



YEARLY STATUS REPORT - 2020-2021

Part A

Data of the Institution

1.Name of the Institution

ZAGDU SINGH CHARITABLE TRUST'S
THAKUR COLLEGE OF ENGINEERING AND
TECHNOLOGY

- Name of the Head of the institution **Dr. B. K. Mishra**
- Designation **Principal**
- Does the institution function from its own campus? **Yes**
- Phone No. of the Principal **02267308111**
- Alternate phone No. **02267308107**
- Mobile No. (Principal) **9821285825**
- Registered e-mail ID (Principal) **tcet.principal@thakureducation.org**
- Address **Thakur College Of Engineering And Technology. A-Block, Thakur Educational Campus, Shyamnarayan Thakur Marg, Thakur Village, Kandivali(E). Mumbai - 400101.**
- City/Town **Mumbai**
- State/UT **Maharashtra**
- Pin Code **400101**

2.Institutional status

- Autonomous Status (Provide the date of conferment of Autonomy) **24/06/2019**

- Type of Institution **Co-education**

- Location **Urban**

- Financial Status **Self-financing**

- Name of the IQAC Co-ordinator/Director **Dr. Rajesh Bansode**
- Phone No. **02267308106**
- Mobile No: **9833179097**
- IQAC e-mail ID **tcet.iqac@thakureducation.org**

3. Website address (Web link of the AQAR (Previous Academic Year)) <https://www.tcetmumbai.in/Notice/IQAC/AQAR%20report%202019-2020.pdf>

4. Was the Academic Calendar prepared for that year? **Yes**

- if yes, whether it is uploaded in the Institutional website Web link: https://www.tcetmumbai.in/Notice/Academic_Calender.pdf

5. Accreditation Details

Cycle	Grade	CGPA	Year of Accreditation	Validity from	Validity to
Cycle 1	A	3.17	2017	30/10/2017	29/10/2024

6. Date of Establishment of IQAC **20/01/2018**

7. Provide the list of Special Status conferred by Central and/or State Government on the Institution/Department/Faculty/School (UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC, etc.)?

Institution/ Department/Faculty/School	Scheme	Funding Agency	Year of Award with Duration	Amount
Thakur College of Engineering & Technology	IEDC	DST	20/07/2020	800000

8. Provide details regarding the composition of the IQAC:

- Upload the latest notification regarding the composition of the IQAC by the HEI [View File](#)

9. No. of IQAC meetings held during the year **3**

- Were the minutes of IQAC meeting(s) and compliance to the decisions taken uploaded on the institutional website? **Yes**
- If No, please upload the minutes of the meeting(s) and Action Taken Report No File Uploaded

10. Did IQAC receive funding from any funding agency to support its activities during the year? **Yes**

- If yes, mention the amount **1384275**

11. Significant contributions made by IQAC during the current year (maximum five bullets)

1. A questionnaire was designed for students satisfaction survey form with IQAC members support to get their suggestions, feedback to improve online teaching. 2. Conduct of one day National Symposium on NEP 2020 - Opportunities for stakeholders was conducted on 27th of April 2021 as an initiative of IQAC. The program included sharing of Quality practices, panel discussion, Mini coffee table conference on the theme of the symposium, tie up with UGC care Scopus indexed journal (Journal of Engineering Education Transformation - JEET) with 15 publication papers included, MoU with Gardencity University- Bangalore. 3. The conduction of Performance Academic Audit for the AY 2019-20 and AY 2020-21 on 27th July 2021 by external peer team where in major aspects like curriculum enrichment, curriculum design

development, then followed by specializations internships, higher studies and statistics were focussed for their continual improvement

4. Based on 7 NAAC Criteria's the format was prepared to discuss during IQAC meeting. The parameters includes: (a) Quality initiatives taken for each criteria (b) Purpose/drive/planning/Deployment (c) Scope & target audience, (d) Outcome & improvement w.r.t previous A.Y (e) Impact of initiatives and (f) Validation & Documentary evidence

5. To make the system time bound, IQAC has created a template for the first time as a colour code so as to ease out to see that a Section in-charge, HOD, Principal, Vice Principal, Dean's can speak once in a go and can complete the agenda for the meeting.

6. Internal benchmarking parameters for student specific were prepared on 06 major parameters where comparison was done among data received for AY 2018-19. 2019-20 which included: (a) Student enrolment admission quality data with highest cut off CET score, the lowest cut off is observed (b) progression of industry placements, (c) No. of students admitted at B.E (d) Exam results with passing % (e) In-house internship & (f) Higher studies.

7. The newly developed template to collect the data related to academic performance audit as developed after receiving suggestions from combined meeting of Academic Performance Audit and 4th Quarterly Meeting of IQAC.as per autonomy and IQAC- NAAC. Template, actionable points and who has to act upon, template is created quarter wise of what quarter wise action planning strategies for implementing future plan action and then quarter wise action for next A.Y. 2021-2022 is to be planned and executed. Template helps to revise the academic planning design process, making it consistent there he mentioned there were some inconsistencies found and then the points are formed, accordingly the Dean academic board (Member secretary), Deans, Controller of examination, HODs as chairman Board of Studies, section in-charges have to take action. The template is prepared based on 7 NAAC criteria's.

12. Plan of action chalked out by IQAC at the beginning of the academic year towards quality enhancement and the outcome achieved by the end of the academic year:

Plan of Action	Achievements/Outcomes
<p align="center">COVID Protocols</p>	<p align="center">Restructuring of certain laboratory exercises in such a way that students learning is not hampered and all necessary COVID precautions are taken if conducted in offline mode</p>
<p align="center">Conducting Faculty Development activities</p>	<p align="center">The following FDP's are conducted at Institute level during the Academic Year: Online FDP on "Creating Digital Content for Effective Online Academic Delivery" (01/06/2020-12/06/2020) Online FDP on</p>
<p align="center">Conducting Student Development activities</p>	<p>a) In Computer Dept. during Research based learning activity different sessions like prototype development, statistical methods, problem solving and technical paper writing were conducted.</p> <p>b) In E&TC dept. during the RBL sessions, the students were taught to write technical blogs and they have been shown to create a prototype for their RBL project.</p> <p>c) Industry mentors are allotted to all PG students for their project to promote research culture in PG so that the guidance can come from the industry mentors on the latest technologies.</p>
<p align="center">Placement Statistics and Online Course Enrollment</p>	<p>a) 1520 students interested in the placement and out of 844 students placed (for batches 2020-2021-2022) marking up to 56%. Employability skill development program was carried for the last semester, out of 1657 students enrolled and 1657</p>

students were able to complete the complete evaluation part. ESD for second & third year student was conducted and the title of the ESD awards feature extra development. b) A total of 2840 Coursera license was issued to all students and staff and they have completed 9200 plus courses on Coursera till date.

13. Was the AQAR placed before the statutory body? Yes

- Name of the statutory body

Name of the statutory body	Date of meeting(s)
Governing Council	20/10/2020

14. Was the institutional data submitted to AISHE ? Yes

- Year

Part A

Data of the Institution

1.Name of the Institution	ZAGDU SINGH CHARITABLE TRUST'S THAKUR COLLEGE OF ENGINEERING AND TECHNOLOGY
• Name of the Head of the institution	Dr. B. K. Mishra
• Designation	Principal
• Does the institution function from its own campus?	Yes
• Phone No. of the Principal	02267308111
• Alternate phone No.	02267308107
• Mobile No. (Principal)	9821285825
• Registered e-mail ID (Principal)	tcet.principal@thakureducation.org
• Address	Thakur College Of Engineering And Technology. A-Block, Thakur Educational Campus, Shyamnarayan Thakur Marg, Thakur Village, Kandivali(E). Mumbai - 400101.
• City/Town	Mumbai
• State/UT	Maharashtra
• Pin Code	400101
2.Institutional status	
• Autonomous Status (Provide the date of conferment of Autonomy)	24/06/2019
• Type of Institution	Co-education
• Location	Urban

• Financial Status	Self-financing				
• Name of the IQAC Co-ordinator/Director	Dr. Rajesh Bansode				
• Phone No.	02267308106				
• Mobile No:	9833179097				
• IQAC e-mail ID	tcet.iqac@thakureducation.org				
3.Website address (Web link of the AQAR (Previous Academic Year)	https://www.tcetmumbai.in/Notice/IOAC/AQAR%20report%202019-2020.pdf				
4.Was the Academic Calendar prepared for that year?	Yes				
• if yes, whether it is uploaded in the Institutional website Web link:	https://www.tcetmumbai.in/Notice/Academic_Calender.pdf				
5.Accreditation Details					
Cycle	Grade	CGPA	Year of Accreditation	Validity from	Validity to
Cycle 1	A	3.17	2017	30/10/2017	29/10/2024
6.Date of Establishment of IQAC			20/01/2018		
7.Provide the list of Special Status conferred by Central and/or State Government on the Institution/Department/Faculty/School (UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC, etc.)?					
Institution/ Department/Faculty/School	Scheme	Funding Agency	Year of Award with Duration	Amount	
Thakur College of Engineering & Technology	IEDC	DST	20/07/2020	800000	
8.Provide details regarding the composition of the IQAC:					
• Upload the latest notification regarding the	View File				

composition of the IQAC by the HEI		
9.No. of IQAC meetings held during the year	3	
<ul style="list-style-type: none"> Were the minutes of IQAC meeting(s) and compliance to the decisions taken uploaded on the institutional website? 	Yes	
<ul style="list-style-type: none"> If No, please upload the minutes of the meeting(s) and Action Taken Report 	No File Uploaded	
10.Did IQAC receive funding from any funding agency to support its activities during the year?	Yes	
<ul style="list-style-type: none"> If yes, mention the amount 	1384275	
11.Significant contributions made by IQAC during the current year (maximum five bullets)		
<p>1. A questionnaire was designed for students satisfaction survey form with IQAC members support to get their suggestions, feedback to improve online teaching. 2. Conduct of one day National Symposium on NEP 2020 - Opportunities for stakeholders was conducted on 27th of April 2021 as an initiative of IQAC. The program included sharing of Quality practices, panel discussion, Mini coffee table conference on the theme of the symposium, tie up with UGC care Scopus indexed journal (Journal of Engineering Education Transformation - JEET) with 15 publication papers included, MoU with Gardencity University-Bangalore. 3. The conduction of Performance Academic Audit for the AY 2019-20 and AY 2020-21 on 27th July 2021 by external peer team where in major aspects like curriculum enrichment, curriculum design development, then followed by specializations internships, higher studies and statistics were focussed for their continual improvement 4. Based on 7 NAAC Criteria's the format was prepared to discuss during IQAC meeting. The parameters includes: (a) Quality initiatives taken for each criteria (b) Purpose/drive/planning/Deployment (c)Scope & target audience, (d)Outcome & improvement w.r.t previous A.Y (e) Impact of initiatives and (f)Validation & Documentary evidence 5. To make the system time bound, IQAC has created a template for the first time as a colour code so as to ease out to see that a Section in-charge, HOD, Principal, Vice Principal, Dean's can speak once in</p>		

a go and can complete the agenda for the meeting. 6. Internal benchmarking parameters for student specific were prepared on 06 major parameters where comparison was done among data received for AY 2018-19. 2019-20 which included: (a) Student enrolment admission quality data with highest cut off CET score, the lowest cut off is observed (b) progression of industry placements, (c) No. of students admitted at B.E (d) Exam results with passing % (e) In-house internship & (f) Higher studies. 7. The newly developed template to collect the data related to academic performance audit as developed after receiving suggestions from combined meeting of Academic Performance Audit and 4th Quarterly Meeting of IQAC.as per autonomy and IQAC- NAAC. Template, actionable points and who has to act upon, template is created quarter wise of what quarter wise action planning strategies for implementing future plan action and then quarter wise action for next A.Y. 2021-2022 is to be planned and executed. Template helps to revise the academic planning design process, making it consistent there he mentioned there were some inconsistencies found and then the points are formed, accordingly the Dean academic board (Member secretary), Deans, Controller of examination, HODs as chairman Board of Studies, section in-charges have to take action. The template is prepared based on 7 NAAC criteria's.

