	18
Total	172	175	189	170	28	31	34	32	28	28	30	30	28	30	31	29

	ELEX				MECH				CIVIL				ES&H			
	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17
Male	6	5	5	4	20	20	23	20	11	12	14	8	21	19	19	17
Female	9	10	13	10	3	3	3	5	9	9	7	6	9	8	10	9
Total	15	15	18	14	23	23	26	25	20	21	21	14	30	27	29	26

Faculty Qualification																
	TCET				COMP				IT				E&TC			
	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17
PhD/MPhil	40	30	30	31	9	4	4	3	7	4	4	5	5	5	5	5
ME/MTECH	123	133	144	120	19	26	29	27	21	24	26	23	22	24	26	24
MSc/MA/MBA	9	10	8	8	0	0	0	1	0	0	0	0	1	1	0	0
BE/BTECH	0	2	7	11	0	1	1	1	0	0	0	2	0	0	0	0
Total	172	175	189	170	28	31	34	32	28	28	30	30	28	30	31	29

	ELEX				MECH				CIVIL				ES&H			
	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17
PhD/MPhil	2	2	2	2	2	2	2	2	2	2	2	1	13	11	11	13
ME/MTECH	13	13	15	12	21	21	22	19	18	18	16	10	9	7	10	5
MSc/MA/MBA	0	0	0	0	0	0	0	0	0	0	0	0	8	9	8	7
BE/BTECH	0	0	1	0	0	0	2	4	0	1	3	3	0	0	0	1
Total	15	15	18	14	23	23	26	25	20	21	21	14	30	27	29	26

Faculty Cadre																
	TCET				COMP				IT				E&TC			
	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17
Professor/Adjunct Prof.	15	12	10	10	3	2	1	1	4	3	3	3	5	4	3	3
Asso. Professor	13	10	12	12	4	2	2	2	2	2	2	3	2	1	3	3
Asst. Professor	142	147	156	133	21	25	29	27	22	23	24	22	21	25	25	23
Lecturer/Other	2	6	11	15	0	2	2	2	0	0	1	2	0	0	0	0
Total	172	175	189	170	28	31	34	32	28	28	30	30	28	30	31	29

	ELEX				MECH				CIVIL				ES&H			
	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17
Professor/Adjunct Prof.	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Asso. Professor	3	3	3	3	0	0	0	0	2	2	2	1	0	0	0	0
Asst. Professor	11	11	13	10	21	21	22	19	18	18	16	10	28	24	27	22
Lecturer/Other	0	0	1	0	0	0	2	4	0	1	3	3	2	3	2	4
Total	15	15	18	14	23	23	26	25	20	21	21	14	30	27	29	26

Faculty Experience in Years,Months (Not decimal)																
	TCET				COMP				IT				E&TC			
	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17
Minimum	1.10	0.05	0.06	0.11	3.05	1.08	1.02	0.11	3.10	0.05	2.00	1.03	2.06	1.08	0.08	2.01
Maximum	40.00	39.00	48.10	47.10	40.00	39.00	25.06	24.06	23.11	22.11	21.11	20.11	36.08	35.08	30.02	29.02
Average	13.01	11.11	10.11	11.01	13.05	11.11	9.11	10.06	14.08	13.07	12.05	11.01	16.01	13.11	13.03	13.01
Median	12.02	11.00	9.09	10.07	12.05	11.00	9.11	9.11	14.06	13.06	12.06	11.05	17.07	15.03	14.08	14.03

	ELEX				MECH				CIVIL				ES&H			
	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17
Minimum	4.00	2.04	2.00	2.01	2.07	1.09	0.09	1.03	2.06	1.06	0.06	2.01	1.10	1.00	1.05	1.01
Maximum	30.11	29.11	28.11	27.11	27.10	26.10	48.10	47.10	30.09	29.09	28.09	19.06	29.07	28.07	27.07	26.07
Average	14.08	13.06	11.05	12.08	11.02	10.01	10.02	10.04	8.07	7.03	6.03	5.01	12.04	12.01	11.10	12.08
Median	13.09	12.09	11.04	10.11	9.00	8.00	6.08	6.01	6.11	5.01	4.01	4.01	11.02	10.02	12.11	13.04

Faculty Appointment																
	TCET				COMP				IT				E&TC			
	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17
Regular	132	137	146	143	20	22	24	26	24	24	25	24	23	25	29	28
Ad-Hoc	40	38	43	27	8	9	10	6	4	4	5	6	5	5	2	1
Total	172	175	189	170	28	31	34	32	28	28	30	30	28	30	31	29

	ELEX				MECH				CIVIL				ES&H			
	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17	2019-20	2018-19	2017-18	2016-17
Regular	14	15	16	14	19	19	19	19	15	15	14	10	17	17	19	22
Ad-Hoc	1	0	2	0	4	4	7	6	5	6	7	4	13	10	10	4
Total	15	15	18	14	23	23	26	25	20	21	21	14	30	27	29	26

1.1.5 Honours and Recognitions Received by Faculty

The faculty members have tremendously done well in all areas. As Academic Research plays a very significant role in meeting national goals, the faculty members who joined at the initial stage of the institute have gained experience and attempted to enhance the culture of R&D through publications, grants, awards, copyrights, patents through the platforms of UOM, AICTE, IEDC, DST etc. The participation of faculty members in inter-university, inter-state & national level competitions was well-promoted at the institute. A few faculty members were part of **Smart India Hackathon (SIH)** and were winners in a few selected categories. The faculty members are motivated to engage in bringing innovative ideas which are considered for Intellectual Property Right like copyrights and patents, which would result towards their awards and recognitions.

Name of faculty	Designation	Award, fellowship, received from Government or recognized bodies
Dr Kamal Shah	Professor	Golden Aim Award for Excellence in Leadership in education and Entrepreneurship development.
Dr Lochan Jolly	Professor	Appreciation award at FOSSEE Symposium IITB for her contribution to textbook companion and Lab migration in Scilab.
Dr Sanjay Kumar	Professor	Inter University Research Convention, Anveshan, Feb 2020, 3 rd Rank
Dr Sangeeta Mishra	Associate Professor	"Abdul Kalam Best Young Scientist" award by Bose Science Society.
Dr Rashmi Thakur	Assistant Professor	Ministry of Bureau of police Research and Development (BPRD), SIH 2020 – 1 st Rank

1.1.6 Preparation of Academic Calendar

The tentative Institute Academic calendar is finalized 15 days before the commencement of semester. The HODs prepare the calendar at department level in alignment with institute academic calendar. Academic calendar is notified on the notice board and website. It is also included in the faculty diary (only relevant activities) for compliance.

The separate academic calendars for students and faculty members are prepared for each semester at the institute level for the smooth conduct of the academic activities. All curricular, co-curricular and extra-curricular activities are planned well in advance in the academic calendar. The actual semester conduct is for 15 weeks where the conduct of lectures/practical/ tutorials along with the in-semester assessment is scheduled. The semester conduct starts with lectures/practical followed by the in-semester assessment (ISA) planned during 9th week of semester, followed by retest during 11th week of semester, term work submission during 18th week, oral/practical exams in 19th week of semester followed by End Semester Examination in 21st week & all ATKT/supplementary exams in 24th week as per academic calendar. All these activities are well-informed to students by the respective department and exam section. The university notices and circulars related to the examinations are also informed to students from time to time through student notice boards, departmental notice boards and institute website.

1.1.7 Curricular, Co-Curricular, Extra-Curricular and Professional Body Activities

- a) **Curricular Activities:** Curriculum under autonomy prepared for global career through holistic education with provision for specialization and minor subjects.

Odd Semester is started on 19th July 2019 for SE to BE and from 1st August 2019 for FE. Mid-Semester exam was conducted on 9, 11, 13 and 16th Sept. 2019. Last instructional day was 16th November 2019 for SE to BE and 22nd November 2019 for FE. End semester exams (Oral/Practical) were held from 18th November 2019 to 23rd November 2019. End semester exams (Theory) were held from 02nd to 27th December 2019. Semester review presentations were done by faculty on 24th December 2019. All regular students' results were declared on 8th January 2020. ATKT results were declared on 17th January 2020.

Even Semester is started on 06th January 2020 for FE to BE. Mid-Semester exam was conducted from 2nd to 7th March 2020. Last instructional day for all was planned on 18th April 2020. End semester exams (Oral/Practical) were planned from 20th to 25th April 2020. End semester exams (Theory) were planned from 04th to 19th May 2020. But due to the COVID-19 pandemic and a nationwide lockdown which was imposed by authorities, the institute has adapted to the new normal swiftly and started to work/ study from home using online meeting platforms. The online teaching commenced in the current pandemic situation from 26th March 2020. All the remaining semester activities were carried out in online mode.

Due to pandemic situation, for semester II, IV, VI, end semester exam was not conducted, and results were declared on 29th June 2020 based on University of Mumbai guidelines. (Ref: UOM circular no DBOEE/ICD/2020-21/05 dated 26/5/2020). Semester VIII end semester exam was conducted in online mode from 1st to 9th October 2020 as per University of Mumbai guidelines. (Ref: MU-Exam-Mission-2020-CIRCULAR No. Exam/DBOEE/ICC/2020-21-02). The result was declared on 19th October 2020.

The institute has taken an initiative to extend innovative learning which can lead to effective evaluation & assessment. The objective was to ensure the teaching-learning process to be delivered in a seamless manner and at the same time it is to uplift students' skills to link and understand real time applications with problem-solving skills, critical thinking, research & innovation, design & development resulting in Holistic development.

- Various platforms like Google classroom, Zoom and Google meet are used by teachers for teaching-learning process. Online lectures & practical were conducted on these platforms and necessary study material was uploaded on GCRs and ERP.
- Due to pandemic, sessions were conducted using flip classroom mode by sharing resource material such as PPTs, notes, links etc. and followed by that doubt solving and revision lecture and practice tests to ensure the proper conduct of formative and summative assessment
- Zoom platform was used for doubt solving sessions, project progress demonstrations/ presentations and oral/ practical examination.
- Google classroom was used for sharing learning resources- PPTs, notes, topic-wise contents and conduct of Formative Assessment test and Summative Assessment.
- Assignments and notes are uploaded in ERP-Academic Monitoring module.

The future part of online learning among students, planned for AY 2020-21, is to bring more & more interest in technical subjects among students by various mechanisms which will make them understand the topics with more clarity. A brief online test is conducted during lectures/practical through online platforms viz. Padlet, Mentimeter etc. to check students' learning. (For Blended learning in future for both online, offline teaching)

- **Seminar:** Technical Seminar was conducted by E&TC department on Product Designing and Processing, Data Networking and Cyber Security, AI & Machine Learning on 12th-13th March 2020 & 18th -19th September 2020. Three seminars were conducted by the Civil Department on Easy Bid on 25th February 2020, Lean Construction Technology on 12th June 2020, Use of Waste by products in Road Construction on 19th September 2020.
- **STTP:** Following training programmes were conducted:
 - AICTE Sponsored STTP (Short Term Training Program) on "Perspectives on Data Analytics with Advances in Software Engineering" was conducted by COMP Dept during Feb 24th - 28th 2020
 - AICTE approved STTP for E&TC, IT, COMP was conducted from 24th - 29th February 2020.

b) Co-curricular Activities: Under autonomy, co-curricular activities are incorporated through TBL, PBL and RBL with well-defined curriculum and the credits. Activities are spread over the semester and in alignment with the professional development as per AICTE guidelines. Similarly, ABL events are conducted every Friday as per timetable for 2-3 hrs through a well-defined curriculum. Outreach, Extension, and Social programmes are also the part of co-curricular activities. Moreover, it includes teaching-learning on Life skills of UGC and Induction programme curriculum of AICTE. To expose the student to the industry/corporate environment, the institute has created the provision of internships at UG and PG during summer vacation. In addition, a large number of activities are conducted as per the previous practices under professional and social bodies of the student chapter. These activities include activities done at institute level, department level and section level. These activities are encouraged to promote Holistic Student Development (HSD). Four activities were conducted:

- Engineering Workshop & Paper Presentation Contest conducted during 28th - 29th February 2020.
- ABL activities were conducted from 27th July to 1st August 2020 on the theme of problem, solution, design, and product. Many students came out with the prototype on waste management. (Technical and Non-Technical)
- PBL activities were conducted for Sem-III and Sem-V from 10th August to 10th September 2020 with an objective to create platform for conducive Learning Environment for Undergraduate students. This ensured overall professional growth with systematic indulgent of standards and amendments followed by industry and research institutes on the theme of Social Problem Technical Solution. Many students came out with the prototype to address social problem. (Technical and Non-Technical).
- Pre-placement Orientation was conducted for Third Year on 16th Sept. 2019 to create awareness about available career options after engineering, to help the students in identifying career plan and placement process, and provide information about pre-placement training program and its impact on placement.
- Orientation on ESD training was conducted on 4th August 2020 for all SE students for enhancing their technical skills as per the industry requirement. Total 525 out of 603 (around 87%) from Second Year attended the program. ESD program was conducted for SEM III from 7th - 11th January 2020 and on weekends. Total 747 students attended. Online Coursera was conducted for SEM IV from 21st April - 11th July 2020 and on weekends, where 747 students have attended. ESD program was conducted for SEM V from 26th - 31st July 2020, where 799 students have attended. ESD program was conducted for SEM III from 4th - 9th August 2020 with 603 students attended the program.

c) Extra-Curricular Activities: Since June 2020 onwards, more than 40 programs were conducted in online mode. Student participation and productivity were found increased in these programs.