12. Plan of action chalked out by IQAC at the beginning of the academic year towards quality enhancement and the outcome achieved by the end of the academic year:

Plan of Action	Achievements/Outcomes
COVID Protocols	Restructuring of certain laboratory exercises in such a way that students learning is not hampered and all necessary COVID precautions are taken if conducted in offline mode
Conducting Faculty Development activities	The following FDP's are conducted at Institute level during the Academic Year: Online FDP on "Creating Digital Content for Effective Online Academic Delivery" (01/06/2020-12/06/2020) Online FDP on
Conducting Student Development activities	a) In Computer Dept. during Research based learning

	<p>activity different sessions like prototype development, statistical methods, problem solving and technical paper writing were conducted.</p> <p>b) In E&TC dept. during the RBL sessions, the students were taught to write technical blogs and they have been shown to create a prototype for their RBL project. c) Industry mentors are allotted to all PG students for their project to promote research culture in PG so that the guidance can come from the industry mentors on the latest technologies.</p>
<p>Placement Statistics and Online Course Enrollment</p>	<p>a) 1520 students interested in the placement and out of 844 students placed (for batches 2020-2021-2022) marking up to 56%. Employability skill development program was carried for the last semester, out of 1657 students enrolled and 1657 students were able to complete the complete evaluation part. ESD for second & third year student was conducted and the title of the ESD awards feature extra development. b) A total of 2840 Coursera license was issued to all students and staff and they have completed 9200 plus courses on Coursera till date.</p>
<p>13. Was the AQAR placed before the statutory body?</p>	<p>Yes</p>
<ul style="list-style-type: none"> Name of the statutory body 	

Name of the statutory body	Date of meeting(s)
Governing Council	20/10/2020
14. Was the institutional data submitted to AISHE ?	Yes
<ul style="list-style-type: none"> • Year 	
Year	Date of Submission
25/09/2021	25/09/2021
15. Multidisciplinary / interdisciplinary	
16. Academic bank of credits (ABC):	
17. Skill development:	
18. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course)	
19. Focus on Outcome based education (OBE): Focus on Outcome based education (OBE):	
20. Distance education/online education:	

Extended Profile

1. Programme

1.1 15

Number of programmes offered during the year:

File Description	Documents
Institutional Data in Prescribed Format	No File Uploaded

2.Student

2.1 3392

Total number of students during the year:

File Description	Documents
Institutional data in Prescribed format	No File Uploaded

2.2 799

Number of outgoing / final year students during the year:

File Description	Documents
Institutional Data in Prescribed Format	No File Uploaded

2.3 3357

Number of students who appeared for the examinations conducted by the institution during the year:

File Description	Documents
Institutional Data in Prescribed Format	No File Uploaded

3.Academic

3.1 712

Number of courses in all programmes during the year:

File Description	Documents
Institutional Data in Prescribed Format	No File Uploaded

3.2 207

Number of full-time teachers during the year:

Extended Profile	
1.Programme	
1.1 Number of programmes offered during the year:	15
File Description	Documents
Institutional Data in Prescribed Format	No File Uploaded
2.Student	
2.1 Total number of students during the year:	3392
File Description	Documents
Institutional data in Prescribed format	No File Uploaded
2.2 Number of outgoing / final year students during the year:	799
File Description	Documents
Institutional Data in Prescribed Format	No File Uploaded
2.3 Number of students who appeared for the examinations conducted by the institution during the year:	3357
File Description	Documents
Institutional Data in Prescribed Format	No File Uploaded
3.Academic	
3.1 Number of courses in all programmes during the year:	712
File Description	Documents
Institutional Data in Prescribed Format	No File Uploaded

3.2	207
Number of full-time teachers during the year:	
File Description	Documents
Institutional Data in Prescribed Format	No File Uploaded
3.3	207
Number of sanctioned posts for the year:	
4.Institution	
4.1	145
Number of seats earmarked for reserved categories as per GOI/State Government during the year:	
4.2	50
Total number of Classrooms and Seminar halls	
4.3	1197
Total number of computers on campus for academic purposes	
4.4	222961649
Total expenditure, excluding salary, during the year (INR in Lakhs):	

Part B

CURRICULAR ASPECTS

1.1 - Curriculum Design and Development

1.1.1 - Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which are reflected in Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes offered by the Institution.

Program Outcomes and Program Specific Outcomes is strengthened at various meetings by taking inputs from different stakeholders viz. faculty through Programme Assessment Committee and Faculty Advisory Committee, students through Student advisory meeting, Industry, Alumni and Parents through Department advisory committee, Academicians from Peer Institutions and Industry and Academicians through BoS Meeting and Academic Council Meetings.

Curricular gaps are identified according to inputs received from above mentioned stakeholders and implemented in respective courses. Every year 20-30% modifications are done in every course. The AICTE Model curriculum has been followed for deciding the subjects, hours and credits while deciding on the scheme and syllabus of all programs and courses in our Institute. In addition, the curriculum for all the programs have been developed keeping the syllabus of reputed institutions in India like IIT, NIT etc. as well as Mumbai University and other top Universities across the country, as reference. This has created relevance at local level, regional level and national level. The opinions of industry experts and subject experts are also taken while framing the syllabus. Once the syllabus is framed, the approval of the same is taken from the Board of Studies to review the fulfilment of requirements of POs, PSOs and COs.

File Description	Documents
Upload additional information, if any	No File Uploaded
Link for additional information	www.tcetmumbai.in

1.1.2 - Number of Programmes where syllabus revision was carried out during the year
18

File Description	Documents
Minutes of relevant Academic Council/BOS meeting	View File
Details of syllabus revision during the year	View File
Any additional information	No File Uploaded

1.1.3 - Number of courses focusing on employability/entrepreneurship/ skill development offered by the Institution during the year

13

File Description	Documents
Curriculum / Syllabus of such courses	View File
Minutes of the Boards of Studies/ Academic Council meetings with approval for these courses	View File
MoUs with relevant organizations for these courses, if any	No File Uploaded
Any additional information	No File Uploaded

1.2 - Academic Flexibility

1.2.1 - Number of new courses introduced across all programmes offered during the year

13

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	View File
Any additional information	No File Uploaded
Institutional data in prescribed format (Data Template)	View File

1.2.2 - Number of Programmes offered through Choice Based Credit System (CBCS)/Elective Course System

18

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	View File
Any additional information	No File Uploaded
List of Add on /Certificate programs (Data Template)	View File

1.3 - Curriculum Enrichment

1.3.1 - Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability, and Human Values into the curriculum

The Institute curriculum of all programs addresses issues

relevant to gender, environment and sustainability, human values and professional ethics. Apart from the academic, TCET offers a separate section in the syllabus scheme for Holistic Development of students and offers credits towards that as well apart from academic credits. Various activities are organized throughout the year under the auspices of various committees formed at the department and at the Institute level.

1. **Gender Sensitivity:** Under NSS and Rotaract committee, students are sensitized and encouraged to work towards gender equity from a cross-cultural perspective. TCET annually organizes seminars, conferences, guest lectures, street plays and literary activities that help in gender sensitization.
2. **Environment and Sustainability:** A compulsory core course on Environment studies is included in all UG programmes. Apart from that, the UG programmes in Civil and Mechanical Engineering include subjects on Water, Sanitation and Waste Management, Renewable Energy, Dairy Technology, Agriculture and Environmental and Green Technology. Environment awareness camps, seminars, workshops, guest lectures, industry visits etc. are organized.
3. **Human Values and Professional Ethics:** The curriculum across all years also focusses on the development of human values and professional ethics like Universal Human Values, Indian tradition, Environment Studies, Disaster Management etc.

File Description	Documents
Upload the list and description of the courses which address issues related to Gender, Environment and Sustainability, Human Values and Professional Ethics in the curriculum	View File
Any additional information	No File Uploaded

1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year

10

File Description	Documents
List of value-added courses	View File
Brochure or any other document relating to value-added courses	View File
Any additional information	No File Uploaded

1.3.3 - Number of students enrolled in the courses under 1.3.2 above

2538

File Description	Documents
List of students enrolled	View File
Any additional information	No File Uploaded

1.3.4 - Number of students undertaking field work/projects/ internships / student projects

1266

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	View File
Any additional information	No File Uploaded

1.4 - Feedback System

1.4.1 - Structured feedback and review of the syllabus (semester-wise / year-wise) is obtained from 1) Students 2) Teachers 3) Employers and 4) Alumni

A. All 4 of the above

File Description	Documents
Provide the URL for stakeholders' feedback report	https://thakureducation-my.sharepoint.com/:b:/g/personal/tcet_igac_thakureducation_org/ETr1f5qR2otDltcCq1aiTPYBao04jKRDLJ70RmI81R9-FQ?e=oNQibT
Upload the Action Taken Report of the feedback as recorded by the Governing Council / Syndicate / Board of Management	View File
Any additional information	No File Uploaded

1.4.2 - The feedback system of the Institution comprises the following

B. Feedback collected, analysed and action taken

File Description	Documents
Provide URL for stakeholders' feedback report	https://thakureducation-my.sharepoint.com/:b:/g/personal/tcet_igac_thakureducation_org/ETr1f5qR2otDltcCq1aiTPYBao04jKRDLJ70RmI81R9-FQ?e=oNQibT
Any additional information	View File

TEACHING-LEARNING AND EVALUATION

2.1 - Student Enrollment and Profile

2.1.1 - Enrolment of Students

2.1.1.1 - Number of students admitted (year-wise) during the year

878

File Description	Documents
Any additional information	No File Uploaded
Institutional data in prescribed format	View File

2.1.2 - Number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per the reservation policy during the year (exclusive of supernumerary seats)

54

File Description	Documents
Any additional information	No File Uploaded
Number of seats filled against seats reserved (Data Template)	View File

2.2 - Catering to Student Diversity

2.2.1 - The institution assesses students' learning levels and organises special programmes for both slow and advanced learners.

TCET follows a process of segregating students based on learning levels in which students are categorized as excellent, good, and average with academic performance and validation. The wide range of continuous assessment components that include, Class Assignments, Seminars and Group Discussions, Quizzes, Class Tests, Projects, Internships, Viva-voce examinations and attendance, enable effective assessment of learning levels of students.

Faculty members and various Committees regularly review the academic progress and counsel students to improve their performance to ensure their academic growth. As per these categories, students are counselled by their teacher guardians and class in charges. Special measures taken to support relatively slow learners are as follows:

Organizing Extra Classes, remedial exams, Providing tutorial assignments, extra reading material to improve basic understanding of subject, Encouraging them to study courses on developing soft skills to master understanding of language, Encouraging them to participate in various activities to develop social skills.

Students' who are academically excellent or specifically fast learners are given advanced exercises related to their subjects after their regular experiments. Faculty members also refer to such fast learners some advanced areas for further study as per the interest of the students.

The institute has another provision for students who face problem of coping with English language since engineering students are from various boards. The provision is General English Proficiency Training which is conducted over and above the curriculum activities. The training programs is meant for boosting the confidence of students coming from vernacular

medium with English language barriers. This program is conducted for 12-20 hours in which various activities are conducted for confidence building. The program focuses mainly on speech, grammar, and vocabulary of the students which leads ultimately to develop interest in English language.

The Institute employs varied evaluations to test both Quality and Values. It has a continuous evaluation system with different types of assessments spread throughout the semester. It implements well-defined models of evaluation with varied types of assessment to effectively evaluate outcomes, both at the course and the program level.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

2.2.2 - Student – Teacher (full-time) ratio

Year	Number of Students	Number of Teachers
01/05/2021	3337	207

File Description	Documents
Upload any additional information	No File Uploaded

2.3 - Teaching- Learning Process

2.3.1 - Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

TCET believes in the adoption of student's centric methods to enhance student involvement as a part of participative learning and problem-solving methodology. Role Plays, Team works, Debates, Seminar Quizzes and case studies Specifically Students centric Teaching Methods are reflected in project work, Field Visit, Industrial visit & guest lectures.

Specifically, the student's centric methodology includes

Experiential Learning

A. Project work: Project work is organized as Project Based Learning in second year and third year and Major Projects in final year. Also, in Professional Elective Courses, Practical sessions are conducted in the form of a Capstone project.

B. Internship in institute or industry: As AICTE Model curriculum as well as TCET Curriculum has made Internship mandatory for students, therefore students have to undergo internship in the second, third and final year of their engineering program. TCET offers in house internship at second year level whereas for third year students, Industry internship is recommended. 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.

C. Participation in competition at various level: For Real time exposure students are encouraged to participate at National and International Level

D. Industrial Visits: Departments Plan and Organize the industrial visits for students to provide exposure to industrial work culture both at local level as well as out of station level.

E. Guest Lecture: Guest lectures by eminent experts from industry and academics from across the world are organized to supplement the teaching process and provide experiential learning.

The curriculum also focuses on promoting Holistic Student Development (HSD) which includes courses on Employability Skill Development which focus on Industry Specific skills, Professional skills which focus on basic Technology skills for 2nd year, industry/ research/ entrepreneurship skills for 3rd and Final Year. PBL is common for SE, TE and BE under HSD along with ABL(Co-curricular/ Extra-curricular/ Extension) for SE students and RBL for TE & BE students.

. Project Based Learning (PBL): This course intends to aid students identify real world problems and apply computing fundamental and technical skill to find solutions to them.

Activity Based Learning (ABL): ABL helps students learn skills other than technical ones which make an impact on the

students' personality.

Research Based Learning (RBL): This course is focused to engage the learner in research by upgrading domain knowledge through participation in various core research activities for innovative idea generation.

Professional Skills (PS): PS is taught to introduce new technologies to students. It helps them to acquire skills to develop projects using recent technologies.

Employability Development Skills (ESD): ESD is taught considering the emerging technology requirements in industry.

Activities like Group Presentations, Group-Discussions, Peer to Peer Interactions, etc. helped students enhance his/her participation and interactions. They also got adjusted and adapted to the new learning environment irrespective of where the student was currently located.

File Description	Documents
Upload any additional information	No File Uploaded
Link for additional Information	Nil

2.3.2 - Teachers use ICT-enabled tools including online resources for effective teaching and learning

At TCET, the classrooms and labs are ICT enabled with projectors installed and the campus is enabled with high speed WIFI connection at various points. During the pandemic, online platforms were used for academic conduct, doubt solving sessions, Project progress demos-presentations and assessments. College has provided pen tablets and other necessary digital infrastructure to effectively conduct the online session like good cameras, zoom licenses and all other requirements have been given to the department in sufficient numbers

The faculty at TCET use various ICT enabled tools to enhance the quality of teaching-learning like

1. Microsoft Teams and Google Classroom is used to manage and post course related information- learning material, quizzes, lab submissions and evaluations, assignments, etc.

2. Virtual labs are used to conduct labs through simulations.
3. Online drawing tools like concept maps, mind maps, are used to perform student centric activities.
4. The PPTs are enabled with animations and simulations to improve the effectiveness of the teaching- learning process.
5. The online learning environments are designed to train students in open problem-solving activity.
6. Lab manuals are mailed to students well in advance the experiment is performed.
7. Online quizzes and polls are regularly conducted to record the feedback of the students. Various online Tools were used to conduct Formative Assessment such as Google Form (MCQs), Group discussion Activity (PPTs/Microsoft Word), Quiz (Zoom Pooling) , Debate (PPTs/Microsoft word), Word cloud (Mentimeter), Flip classroom(By uploading material on ERP, Profile website Page), Puzzles (Online Puzzle Maker Tool), padlet used for writing answers and then up voted or down voted by peers, Crossword Puzzles and Case Study etc.
8. Institute has offered Digital Infrastructure:Webcam,Wi-fi Router,Pen Tablet,Wired Headset,Stylus Pen to each department to improve the learning experience of students, especially for numerical based subjects.

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	Nil
Upload any additional information	No File Uploaded

2.3.3 - Ratio of students to mentor for academic and other related issues

2.3.3.1 - Number of mentors

168

File Description	Documents
Upload year-wise number of students enrolled and full-time teachers on roll	View File
Circulars with regard to assigning mentors to mentees	View File

2.3.4 - Preparation and adherence to Academic Calendar and Teaching Plans by the institution

Academic Calendar is prepared on semester basis taking into account the university calendar , the list of holidays, students activities etc.

Academic calendar (tentative) is released twenty one days before the semester commencement as tentative calendar. The tentative Academic calendar is finalized 15 days after the commencement of semester.

HODs prepare department calendar in alignment with institute academic calendar

Academic calendar is notified on notice board and website. It is also included in the faculty diary (only relevant activities) for compliance.

The academic calendar in general, comprises week number, number of instructional days in that week, date, day and the activity name(s) to be conducted. The activities in the academic calendar for students not only comprises details of academic conduct but also comprises details of other activities viz. professional bodies organized activities, social bodies organized activities, Training & Placement conducted co curricular activities and activities related to Higher Education and Online Courses Cell

According to academic calendar prepared at the institute level where semester conduct is for the first 8 weeks the conduct of lectures/practical is done followed by the In-semester assessment planned during 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 by End Semester Examination in 21st week & all ATKT/supplementary exams in 24th week as per academic calendar. (three In semester assessments and one Innovative exam for FE per semester during AY 2020-21 as part of 60:40 scheme).

Students are informed about these internal examinations well in advance by the department and exam section . Internal assessment dates are also provided by the college in the proposed academic calendar prepared at the beginning of each semester .

Students are informed about the university notices and circulars related to the examinations from time to time through student notice board, departmental notice boards, college website .

The academic calendar is implemented actively through proper planning and executions. Planning is done during the vacation and execution is done during the semester. Improvements in the academic calendar, timetable, academic skills and Outcome based education at implemented effectively.

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	View File

2.4 - Teacher Profile and Quality

2.4.1 - Number of full-time teachers against sanctioned posts during the year

207

File Description	Documents
Year-wise full-time teachers and sanctioned posts for the year	View File
List of the faculty members authenticated by the Head of HEI	No File Uploaded
Any additional information	No File Uploaded

2.4.2 - Number of full-time teachers with PhD/ D.M. / M.Ch. / D.N.B Super-Specialty / DSc / DLitt during the year

39

File Description	Documents
List of number of full-time teachers with PhD./ D.M. / M.Ch. / D.N.B Super-Specialty / D.Sc. / D.Litt. and number of full-time teachers for 5 years	View File
Any additional information	No File Uploaded

2.4.3 - Total teaching experience of full-time teachers in the same institution: (Full-time teachers' total teaching experience in the current institution)

1293.4

File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	View File
Any additional information	No File Uploaded

2.5 - Evaluation Process and Reforms

2.5.1 - Number of days from the date of last semester-end/ year- end examination till the declaration of results during the year

Nil

File Description	Documents
List of Programmes and the date of last semester-end / year-end examinations and the date of declaration of result	View File
Any additional information	No File Uploaded

2.5.2 - Number of students' complaints/grievances against evaluation against the total number who appeared in the examinations during the year

0

File Description	Documents
Upload the number of complaints and total number of students who appeared for exams during the year	No File Uploaded
Upload any additional information	No File Uploaded

2.5.3 - IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA) have brought in considerable improvement in the Examination Management System (EMS) of the Institution

Continuous Evaluation is carried out for evaluating the learning of the students on 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 test etc. Monthly evaluation is for Formative assessment and remedial work done by defaulters and slow learners. Mid-term evaluation includes compliance for 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.

In academic year (2020-2021) the institute has moved from the traditional examination scheme where more weightage is given to End Semester Exam (ESE) and internal assessment. In the 60:40 scheme, 60 marks are for ESE and out of remaining 40 marks, 20 marks are for In semester assessment and 20 marks are for Innovative exam where student will be given some task to assess the learning in a particular subject. In academic year (2020-2021) 1st year students had 60:40 scheme and for the students of 2nd, 3rd and final year, examination scheme remains as per 75:25 (ESE: IA) only.

The In-semester assessment is planned during 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 by End Semester Exam at the end of semester in 21st week & all ATKT/supplementary exams in 24th week as per academic calendar

For the 1st year three In semester assessments and one Innovative exam were planed per semester during AY 2020-21 as part of 60:40 scheme).

In-Semester Assessment marks are consolidated by considering the average of two In-Semester Examination and Innovative Examination for maximum 40 marks. End Semester Exam performance is measured on the basis of students' performance with a maximum of 60 marks.

The evaluation of the term work is done and it needs to be granted by the subject teacher and the granted list is to be approved by the authority. The term work is assessed on regular basis and the records are maintained with the concerned laboratories .In theexaminations 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 andprogramme outcome, 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 PO to meet requirements of 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:

1. Help desk to facilitate students during examinations.
2. Separate examination control rooms for effective distribution , collecton and monitoring of exam process.
3. Centralized assessment center for internal assessment
4. Dedicated staff and room for monitoring the entire assessment process
5. Assessment record is generated on daily basis to comply with the number of days required to publish the results within stipulated period .
6. Conduct of open house after provisional result declaration, amendment of marks after open house and supplementary examinations conduction
7. During the Covid-19

pendemic ,blended online exam conduct was done through Google Classroom,online apps viz. zoom, Microsoft teams, Google meet etc. while maintaining quality & integrity.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

2.6 - Student Performance and Learning Outcomes

2.6.1 - Programme Outcomes and Course Outcomes for all Programmes offered by the institution are stated and displayed on the website and communicated to teachers and students

Programme Outcomes(POs) are published on various publicity platforms and prominent places in the Institute and Department viz. Department and Institute Notice boards,College website: <http://www.tcetmumbai.in/>, Admission Brochures and other Institute publications viz. Souvenirs, proceedings, college magazines, faculty diary, journals etc.,Programme Resource Book,Course Resource Books,Prominent Places in the department, Faculty Diary,Journal files etc.

Therefore, these mechanisms provide the means for dissemination of the POs amongst the stakeholders, mainly the faculty and the students and act as a guiding force for shaping the career of the student.