- The Leadership Program was conducted in the orientation week, where the senior leadership gave the training to plan, do, check and act (PDCA) with respect to various student activities for the office bearers of all professional, social bodies and council. The second part of the program was conducted by the ex-office bearers for the new team along with the faculty in-charges. The third part of the program was related to developing case studies related to various student issues as per the input received by the industry experts in the field of creative and design thinking. This program was monitored by TSDW.
- AICTE has launched 100 Activity Point Program for students, which need to be completed in 4 years. In this regard, we are initiating Activity Point Diary, where the students' participation in various activities can be recorded and verified by student heads and faculty in-charges. Later, at the end of 4 years, after verification by the Deans, Vice-Principal and Principal, the transcripts will be generated which will be an essential part of degree allocation.
- Training and Placement Cell organized an interactive webinar series on Holistic Development during Pandemic 2020- A Fight for the Future. It was conducted from 15th June to 11th July 2020 from 11:00 AM onwards.
- During this current pandemic, physical format is not possible to run the institute activities. Virtual format has been adopted to keep the students engaged. For these

activities, institute plans to make it theme based so that it can be aligned with 100 AICTE activity points. Activities are organized at Intra/ Inter College level. All these activities and events are getting good response from outside. Some of the programmes conducted during this pandemic include:

- E- Techfest during 5th - 14th June 2020 organized by professional bodies
- Gusto- 2020 during 15th- 25th June 2020 organized by TSDW
- Student Exchange Programmes during 15th-30th June 2020 organized by Dean (SSW) and Activity Head
- Webinar Series during 15th June -10th July 2020 organized by TPO
- STEM PROMO during 6th to 10th July 2020 by F.E. Engineering department
- Leadership Programme (12-14 Aug. 2020) (Student Engagement Week) organized by TSDW
- Student Fitness Week -1st-6th Sept. 2020 organized by TSDW
- Teachers' Day and many more such activities- 5th Sept. 2020 organized by TSDW
- TEDx -27th September 2020- A program of local, self-organized events that bring people together to share a TED-like experience organized by TEDx Team/ IETE professional body of Electronics Engineering Department.

d) Professional Body Activities:

- **ACM**
 - Core committee formation- 8th August 2020
 - Working committee formation- 29th August 2020
 - Webinar on IT Domains- 5th September 2020
 - Coding Competition- 12th September 2020
 - Technical Rush- 19th September 2020
 - Technical Seminar- 26th September 2020
- **CSI**
 - Core committee formation- 8th August 2020
 - Working committee formation- 29th August 2020
 - Technical Quiz Competition- 5th September 2020
 - Expression of ideas -A Debate Competition- 12th September 2020
 - Seminar/Webinar on Budding Technology- 19th September 2020
 - Coding Competition- 26th September 2020
- **ASCE Activities**
 - Core committee formation- 8th August 2020
 - ASCE recorded Webinar on Decentralized Recharge and Reuse- Innovative Wastewater Systems- 29th August 2020
 - Disaster Proof Housing ideas- 5th September 2020
 - Industry Awareness Program- 12th September 2020
 - Miniature Project Making/Model making- 19th September 2020
 - Webinar- 26th September 2020
- **ASME /SAE Activities**
 - Core committee formation- 8th August 2020
 - Webinar- 29th August 2020
 - Technical Quiz Competition- 5th September 2020
 - A Technical Debate Competition- 12th September 2020

- Alumni Interaction- 19th September 2020
- Technical Workshop (Robotics/Industry 4.0)- 26th September 2020
- **IEEE Activities:**
 - Core committee formation- 8th August 2020
 - Working committee formation- 29th August 2020
 - Technical Quiz Competition- 5th September 2020
 - Expression of Ideas- A Debate Competition- 12th September 2020
 - Alumni Interaction- 19th September 2020
 - Industry Talk- Project Discussion and Guidance (DATE)

All these activities are planned to integrate with IIC activities in future.

1.1.8 Evaluation and Evaluation Process Reforms

Reforms initiated on Continuous Internal Evaluation (CIE) system at the institutional level:

Continuous Evaluation is carried out for evaluating the learning of the students on a regular basis from the start of semester on weekly, monthly basis as well as mid semester and end semester evaluation. Weekly evaluation is done for practical performance/ tutorial/ project, quizzes, surprise tests etc. Monthly evaluation is carried out through formative assessment and remedial work done by defaulters and slow learners. Mid-term evaluation includes compliance of term work, assignment, internal examination and mid-semester review of the student classroom participation, laboratory work. At each stage of evaluation, students are categorized into three levels (Level-I: Low, Level-II: Medium, Level-III: High) and performance is communicated to the students. The In-semester assessment is planned during 8th-9th week of semester followed by Retest during 10th- 11th week of semester, term work submission during 18th week, oral/practical exams in 19th week of semester followed at the end of semester in 21st week & all ATKT/supplementary exams in 24th week as per academic calendar.

The evaluation of the term work is done and granted by the subject teacher. Further this list of granted students is to be approved by the authority. The term work is assessed on a regular basis and the records are maintained with the concerned laboratories. In the examinations, the effort is taken to align the question paper with Revised Bloom's Taxonomy (RBT) models which helps the institute to understand the attainment of course outcomes and programme outcomes, as per the institute guidelines within the framework of a Choice Based Credit Grading System for Holistic Development (CBCGS-H).

AICTE exam reforms help in attainment of POs. For the development of Pos and to meet requirements of the OBE model, the examination system is learner-centric to ensure that learning be tested using the RBT model and Performance Indicator (PI), which in turn is linked to CA (competencies to be attained) and then to POs.

Institute Level Reforms: (The exam conduct from offline to online was done for exams of In-Semester assessment, End Semester Exams, Practical/ Projects/ Orals)

During the Covid-19 pandemic, blended online exam was conducted through Google Classroom, online apps viz. zoom, Microsoft teams, Google meet etc. through open-book, open-choice questions while maintaining quality & integrity.

Open house was conducted after provisional result declaration with amendment in marks to resolve the grievances and supplementary examinations were also conducted.

1.1.9 Student Performance

The sustained and enhanced rigorous technical curriculum and rich, interdisciplinary learning environment is required to be delivered to maintain consistency in students' performance. Learning is changing at a rapid pace so there is a need to match engineering and technological development becoming more and more globalized and interdisciplinary. The students' performance measured as academic results for the past batches has been consistent above 95% in the informal teaching. But due to addition of beyond curriculum components viz. PBL, RBL,ESD, professional skills, blended learning adding to the curriculum in an autonomous formal system, has sustained and improved the overall success rates of all the batches across departments.

BE Result:

			2019-20	2018-19	2017-18	2016-17	2015-16
COMP	No. of Students	Appeared	149	163	144	153	154
		Passed	149	161	143	151	149
		Pass %	100%	99%	99%	99%	97%
E&TC	No. of Students	Appeared	144	163	149	138	138
		Passed	144	150	145	119	136
		Pass %	100%	92%	97%	86%	99%
IT	No. of Students	Appeared	151	154	154	152	149
		Passed	151	154	149	147	145
		Pass %	100%	100%	97%	97%	97%
ELEX	No. of Students	Appeared	74	78	73	74	67
		Passed	74	76	71	68	54
		Pass %	100%	97%	97%	92%	81%
MECH	No. of Students	Appeared	140	149	157	141	134
		Passed	140	144	150	124	126
		Pass %	100%	97%	96%	88%	94%
CIVIL	No. of Students	Appeared	136	151	135	-	-
		Passed	136	142	131	-	-
		Pass %	100%	94%	97%	-	-
TCET	No. of Students	Appeared	794	858	812	658	642
		Passed	794	827	789	609	610
		Pass %	100%	96%	97%	93%	95%

Graduate Aptitude Test in Engineering (GATE) training by the Department of Civil Engineering

Under the auspices of the Thakur Institute of Career Advancement, the Department of Civil Engineering conducts an efficiently-monitored course for preparing our students for the GATE. The first batch, with 20 students, was started on 9th September 2018. In GATE-2020, a total of 20 students benefited from this course, with performance as recorded in Table.

GATE -2020

Sr No	Name	Batch	Marks	Gate Score	AIR
1	NITESH MISHRA	2018	73.76	794	508
2	VIKAS PRAJAPATI	2019	68.29	735	1025
3	VISHAL SINGH	2019	50.03	537	5469
4	SACHIN DHOBI	2019	28.86	--	--
5	RAJESH SAMBHARI	2020	46.95	503	6813
6	VIVEK SHUKLA	2020	46.13	494	7200
7	SHIVAM MISHRA	2020	42.84	458	9043

8	CHIRAYU JAIN	2020	42.5	454	9254
9	RAHUL AGARWAL	2020	32.22	--	--
10	SAURABH GUPTA	2020	30.81	--	--
11	VISHAL	2020	29.09	--	--
12	SHUBHAM SAWANT	2020	28.12	--	--
13	JITENDRA YADAV	2020	27.43	--	--
14	MUHAMMED TALHA	2020	26.4	--	--
15	SHREYA BUWA	2020	25.37	--	--
16	DIVYANKSHI JADHAV	2020	25.28	--	--
17	ROHAN PARAB	2020	23.66	--	--
18	KULDEEP PHATAK	2020	22.37	--	--
19	VIBHA JAIN	2020	22.02	--	--
20	CHARMI BHANUSHALI	2020	18.11	--	--

After successful completion of first batch, Civil Engineering Department started second batch of GATE 2021 in the month of November 2019, which was completed in December 2020 and the result was improved as compared to previous batch and 15 students qualified the GATE 2021 exam.

1.1.10 Students Mentoring System

Teacher-Guardian scheme is available in the institute where around 20-22 students are allotted to each faculty member. Each faculty mentor maintains a handbook that records the overall performance of a student under them. The handbook contains following details:

- Personal details of students like residential address, contact number, parents' occupation, parents' contact details
- Score before taking admission in engineering i.e., HSC and SSC marks
- Workshops attended
- Competitive exams given
- Internships
- Projects undertaken
- Participation in Extra/co-curricular activities

Other than this, a record of the attendance per month, subject-wise in-semester assessment marks obtained during the semester and overall CGPA attained is also maintained. The mentor interacts with each mentee (student) at-least twice in a semester or as per need to gauge the performance of the mentees, difficulties faced during the semester and other kinds of personal discussion as per the comfort level between the mentor and mentee. The mentee's academic record, co-curricular and extra-curricular activities and counselling record is maintained in the Teacher Guardian book.

Mentee's performance is monitored and based on his/her strength and weakness, guidance is provided to understand the challenges and opportunities available in college. This will also help in developing a smooth transition to campus life at first year level and in enhancing the mentee's growth, improving self-confidence, managing conflicts, and helping them to achieve their goals from second to final year level. Counselling is done for improvement in attendance, participation in co-curricular/extra-curricular activities and improvement in academic results. Moreover, students are also motivated to participate in technical events, competitions, and paper publication.

In the current pandemic situation, the mentors and professional counsellors adopted virtual interaction sessions with students to keep them motivated for online learning and participation in doubt-clearing sessions, evaluation, internships, and online courses for holistic development.

Year	Number of students enrolled in the institution	Number of fulltime teachers	Mentor: Mentee Ratio
2019-20	3049 (UG) + 36 (PG) + 30 (PhD) = 3115	168	1:20
2018-19	3172 (UG) + 39 (PG) + 30 (PhD) = 3251	183	1:20
2017-18	3175 (UG) + 44 (PG) + 9 (PhD) = 3228	177	1:20
2016-17	3021 (UG) + 65 (PG) + 9 (PhD) = 3095	169	1:20
2015-16	2857 (UG) + 108 (PG) + 9 (PhD) = 2962	159	1:20

1.2 Research Activities

Engineering research plays a very significant role in meeting national goals. Research is to boost economic productivity and competitiveness, strengthen national security, improve human health, and achieve other national objectives in the next century. Understanding the need for encouraging engineering graduates towards pursuing research, the TCET Research & Development Cell was set up in the year 2013. Under this Cell, the technical talent of students is nurtured. It gives them a platform to check the feasibility of their ideas by developing small circuits or projects under hobby-club facilities. The projects developed by students are evaluated at various levels, first at the department level and then at institute level by experts from reputed academic institutes and industries for maintaining quality of work. The projects, which have the potential of being converted into products, are reviewed by expert entrepreneurs and industrialists. Furthermore, students are encouraged to take part in various national and international level competitions to enhance their technical competency. Innovative ideas are even considered for Intellectual Property Rights like copyrights and patents. Various workshops and webinars are also organized where students are given exposure to latest technologies beyond the curriculum, which helps them to bridge the gap between academia and industry, and for skill enhancement.

1.2.1 Research Funds Sanctioned and Received from Various Agencies

Name of the investigator	Dept.	Title of the project and duration	Amount sanctioned	Funding Agency	Year
Dr. Lochan Jolly	E&TC	Next generation Farming	15,000/-	UOM	2014-15
Mrs. Sonal Barvey	E&TC	Solar Harvesting and its Efficient Utilisation	25,000/-	UOM	2014-15
Mrs. Megha Gupta	E&TC	Home Automation using Speech and Clap recognition System	15,000/-	UOM	2014-15
Dr. Rajni Bahuguna	ES&H	Synthesis, Characterization and gas sensing properties of conducting polymer nanocomposites	50,000/-	UOM	2014-15
Mr. Rohit K. Singh	ES&H	Microwave Assisted solvent free condensation of Bio-renewable Levulinic Acid and phenol to Diphenolic Acid by using solid acid catalyst	40,000/-	UOM	2014-15
Total-A			1,45,000/-		
Dr. Sangeeta Mishra	E&TC	Electronic Oxygen Tree	40,000/-	UOM	2015-16

Ms. Anvita Birje	E&TC	QuadCopter controlled by Android mobile	30,000/-	UOM	2015-16
Mr. Deepak Shete	E&TC	7am Arivu – The Seventh Sense	25,000/-	UOM	2015-16
Mr. Sanjeev Ghosh	E&TC	Image Processing based book reader, facial recognition along with GPS tracker for visually impaired	35,000/-	UOM	2015-16
Mr. Manoj Shyam Chavan	E&TC	Hidden Markov Model based Online Handwritten Signature Verification using Hybrid Wavelet Transform	25,000/-	UOM	2015-16
Mr. Vaibhav Gijre	ELEX	TCETDUINO-AVR Development Board	10,000/-	UOM	2015-16
Mr. Kiran Bhandari	COMP	Portable Wireless Patient Monitoring System Using GSM– 2015-16	32,000/-	UOM	2015-16
Mr. Rajesh Behra	MECH	Magnetic Wheel based on magnetic propulsion and levitation	35,000/-	UOM	2015-16
Ms. Nita Jain	ES&H	Heat transfer analysis of magneto hydrodynamic non-Newtonian fluids	25,000/-	UOM	2015-16
Dr. Poonam Ojha	ES&H	Ethical Behaviour among TCET Engineering Undergraduates	25,000/-	UOM	2015-16
Total - B			2,82,000/-		
Dr. Vinitkumar Dongre	E&TC	Slotted Dual Band Patch Antenna Embedded with Metamaterial for WLAN and WiMAX Application	20,000/-	UOM	2016-17
Mrs. Aradhana Manekar	E&TC	Telepresence Robot with Stereoscopic Vision	30,000/-	UOM	2016-17
Ms. Sukruti Kaulgud	E&TC	On Panel Signalling with autobraking of Train and Monitoring of Railway Tracks	22,000/-	UOM	2016-17
Ms. Sujata Kulkarni	E&TC	Smart Parking Management System	25,000/-	UOM	2016-17
Ms. Rupali Mane	E&TC	Smart Medibox	20,000/-	UOM	2016-17
Dr. Bijith Marakarkandy	IT	A Portable Dental Caries Detection and Classification system	20,000/-	UOM	2016-17
Mr. Anil Vasoya	IT	Virtual Computing Lab in College using Hybrid Cloud	25,000/-	UOM	2016-17
Mrs. Neha Patwari	IT	Transmitted Advanced Safety Assistance Automobile System (TRASAS)	27,500/	UOM	2016-17
Mr. Bhushan Nemade	IT	Cloud based surveillance system using Adaptive Automatic Video Tracking Learning and Detection	31,000/-	UOM	2016-17
Mrs. Neha Kapadia	IT	IoT (Internet of Things) based Highway Toll Deduction System	25,000/-	UOM	2016-17
Ms. Sangeeta Vhatkar	IT	PEGASIS based Irrigation Control System in WSN using IOT	24,500/-	UOM	2016-17
Dr. Sandhya Save	ELEX	PLC Based Waste Segregation System for Green Environment	30,000/-	UOM	2016-17
Mr. Krishnakant Mishra	ES&H	Study of Electro-Optical properties of Quantum Dots Doped in Liquid crystal Polymer system	30,000/-	UOM	2016-17

Dr. Kamal Shah	IT	Bus Tracking System for safety of school kids	100000/-	DST	2016-17
Dr. Lochan Jolly	E&TC	Leaf Disease Detector	100000/-	DST	2016-17
Dr. Sangeeta Mishra	E&TC	Facile - The Smart Home	100000/-	DST	2016-17
Mr. Anil Vasoya	IT	Low Power smart class room teaching learning using Raspberry Pi	100000/-	DST	2016-17
Mr. Rohitkumar Singh	ES&H	Design and Development of electrolytic cell for production of Hydrogen from Urine	100000/-	DST	2016-17
Total - C			8,30,000/-		
Ms. Neha Chauhan	MECH	Oxygen Generation through electrolysis from Solar Tree	25,000/-	UOM	2017-18
Mrs. Pranjali Kasture	IT	IoT Based Guest Tagging System	60,000/-	UOM	2017-18
Mr. Namdeo Badhe	IT	A Healthcare System to help mentally challenged person to create	30,000/-	UOM	2017-18
Mrs. Vaishali Nirgude	COMP	IoT Based Fire Fighting Robot using Arduino	25,000/-	UOM	2017-18
Dr. Seema Jagtap	CIVIL	A Self Balancing Tower Crane	25,000/-	UOM	2017-18
Ms. Megha Gupta	E&TC	Designing of Energy Efficient Smart Classroom using image processing and embedded system	24000/-	UOM	2017-18
Mrs. Rashmita Kumari Mohapatra	E&TC	Locomotion System for ALS Patients using Artificial Intelligence	20,000/-	UOM	2017-18
Dr. Deven Shah	IT	Cloud Based Web Application Profiling and Security	100000/-	DST	2017-18
Dr. Vinitkumar Dongre	E&TC	High Resolution FMCW RADAR Gauge	100000/-	DST	2017-18
Dr. Sandhya Save	ELEX	Steps towards Clean City	100000/-	DST	2017-18
Mrs. Poorva Waingankar	ELEX	Artificial Simulation of Brain using Binaural Frequency	100000/-	DST	2017-18
Mr. Anand Khandare	COMP	Smart Weighing Machine	100000/-	DST	2017-18
Total-D			7,09,000/-		
Mr. Shailendra Shastri	E&TC	Design of Hybrid boat using microcontroller	20000/-	UOM	2018-19
Ms. Kalawati Patil	E&TC	An Enhanced Density and Priority based traffic light control system using Artificial Intelligence	20000/-	UOM	2018-19
Dr. Sangeeta Mishra	E&TC	To Implement a tactile device for visually impaired people to read documents	25000/-	UOM	2018-19
Mr. Deepak Shete	E&TC	Designing cost effective Vending Machine and implement online ordering and payment system for it	15000/-	UOM	2018-19
Ms. Rutvi Thakar	E&TC	Implementation of Low Cost Hand Gesture Based Wireless Robotic Arm Control	18000/-	UOM	2018-19
Mr. Nikhil Tiwari	E&TC	IoT enabled floor cleaning system	15000/-	UOM	2018-19
Mrs. Hetal Amrutia	IT	Smart Bag – IoT based Application	40000/-	UOM	2018-19

Mr. Shridhar Kamble	IT	Sensing heart Rate and Respiratory Rate using smart geophone sensor network and early detection of heart attack/stroke using Pulse Sensor	25000/-	UOM	2018-19
Dr. Vivek Mishra	ES&H	Radioactive Waste-disposals by Transport and Reaction Diffusion using Lattice Boltzmann Method	30000/-	UOM	2018-19
Dr. Sunita Pachori	ES&H	Investigating the need of Arogya Yojana in Saiwan, District Palghar, State Maharashtra, A Step towards Ayushman Bharat	40000/-	UOM	2018-19
Mr. Pritesh Bhana	CIVIL	Comparative Evaluation of Dense Graded Bituminous Concrete With Different Nominal Maximum Aggregate Sizes	30000/-	UOM	2018-19
Mr. Krishna Gaikwad	MECH	INARI – Automated rice plantation machine	25000/-	UOM	2018-19
Mr. Rupesh Deshbhratar	MECH	Adaptable Bladeless Disc Wind Turbine	50000/-	UOM	2018-19
Mr. Vinay Bhatkar	MECH	Commercial module for fuel synthesis from Waste Plastics	50000/-	UOM	2018-19
Dr. Siddesh Siddappa	MECH	Aiternate driving mechanism to Run a Centrifugal Pump	40000/-	UOM	2018-19
Dr. Sheetal Rathi	COMP	Development of Predictive analytics Model in Mental Healthcare for school students	25000/-	UOM	2018-19
Mr. Anand Khandare	COMP	IoT Based Weighing Scale for Farmer: Linking Small-Scale Farmers and Consumers to market using Internet of Things	25000/-	UOM	2018-19
Mrs. Harshali P. Patil	COMP	Development of Futuristic Water Conservation System using Enhanced Technique	25000/-	UOM	2018-19
Mrs. Shiwani Gupta	COMP	Design and Development of Wet and Dry waste Segregation using Smart Dustbin	35000/-	UOM	2018-19
Mrs. Roohi Mehta	ELEX	Eco friendly smart solar panel cleaning system	18000/-	UOM	2018-19
Mr. Rupesh Deshbhratar	MECH	Water Less cooling for machining by Vortex Tube	100000/-	DST	2018-19
Mr. Arpit Vyas	CIVIL	Plastocrete	100000/-	DST	2018-19
Mr. Mahendra Shelar	MECH	Eco-Friendly Chainless Bicycle	100000/-	DST	2018-19
Dr. Kamal Shah	IT	Hygiene alert system for Toilets	100000/-	DST	2018-19
Dr. Sangeeta Mishra	E&TC	Emergency Service Drone	100000/-	DST	2018-19
Total-E			10,71,000/-		
Mr. Rajeshwar S. Deshmukh	MECH	Development of Automatic Flame Control Burner Powered By Portable Biogas Plant	25000/-	UOM	2019-20
Mrs. Swetha Suresh Kumar	MECH	Automated Waste Segregator System (AWSS)	35000/-	UOM	2019-20
Mr. Mahendra Shelar	MECH	Improvement in Physical Properties of Polymer Composites through different Nanofillers	32000/-	UOM	2019-20

Mr. Arpit S. Vyas	CIVIL	Utilization of Single Use Plastic Waste to Enhance Properties of Soils for Subgrade	25000/-	UOM	2019-20
Mr. Anuj Pawar	CIVIL	Enlightening the Strength and Stabilizing Properties Paver blocks by using Terrazyme with Cost Optimization	25000/-	UOM	2019-20
Ms. Anvita Birje	E&TC	Development of Learning Platform based on STEM	25000/-	UOM	2019-20
MS.Aradhana Manekar	E&TC	EEG based Diagnosis of Addiction using Statistical Methods	35000/-	UOM	2019-20
Mr. Niket Amoda	E&TC	Development of Disaster Management Setup to Raise Alarms using Sensor Network to Prevent Loss of Life and Property	40000/-	UOM	2019-20
Mr. Sunil Khatri	ELEX	Predictive Model for Examination and Analysis of Water Logged Zones in Mumbai Locale	30000/-	UOM	2019-20
Mr. Hemant Kasturiwale	ELEX	Low Cost Development Data Acquisition board for Real Time Application	10000/-	UOM	2019-20
Dr. Kamal Shah	IT	Smart Warehouse For Grain Storage Based on Innovative First In First Out (FIFO) Technique with IoT enables Sensors to Reduce Quality losses of Grains	25000/-	UOM	2019-20
Ms. Ashwini Patil	ES&H	Design and Development of Embedded System Remote Controlled Automobile using RFID	20000/-	UOM	2019-20
Total-F			3,27,000/-		
Grand Total (A+B+C+D+E+F)			31,10,000/-		

IEDC Grant 2019-20				
Sr. No.	Title of Project	Name of the faculty In-charge	Department	Fund Sanctioned
1	Recumbent Human powered vehicle	Mr.Mahendra Shelar	MECH	1,00,000
2	Full body Exoskeleton suit with enemy detection	Mr.Krishna Gaikwad	MECH	1,00,000
3	Clubbing College Projects across India	Mr.Sudhir Dhekane	IT	1,00,000
4	The box	Mr.Shailesh Sangle	COMP	1,00,000
5	Structural health Monitoring	Dr.Lochan Jolly	E&TC	1,00,000
Total				5,00,000