Course Objective and Course Outcomes are defined for every subject and are given in the syllabus. For every subject 6 modules are defined. The course outcomes are based on these 6 modules. Course Outcomes are communicated to the students during the first week of every semester (Semester Orientation Programme).

These Course outcomes are available on the college website as well.

Here the 1st link gives the general information of the department, 2nd link is for PEOs, 3rd link is for POs, 4th link is for PSOs

5th link is for the details of the course outcomes which are

included in the syllabus.

Link on the website for additional Information

COMP

https://www.tcetmumbai.in/deptCompEngineering_home.html

<https://www.tcetmumbai.in/CMPN%20PEO.html>

<https://www.tcetmumbai.in/CMPN%20PO.html>

<https://www.tcetmumbai.in/CMPN%20PSO.html>

<https://www.tcetmumbai.in/CMPN%20syllabus.html>

IT

https://www.tcetmumbai.in/deptInformationTechnology_home.html

<https://www.tcetmumbai.in/IT%20PEO.html>

<https://www.tcetmumbai.in/IT%20PO.html>

<https://www.tcetmumbai.in/IT%20PSO.html>

<https://www.tcetmumbai.in/IT%20syllabus.html>

EnTC

https://www.tcetmumbai.in/deptEXTC_home.html

<https://www.tcetmumbai.in/EXTC%20PEO.html>

<https://www.tcetmumbai.in/EXTC%20PO.html>

<https://www.tcetmumbai.in/EXTC%20PSO.html>

<https://www.tcetmumbai.in/EXTC%20Syllabus.html>

ELEX

https://www.tcetmumbai.in/deptElectronicEngg_home.html

<https://www.tcetmumbai.in/ETRX%20PEO.html>

<https://www.tcetmumbai.in/ETRX%20PO.html>

<https://www.tcetmumbai.in/ETRX%20PSO.html>

<https://www.tcetmumbai.in/ETRX%20Syllabus.html>

MECH

https://www.tcetmumbai.in/deptmechanical_home.html

<https://www.tcetmumbai.in/MECH%20PEO.html>

<https://www.tcetmumbai.in/MECH%20PO.html>

<https://www.tcetmumbai.in/MECH%20PSO.html>

<https://www.tcetmumbai.in/MECH%20syllabus.html>

CIVIL

https://www.tcetmumbai.in/deptcivilengg_home.html

<https://www.tcetmumbai.in/CIVIL%20PEO.html>

<https://www.tcetmumbai.in/CIVIL%20PO.html>

<https://www.tcetmumbai.in/CIVIL%20PSO.html>

<https://www.tcetmumbai.in/CIVIL%20syllabus.html>

ES&H

https://www.tcetmumbai.in/deptHumanitiesSci_home.html

<https://www.tcetmumbai.in/HNS%20PEO.html>

<https://www.tcetmumbai.in/HNS%20PSO.html>

<https://www.tcetmumbai.in/HNS%20GA.html>

[https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20\(COMP-CIVIL-ELEX\)%20Scheme%20Group-1.pdf](https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20(COMP-CIVIL-ELEX)%20Scheme%20Group-1.pdf)

[https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20\(IT-E&TC-MECH\)%20Scheme%20Group-2\).pdf](https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20(IT-E&TC-MECH)%20Scheme%20Group-2).pdf)

[https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20\(CIVIL-ELEX-COMP\)%20Sem%20I%20&%20II%20Group-1.pdf](https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20(CIVIL-ELEX-COMP)%20Sem%20I%20&%20II%20Group-1.pdf)

[https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20\(IT-E&TC-MECH\)%20Sem%20I%20&%20II%20Group-2%20.pdf](https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20(IT-E&TC-MECH)%20Sem%20I%20&%20II%20Group-2%20.pdf)

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	No File Uploaded
Upload any additional information	No File Uploaded
Link for additional Information	https://www.tcetmumbai.in/deptCompEngineering_home.html

2.6.2 - Attainment of Programme Outcomes and Course Outcomes as evaluated by the institution

At the initial stage of Outcome-Based Education (OBE), the Course Outcomes (CO's) for each course are defined based on the Programme Outcome (PO's) and other requirements. At the end of each course, the COs needs to be assessed and evaluated, to check attainment. Assessment is carried out by the department to evaluate the achievement of programme Outcomes and programme specific outcomes. Attainment is the action or fact of achieving a standard result towards accomplishment of desired goals. Primarily attainment is the standard of academic attainment as observed by continuous evaluation through internal assessment test, assignments and or examination result. Attainment of the COs can be measured directly and indirectly.

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 outcome, as per the institute guidelines within the framework of a Choice Based Credit Grading System for Holistic Development (CBCGS-H).

Direct attainment basically displays the student's knowledge and skills from their performance. It can be determined from the performance of the students in all the relevant assessment instruments like internal assessments, assignments, and final examination, providing strong evidence of student learning. Indirect methods like course surveys and exit surveys ask the stakeholders to reflect on student's learning. They assess opinions or thoughts about the graduate's knowledge or skills. Indirect measures can provide information about graduate's perception of their learning and how this learning is valued by different stakeholders

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

2.6.3 - Pass Percentage of students

2.6.3.1 - Total number of final year students who passed in the examinations conducted by Institution

799

File Description	Documents
Upload list of Programmes and number of students appear for and passed in the final year examinations	View File
Upload any additional information	No File Uploaded
Paste link for the annual report	Nil

2.7 - Student Satisfaction Survey

2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution

may design its own questionnaire). Results and details need to be provided as a weblink

https://www.tcetmumbai.in/All_Dept_feedback-inst.html

RESEARCH, INNOVATIONS AND EXTENSION

3.1 - Promotion of Research and Facilities

3.1.1 - The institution's research facilities are frequently updated and there is a well-defined policy for promotion of research which is uploaded on the institutional website and implemented

1.

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. The institute is recognized as a research centre by the University of Mumbai for Ph.D. (Technology) in Electronics & Telecommunication Engineering. TCET since its establishment, has a culture of nurturing research abilities at undergraduate and postgraduate level. In order to provide a strong platform to the researchers, academicians and scholars, TCET regularly organizes various national and international conferences, seminars, workshops and colloquium. 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. The institute has a remote centre of IIT Bombay for online research, android mobile application development and e-yantra laboratory. Under industry-institute-interaction the institute has Thakur-Accenture Innovation Centre for advanced computing and communication. The institute also has a centre of excellence with the set objectives and advantages for carrying out research which impacts the overall research culture in the institute.

•

Description: 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. The institute is recognized as a research centre by the University of Mumbai for Ph.D. (Technology) in Electronics & Telecommunication Engineering. TCET since its establishment, has a culture of nurturing research abilities at undergraduate and postgraduate level. In order to provide a strong platform to the researchers, academicians and scholars, TCET regularly organizes various national and international conferences, seminars, workshops and colloquium. 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. The institute has a remote centre of IIT Bombay for online research, android mobile application development and e-yantra laboratory. Under industry-institute-interaction the institute has Thakur-Accenture Innovation Centre for advanced computing and communication. The institute also has a centre of excellence with the set objectives and advantages for carrying out research which impacts the overall research culture in the institute.

2.

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 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.

3.

Understanding the need for encouraging engineering graduates towards pursuing research, the TCET Research & Development Cell was setup 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 institute provides all necessary infrastructural facilities and a conducive environment to promote research activity in the campus. Due to limited resources, the institute may not be able to fund all the research activities taken up by the faculty and students. Faculty are encouraged to apply for various funding agencies and pursue their research. However, the institute is ready to provide seed funding or partial funding based on the merit of proposals submitted by faculty or student. The faculty and students are encouraged to present their ideas / project proposals before the research committee for getting the sanction of seed funding in accordance with institute guidelines.

The faculty and students are given freedom to choose the research area of their choice and guidance is given to seek funding from various funding agencies and industries. The institute encourages the faculty by providing incentives for peer reviewed publications, writing books and filing patents. The institute takes care of patent filing process, which is governed by the Research policy of the institute.

The institute gives a free hand to report research results and findings. However, a thorough review is done for all research proposals seeking funding from various funding agencies by consulting the research committee under Dean(R&D), coordinator of respective department. This committee also monitors the impact of research and consultancy and ensures non-violation of research & consultancy ethics, professional ethics, privacy of the people, human rights, causing problems to health & safety of human beings and damage of the property.

Research Centers are established in various departments of the institute with necessary software and computing facilities for

carrying out research activities.

MECH

In order to provide a strong platform to the researchers, academicians and scholars, TCET regularly organizes various national and international conferences, seminars, workshops and colloquium. 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. Under industry-institute-interaction the institute has TATA Innovation Center for Design and development.

CIVIL

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. TCET since its establishment has a culture of nurturing research abilities at undergraduate and postgraduate level. Pursuing research leading to Ph. D. degree is both challenging and rewarding experience. Against this background, TCET has started Ph.D. (Technology) Research Centre of University of Mumbai (UOM) from the academic year 2014-15 which involves course work and other requirements as per university rules/guidelines.

In order to provide a strong platform to the researchers, academicians and scholars, TCET regularly organizes various national and international conferences, seminars, workshops and colloquium. 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. The institute has a remote center of IIT Bombay for online research, android mobile application development and e-yantra laboratory. Under industry-institute-interaction the institute has Thakur-Accenture Innovation Centre for advance computing and communication. The institute also has center of excellence with the set objectives and advantages for carrying out research which impacts the overall research culture in the institute.

The institute is recognized as research centre by university of Mumbai for Ph.D. (Technology) in Electronics & Telecommunication

Engineering.

TCET since its establishment, has a culture of nurturing research abilities at undergraduate and postgraduate level. Pursuing research leading to Ph. D. degree is both challenging and rewarding experience. Against this background, TCET has started Ph.D. (Technology) Research Centre of University of Mumbai (UOM) from the current academic year (A.Y.2014-15). It offers research program leading to the Ph.D. (Technology) Degree in Electronics & Telecommunication Engineering, Computer Engineering and Information Technology of UOM. Presently 10 seats are offered and it involves course work and other requirements as per university rules/guidelines.

In order to provide a strong platform to the researchers, academicians and scholars, TCET regularly organizes various national and international conferences, seminars, workshops and colloquium.

The institute has a remote centre of IIT Bombay for online research, android mobile application development and e-yantra laboratory. Under industry-institute-interaction the institute has Thakur-Accenture Innovation Centre for advance computing and communication. The institute also has centre of excellence with the set objectives and advantages for carrying out research which impacts the overall research culture in the institute.