University MRG 2019-20				
Sr. No.	Title of Project	Name of the faculty in-charge	Department	Fund Sanctioned
1	Development of Automatic Flame Control Burner Powered By Portable Biogas Plant	Mr.Rajeswar Deshmukh	MECH	25,000
2	Automated Waste Segregator System (AWSS)	Mrs.Swetha Suresh Kumar	MECH	35,000
3	Improvement in Physical Properties of Polymer Composites through different Nanofillers	Mr.Mahendra Shelar	MECH	32,000
4	Utilization of Single Use Plastic Waste to Enhance Properties of Soils for Subgrade	Mr.Arpit Vyas	CIVIL	25,000
5	Enlightening the Strength and Stabilizing Properties Paver blocks by using Terrazyme with Cost Optimization	Mr.Anuj Pawar	CIVIL	25,000
6	Development of Learning Platform based on STEM	Ms.Anvita Birje	E&TC	25,000
7	EEG based Diagnosis of Addiction using Statistical Methods	Ms.Aradhana Manekar	E&TC	35,000
8	Development of Disaster Management Setup to Raise Alarms using Sensor Network to Prevent Loss of Life and Property	Mr.Niket Amoda	E&TC	40,000
9	Predictive Model for Examination and Analysis of Water-Logged Zones in Mumbai Locale	Mr.Sunil Khatri	ELEX	30,000
10	Low-Cost Development Data Acquisition board for Real Time Application	Mr.Hemant Kasturiwale	ELEX	10,000
11	Smart Warehouse for Grain Storage Based on Innovative First in First out (FIFO) Technique with IoT enables Sensors to Reduce Quality losses of Grains	Dr.Kamal Shah	IT	25,000
12	Design and Development of Embedded System Remote Controlled Automobile using RFID	Ms.Ashwini Patil	COMP	20,000
Total amount				3,27,000

AICTE - Grants					
Sr.No.	Name of the Program/Scheme/Project	Name of the Faculty In-Charge received grant	Department	Sanction date, duration of grant	Total Sanction Amount (in Rs.)
1	Modernisation of Microcontroller Laboratory by merging IOT Lab Kits (MODROBS)	Dr.Vinitkumr Dongre	E&TC	2019-20	13,74,510.00
2	STTP on Next Generation Communications and Networks	Dr.Vinitkumar Dongre	E&TC	2019-20	3,11,667.00
3	STTP on "Moral Values, Ethics and Behavioral Science	Dr.Vikas Kaul Dr.Aditya Desai	IT	2019-20	3,25,000.00
Grand Total					20,11,177.00

1.2.2 Innovation Ecosystem

Research plays a vital role in the success of any institution. Fundamental research in the field of engineering is a national challenge. Quality research in technology is the need of the hour for sustainable growth. In order to provide a strong platform to the researchers, academicians and scholars, Institute regularly organizes various national and international conferences, seminars, workshops and colloquium, and encourages for copyrights & patents for their individual recognition. These initiatives enable the stakeholders to build their capacity for critical examination and sound judgment, thereby facilitating them to contribute to the existing body of knowledge.

- a) Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative Practices During the Year

Title of Workshop/Seminar	Name of the Dept.	Name of the faculty Coordinator	Date(s)
Under Water Construction Workshop	Civil Engineering	Ms.Rutuja Shinde	19-09-2019
Primavera Workshop	Civil Engineering	Ms.Rutuja Shinde	20-09-2019
Seminar on Opportunities in Civil Engineering Consultancy	Civil Engineering	Ms.Rutuja Shinde	27-09-2019
Wastewater Treatment Plant Visit	Civil Engineering		30-10-2019
Educational Excursion	Civil Engineering	Mr.Swapnil Raut	02-01-2020 to 10-01-2020
E-Techno Fest	Civil Engineering	Ms.Rutuja Shinde	05-06-2020 to 12-06-2020
Database Management – Revolutionized	Information Technology	Mr.Pramod Bhide	17-09-2019
Recent trends in Industry in Database Technology	Information Technology	Mr.Ranganathan	17-09-2019

Title of Workshop/Seminar	Name of the Dept.	Name of the faculty Coordinator	Date(s)
Data Science	Information Technology	Mr.Akash Shah	17-09-2019
Technical Talk on Machine Learning Algorithms & its applications	Information Technology	Ms.Shruti Mathur	13-08-2019
Cryptography and Network Security	Information Technology	Mr.Rahul Neve	20-08-2019
Hands on Wordpress Workshop	Information Technology	Ms.Neha Kapadia Ms.Swati Abhang	27-08-2019
Advantages and Disadvantages of Machine Learning to Society	Information Technology	Mr.Sudhir Dhekane Ms.Neha Patwari	22-10-2019
Patentable subject matter and draft preparation for patent and copyright application	Electronics and Tele-Communication Engineering	Dr.Vinitkumar Dongre	29-08-2020
Introduction to CATIA V6	Mechanical Engineering	Mr.Krishna Gaikwad	22-01-2019
Actions on Google Workshop	Electronics and Tele-Communication Engineering	Ms.Aradhana Manekar Mr.Deepak Shete	05-10-2019
Seminar on My journey to NASA	Electronics and Tele-Communication Engineering	Dr.Vinit kumar Dongre	07-10-2019
Alumni Interaction	Electronics and Tele-Communication Engineering	Ms.Aradhana Manekar Mr.Deepak Shete	22-10-2019
Workshop on Machine Learning	Electronics and Tele-Communication Engineering	Ms.Aradhana Manekar Mr.Deepak Shete	26-02-2020, 27-02-2020
Workshop on Cisco Certified Network Architect	Electronics and Tele-Communication Engineering	Ms.Aradhana Manekar Mr.Deepak Shete	26-02-2020, 27-02-2020
Workshop on IoT	Electronics and Tele-Communication Engineering	Dr.Lochar Jolly	26-02-2020, 27-02-2020
Alumni Meet	Electronics and Tele-Communication Engineering	Ms.Aradhana Manekar Mr.Deepak Shete	02-06-2020
Webinar on Project Guidance	Electronics and Tele-Communication Engineering	Ms.Aradhana Manekar Mr.Deepak Shete	11-06-2020
TEDxTCET	Electronics Engineering	Ms.Sujata Dubal	14-09-2019
Workshop on Artificial Intelligence	Computer Engineering	Ms.Prachi Janrao	26-02-2020 & 27-02-2020
Workshop on Blockchain	Computer Engineering	Mr.Vikas Singh	26-02-2020 & 27-02-2020
Webinar on "Your guide to higher studies"	Computer Engineering	Mr.Shailesh Sangle	05-06-2020
Webinar "Career Choices? What's Next"	Computer Engineering	Ms.Prachi Janrao	06-06-2020
Seminar on Higher Studies	Computer Engineering	Mr.Shailesh Sangle	23-08-2019
Workshop on Data Analytics	Computer Engineering	Mr.Vikas Singh	18-09-2019 & 19-09-2019
Innowiz Orientation & Team Building	Computer Engineering	Ms.Prachi Janrao	22-10-2019
Workshop on Android Application Development	Computer Engineering	Mr.Shailesh Sangle	02-11-2019
Webinar on IoT	Computer Engineering	Mr.Vikas Singh	08-11-2019
Webinar on Machine Learning	Computer Engineering	Mr.Shailesh Sangle	08-11-2019
MSME – DI, Mumbai Industrial Motivation Campaign	Institute Level	Dr.Kamal Shah	03-10-2019
Pre-Placement Training	Institute Level	Ms.Leena Chakraborty Mr.Amol Dapkekar	12-10-2019 to 16-11-2019
Pre-Placement Training	Institute Level	Ms.Leena Chakraborty Mr.Amol Dapkekar	01-02-2020 to 11-04-2020

Title of Workshop/Seminar	Name of the Dept.	Name of the faculty Coordinator	Date(s)
Pre-Placement Training	Institute Level	Ms.Leena Chakraborty Mr.Amol Dapkekar	30-05-2020 to 13-06-2020
Corporate Training	Institute Level	Mr.Namdeo Badhe Mr.Amol Dapkekar	01-02-2020 to 08-03-2020
Corporate Training	Institute Level	Mr.Namdeo Badhe Mr.Amol Dapkekar	17-06-2020 to 26-06-2020
ICCFP-INFYTO	Institute Level	Mr.Namdeo Badhe Mr.Amol Dapkekar	20-12-2019 to 21-01-2020
Employability Skill Development Programme (batch 2022)	Institute Level	Mr.Nitin Harne Mr.Amol Dapkekar	07-01-2020 to 11-01-2020
Employability Skill Development Programme (batch 2022)	Institute Level	Mr.Nitin Harne Mr.Amol Dapkekar	18-02-2020 to 08-03-2020
Industry-Institute Symposium-VI 2019 Employment through InfyTO portal.	Institute Level	Ms.Rupali Mane Mr.Amol Dapkekar	06-04-2019
Expert Lecture by TCS	Institute Level	Mr.Darshan Mali Mr.Amol Dapkekar	24-07-2019
Expert Lecture by Accenture	Institute Level	Ms.Rupali Mane Mr.Amol Dapkekar	08-07-2019
Barclay's training programme	Institute Level	Ms.Rupali Mane Mr.Amol Dapkekar	31-08-2019
Expert talk on GAIT assessment and recruitment at Japan	Institute Level	Ms.Rupali Mane Mr.Amol Dapkekar	15-10-2019
Orientation on International Internship Program	Institute Level	Mr.Pankaj Rawool Ms.Rupali Mane Mr.Amol Dapkekar	03-12-2020
Orientation on Internshala Internship Program	Institute Level	Mr.Pankaj Rawool	03-12-2020
Student Development Program	Institute Level	Mr.Darshan Mali, Mr.Amol.D, Mr.Nitin Harne, Ms.Rupali Mane, Mr.Namdeo Badhe Ms.Leena Chakraborty	08-07-2019 to 12-07-2019

b) Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of the Awardee	Awarding Agency	Date of Award	Category
MHRD MEGA Online Challenge SAMADHAN certificate (14th April -25th April 2020) for solving pandemic challenges	Hemant Kasturiwale	MHRD, AICTE, FORGE, Innovationcurs	10-06-2020	Faculty
Multi Agro Mechanism (14th Avishkar Research Convention 2019-20)	Pal Vikrant Sunder, Pawar Kunal Shashikant, Patil Pankaj Prakash	University of Mumbai	02-01-2020	Student (Under Graduate Students)
Judiciary System using Blockchain (14th Avishkar Research Convention 2019-20)	Khairwal Neerajkumari Surajbhan	University of Mumbai	02-01-2020	PHD Scholar (Post PG Students)
Mentor of Change (MoC) for Atal Tinkering Lab	Dr. Sandhya Sandeep Save	Atal Innovation Mission, NITI Aayog	29 Dec 2020	Mentor India Community.
Volunteer ,organising and conducting the 64-session eSIP 2020 Sampler _letter of appreciation	Dr. Sandhya Sandeep Save	NCC-IP All India Council for Technical Education (AICTE)	25 Nov 2020	UHV faculty

c) No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Centre	Name	Sponsored by
1	TCET Incubation Centre	TCET
Name of the Start-up	Nature of Start-up	Date of commencement
Three Apples	Employment generation	23-08-2019
Consumer Market Insight Research	Employment generation	23-08-2019
Geoenix Solutions Private Limited	Employment generation	23-08-2019

1.2.3 Research Publications

Thakur College of Engineering & Technology brought out the first issue of its annual magazine QUASAR in 2010. Since then, every issue of the magazine has been meticulously handled by the Editorial Committee which comprises both faculty and student members. Quasar is a powerful medium through which we can inspire and enlighten. The faculty & students' publications have increased every subsequent year through their publications in the international conferences since 2010 which is now held twice the year since 2020. The institute has also provided a platform for the conduct of conferences each year with different affiliations viz. Springer, IEEE, ACM, Scopus indexed journals, UGC approved journals etc. The departments also publish newsletters and technical magazines prepared in each semester, where all stakeholders get involved and contribute to the articles of technical magazines, enriching the strength of the institute culture.

a. Faculty Publications Summary:

Departments:					
ES&H					
Year	ICWET+ Multicon-W	International /National Journals	International / National Conference	Book Publications	Resource Book
2015-16	15	4	30	0	9
2016-17	17	07	05	02	9
2017-18	22	10	03	04	9
2018-19	32	06	02	04	9
2019-20	29	02	02	04	9
COMP					
2015-16	24	41	44	0	5
2016-17	30	44	5	30	5
2017-18	84	40	28	30	14
2018-19	88	22	29	30	14
2019-20	93	19	6	38	15
E&TC					
2015-16	32	5	12	2	18

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2016-17	35	3	3	0	24
2017-18	81	2	3	0	24
2018-19	128	3	2	0	24
2019-20	25	4	2	0	24
IT - ICCSOD+ Multicon-W					
2015-16	42	21	34	5	14
2016-17	54	20	17	15	18
2017-18	72	14	13	15	19
2018-19	42	19	23	15	24
2019-20	53	9	21	18	25
ELEX					
2015-16	2	6	14	0	1
2016-17	0	7	1	0	1
2017-18	6	11	8	0	1
2018-19	5	9	0	0	1
2019-20	3	12	1	0	1
MECH - ICWAME+MultionW					
2015-16	34	4	3	0	5
2016-17	71	2	71	0	5
2017-18	38	1	38	0	5
2018-19	53	7	53	0	5
2019-20	20	4	20	0	5
CIVIL - ICAMCE + Muticon W					
2015-16	5	5	1	0	0
2016-17	6	20	10	0	0
2017-18	17	9	19	0	4
2018-19	17	22	19	0	4
2019-20	38	4	38	0	9
Total	1313	418	585	212	359

b) Research Publications in the Journals notified on UGC website during the academic year

	Department	No. of Publication	Average Impact Factor
National	Information Technology	10	3.89
	Computer Engineering	12	3.79
International	Engineering Sciences and Humanity	1	0.9
	Information Technology	3	3.89
	Electronics and Telecommunication Engineering	9	3.25
	Electronics Engineering	1	6.3

c) Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	No. of publication
Civil Engineering	Papers in International conference proceedings (Multicon-W: -ICAMCE 2020) – 27
Engineering Sciences and Humanity	Papers in National conference proceedings (Multicon-W: -CHSTE 2020 and EWPPC 2020) –61
Information Technology	3 Books (Advanced Internet Technology by Dr. Deven Shah, Cloud Computing & Services by Dr. Deven Shah and Digital Signal & Image Processing by Dr. Bijith Markarkandy)
	Papers in International conference proceedings (Multicon-W: -IC-ICN 2020) -70
Mechanical Engineering	Papers in International conference proceedings (Multicon-W: -ICAMCE 2020) – 26
Electronics and Telecommunication Engineering	Papers in International conference proceedings (Multicon-W: -IC-TELCON 2020) – 30
Electronics Engineering	Papers in International conference proceedings (Multicon-W: -IC-TELCON 2020) – 08
Computer Engineering	Papers in International conference proceedings (Multicon-W: -IC-ICN 2020) – 68

d) Details of Books published at Institute level

Sr. No	Proceeding Title Name	Name of the Editors	ISBN No.	Details	Year of publishing
1	Proceedings of International Conference on Intelligent Computing and Networking - 2020 (IC-ICN)	Dr. Rajesh Bansode Dr. Sheetal Rathi Mr. Vikas Kaul Mrs. Shiwani Gupta Dr. Anand Khandare Mr. Aditya Desai	978-1-7329562-6-1	This book is the Proceedings of International Conference on Intelligent Computing and Networking. Received 273 technical papers with 1334 pages	2020
2	Proceedings of International Conference on Trends in Electronics & Telecommunication – 2020 (IC-TELCON)	Dr. Sandhya Save Dr. Vinithkumar Dongre Ms. Sujata Alegavi Ms. Rutvi Thakkar	987-1-7329562-5-4	This book is the Proceedings of International Conference on Trends in Electronics & Telecommunication. Received 152 technical papers with 713 pages	2020

Sr. No	Proceeding Title Name	Name of the Editors	ISBN No.	Details	Year of publishing
3	Proceedings of International conference on advances in Mechanical & civil engineering - 2020 (IC-AMCE)	Dr.Siddesh Sidappa Dr.Seema Jagtap Dr.Sanjeev Chaudhary Mr.Iqbal Mujawar Ms.Priyanka Deshmukh Mr.Vaibhav Gudi Mr.Ghanshyam Pal	978-1-7329562-7-8	This book is the Proceedings of International conference on advances in Mechanical & civil engineering. Received 152 technical papers with 713 pages	2020
4	Proceedings of Conference on Humanities, Science and Technical Education - 2020 (CHSTE)	Dr.Vivek Mishra Dr.Krishnakant Mishra Mr.Amol Dapkekar Mr.Rohit kumar singh Mr.Yogesh Bhalekar Mr.Amol Sakpal Mr.Vimal Gosar Mr.Sunny Nanade Mr.Vikas Nagre Mr.Vikrant.D	978-1-7329562-8-5	This book is the Proceedings of Conference on Humanities, Science and Technical Education. Received 35 papers with 161 pages	2020
5	Proceedings of Engineering Workshop & Paper Presentation Contest - 2020 (EWPPC)	Mr.Rohit kumar Singh Dr.Neha Mishra Dr.Kiran Sanap	978-1-7329562-9-2	This book is the Proceedings of Engineering Workshop & Paper Presentation Contest. Received 71 papers with 227 pages	2020
6	Proceedings of International Conference on Block chain Technology	Dr.Dhiren Patel Dr.Sukumar Nandi Dr.B.K.Mishra Dr.Deven Shah Dr.Chirag N.Modi Dr.Kamal Shah Dr.Rajesh Bansode	978-981-15-4541-2	This book is the Proceedings of Block chain Technology. Where we received 20 papers with 258 pages, Hardcover, Series ISSN 2661-8338	2020
7	TMH Proceedings of Multicon-W 2020	Dr.B.K.Mishra	978-93-90385-79-9	This book is the Proceedings of TMH. Where we received 38 papers with 216 pages	2020

- e) Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or Pub Med/ Indian Citation Index

Title of the paper	Name of the author	Title of the journal	Year	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citations
Delay Incurred in Wireless Sensor Networks Using N-Policy M/M/1 Queuing Model and its Mitigation	Sanjeev Ghosh	International Journal of Electronics, Communications, and Measurement Engineering (IJECME)	2019	1	TCET	1

Title of the paper	Name of the author	Title of the journal	Year	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citations
Reduced Power Consumption in Wireless Sensor Networks with Min (N, T) Policy based M/G/1 Queue in Rayleigh Fading Channel	Sanjeev Ghosh	International Journal on Emerging Technologies	2020	0	TCET	0
Performance Evaluation of ASR for Isolated Words in Sindhi Language	Aarti H Dharmani, Sanjeev Ghosh	2019 International Conference on Advances in Computer Engineering, Communication and Control (ICAC3)	2019	0	TCET	0
Min (N, T) Policy M/G/1 Queue based Reduction of Power Consumption in Wireless Sensor Networks	Sanjeev Ghosh	2019 International Conference on Advances in Computer Engineering Computing, Communication and Control (ICAC3)	2019	0	TCET	0
USERS' NEXT LOCATION RECOMMENDATION USING DATA MINING	Sanjeev Ghosh	Journal of Emerging Technologies and Innovative Research	2019	0	TCET	0
Power Consumption and Delay in Wireless Sensor Networks using N-Policy M/M/1 Queuing Model	Sanjeev Ghosh	International Conference on Trends in Electronics and Communication	2019	0	TCET	0
An UWB Antenna with Dual Notched Band Characteristics at WLAN Band and X-Band Application	B K Mishra	Optical and Wireless Technologies	2020	0	TCET	0
BER Performance Comparison of DCO-OFDM and Convolutional Coded DCO-OFDM in IM/DD Systems	B K Mishra	International Journal of Electronics, Communications, and Measurement Engineering (IJECME)	2019	0	TCET	0
Analysis of Woven and Non-Woven Polyester Fabrics Made Flexible CP Annular Ring Textile Antenna	B K Mishra	International Journal of Electronics, Communications, and Measurement Engineering (IJECME)	2019	0	TCET	0
Computer Engineering comparative Analysis of ACO-OFDM and CACO-OFDM for Indoor Optical Wireless Communication	B K Mishra	2019 TEQIP III Sponsored International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW)	2019	0	TCET	0
Enhancement of Power Conversion Efficiency with Optimization of Antireflection Coating	Sukruti Kaulgud, B. K. Mishra	International Journal Microwave and Optical Technology	2019	0	TCET	0
Online signature verification using hybrid wavelet transform	Manoj Chavan	International Journal of Electrical and Computer Engineering (IJECE)	2020	0	TCET	0
Lung Cancer Detection using Local Energy-Based Shape Histogram (LESH) Feature Extraction Using Adaboost Machine Learning Techniques	Hemant Kasturiwale, Sharvani B	International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-9 Issue-3, Scopus	January 2020.	NA	Amravati University	NA
Image super resolution technique: A novel approach for leaf diseased problems	Hemant Kasturiwale, Sanket	Intelligent Decision Technologies, vol. 14, no. 1, pp. 9-19, 2020.10.3233/IDT-190075, March 2020. Scopus and Web of Science	March 2020.	NA	Amravati University	NA
Qualitative analysis of Heart Rate Variability based Biosignal Model for Classification of Cardiac Diseases	Hemant P. Kasturiwale, Sujata N Kale,	International Journal of Advanced Science and Technology(IJAST), 29(7), 296 – 305 Scopus	March 2020.	NA	Amravati University	NA
Hyper-Spectral Image Classification using Multi Labelled, Multi-Scale and Multi-Angle CNN with MS-MA BT Algorithm	Sujata Alegavi, Raghavendra Sedamkar,	International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Volume-8, Issue-953, pg., 1229-1235, Scopus Indexed	July 2019.	NA	TCET	NA

Title of the paper	Name of the author	Title of the Journal	Year	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citations
SVM Inspired Hybrid Classifier Design for Remote Sensed Images, A Case Study on SVM Inspired Hybrid Classifier Design for Remote Sensed Images	S. S. Alegavi and R.R. Sedamkar	The International Journal of Analytical & Experimental Modal Analysis, UGC-Care Approved Group-A Journal, ISSN No. 0886-9367, Volume XI, Issue VII, pg. no. 478-485, UGC Care List A	July 2019.	NA	TCET	NA
Transfer Learning for Classification of Hyperspectral Images using VGG & VGG-VDD Pretrained Networks	S. S. Alegavi, R.R. Sedamkar	International Journal of Advanced Science and Technology (IJAST), ISSN: 2005-4238, Volume-28, Issue No. 20, pg., 1290-1303, Scopus and Elsevier	Dec-19	NA	TCET	NA
Implementation of Deep Convolutional Neural Network for Classification of Multiscaled & Multiangled Remote Sensing Scene	S.S. Alegavi, R.R. Sedamkar	Intelligent Decision Technologies International Journal on Soft Computer Engineering approaches for image analysis in practical scenario: Challenges, Solutions and Applications, 14 (2020) 21–34, DOI: 10.3233/IDT-190076 IOS Press, Scopus and Web of Science	Feb-20	NA	TCET	NA
Implementation and Investigation of Net Metering: Proposing Real-Time Tariffs for Residential Consumers in Maharashtra State	A. Talhar and S. Bodkhe,	. IEEE Industry Applications Magazine	July-Aug. 2020	1	TCET	1
The Global Survey of Electrical Energy Distribution System: A Review	A. S. Talhar, S.B. Bodkhe	International Journal of Electrical and Computer Engineering (IJECE), Scopus	Aug-19	3		3
Study and Implementation of the Real Time Tariff for Residential Load in Other Countries and Proposing the Same for India	A. S. Talhar, S.B. Bodkhe,	International Journal of Innovative Technology and Exploring Engineering (IJITEE), Scopus	March 2019.	NA	Department of Electrical Engineering, Shri Ramdeobaba College of Engineering and Management, India	NA
Overview of Existing Electricity Tariff Structure & Residential Load Pattern in Maharashtra: A Case Study	Archana S. Talhar, Sanjay B. Bodkhe, Apurva Ambade and Laxmankumar S. Belge,	Helix – The Scientific Explore, IEEE	Dec-19	NA		NA
Book: Machine Learning with HealthCare Perspective, Chapter: Machine Learning for Healthcare: Introduction	R. R. Sedamkar, Shiwani Gupta	Springer, Learning and Analytics in Intelligent Systems, ISSN 2662-3447, ISSN 2662-3455 (electronic), ISBN 978-3-030-40849-7, ISBN 978-3-030-40850-3 (eBook)	2020	Nil	TCET	NIL
Genetic Algorithm for feature selection and parameter optimization to enhance accuracy for healthcare data	R. R. Sedamkar, Shiwani Gupta	Springer Book Series, Theme Intelligent Computer Engineering, Algorithms for Intelligent Systems (AIS) ISSN 25247565	2020	NIL	TCET	NIL
A Survey on Deep Learning-Based Automatic Text Summarization Models.	Sheetal Rathi,	Advances in Artificial Intelligence and Data Engineering DOI:https://doi.org/10.1007/978-981-15-3514-7_30 Online ISBN:978-981-15-3514-7	2020	NIL	TCET	NIL
Computer Engineering comprehensive Survey on Deep Learning Approaches in Predictive Business Process Monitoring	Sheetal Rathi, Nitin Harane	Springer, (Scopus Indexed)	2020	NIL	TCET	NIL
CDNB: CAVIAR - Dragonfly Optimization with Naive Bayes for the Sentiment & Affect Analysis in Social Media	H. P. Patil	Big Data Journal, SCI indexed	2020	NIL	TCET	NIL