File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	View File
Provide URL of policy document on promotion of research uploaded on the website	https://www.tcetmumbai.in/research_promotion.html
Any additional information	No File Uploaded

3.1.2 - The institution provides seed money to its teachers for research

3.1.2.1 - Seed money provided by the institution to its teachers for research during the year (INR in lakhs)

2982755

File Description	Documents
Minutes of the relevant bodies of the institution regarding seed money	View File
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	View File
List of teachers receiving grant and details of grant received	No File Uploaded
Any additional information	No File Uploaded

3.1.3 - Number of teachers who were awarded national / international fellowship(s) for advanced studies/research during the year

3

File Description	Documents
e-copies of the award letters of the teachers	View File
List of teachers and details of their international fellowship(s)	View File
Any additional information	No File Uploaded

3.2 - Resource Mobilization for Research

3.2.1 - Grants received from Government and Non-Governmental agencies for research projects, endowments, Chairs during the year (INR in Lakhs)

1595667

File Description	Documents
e-copies of the grant award letters for research projects sponsored by non-governmental agencies/organizations	View File
List of projects and grant details	View File
Any additional information	No File Uploaded

3.2.2 - Number of teachers having research projects during the year

7

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil
List of research projects during the year	View File

3.2.3 - Number of teachers recognised as research guides

9

File Description	Documents
Upload copies of the letter of the university recognizing teachers as research guides	View File
Institutional data in Prescribed format	View File

3.2.4 - Number of departments having research projects funded by Government and Non-Government agencies during the year

5

File Description	Documents
Supporting document from Funding Agencies	View File
Paste link to funding agencies' website	Nil
Any additional information	View File

3.3 - Innovation Ecosystem

3.3.1 - Institution has created an ecosystem for innovations and creation and transfer of knowledge supported by dedicated centres for research, entrepreneurship, community orientation, incubation, etc.

TCET's R&D cell is a platform where young minds come up with innovative ideas and the ecosystem of this cell has helped these ideas grow with fruitful outcomes. The R&D cell has a well-

equipped components library from which students can issue components required to test their ideas for one semester. TCET-IEDC is a unique platform where students are selected from different branches of engineering and encouraged to do interdisciplinary projects. Every year students are encouraged to take part in various Hackathons, Ideathons organized by the Central Government, AICTE, various MNCs and other industries. To promote first-generation entrepreneurs, TCET organizes various awareness programs, certification courses by reputed institutes, regular meetings with existing successful entrepreneurs etc. TCET's NSS student chapter has organized several activities like blood donation drive, cleanliness drive etc. through which its volunteers have developed constructive linkage between campus and community. TCET's Extension Work Team has organized activities that provide research-based information, teaching people new knowledge and skills, helping people to improve their income etc. TCET's Rotaract club has been started with the main objective of community service and professional development

TCET-R&D cell is dedicated to help advance existing knowledge and nurture new ideas by providing resources and facilities to create cutting edge products from which future research will emerge.

Main objectives of R&D cell are as follow:

- To incubate, projects in the institute and then promote and commercialize them to external stakeholders like industry and other institutions through yearly project exhibition and competition.
- To motivates and encourage faculty members and students for research and development activities in the area of specialized domains and takes multiple initiatives on Institute, Mumbai University, National, International level for holistic development.
- To assist faculty and students to apply for minimum one grant yearly in major domains from various government and non-government funding agencies.
- To conduct workshop in major domains and industrial visit for staff and students on emerging technologies.
- To have memorandum of understanding (MOU's) with industries for research service and product development and to provide solutions to industrial problems through consultancy.
- To register the work done by R&D cell under Intellectual Property Rights.

- Institutional Innovation Cell is established to interact with industry, government, professionals, experts from research laboratory etc. for research opportunities.
- TCET-EDC aims at developing the spirit of entrepreneurship among the students.
- NISP (National Innovation and Start-up Policy) Expert Committee is constituted at institute level which will regulate and review the startup and innovation policy time to time.

Institute is in the process of developing startup and innovation policy in accordance with NISP-2019 Policy as per AICTE guidelines.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://www.tcetmumbai.in/rnd_mvo.html

3.3.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year

Nil

File Description	Documents
Report of the events	View File
List of workshops/seminars conducted during the year	View File
Any additional information	No File Uploaded

3.4 - Research Publications and Awards

3.4.1 - The Institution ensures implementation of its Code of Ethics for Research uploaded in the website through the following: Research Advisory Committee Ethics Committee Inclusion of Research Ethics in the research methodology course work Plagiarism check through authenticated software

D. Any 1 of the above

File Description	Documents
Code of Ethics for Research, Research Advisory Committee and Ethics Committee constitution and list of members of these committees, software used for plagiarism check	View File
Any additional information	No File Uploaded

3.4.2 - Number of PhD candidates registered per teacher (as per the data given with regard to recognized PhD guides/ supervisors provided in Metric No. 3.2.3) during the year

3.4.2.1 - Number of PhD students registered during the year

12

File Description	Documents
URL to the research page on HEI website	https://www.tcetmumbai.in/about_rndcell.html
List of PhD scholars and details like name of the guide, title of thesis, and year of registration	View File
Any additional information	No File Uploaded

3.4.3 - Number of research papers per teacher in CARE Journals notified on UGC website during the year

12

File Description	Documents
List of research papers by title, author, department, and year of publication	View File
Any additional information	No File Uploaded

3.4.4 - Number of books and chapters in edited volumes / books published per teacher during the year

17

File Description	Documents
Upload any additional information	View File
Paste link for additional information	Nil

3.4.5 - Bibliometrics of the publications during the year based on average Citation Index in Scopus/ Web of Science/PubMed

3.4.5.1 - Total number of Citations in Scopus during the year

47

File Description	Documents
Any additional information	No File Uploaded
Bibliometrics of the publications during the year	View File

3.4.6 - Bibliometrics of the publications during the year based on Scopus/ Web of Science – h-Index of the University

3.4.6.1 - h-index of Scopus during the year

63

File Description	Documents
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	View File
Any additional information	No File Uploaded

3.5 - Consultancy

3.5.1 - Revenue generated from consultancy and corporate training during the year (INR in lakhs)

1055000

File Description	Documents
Audited statements of accounts indicating the revenue generated through consultancy and corporate training	View File
List of consultants and revenue generated by them	No File Uploaded
Any additional information	No File Uploaded

3.5.2 - Total amount spent on developing facilities, training teachers and clerical/project staff for undertaking consultancy during the year

145486

File Description	Documents
Audited statements of accounts indicating the expenditure incurred on developing facilities and training teachers and staff for undertaking consultancy	View File
List of training programmes, teachers and staff trained for undertaking consultancy	No File Uploaded
List of facilities and staff available for undertaking consultancy	No File Uploaded
Any additional information	No File Uploaded

3.6 - Extension Activities

3.6.1 - Extension activities carried out in the neighbourhood sensitising students to social issues for their holistic development, and the impact thereof during the year

In TCET, NSS has always stood up to its strong spirit of serving people keeping in mind the policy of "Not Me, But You". The belief that we must live for others, is being realized through the selfless service of the NSS volunteers who get into timely action for the upliftment of the needy people of their respective localities. NSS unit of TCET has always given the volunteers, a platform to serve the society and bring happiness and smiles on many faces, which has sown the seeds of social commitment in many students who are otherwise kept aloof from the real challenges and torments faced by the masses in the

society as a whole. A team of 150 committed NSS Volunteers and Programme Officers of TCET under the NSS Technical cell of Directorate of Technical Education, Mumbai have proven to be an enough cause and reason for instilling a significant change in the society. The service rendered by NSS are varied in nature: Education, Environment, Health and Society. Regular Activities and Special Camping Programmes are the highlights of NSS activities of the college. The objective of NSS is to enhance physical wellbeing, spread awareness regarding the importance of proper health, safety measures and stress on physical and mental health, etc. With these objectives many activities have been conducted.

The college students are enrolled for extension work projects and perform various activities for the social awareness based on various issues / problems in the society such as Save Girl Child, Pollution, Aids, Global Warming, Environment, Tree Plantation, Importance of Education, Illiteracy, Child Labour, Dowry Deaths, Malnutrition, Watershed Management and so many. Extension works is good activity due to these students have showcased their inner abilities to participate in making of posters, Slogans and street Play, etc. EWT activities also teaches students to serve the society for bringing change in it.

Description: TCET's Extension Work Team (EWT) specifically works for the underprivileged sections of the society. It extends educational programs that enhance and improve the quality of life in tune with today's socio-economic changes. It plans and executes activities that encourage people to improve their conditions in all dimensions of their lives. CET's Extension Work Team has organized activities that provide research-based information, teaching people new knowledge and skills, helping people to improve their income etc. TCET's Rotaract club has been started with the main objective of community service and professional development as well as to encourage the members to enhance communication skills and promote personality development through teaching learning process.

The Scheme of Lifelong Learning and Extension is monitored through separate Guidelines of UGC from its subsequent five year plans and funds allocations. In the XI five year plan period (2007-2012), as per the guidelines the existing Departments of all the 80 Universities in India, including eight universities in Maharashtra State is renamed as "Lifelong Learning & Extension". T.C.E.T is one of the colleges that is affiliated to Mumbai University.

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

The development of people is the ultimate goal of Extension education and Field Outreach activities. Providing research-based information, teaching people new knowledge and skills, helping them to improve production or increase income. The methods of Extension education and Field Outreach activities arise from proven principles, and the most effective Extension Educators and Field Outreach activists know and use a variety of teaching methods.

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

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

3.6.2 - Number of awards and recognition received by the Institution, its teachers and students for extension activities from Government / Government-recognised bodies during the year

3

File Description	Documents
Number of awards for extension activities in during the year	View File
e-copy of the award letters	View File
Any additional information	No File Uploaded

3.6.3 - Number of extension and outreach programmes conducted by the institution through NSS/NCC/Red Cross/YRC, etc. during the year (including Government-initiated programmes such as Swachh Bharat, AIDS Awareness, and Gender Sensitization and those organised in collaboration with industry, community and NGOs)

78

File Description	Documents
Reports of the events organized	View File
Any additional information	No File Uploaded

3.6.4 - Number of students participating in extension activities listed in 3.6.3 during the year

295

File Description	Documents
Reports of the events	View File
Any additional information	No File Uploaded

3.7 - Collaboration

3.7.1 - Number of collaborative activities during the year for research/ faculty exchange/ student exchange/ internship/ on-the-job training/ project work

9

File Description	Documents
Copies of documents highlighting collaboration	View File
Any additional information	View File

3.7.2 - Number of functional MoUs with institutions of national and/or international importance, other universities, industries, corporate houses, etc. during the year (only functional MoUs with ongoing activities to be considered)

11

File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	View File
Details of functional MoUs with institutions of national, international importance, other institutions etc. during the year	View File
Any additional information	No File Uploaded

INFRASTRUCTURE AND LEARNING RESOURCES

4.1 - Physical Facilities

4.1.1 - The Institution has adequate infrastructure and physical facilities for teaching-learning, viz., classrooms, laboratories, computing equipments, etc.

The college has a state-of-the-art infrastructure and the world class educational facilities for engineering education. The outstanding infrastructure created conducive environment and the right academic ambience, key infrastructure includes

- Classrooms :54
- Tutorial rooms:08
- Laboratories/additional workshop:70
- Computer center:02 Language Laboraoty:01
- Central Library:01
- Departmental library:07 Gymkhana:01
- Seminar Hall:06
- Auditorium:01
- Cafeteria:01
- Canteen:01
- Workshop:01
- Drawing Hall:02

Air conditioned Classrooms /Seminar halls are well designed and well equipped with single seater benches. Each classroom has the seating capacity up to 80. Institute has four seminar rooms well equipped with audio-visual, smart boards, internet, Wi-fi connections .

Laboratories are well equipped with branded equipments, kits, computing facilities, computer based laboratories, internet facilities, Latest Software etc

Virtual lab conduction using different online platform.
(i.e IIT's platforms and Amrita Lab).

Online ICT facilities were added for smooth conduction of
lectures / practicals.

Institute has an excellent infrastructure consisting of Local
Area Network on which 1200 computers are connected to INTERNET
with the BW of 1.1Gbps

ERP with LMS is also deployed for campus management

File Description	Documents
Upload any additional information	View File
Paste link for additional information	Nil

4.1.2 - The institution has adequate facilities for cultural activities, yoga, sports and games (indoor and outdoor) including gymnasium, yoga centre, auditorium etc.)

For recreation during break / vacation, various facilities for indoor sports have been developed in the boys and girl's room, Some of the facilities include: table tennis, carom, chess etc. Multipurpose halls are created to organize viz. Yoga, meditation, motivational lectures, group activities etc.

Adjacent to the college there is a large playground of 3.5 acres suitable for all kinds of sport activities. Sports facilities available in the ground includes: Volleyball, badminton, throw-ball, foot-ball, cricket, kabaddi and many more outdoor events. Thakur Cricket stadium is also use to promote cricket. College is planning to install Military Training structure to train students who are aspiring to join defense services.

File Description	Documents
Geotagged pictures	View File
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

4.1.3 - Number of classrooms and seminar halls with ICT-enabled facilities

50

File Description	Documents
Upload any additional information	No File Uploaded
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	View File

4.1.4 - Expenditure for infrastructure augmentation, excluding salary, during the year (INR in Lakhs)

2229

File Description	Documents
Upload audited utilization statements	No File Uploaded
Details of Expenditure, excluding salary, during the years	View File
Any additional information	No File Uploaded

4.2 - Library as a Learning Resource

4.2.1 - Library is automated using Integrated Library Management System (ILMS)

- Name of the ILMS software—Koha Software ,
- Nature of automation (full or partial)--Partial
- Version—18.11
- Year of automation—2005

Library is an essential part of any educational institution. TCET has very well equipped and rich in books library. It facilitates access of books online and off-line. It has a circular section, two reading section and a digital reading section. The library has a sufficient number of books, e-books, and e-journals. Students and staff can access books using Knimbus software inside and outside campus.

Learning Resource center (Central Library) has built up area of 840 Sq.m. LRC is highly modular. The library is running for 12 hrs on office working days

•

Text Books:31,270

Reference Books: more than 2712

Book bank facility for students with more than 2630 books

Magazines- More than 82

Added42 new books in the AY2021-22

Department library with average 500 books and 500 project reports

8 E journals Data bases

IEEE-All Society periodicals Package-169 Journals

McGraw Hill-Access Engg/Library-800 e-books

ASME-Mechanical Engineering 27 Journals

Elsevier-Science Direct-275 Journals

ASCE-Civil Engg-35 Journal new

Springer Electrical,Electronics & CMPN-149 Journals

Journal abstract 15743 & Full Text journal 19518

Knimbus Digital Library(E-books 10000)Remotely content access+mobile app

Library Management : 24 PCs and 157 Mbps Internet

Xrox section: Photocopy/Scan/Print facility

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

4.2.2 - Institution has access to the

A. Any 4 or more of the above

**following: e-journals e-ShodhSindhu
Shodhganga Membership e-books
Databases Remote access to e-resources**

File Description	Documents
Details of subscriptions like e-journals, e-books, e-ShodhSindhu, Shodhganga membership	View File
Upload any additional information	No File Uploaded

4.2.3 - Expenditure on purchase of books/ e-books and subscription to journals/e-journals during the year (INR in lakhs)

28

File Description	Documents
Audited statements of accounts	No File Uploaded
Any additional information	No File Uploaded
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the year (Data Template)	View File

4.2.4 - Usage of library by teachers and students (footfalls and login data for online access)

4.2.4.1 - Number of teachers and students using the library per day during the year

14.8

File Description	Documents
Upload details of library usage by teachers and students	View File
Any additional information	No File Uploaded

4.3 - IT Infrastructure

4.3.1 - Institution has an IT policy covering Wi-Fi, cyber security, etc. and has allocated budget for updating its IT facilities

Open access Wi-Fi for students Airtel

D-Link Router at all staff room and Offices

FortiGate firewall

324 CCTV, 2.8MP equivision HD camera with one month data back up

SSL Certificate for Institute website

Institute has an excellent infrastructure consisting of Local Area Network (LAN) on which on which 1200 computers are connected to internet with the BW of 1.1 Gbps ERP with LMS is also deployed for campus management network infrastructure highlights include :-

High spe4ed servers with 1200 DELL/ HP/ Desktops, Workstation as a windows Linus clients

Microsoft campus agreement licences and high end applications / utility software. Robust campus network configured with Gigabit Sysco backbone switches and optical fibre windows/ Linux server with high speed wifi connectivity

High speed leased line connectivity having 1.1 Gbps bandwidth with integrated RP systems are dedicated 4 Mbps leased line internet connectivity for IIT Bombay Remote centre for Faculty and student development and research programs

Highly secured Network with Forinet 400 E firewall Symantec antivirus for security through campus agreement

High speed leased line connectivity in all class room and laboratories connected with internet projection facility

Campus surveillance system with 200 high end camera and DVRs with One month backup storage having facility to provide footage to stakeholder on request it has dedicated control room fitted with 4 TV Displays for monitoring of footage

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

4.3.2 - Student - Computer ratio

Number of Students	Number of Computers
3337	1197

File Description	Documents
Upload any additional information	No File Uploaded

4.3.3 - Bandwidth of internet connection in the Institution and the number of students on campus A. 750 Mbps

File Description	Documents
Details of bandwidth available in the Institution	View File
Upload any additional information	No File Uploaded

4.3.4 - Institution has facilities for e-content development: B. Any three of the above
Facilities available for e-content development
Media Centre Audio-Visual Centre Lecture Capturing System (LCS) Mixing equipments and software for editing

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil
List of facilities for e-content development (Data Template)	View File

4.4 - Maintenance of Campus Infrastructure

4.4.1 - Expenditure incurred on maintenance of physical and academic support facilities, excluding salary component, during the year (INR in lakhs)

53

File Description	Documents
Audited statements of accounts	View File
Upload any additional information	No File Uploaded

4.4.2 - There are established systems and procedures for maintaining and utilizing physical, academic and support facilities – classrooms, laboratory, library, sports complex, computers, etc.

Maintenance of resources

a) Equipment and machine maintenance

Some of the critical maintenance work are outsourced as per the outsourcing process defined

in ISO manual. However regular monitoring and control is the responsibility of maintenance

section. During the maintenance if anything is required to be purchased shall be raised through

requisition slip.

i. Records of equipment's are maintained in stock registers as specified in Purchase Process

TCET/IP/05

ii. Equipment's / appliances are serviced periodically or as and when required

iii. Equipment's like measuring devices are checked / calibrated during servicing

iv. Servicing is done either by in-house personnel or by external party or through annual

maintenance contract (AMC)

v. Record of servicing is maintained.

vi. Records of AMC are maintained in AMC Register.

vii. Budget of AMC need to be submitted by December 31st of the

ongoing academic year by

Department / Section.

viii. Equipment's that are not in working condition and are not repairable are removed from the

stock.

ix. Machines in Machine Shops are maintained and calibrated by the vendor supplying the

machine.

b) General maintenance:

i. Maintenance of A.C. plant is outsourced on AMC and Auditorium, cleaning and

maintenance is done by internal staff member and one person from outside.

ii. Cleanliness & daily maintenance of the interior facility (classrooms, laboratories, hallway,

and staircase) is done by Class IV employees of the Institute under the supervision of the

Admin Office and surprise check is done by Executive Compliance Officer.

iii. Cleanliness of toilet blocks and wash room have been outsourced since AY 2013-14.

iv. Fire extinguisher is outsourced since refilling of the cylinder is done once in a year.

v. Maintenance of CCTV is outsourced and is maintained in coordination through technical

person of computer center

vi. ICT infrastructure is maintained by computer centre personnel.

vii. Cleaning work is done by floor peon. Other maintenance

related issues are attended by

carpenter and electrician of the institute subject to the complaint put in complaint register.

viii. Water tank cleaning is done quarterly and the AMC is outsourced

Self-Study Report - NAAC ZCT's Thakur College of Engineering and Technology - Mumbai

138 Criterion - 4: Infrastructure and Learning Resources

ix. Carpentry, plumbing and clerical maintenance is done by the in-house carpenter, plumber

and electrician respectively.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

STUDENT SUPPORT AND PROGRESSION

5.1 - Student Support

5.1.1 - Number of students benefitted by scholarships and freeships provided by the Government during the year

1108

File Description	Documents
Upload self-attested letters with the list of students receiving scholarships	View File
Upload any additional information	View File

5.1.2 - Number of students benefitted by scholarships and freeships provided by the institution and non-government agencies during the year

10

File Description	Documents
Upload any additional information	View File
Institutional data in prescribed format	View File

5.1.3 - The following Capacity Development and Skill Enhancement activities are organised for improving students' capabilities Soft Skills Language and Communication Skills Life Skills (Yoga, Physical fitness, Health and Hygiene) Awareness of Trends in Technology **A. All of the above**

File Description	Documents
Link to Institutional website	Nil
Details of capability development and schemes	View File
Any additional information	View File

5.1.4 - Number of students benefitted from guidance/coaching for competitive examinations and career counselling offered by the institution during the year

539

File Description	Documents
Any additional information	View File
Number of students benefitted by guidance for competitive examinations and career counseling during the year (Data Template)	View File

5.1.5 - The institution adopts the following mechanism for redressal of students' grievances, including sexual harassment and ragging: Implementation of guidelines of statutory/regulatory bodies Creating awareness and implementation of policies with zero tolerance Mechanism for submission of online/offline students' grievances Timely redressal of grievances **A. All of the above**

through appropriate committees

File Description	Documents
Minutes of the meetings of students' grievance redressal committee, prevention of sexual harassment committee and Anti-ragging committee	No File Uploaded
Details of student grievances including sexual harassment and ragging cases	No File Uploaded
Upload any additional information	No File Uploaded

5.2 - Student Progression

5.2.1 - Number of outgoing students who got placement during the year

421

File Description	Documents
Self-attested list of students placed	View File
Upload any additional information	View File

5.2.2 - Number of outgoing students progressing to higher education

272

File Description	Documents
Upload supporting data for students/alumni	View File
Details of students who went for higher education	View File
Any additional information	No File Uploaded

5.2.3 - Number of students qualifying in state/ national/ international level examinations during the year

5.2.3.1 - Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/ TOEFL/Civil Services/State government examinations) during the year

130

File Description	Documents
Upload supporting data for students/alumni	View File
Any additional information	View File

5.3 - Student Participation and Activities

5.3.1 - Number of awards/medals for outstanding performance in sports and/or cultural activities at inter-university / state /national / international events (award for a team event should be counted as one) during the year

7

File Description	Documents
e-copies of award letters and certificates	View File
Any additional information	View File

5.3.2 - Presence of an active Student Council and representation of students in academic and administrative bodies/committees of the institution

BE Farewell was conducted on 8th August 2021 in online mode through Zoom platform.

There were 117 participants in BE Farewell function. The program started with the formal introduction of the teachers and students as well as student representatives from the college. Followed by the introduction were live performances by the current students of the college. Next, online games were conducted for the BE students followed by the distribution of awards for the same.

The following staff members were involved in the organisation of the event:

1. Mrs. Poorva Waingankar (ELEX Dept)
2. Dr. Manish Rana (COMP Dept)
3. Mr. Vikas Singh (COMP Dept)
4. Mr. Vaibhav Gijare (ELEX Dept)

Following student representatives were involved in the execution of the event:

1. Dheeraj Jain

1. Janhavi Shetty
2. Jayesh Dave
3. Namit Singh
4. Soniya Kadam
5. Khushi Dubey

Teacher's Day celebration was conducted on 7th September 2021 through online Zoom platform.