Title of the paper	Name of the author	Title of the journal	Year	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citations
Implementing System for Rating Generation by Analysis of Social Media	H. P. Patil	International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-9 Issue-3 (Scopus)	2020	NIL	TCET	NIL
Performance Evaluation of Principal Computer Engineering Component Analysis for Clustering on Sugarcane Dataset	P. P. Janrao	IEEE International Conference on Advances in Computer Engineering, Communication and Control (ICAC3), Mumbai, India, 2019, (SCOPUS INDEXED).	2020	NIL	TCET	NIL
A Median Strange Point algorithm for Delineation of Agricultural Management Zones	P. P. Janrao	IJCSE, Vol.8, Issue.3 (SCOPUS INDEXED).	2020	NIL	TCET	NIL
Design and Development of an Empirical Model to predict cognitive learning level using Bloom Taxonomy for undergraduate Engineering Students	Vidyadhari S	International Conference on Information and Communication Technology for Computer Engineering competitive Strategies (ICTCS) (Dec 2019)	2019	NIL	TCET	NIL
Proposed Work for Modification of AES Mix Column	Vidyadhari S	International Journal for Research in Applied Science and Engineering Technology (IJRASET)	2019	NIL	TCET	NIL
Analysis of Facial Expressions for Predicting Student's Learning Level	Vidyadhari S	IJCSE, Vol.8, Issue.2 (SCOPUS INDEXED).	2020	NIL	TCET	NIL
Botnets: Architecture and Detection Techniques	Vidyadhari S	International Journal of Scientific & Engineering Research	2020	NIL	TCET	NIL

f) h-index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the paper	Name of the author	Title of the journal	Year of publication	h-index	Number of citations excluding self-citations	Institutional affiliation as mentioned in the publication
IoT based Water Parameter Testing in Linear Topology	Bhushan Nemade, Deven Shah	IOSR	2020	7	4	Multicon W 2020
Securing Medical Data Using Fully Homomorphic Encryption	Mrs Anita Chaudhari, Rajesh Bansode	IOSR	2020	6	3	Multicon W 2020
Enhancement of Power Conversion Efficiency with Optimization of Antireflection Coating	Sukruti Kau:gud, B. K. Mishra	International Journal Microwave and Optical Technology	2019	NIL	NIL	TCET
Reduced Power Consumption in Wireless Sensor Networks with Min (N, T) Policy based M/G/1 Queue in Rayleigh Fading Channel	Sanjeev Ghosh	International Journal on Emerging Technologies	2020	NIL	NIL	TCET
Book: Machine Learning with HealthCare Perspective, Chapter: Machine Learning for Healthcare: Introduction	R. R. Sedamkar, Shiwani Gupta	Springer, Learning and Analytics in Intelligent Systems, ISSN 2662-3447, ISSN 2662-3455 (electronic), ISBN 978-3-030-40849-7, ISBN 978-3-030-40850-3 (eBook)	2020	NIL	0	TCET
Genetic Algorithm for feature selection and parameter optimization to enhance accuracy for healthcare data	R. R. Sedamkar, Shiwani Gupta	Springer Book Series, Theme Intelligent Computer Engineering, "Algorithms for Intelligent Systems (AIS)" ISSN 25247565	2020	NIL	0	TCET

Title of the paper	Name of the author	Title of the Journal	Year of publication	h-index	Number of citations excluding self-citations	Institutional affiliation as mentioned in the publication
A Survey on Deep Learning-Based Automatic Text Summarization Models.	Sheetal Rathi	Advances in Artificial Intelligence and Data Engineering DOI:https://doi.org/10.1007/978-981-15-3514-7_30, Online ISBN 978-981-15-3514-7	2020	NIL	0	TCET
Computer Engineering comprehensive Survey on Deep Learning Approaches in Predictive Business Process Monitoring	Sheetal Rathi, Nitin Harane	Springer (Scopus Indexed)	2020	NIL	0	TCET
CDNB:CAVIAR - Dragonfly Optimization with Naive Bayes for the Sentiment & Affect Analysis in Social Media	H. P. Patil	Big Data Journal, SCI indexed	2020	0	0	TCET
Implementing System for Rating Generation by Analysis of Social Media	H. P. Patil	International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-9 Issue-3 (Scopus)	2020	0	0	TCET
Performance Evaluation of Principal Computer Engineering component Analysis for Clustering on Sugarcane Dataset	P. P. Janrao	IEEE International Conference on Advances in Computer Computing, Communication and Control (ICAC3), Mumbai, India, 2019, (SCOPUS INDEXED).	2020	NIL	0	NMIMS
A Median Strange Point algorithm for Delineation of Agricultural Management Zones	P. P. Janrao	IJCSE, Vol.8, Issue.3 (SCOPUS INDEXED).	2020	NIL	0	NMIMS
Design and Development of an Empirical Model to predict cognitive learning level using Bloom Taxonomy for undergraduate Engineering Students	Vidyadhari S	International Conference on Information and Communication Technology for Computer Strategies (ICTCS) (Dec 2019)	2019	NIL	0	NMIMS
Proposed Work for Modification of AES Mix Column	Vidyadhari S	International Journal for Research in Applied Science and Engineering Technology (IJRASET)	2019	NIL	0	TCET
Analysis of Facial Expressions for Predicting Student's Learning Level	Vidyadhari S	IJCSE, Vol.8, Issue.2 (SCOPUS INDEXED).	2020	NIL	0	NMIMS
Botnets: Architecture and Detection Techniques	Vidyadhari S	International Journal of Scientific & Engineering Research	2020	NIL	0	TCET

1.2.4 Faculty Participation in Seminars/Conferences and Symposia during the Academic Year

For effectively translating the curriculum in improving teaching practices, the faculty members receive the support from IITs under MHRD, Govt. of India schemes conducted for teachers, AICTE/UGC sponsored STTPs, ISTE approved FDPs, industry-linked training programmes. The institute also conducts various training and faculty enrichment programmes where faculty members actively participate to enhance their knowledge in the relevant field. The faculty members have advanced in their technical knowledge, skills which they now deliver in the form of sessions at other institutes and industries that bring to their individual recognition.

	COMP	E&TC	ELEX	IT	MECH	CIVIL	ES&H
--	------	------	------	----	------	-------	------

International Level - Attended Seminars/ Workshops (Dept-Faculty)	--	18	--	--	01	--	--
National Level- Attended Seminars/ Workshops (Dept-Faculty)	--	125	26	--	03	7	--
State Level - Attended Seminars/ Workshops (Dept-Faculty)	--	14	2	--	--	--	--
Local Level Attended Seminars/ Workshops (Dept-Faculty)	6	120	--	--	--	--	--
International Level – Presented papers (Dept-Faculty)	68	30	8	70	26	27	--
National Level- Presented papers (Dept-Faculty)	--	--	--	--	--	--	61
International Level – As resource persons (Dept-Faculty)	--	1	5	--	--	--	--
National Level- As resource persons (Dept-Faculty)	--	4	--	--	--	--	--
State Level - As resource persons (Dept-Faculty)	--	6	--	--	--	--	--
Local Level As resource persons (Dept-Faculty)	6	6	--	--	01	--	--
Total	80	324	41	70	31	34	61

1.2.5 Patents Published/Awarded During the Academic Year

The impact of implementation of recommendation on research culture is through participation of students and staff. This has increased in the engagement of faculty members in research and development activities. The research funding has been increasing mainly in terms of the applications for research proposals. The research publications by student and faculty members have increased awareness regarding IPR. As a result, the institute has copyrights, trademarks and patents registered. To enhance the scientific and research temper, commitment acts as a guiding force for the R & D culture. Therefore, the R & D cell at the institute has defined the MVS and objectives which are widely displayed in various research domains/areas.

Patent Details	Patent status Published/ Filed	Patent Number	Date
Improved method for Energy efficient roadside lamp utilization	Published	202041001118 A	17/01/2020
Disease analysis by machine learning over data from health community	Published	202031001339 A	07/02/2020
A Hybrid Method for Deep ENN with Multiscale Rotation Invariance Features for Hyperspectral Image Classification and Retrieval	Filed	202021004626	07/02/2020

1.2.6 Revenue Generated from Consultancy

As per the curriculum design, technical core subjects are taught to students from second year of engineering. During each semester and in each branch, the institute identifies a specific subject in one of the specialized domains, wherein students learn industry relevant technologies. Emerging technologies and research-oriented projects are allotted to students in consultation with the R & D cell, which increases the involvement of industry mentors. At the end of the year, project evaluation is carried out by industry experts. Projects, which have potential for further product development, are handed over to Entrepreneurship Cell for start-up formalities and business plan development. The 3I Cell (Industry Institute Interaction) supports students and faculty to associate themselves with reputed industries for research and product development. Some of the tie-ups with industries are developed in the form of establishing centres of excellence. Faculty members also learn new technologies and apply knowledge in developing various projects, so the consultancy work of faculty members is boosted which is a prestigious parameter for any institute. The policy of sharing of revenue by institute and the faculty is 30:70, wherein 30% after deduction of the expenditure as envisaged herein above shall be paid to the institute while 70% shall be retained by the concerned faculty.

Consultancy Name	Initiator of Programme (Dept.)	Dept.	Amount of Consultancy	Year
Star Lite Constructions	Dr. Megharani Patil	COMP	3,000.00	2018-19
Lab Systems (I) Pvt. Ltd.	Dr. Deven Shah	IT	2,00,000.00	2018-19
	Mr. Sandip Bankar	IT		
	Mr. Hiten Mehta	--		
R-Vision	Dr. Lochan Jolly	E&TC	78,000.00	2018-19
Zhyptily Technologies Pvt. Ltd	Dr. Deven Shah	IT	5,00,000.00	2017-18
	Dr. Kamal Shah	IT		
Staredu Solutions (Devops)	Dr. Deven Shah	IT	3,50,000.00	2017-18
	Dr. Kamal Shah	IT		
	Dr. Rajesh Bansode	IT		
	Dr. Rekha Sharma	COMP		
	Mrs. Hetal Amrutia	IT		
	Mrs. Purvi Sankhe	IT		

	Mrs. Veena Kulkarni	COMP		
	Mrs. Kalpana Gangwar	COMP		
Indian Space Research Organization (ISRO)	Dr. Deven Shah	IT	3,00,000.00	2017-18
Gopal Garden High School	Mr. Vikas Kaul	IT	7,000.00	2017-18
	Mrs. Neha Kapadia	IT		
	Anshul Dalmia	IT		
	Varun Mishra	IT		
	Abhijit Kushwaha	IT		
	Nilesh Gupta	IT		
Bhaktivedant Hospital	Mr. Namdeo Badhe	IT	15,000.00	2017-18
	Mr. Vikas Singh	COMP		
Singh Brothers Educare	Mrs. Harshali Patil	COMP	15,000.00	2017-18
Staredu Solutions (IoT)	Dr. Deven Shah	IT	1,50,000.00	2017-18
	Mr. Rahul Neve	IT		
Staredu Solutions (Block Chain)	Dr. Deven Shah	IT	5,00,000.00	2017-18
	Dr. Kamal Shah	IT		
HoT Technology	Dr. Deven Shah	IT	1,00,000.00	2017-18
	Dr. Kamal Shah	IT		
Bhaktivedanta Hospital	Dr. Kamal Shah	IT	1,79,400.00	2016-17
	Dr. Vinayak Bharadi	IT		
	Mr. Vikas Kaul	IT		
	Ms. Vandana Munde	IT		
	Ms. Pranjali Kasture	IT		
	Mr. Bhushan Nemade	IT		
	Mr. Aaditya Desai (IT		
Thakur Institute of Management Studies & Research	Dr. Kamal Shah	IT	10,000.00	2016-17
Grand Total			24,07,400/-	

2 Administrative activities including meetings of Statutory Bodies:

TCET's organizational and governance structure comprises of three levels: strategic, operational, and advisory. At the strategic level, the Trust consists of the CEO, Board of Trustees & Trustee In-charge take decisions. The Chairman of the Trust (the Trustee-in-Charge of the Institute) is responsible for setting the direction, defining policies, and guiding the Institute's activities in consultation with the Principal and institute's senior leadership team. At the advisory level, the Governing Council, and an Advisory Committee are formed as per the AICTE/ UOM/CI E guidelines. These two committees review the Institute's performance and recommend additional programs. The suggestions, recommendations and changes are provided for the smooth conduct of the activities like institutional functioning (academic and research environment) student and faculty development (personal, professional and social), outreach and advocacy programmes to sustain institutional growth along with the welfare of students and staff, etc. The operational level is a matrix structure and comprises of Principal, Vice-Principal, Deans and HODs, assisted by the various Local Managing Committees. Each Committee comprises of cross-functional and inter-departmental staff. Day-to-day management work is the responsibility of the Principal, who develops rules and procedures to implement the policies outlined by the Board of Trustees. Vice-Principal and Deans form the senior leadership team to support Principal for the operation of the institute. The meetings of statutory committee viz. Governing Body, Advisory Committee, College Development Committee, Academic Council, Board of Studies, and Finance Committee are conducted twice in each academic year.

2.1 Meetings of Statutory Bodies:

Sr. No.	Statutory Body	Meetings Dates	
1	Governing Body (Twice a year)	18-01-2020	24-10-2020
2	Advisory Committee (Twice a year)	18-01-2020	17-10-2020
3	College Development Committee (Twice a year)	18-01-2020	17-10-2020
4	Academic Council (Twice a year)	21-12-2019	05-05-2020
5	Board of Studies (Twice a year)	02-05-2020	07-09-2020
6	Finance Committee (Twice a year)		

2.2 Practices of decentralization and participative management during the academic year

TCET has clearly defined organizational hierarchy with well-defined roles and responsibilities for each and every staff member.

- The participative management at all levels including HODs, Section In-charges, Activity Heads etc. enhanced with involvement of all. TCET has Institutional committees for all activities in the organization for which members from the various departments are appointed. Apart from the staff members, students and alumni are also involved in many of the committees, which ensure a participative environment within the organization. Also, the parents are involved in the Advisory committee, so that they know about the activities going on in the Institute and provide their valuable inputs for improvement.
- All departments are headed by the HOD and have been assigned a mentor Dean from the Institute. Under the leadership of Dean and HOD, each department conducts various co-curricular activities independently. The departments are also supported by a deputy HOD and two co-ordinators, who look after all the academic and administrative activities of the department. For each and every class, there is a class teacher who is responsible for academic and administrative activities related to that class. This ensures appropriate academic control

of the department. The delineation of responsibilities facilitates a healthy work environment throughout the organization. There is an academic monitoring team which ensures smooth conduct of academic. The role of Mentor Dean was instrumental in guiding people of various departments for bringing better administration at departmental level.

2.3 Strategy Development and Deployment

2.3.1 Quality Improvement Strategies Adopted

- **Curriculum Development:** Under the Autonomy structure, various courses were introduced to match industry requirements. Societal impact was considered as the key point in developing the curriculum. At Institute level, faculty members have introduced the concept of Design-based experiments and mini projects for most of the courses. Students are encouraged to take online courses such as NPTEL, Coursera, etc. for which the institute faculty members act as mentors. Also, the Holistic Student Development approach adopted by the Institute since 2016 has been implemented and successfully continued in this Academic Year. Faculty members are also nominated to various Academic Bodies at University level.
- **Teaching and Learning:**
 - Faculty members plan the academic conduct by syllabus detailing, developing resource book and course file, designing practice sessions, assignments and experiments, IA paper and the effective conduct of academics.
 - All lectures and practical are conducted as per the plan and are reviewed time to time to improve the efficiency and effectiveness of teaching-learning during semester. In Even semester of A.Y. 2019-20, the unprecedented situation of COVID-19 pandemic occurred. To cope with this, latest teaching methodologies and various modes of learning were adopted by the faculty members. Various online platforms were used for content delivery viz. Zoom, Google classroom, Flipped classroom etc. The recordings of lectures were provided to students. As physical classes were not possible after March second week.
 - The process is monitored at 3 levels viz. Faculty, HOD and Dean Academic to avoid lapses.
- **Examination and Evaluation (Online evaluation in even semester):** Continuous evaluation through different methods like internal assessment test, assignments, presentations, projects etc. is carried out in each semester. At the end of each semester, university conducts the semester end examination for regular as well as A.T.K.T. examinations. Examinations are mainly in the form of Term Work/ Practical/ Oral/ Project viva/Theory. Examination committee is formed to ensure smooth conduct of examination and evaluation. Institute communicates the results on the internet through Institute website. After announcement of the results, students can request for reevaluation of the answer scripts for semester end theory examination within a stipulated period. After reevaluation, records are updated with changes if any and the student is issued a revised memorandum of marks.

Due to pandemic of COVID-19, the examination for all students was conducted in online mode (as per UGC guidelines) and results were declared on time. Online ESE examination for BE and promotion of students to next year was done based on their previous semester performance.

- **Research and Development:** Areas of domain specific research in various programs are identified and all faculty members and students are encouraged to explore various research avenues. Domain development support, like formal partnerships with external entities, facilitating faculty participation, resource procurement in various domains, is provided. R&D committee ensures compliance of various research proposals granted to the institute. Pilot projects are launched for successful development and execution of the challenges so that good ideas can be implemented on a small scale to verify feasibility and impact in a region. Students are encouraged to participate in State/National level Hackathon competitions.
- **Library, ICT and Physical Infrastructure/ Instrumentation:** The institute provides the learning resources to students/scholars and faculty to ensure effective teaching-learning process with optimum resource utilization at the institute. Following strategies are adopted for improving teaching-learning environment:
 - Procurement of books as per regulatory body.
 - Deputing of additional staff for circulation of books during peak period.
 - Providing additional reading rooms during exams.
 - Attracting students to utilize library services via orientation programs.
 - Availability of library services on all working days with non-working Saturdays during examination
 - Remote access facility is made available through mobile application- Nimbus
 - New reading room with the capacity of 148 is added.
 - ICT 155 Mbps, 2 Mbps and Physical Infrastructure/ Instrumentation.
- **Human Resource Management:** The Governing Body is the supreme body which is headed by the Chairman of the Management Council, where two members of the Management (Correspondent and Secretary), UGC, University and the State Government Nominees, the Principal, Director, Trustee, two External members as educationists and two Senior Professors of the College are the members.

A well-established team of the institute is responsible for ensuring compliance with employment and government laws. Proper care is taken in the selection process for keeping quality in the appointments. Staff members are provided with various types of training programme and workshops for enhancing their competence. Work is distributed as per qualifications and experience of the staff.

- **Industry Interaction / Collaboration (International evaluator for Project examination from Industry and academia):** T&P cell takes initiatives for collaboration with various MNCs and local industries for industrial training and internships for students of all departments.

There is an in-house internship facility created for students. At the end of current academic year, this internship is carried out in online mode due to COVID-19 pandemic. Also, international experts from industry and academia were invited for Project Evaluation. Four weeks webinar series is organised by T&P Cell in online mode, in which national level as well as international level industry/academia experts delivered talks on various topics.

Industrial visits for students and faculty are arranged at local level as well as outside state. Technical seminars and workshops are arranged by Industry Experts in every semester. In

the international conference organized by the institute every year, special workshop sessions are conducted for students by industry experts.

- **Admission of Students:** Various programs are conducted to maximize publicity and brand building of the institute and through various awards and recognitions. The institute extended support with courtesy to interested candidates seeking information related to admission. Prompt information is provided to students' enquiry, handling through adequate number of admission counters and helpdesks. Outreach programs are organized to spread awareness and attract potential students. It is also ensured to provide the informative brochures and one page handout of brochure, which would support students in getting the information of the institute and would reach maximum number of people. The institute website is regularly updated and highlighted with latest information related to admission. Compliance is met of various norms issued by statutory and regulatory bodies within the timeframe.

2.3.2 Implementation of e-governance in areas of operations:

- **Planning and Development:** The academic and some of the administrative planning are done via ERP. The institute has adopted ERP mainly for academic monitoring and control. The lecture planning of all faculty members, attendance, syllabus coverage, publishing notes/ study material for students and related updates are done through ERP. Also, leave application for faculty with adjustment is made online through ERP. Students are also provided access to necessary documents.
- **Administration:** All records related to students' performance are prepared using software-based tools for checking attainments. Consolidation is achieved in effective manner.
- **Finance and Accounts:** The payment of salary to the faculty and staff is done through electronic clearance deposited in the bank. The payment of student fees is also received through NEFT/RTGS mandates. Payment to affiliating bodies and other stake holders is also done online through portals.
- **Student Admission and Support:** Form filling, fees, notifications to concerned are published on Institute website. Online consents for Training and Placement, Higher studies, online certification cell activities etc. are taken from students. Also, the feedback from students about faculty and Institute are taken online.
- **Examination:** All notices are displayed through website related to Examination form filling, fees, notifications etc. Remuneration for examination is disbursed electronically. The results are prepared using in-house software.

2.4 Faculty Empowerment Strategies

2.4.1 Teachers are provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the academic year from institute.

Sr. No.	Name of Faculty	Department	Conference/Workshop /Membership fees	Details
1	Mr. Sunil Khatri	Electronics Engineering	Course Name: NNRMS-ISRO Sponsored Certificate Course in Remote Sensing & Geographic Information System Technology and Applications	13-05-2019 to 05-07-2019 Amount spent: Approximately 30,000/- overall
2	Mr. Anuj Pawar	Civil Engineering	Indian Geotechnical conference workshop 2019 SVNIT Surat	19-12-2019 to 21-12-2019 (Rs.5500/-)

Sr. No.	Name of Faculty	Department	Conference/Workshop /Membership fees	Details
3	Mr. Anuj Pawar	Civil Engineering	Indian geotechnical society Mumbai chapter by IIT Bombay one day workshop on advanced triaxial testing	01-02-2020 (Rs.4200/-)

2.4.2 Various professional development / administrative training programmes are organized by the institute for teaching and non-teaching staff during the academic year.

Sr. No.	Title of Programme	Department	Programme details	No. of participants
1	STTP on Design Thinking and Risk Mitigation to Enhance Educational Productivity 24th-29th February 2020	E&TC	STTP	6
2	Online FDP to develop e-content for effective academic delivery by TCET	E&TC	Online FDP	22
3	AICTE Sponsored STTP	COMP	Short Term training Program on "Perspectives on data Analytics with Advances in Software Engineering"	02 (Internal) + 38 (External)
4	Online FDP	COMP	Online FDP on Creating Digital Content for Effective Online Academic Delivery	21
5	Online Faculty Development Program in Association with Spoken Tutorial IIT Bombay.	MECH	Date/Duration: 15th to 19th June 2020 (1 Weeks). The objective behind this FDP is to also enable faculty members to use Scilab as a tool for computation of mathematical expressions.	16
6	Online FDP to develop E-content for Effective Academics. Institute level Programme	ELEX	Online FDP (02/06/20-13-06-20)	13
7	Five Days FDP on Python (online) IITB	ELEX	15/06/2020 to 20/06/2020	19
8	Two Days FDP on LATEX (online)	CIVIL	15/05/2020 to 16/05/2020	19
9	One Week FDP on SCILAB in Association with Spoken Tutorial IIT Bombay (online)	CIVIL	15/06/2020 to 19/06/2020	105
10	STTP on -Research Methodology and Intellectual Property Rights-	IT	24th-29th February 2020 STTP	50
11	Online FDP to develop e-content for effective academic delivery	IT	Online FDP on Creating Digital Content for Effective Online Academic Delivery 1 st to 15 th June by TCET	23
12	Online Faculty Development Program on R-programming	IT	1 week, 15-19 June,2020, In Association with Spoken Tutorial IIT Bombay.	19
13	Holistic Development During Pandemic 2020 A fight for future,	IT	15 June 5 th July,20, Webinar series, by TNP Cell	23

2.4.3 Welfare Schemes

Teaching and Non-Teaching Staff: Credit Co-operative Society, Medical Camps, Health Insurance, PF, Gratuity

Students: Scholarships (Full and Partial), Travel Concession, Project Finance through Hobby Clubs

2.4.4 Activities and support from the Parent – Teacher Association

- The parent teacher meeting is conducted every year during induction programme of FE.
- Parents meet is organized twice every semester at Department level. At the start of semester, it is for briefing about the semester and activities, and second meeting to inform about overall progress of their ward. Also, the feedback from parents is taken during such meets and

suggestions are consolidated. In Even semester, Parents' feedback during online examinations was also taken.

- c) Apart from that, parents are also included in the Advisory committee of each department, where they can give suggestions towards the growth and development of the organization.

2.4.5 Internal Quality Assurance System Details

- | | | |
|----|-------------------------------------|-----|
| a) | Submission of Data for AISHE portal | Yes |
| b) | Participation in NIRF | Yes |
| c) | ISO certification | Yes |
| d) | NBA or any other quality audit | Yes |

2.4.6 Number of Quality Initiatives undertaken during the year

- a) Specialization Courses are offered as a part of curriculum under an Autonomous scheme.
- b) Conduct of online TLP, doubt-solving session, evaluation and assessment is carried out during COVID-19 situation with the use and integration of different online platforms- Microsoft Teams, Zoom & Google Classroom.
- c) Employability Skills Development Programme is organized for enhancing IT skills of students
- d) Agile Methodology is followed for developing Application based BE Projects.
- e) Online Conduct of in-house internship is successfully carried out.
- f) Conduction of training programmes for GATE, GRE, GMAT at institute level is organized for students to get into higher studies.

2.4.7 Differently-abled (Divyangjan) friendliness

Items Facilities	Yes/No
Physical facilities	Yes (Washrooms for Differently abled)
Provision for lift	Yes
Ramp/ Rails	Yes (1 Wheelchair)
Rest Rooms	Yes
Any other similar facility	Yes (Disability Resource Centre)

3 Extension activities undertaken:

The institute has strengthened the extension and outreach activities, since it received the NAAC accreditation in the year 2017. It has started putting efforts to motivate faculty members and students to take part in the initiative for the overall development. The extension and outreach program has been started from current A.Y. through the extension programmes which are based on the theme of population and the outreach programme are conducted to create the interest in subjects like Maths & Science, so that students should opt for engineering career. The school education is planned to be integrated with an initiative like STEM (Science, Technology, Engineering and Maths) of USA. The

institute has NSS wing with the programme officers of NSS units. Every student member of NSS serves for a period of two years with 120 hours of engagement in community service for each year, excluding annual camps. At the end of two years of satisfactory service, each student member receives NSS Certificate, which is considered as equivalent to a diploma in Social Service. The Student Organisation for Reform & Transformation (SORT) Club is newly formed club which was established in October 2019 in association with Vyakti Vikas Kendra, India. This has ensured to engage students in their self-development and spiritual activities, believing in the principal development of youth which leads to development of society and development of nation. SORT Club is established with unique motto of "If it's SORT, it's Unique", highlighting club objective to promote uniqueness & originality amongst the member of SORT. With clear objective of Self Development, Talent Incubation & Spirituality under SORT Club stands out of all the committees & clubs to focus solely on students' development. In addition, the institute has started advocacy and outreach activities to expand the institute connect with the outside world.