The event began with the formal introduction of the dignitaries. Followed by the introduction, drama was performed on the online platform. Housie game was conducted online for the teachers. Music performances were done as the last event of the celebration. Total number of teachers attending were 73 and 50 students attended the function.

Following faculty members were involved in the organisation of the function:

- 1) Mrs. Poorva Waingankar (ELEX Dept)
- 2) Dr. Manish Rana (COMP Dept)
- 3) Mr. Vikas Singh (COMP Dept)
- 4) Mr. Vaibhav Gijare (ELEX Dept)

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

5.3.3 - Number of sports and cultural events / competitions organised by the institution

File Description	Documents
Report of the event	No File Uploaded
List of sports and cultural events / competitions organised per year	View File
Upload any additional information	No File Uploaded

5.4 - Alumni Engagement

5.4.1 - The Alumni Association and its Chapters (registered and functional) contribute significantly to the development of the institution through financial and other support services

Yes, the institute has its Alumni Association registered in September 2017. Alumni meets are conducted from 2011 which are supported by the institute. Also, from 2018, the association has started with Alumni Award for Alumni with outstanding contribution in his/her field.

Alumni of the institute also contribute towards development of the institute.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

5.4.2 - Alumni's financial contribution during the year **C. 5 Lakhs - 10 Lakhs**

File Description	Documents
Upload any additional information	No File Uploaded

GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 - Institutional Vision and Leadership

6.1.1 - The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the Institution

The governance body of TCET keeps the prime focus is on the vision and mission of the institute, which is as stated below:

VISION

Thakur College of Engineering and Technology will excel in Technical Education to become an internationally renowned premier Institute of Engineering and Technology.

MISSION

To provide state-of-the-art infrastructure and right academic ambience for developing professional skills as well as an environment for growth of leadership and managerial skills to students which will make them competent engineers to deliver quality results in industry.

The following strategic characteristics and aspirations enable the College to realize its vision:

- Modern and precise educational experiences that develop the engineers.
- An atmosphere that facilitates personal commitment to the educational success of students in an environment that values multiplicity and society
- Education and research partnerships with Universities, colleges and industries.
- Highly successful alumni who contribute to the profession in the global society
- Undergraduate, post graduate and PhD programs that integrate global awareness, communication skills and team building across the curriculum
- Practical and responsible resource management.
- Training that prepares students for interdisciplinary engineering research and advanced problem solving

- Leadership and service to meet society needs.

Formulation of action plans and defining the policy objectives attempts to address the issues of systematic change to provide quality education. Creating robust principles, frameworks, systems and processes the institution intends to reinforce the culture of excellence.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

6.1.2 - Effective leadership is reflected in various institutional practices such as decentralization and participative management

The institution practises decentralization and participatory management in keeping with its belief in collective leadership and democratic traditions. A particular reflection of this practice may be seen in the extensive delegation of authority to the Heads of the various Departments in the college.

The Ways in which Heads of Departments participate in the Management Process:

- The Head of the Department oversees the Teaching Plans of his/her departmental members.
- He/she is empowered to make adjustments in the routine, and to allot teaching assignments and evaluation duties.
- He/she enjoys the privilege of convening departmental meetings where the programmes for the entire term are decided.
- He/she often takes the lead in planning seminars, workshops, career counselling sessions, remedial measures, inter- departmental or/and inter-college exercises, departmental excursions and study tours.
- He/she is at liberty to introduce creative and innovative measures for the benefit of his/her students.

- Heads of Departments plan, prepare and publish the departmental magazine or working paper in consultation with his/her departmental colleagues.
- He/she organizes and conducts the Parent-Teacher meetings in which the academic progress of the students is communicated to their guardians.
- He/she, in consultation with his/her department oversees the paper-setting, moderation, evaluation, and marks submission of all internal examinations of the department.
- He/she decides on the nature, pattern and duration of special and remedial classes for the students of his/her department.
- The Head, in consultation with his/her departmental teachers enjoys total flexibility in planning and organizing seminars for students.
- Through their adept handling of their departments Heads discharge their function as nodal agents of the academic and administrative processes in the college thereby contributing to the health and vibrancy of the management mechanisms in the college.

The above enumeration of features comprising participatory management points fairly conclusively to the ethics of decentralization which is integral to the institution and informs its functioning at every level.

File Description	Documents
Upload strategic plan and deployment documents on the website	View File
Upload any additional information	View File
Paste link for additional Information	Nil

6.2 - Strategy Development and Deployment

6.2.1 - The institutional Strategic/ Perspective plan has been clearly articulated and implemented

- Curriculum Development
- Teaching and Learning
- Examination and Evaluation
- Research and Development
- Library, ICT and Physical Infrastructure / Instrumentation
- Human Resource Management
- Industry Interaction / Collaboration
- Admission of Students
- 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. The concepts of Design-based experiments and mini projects for most of the courses have been introduced at the Institute level. Students are encouraged to take online courses such as NPTEL, Coursera, etc. for which the institute's 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 the University level.
- Teaching and Learning
- Faculty members plan the academic conduct as per the syllabus, detailing and developing resource book and course file, designing practice sessions, assignments, and experiments, IAT paper, and effective conduct of the academics.
- All lectures and practical classes are to be conducted as

per the plan and are reviewed time to time to improve the efficiency and effectiveness of teaching learning during the semester. The latest available teaching methods and various modes of learning are also adopted by the faculty members during the pandemic. Various digital platforms viz. Zoom, Google Classroom, Flipped Classroom concept, etc. were used for content delivery, and the recordings of lectures provided to the students.

- The TLP is monitored at 3 levels: Faculty, HOD and leadership mentors.
- Examination and Evaluation (Online Evaluation in Even Semester)

The Examination Committee is formed to ensure smooth conduct of the examinations. 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, the University conducts the semester-end examination as well as the A.T.K.T. students. Examinations are mainly for Term Work, Practical, Oral, Project viva-voce, and Theory.

Institute communicates the results on the internet through Institute website. After announcement of the results, students can request for revaluation of the semester-end theory examination answer scripts within a stipulated period. After revaluation, records are updated with changes if any and the student is issued a revised memorandum of marks.

Due to the COVID-19 pandemic, the examinations for all students were conducted in online mode (as per UGC guidelines) and results were declared on time. Online ESE examination for FE to BE was conducted and results were declared within the timeframe without impacting on the academic year of the students.

- Research and Development

Areas of domain specific research in various programmes 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. 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 additional staff for circulation of books during peak period.
- Providing additional reading rooms during examinations.
- Motivating students to utilize library services via orientation programmes.
- Availability of library services also on non-working Saturdays during examination
- Remote access facility made available through mobile app Nimbus.
- 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 of TCET. The Governing Body

comprises of: i) two members of the Management (Correspondent and Secretary), ii) one nominee of State Government, iii) one nominee of University of Mumbai, iv) one nominee of the UGC, v) Principal of TCET, vi) Director, Trustee, vii) two external members (as educationists), and viii) two senior professors of TCET.

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 sent for various types of training programme and workshops for enhancing their competence. Works are distributed as per qualifications and experience of the staff member.

- Industry Interaction / Collaboration (International Evaluator for Project Examination from Industry and Academia)

Training & Placement (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 also an in-house internship facility created for the students. Owing to COVID-19 pandemic, the internship programme is conducted in online mode. Also, experts from industry and academia were invited for project evaluation. T&P Cell organized a four weeks webinar series in which national-level as well as international-level experts from industry/ academia 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
- Maximizing publicity and brand building of the institute through various awards and recognitions.

- Extending courtesy to interested candidates seeking information related to admission.
- Prompt enquiry handling through adequate number of admission counters and helpdesks.
- Spreading awareness through outreach programmes to attract potential students.
- Publication of Informative Brochure and one page handout of brochure
- Website regularly updated with latest information related to admission.
- Timely compliance is met of various norms issued by statutory and regulatory bodies.

File Description	Documents
Strategic Plan and deployment documents on the website	View File
Paste link for additional information	Nil
Upload any additional information	View File

6.2.2 - The functioning of the various institutional bodies is effective and efficient as visible from the policies, administrative set-up, appointment and service rules, procedures, etc.

- TCET's organizational and governance structure comprises of three levels: strategic, operational, and advisory. At the strategic level, there is the Trust consisting of the CEO Board of Trustees & Trustee In-charge. 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 senior leadership team. At the advisory level are the Governing Council, and an Advisory Committee formed as per the AICTE/ UOM/ DTE guidelines. These two committees review the Institute's

performance and recommend additional programs, changes required in the institutional functioning (academic and research environment,) student and faculty development (personal, professional and social), outreach and advocacy programmes to sustain institutional growth, students and staff welfare 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 organogram shows functioning of various levels.

File Description	Documents
Paste link to Organogram on the institution webpage	https://thakureducation-my.sharepoint.com/:b:/g/personal/tcet iqac thakureducation org/Ebq_03Hxls5PkkH2z3HNU8wBZ-YWlOYhdAMsC-7_oP3_pQ?e=GiR5rh
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

6.2.3 - Implementation of e-governance in areas of operation: Administration Finance and Accounts Student Admission and Support Examination A. All of the above

File Description	Documents
ERP (Enterprise Resource Planning) Documen	View File
Screen shots of user interfaces	View File
Details of implementation of e-governance in areas of operation	View File
Any additional information	View File

6.3 - Faculty Empowerment Strategies

6.3.1 - The institution has effective welfare measures for teaching and non-teaching staff and avenues for their career development/ progression

For welfare of Faculty and staff, TCET has Mediclaim policy, Credit Society, through which personal loans can be taken by staff /Faculty. Every three years medical camps are organised.

For career progression, Faculty Development Programs (FDP) conducted at TCET are either Self-Financed, sponsored by approving authorities like AICTE, / ISTE or Training Programs offered by IIT's conducted at TCET (Remote Center). FDP's have proven to be beneficial to the Faculty members as well as the students. During these FDP's there is a high level of exchange of ideas. During the Pandemic, Online FDP was conducted based on the theme of "Creating Digital Content for Effective Online Academic Delivery" in which many Online Tools were discussed & have been used by the faculty members during the Semester to conduct lectures, evaluate & improve the interaction among the students. They have also developed structured and guided learning resource (E-content) for conduction of lectures (PPTs, Videos, Quizzes and design of experiments using Virtual Lab). Also faculty members are encouraged to pursue higher studies while in job.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

6.3.2 - Number of teachers provided with financial support to attend conferences / workshops and towards payment of membership fee of professional bodies during the year

14

File Description	Documents
Upload any additional information	No File Uploaded
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	View File

6.3.3 - Number of professional development / administrative training programmes organized by the Institution for its teaching and non-teaching staff during the year

19

File Description	Documents
Reports of the Human Resource Development Centres (UGC HRDC/ASC or other relevant centres)	View File
Upload any additional information	No File Uploaded

6.3.4 - Number of teachers who have undergone online/ face-to-face Faculty Development Programmes during the year: (Professional Development Programmes, Orientation / Induction Programmes, Refresher Courses, Short-Term Course, etc.)