3.1 Number of extension and outreach programmes conducted in collaboration with industry, community, and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the current academic year

Title of the Activities	Organising unit/ agency/ collaborating agency	Number of teachers co-ordinated in such activities	Number of students participated in such activities
Blood Donation Drive	Lions Clubs	4	150
Vidhansabha election training and Voter ID awareness	BMC	4	129
Swachhta Abhiyan	UoM	4	105
Tree Plantation	Lions Clubs	4	150
Road safety	Corporator	4	94
Polio drive	BMC	4	40
Education rally	TCET	4	74
Slum Upliftment Programme	TCET, DLLE (UoM)	3	120
Vidya Vikas Sabha Teaching Activity	TCET, DLLE (UoM)	3	37
Street children literacy Programme	N.I.O.S.	3	89
Abhilasha Foundation Donation Collection	N.I.O.S., TCET	3	16
Udaan Festival (Annual Cultural Fest)	Department of Lifelong Learning & Extension (DLLE), University of Mumbai (UoM)	3	15
Suicide Seminar	N.I.O.S., TCET	3	40
TCET-Talk	N.I.O.S., TCET	3	40
Educational Camp (Two Days -Rural area)	TCET, DLLE (UoM)	3	120
Swachta Pakhwada	N.I.O.S., TCET	3	120
Educational Rally	N.I.O.S., TCET	3	80
Health Camp Volunteering	N.I.O.S., TCET	3	45
D fest (Poster Computer Engineering)	N.I.O.S., TCET	3	35
Essay writing Computer Engineering competition	N.I.O.S., TCET	3	28
Seminar for Girl Volunteers on Menstrual cycle	N.I.O.S., TCET	3	90
Poster and video making(educational)	N.I.O.S., TCET	3	79
Multicon W 2020 (International Conference Volunteering)	N.I.O.S., TCET	3	50
Techworld	NSS EWT, Retract	07	15

Extension work details reflecting the contribution to the society

TCET is one of the first engineering colleges affiliated to the University of Mumbai for Extension work as per UGC guidelines, under the scheme of "Lifelong Learning and Extension".

Extension Education and Field Outreach activities always work to encourage people to improve their conditions in all dimensions of their lives. The Extension Work Programme is with specific mandate to work for the less-privileged sections of the society. The institute efforts are to extend educational programmes that will enhance and improve the quality of life of less-privileged groups of the society. The EWT endeavours to make these programmes keeping in view today's socio-economic changes taking place with the technology-driven knowledge based competitive economy drive.

The extension work is the most successful as it involves learners in its programmes so thoroughly that they set their own goals, apply new ideas and receive feedback from others about their progress. Extension work does not dictate how people will solve problems or make decisions for them but it fosters the democratic ideal of self-governance by encouraging each person or group to choose the best among a variety of options.

Objectives:

- 1) To gain career orientation and job orientation.
- 2) To apply classroom knowledge for the benefit of the community.
- 3) To interact with the community in which TCET EWT work.
- 4) To make the students aware of the social problems in the community.
- 5) To educate the volunteers about avoiding wastage of food.

Activities conducted

- 1) Vidya Vikas Sabha
- 2) WCWW Teaching Activity
- 3) Street Children Literacy Programme
- 4) Educational Camp

Outcomes:

Students are able to,

- 1) Achieve career orientation and job orientation.
- 2) Apply classroom knowledge for the benefit of the community.
- 3) Better understand the social problems in the community.
- 4) Interact with the community in which we work.
- 5) Understand the importance of saving food

STEM promotion by F.E department

21st Century is knowledge-based economy where STEM education and related skills create wide variety of exciting career opportunities for highest paid jobs in the current market. In an ever-changing, increasingly complex world, it is more important than ever that our nation's youth are prepared to bring knowledge and skills to solve real world problems. They also make sense of information and know how to gather and evaluate evidence for decision making process. These are the kinds of skills that students develop in Science, Technology, Engineering and Maths—disciplines collectively known as STEM. The program needs to remind students that this kind of learning can be fun and STEM-PROMO 2020 is an effort in this direction.

Events:

- 1) AT-STEM (Aptitude Test in Science, Engineering, Technology and Maths)
- 2) Code Overload (An activity based on coding knowledge using C, C++ and Java)
- 3) Da-Vinci Code (Treasure Hunt)
- 4) Poster Horizon (A poster making activity in the field of STEM)
- 5) Show your Talent! (A video making activity related to a talent which you possess)

Objectives:

- 1) To imbibe importance of STEM education among students.
- 2) To understand creative aspect of the aspiring students.
- 3) To inspire and develop Scientific/Engineering temperament.
- 4) To help the students understand their capabilities to pursue STEM education.
- 5) To ignite passion to experience hands-on and skill-based technical knowledge to become skilled

Feedback Analysis:

A Google doc-based feedback form was shared with all participants, where 700 participants gave feedback for the STEM-PROMO-2020. Feedbacks were conducted on the following parameters.

Q.1. What was your level of satisfaction?

Q.2. How would you like to rate the overall organization of the event?

The analysis of students' feedback is tabulated below in Table-2.

Table: Student's feedback analysis for STEM PROMO-2020 event.

	Poster Horizon		Code Overload		Show Your Talent		Da Vinci Code		ATSTEM2.0	
Total Responses	87		88		53		280		158	
Parameters	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
Not Satisfactory	3	1	0	0	1	1	3	2	3	2
Poor	4	5	2	1	1	1	5	3	3	4
Satisfactory	10	13	13	15	9	3	30	30	13	12
Good	32	18	26	21	11	14	69	79	37	33
Excellent	39	50	47	51	31	34	173	166	102	107

Outcomes:

- 1) Event conducted as per the schedule.
- 2) 700 participants out of 880 registrations appeared for entire STEM PROMO 2020 event.
- 3) Participants came up with diversified thoughts for poster presentations.
- 4) A good platform for budding young minds to come up with talent.
- 5) It has emphasized participants for critical thinking.
- 6) Participants understood the important aspects of basics of engineering course, such as: Science, Technology, Engineering and Mathematics.
- 7) The programme could help to increase the participant's interest in pursuing engineering course.

3.2 Awards and recognition received for extension activities from Government and other recognized bodies during the academic year

Name of the Activity	Award/ Recognition	Awarding Bodies	No. of Students Benefited
Yoga training	Certificate	UOM	3
Poster making	Certificate	UOM	10
D-Fest poster making Computer Engineering competition (inter collegiate festival)	Secured 3 rd position	DLLE	2

3.3 Students participating in extension activities with Government Organisations, Non-Government Organisations, and programmes such as Swachha Bharat Abhiyan, Aids Awareness, Gender Issues, etc. during the academic year

Name of the Scheme	Organising unit/ agency/ collaborating agency	Name of the activity	Number of teachers co-ordinated such activities	Number of students participated in such activities
Swachhta Abhiyan	UOM	Beach, Campus and UOM	4	105
Aids Awareness	RED RIBBEN	Poster and street play	4	73
Swacchta Pakhwada	N.I.O.S., TCET	Swacchta Pakhwada	3	120
Suicide Seminar	N.I.O.S., TCET	Suicide Seminar	3	40
Seminar for Girl Volunteers on Menstrual cycle	N.I.O.S., TCET	Seminar for Girl Volunteers on Menstrual cycle	3	90

3.4 Initiatives taken to address local and national advantages and disadvantages during the academic year

- Number of initiatives to address local and national advantages and disadvantages: 8
- Number of initiatives taken to engage and contribute to local community: 5

Date and duration of the initiative	Name of the initiative	Issue addressed	Number of participating students and staff
09-08-2019	AIDS AWARENESS	Volunteers understood the importance of spreading information about this sensitive topic among the people. A positive response from the people lead to the success of this awareness drive	73
12-08-2019	TREE PLANTATION DRIVE	It helps to create environmental awareness to maintain the balance of ecosystem	73
22-08-2019	BLOOD DONATION CAMP DAY-1	Blood Donation Camp Was Conducted On 22 nd August 2019. The Hospitals That Participated in The Blood Donation Were Nair Hospital and Jaslok Hospital. Count Of 216 Units of Blood Was Collected For The Needful	76
23-08-2019	BLOOD DONATION CAMP DAY-2	Blood Donation Camp Was Conducted On 23 rd August 2019. The Hospitals That Participated In The Blood Donation Were Sion Hospital And Ambedkar Hospital. Count Of 152 Units Were Collected	82
31-08-2019	GODHADI MAKING	Volunteers learned co-ordination among team members, building team spirit and developing management skills. Volunteers were inspired by this idea and vowed to incorporate it in their daily lives	64

Date and duration of the initiative	Name of the initiative	Issue addressed	Number of participating students and staff
16-09-2019	EACH ONE PLANT ONE	It helps to create environmental awareness to maintain the balance of ecosystem	148
19-09-2019	POLIO DRIVE DAY	The volunteers successfully contributed towards eradication of polio by providing the vaccine to the children in the vicinity. Many children were benefited to this drive	40
28-09-2019	KESHAV SRUSHTI OLD AGE HOME VISIT	Volunteers enjoyed this project and had developed an emotional bond with the residents of old age home	98
05-10-2019	VIDHANSABHA SEMINAR 1	The students were able to provide their assistance to the physically challenged and aged voters. The students received an opportunity to be a part of the election process	68
18-10-2019	VIDHANSABHA SEMINAR 2,		68
19-10-2019	VIDHANSABHA TRAINING 1		68
20-10-2019	VIDHANSABHA TRAINING 2		68
21-10-2019	VIDHANSABHA ELECTION DAY		68
03-11-2019	EDUCATION RALLY	Encouraging the students to express their views on importance of education.to encourage presentation of ideas through the means of art	74
24-12-2019	CATARACT EYE CHECKUP CAMP & BETI BACHAO BETI PADHAAO	The volunteers came to know about daily works performed in villages	75
28-12-2019	JOY OF GIVING & TREE PLANTATION	The volunteers came to know about the importance of tree plantation also they distributed the donations successfully	75
09-02-2020	ROAD SAFETY AND TRAFFIC MANAGEMENT	Volunteers realized acceptance among the people regarding the basic safety regulations they should follow. It instilled a sense of responsibility among every citizen as they understood their part in the society	47
14-02-2020	JANTA CURFEW PLEDGE	Volunteers understood the importance of social distancing required during covid-19 pandemic	62
22-02-2020	THE OPENWHO LEARNING MODULE FOR COVID -19	Through this online course volunteers came to know about the origin, symptoms and various preventions that need to be taken	75
22-02-2020	MASK MAKING	Volunteers successfully portrayed their efforts and made home-made masks for them and their families in the pandemic situation	14
02-03-2020	YOGA	The volunteers came to know about different yoga aasans, it's importance and encouraged their family to do it too	14
12-03-2020	WATER POT	Volunteers successfully performed this activity and understood that taking care of other life forms is also important	14
19-03-2020	STRESS MANAGEMENT WEBINAR	Volunteers learned more about stress, how to cope with stress and stay healthy at all times and also what they can do to help people who are dealing with a lot of stress	47

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IQAC Members

IQAC
Coordinator

Director, IQAC

Vice Principal

Principal/IQAC
Chairperson

PROFORMA FOR PROGRESS REPORT OF COLLEGE (AUTONOMOUS)

Academic Performance is conducted by External peer team

Date of Audit conduct by External Peer Team: 27th July, 2021

Progress Report for the Academic Year: 2019-2020

- Academic and research activities undertaken: YES
- Administrative activities including meetings of Statutory Bodies: YES
- Extension activities undertaken: YES
- Financial Report:

Item	Utilized Grant available from previous year	Resources generated through fees and other sources	Grant received from UGC and other funding agencies during the year	Expenditure during the year	Unspent balance	Remarks
NA	Nil	Nil	Nil	NA	NA	Self-financing institute


(Dr.B.K.Mishra)



Principal – Thakur College of Engineering & Technology,
Thakur Village, Kandivali (East), Mumbai

Place: Mumbai

Date: 16-4-22

PROFORMA FOR PROGRESS REPORT OF COLLEGE (AUTONOMOUS)

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B.K.M.

(Dr.B.K.Mishra)

Principal – Thakur College of Engineering & Technology,
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Former Professor IIT-B

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Principal
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H. Vasudevan

Dr. P.P Bhawe – Member
Associate Professor & HoD,
Civil Engg. Dept., VJTI, Mumbai

P.P. Bhawe

Place: *Mumbai*

Date: *16-4-22*