143

File Description	Documents
Summary of the IQAC report	View File
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	No File Uploaded
Upload any additional information	No File Uploaded

6.4 - Financial Management and Resource Mobilization

6.4.1 - Institution conducts internal and external financial audits regularly

The institute conducts Internal Financial Audits regularly. The Institute also deems it necessary to conduct external financial

audits. External Statutory Auditors are appointed for the purpose.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

6.4.2 - Funds / Grants received from non-government bodies, individuals, and philanthropists during the year (not covered in Criterion III and V) (INR in lakhs)

721475

File Description	Documents
Annual statements of accounts	No File Uploaded
Details of funds / grants received from non-government bodies, individuals, philanthropists during the year	View File
Any additional information	No File Uploaded

6.4.3 - Institutional strategies for mobilisation of funds and the optimal utilisation of resources

The institute has a well structured fund management system. The strategies include, Determining the budget for the conduct of the academic year before the start of the academic year, To detect and rectify any misstatements as early as possible and to increase transparency and to query handling promptly. The main sources of finance comes from Trust Funds and Fees collection. The Budget is prepared and approved. Further the budget is allocated to all departments for resource utilization. The resources are classified as Finance resources, Human resources and infrastructure resources. It is optimally utilization in coherence with the current needs and requirements. Resources are utilized interdepartment also.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing quality assurance strategies and processes visible in terms of incremental improvements made during the preceding year with regard to quality (in case of the First Cycle): Incremental improvements made during the preceding year with regard to quality and post-accreditation quality initiatives (Second and subsequent cycles)

1. Successfully implemented Autonomy for all years (graded autonomy).
2. More focus on Skill development of students via Holistic Student Development scheme by incorporating Activity Based Learning (ABL)/Project Based Learning(PBL) in curriculum.
3. Intensify Industry Institute Interaction through various programmes.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

6.5.2 - The institution reviews its teaching-learning process, structures and methodologies of operation and learning outcomes at periodic intervals through its IQAC as per norms

Monthly quality assurance report is submitted to the Principal's office that highlights department performance in various academic pointers ,which is then consolidated at institute level across all departments. Semester preparedness check is done at the start of the semester to ascertain whether the teaching-learning process is in place or not. Quarterly IQAC meetings are conducted in which few of the industry representatives are also a part of committee, whose suggestions are taken into consideration while improving the structure, methodology of the existing institute operations.

Best practices, semester planning etc are taken from all departments and compliance is checked at every quarter. The suggestions given by external committee members are forwarded to departments.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

6.5.3 - Quality assurance initiatives of the institution include Regular meeting of the IQAC Feedback collected, analysed and used for improvement of the institution Collaborative quality initiatives with other institution(s) Participation in NIRF Any other quality audit recognized by state, national or international agencies (such as ISO Certification)

A. Any 4 or all of the above

File Description	Documents
Paste the web link of annual reports of the Institution	Nil
Upload e-copies of accreditations and certification	View File
Upload details of quality assurance initiatives of the institution	View File
Upload any additional information	No File Uploaded

INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 - Institutional Values and Social Responsibilities

7.1.1 - Measures initiated by the Institution for the promotion of gender equity during the year

We, at Thakur College of Engineering and Technology, strive to make our campus safe, inclusive and female-friendly, so we provide top-notch facilities for women on our campus. To start with, security is the main concern these days, so all the floors in our college are well-equipped with high class video surveillance and are also distributed with floor peons. Any female employee or student who has complaints/suggestions can go to the grievance cell, which is functional for the whole day. The women's washroom has an automatic sanitary napkin dispenser that can be used by women by inserting a small amount of money into the machine. They also have changing rooms. Gym and common

room for girls are also available in the campus. There also girl representative in every department for smooth functioning. Webinars and seminars are also organized to disseminate information on girl's safety and hygiene for women on campus. Tcet Roctract organized "Hour to Empower" for promotion of gender equity.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation: Solar energy conservation: Biogas plant Wheeling to the Grid Sensor-based energy conservation Use of LED bulbs/ power-efficient equipment

D. Any 1of the above

File Description	Documents
Geotagged Photographs	View File
Any other relevant information	View File

7.1.3 - Describe the facilities in the institution for the management of the following types of degradable and non-degradable waste (within a maximum of 200 words)

In Solid Waste management system dry waste are placed in GREEN labelled and transported to BMC. Such bins are kept in front of the canteen, beside the food stalls in the campus and other prominent places. Recyclable materials are placed in separate bins. Wet waste are placed in BLUE labelled bins.

For E-waste Management System Unusable, irreparable or redundant IT and Electronics equipment are identified by the respective Laboratory In-charge and are declared as obsolete. Depending upon the nature, intensity of usage, maintenance cost, serviceability, obsolescence in terms of technology, up-gradation

of technology etc., the related items are classified by the Lab In-charges

with the help of Lab Assistant for the purpose of disposal of

these

Items. 6-S designed to enhance effectiveness and efficiency of Laboratories.

1S - SORT (Organization) : Take out unwanted items

2S- SET IN ORDER (Orderliness) : A place for everything and everything in its place

3S- SHINE (Cleanliness) :The area is cleaned at the work is performed

4S- STANDERDISE (Standardized Clean-up) : Maintain a high standard of housekeeping

5S-SUSTAIN (Sustaining the discipline): It is a habit and continually improved.

6S-Safety (Accident Prevention): Maintain safe work environment

File Description	Documents
Relevant documents like agreements/MoUs with Government and other approved agencies	No File Uploaded
Geotagged photographs of the facilities	View File
Any other relevant information	No File Uploaded

7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus

D. Any 1 of the above

File Description	Documents
Geotagged photographs / videos of the facilities	View File
Any other relevant information	No File Uploaded

7.1.5 - Green campus initiatives include

7.1.5.1 - The institutional initiatives for greening the campus are as follows:

C. Any 2 of the above

- 1. Restricted entry of automobiles**
- 2. Use of bicycles/ Battery-powered vehicles**
- 3. Pedestrian-friendly pathways**
- 4. Ban on use of plastic**
- 5. Landscaping**

File Description	Documents
Geotagged photos / videos of the facilities	View File
Various policy documents / decisions circulated for implementation	No File Uploaded
Any other relevant documents	No File Uploaded

7.1.6 - Quality audits on environment and energy undertaken by the institution

7.1.6.1 - The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:

D. Any 1 of the above

- 1. Green audit**
- 2. Energy audit**
- 3. Environment audit**
- 4. Clean and green campus recognitions/awards**
- 5. Beyond the campus environmental promotional activities**

File Description	Documents
Reports on environment and energy audits submitted by the auditing agency	No File Uploaded
Certification by the auditing agency	No File Uploaded
Certificates of the awards received	No File Uploaded
Any other relevant information	View File

7.1.7 - The Institution has a disabled-friendly and barrier-free environment: Ramps/lifts for easy access to classrooms and centres Disabled-friendly washrooms Signage including tactile path lights, display boards and signposts Assistive technology and facilities for persons with disabilities: accessible website, screen-reading software, mechanized equipment, etc. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading materials, screen reading, etc.

C. Any 2 of the above

File Description	Documents
Geotagged photographs / videos of facilities	View File
Policy documents and brochures on the support to be provided	No File Uploaded
Details of the software procured for providing assistance	No File Uploaded
Any other relevant information	No File Uploaded

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e. tolerance and harmony towards cultural, regional, linguistic, communal, socio-economic and other diversities (within a maximum of 200 words).

"Education is the most powerful weapon that you can use to change the world", hence, the Extension Work Team of TCET is working toward providing Basic Education & One-to-one Counselling Sessions for underprivileged kids with the motto - "Reach to Unreached". There are certain students who come from poor socio-economic backgrounds & can't afford tuition or even basic education. Therefore, we offer Online Education on all subjects and Tutoring Session to such students, ranging from grade 1 to grade 10. In addition to that, webinars and seminars on a variety of topics are taken, including Cleanliness, Personal Hygiene, and much more, to provide personal awareness and development. Linguistic differences are resolved by learning the language our students understand best, in our case, the preferred language is Marathi. Basic Online Education is offered by creating study material for the students in the form of PPTs on all the subjects. Whereas, One-to-one Counselling Sessions

for students who have failed, in 9th or 10th grade, are done by taking up subjects in which they require assistance. Interesting and fun learning sessions are conducted by also creating PPTs. Hence, TCET-EWT strives to provide basic education & holistic development for the students

File Description	Documents
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View File

7.1.9 - Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens:

Universal Human Values FDP program for the academic Year 2020-21(odd semester) offered by AICTE, was attended by all faculty members. The head of institute addressed the teaching/non-teaching staff on values, rights, duties and responsibilities of citizens by conducting meetings. The Student Induction Program (SIP) was conducted for First year students as per the AICTE guidelines. It is designed to orient F.E./F.T. students about the facilities and infrastructure of their core department, student interaction Proficiency Module, professional-social body activities, Holistic-Multidisciplinary Education (HME), Professional Skills, Activity Based Learning, Proficiency module (Soft Skills), Student centric teaching learning process, evaluation & assessment system, course objective/outcome, learning objective/outcome, ERP. Also enlighten few implemented modules like Universal Human Values, Debate/Public speaking, Creative Arts, Physical Health and related activities (Yoga & fitness), Professional Bodies, and Student Forum through Portfolio building, which will encourage them to participate for overall development. The introduction of Universal Human Values to the students is to make them understand the importance of Family in life, the difference between Body and Self, happiness and Prosperity. Also, to comprehend the real meaning Harmony in family/ society. This helps to improve the mental attitude, confidence, coordination & rapport among the students.

File Description	Documents
Details of activities that inculcate values necessary to transform students into responsible citizens	View File
Any other relevant information	No File Uploaded

7.1.10 - The institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic sensitization programmes in this regard: The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff Annual awareness programmes on the Code of Conduct are organized

D. Any 1 of the above

File Description	Documents
Code of Ethics - policy document	View File
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programmes, etc. in support of the claims	No File Uploaded
Any other relevant information	View File

7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

TCET, along with the academic performances, understands the importance of co- and extra-curricular activities that help students' holistic development. Celebrating various days throughout the year builds a sense of community. Through Marathi Bhasha Diwas (27th February), we celebrated our unity in diversity. On Teachers Day (5th September), the birth anniversary of Dr. Sarvapalli Radhakrishanna, the College celebrates by acknowledging the efforts of all the students to provide life-long learning. Engineers day (15th September) holds

the most special place in the heart of TCET, where students aim to demonstrate innovation and technology via an exhibition. Lady Representative of our College every year takes the mantle of celebrating International Women's Day (8th March) to appreciate all the incredible budding women in tech and the women who make all this possible. Promoting fitness through Yoga has been an integral part of our Indian culture. Every year on International Yoga day (21st June), all students and staff start the morning doing Yoga together. Last but not least, celebrating the most important day of India, the independence day (15th August) entire Thakur family (Thakur education group) comes together to celebrate the Azadi and remember the sacrifices of all our brave martyrs.

File Description	Documents
Annual report of the celebrations and commemorative events for during the year	View File
Geotagged photographs of some of the events	View File
Any other relevant information	No File Uploaded

7.2 - Best Practices

7.2.1 - Provide the weblink on the Institutional website regarding the Best practices as per the prescribed format of NAAC

Best Practices The Innovation and Entrepreneurship Development Centre

1. The Innovation and Entrepreneurship Development Centre (IEDC)

- Inculcating entrepreneurial Mindset in Engineering students for Atmanirbhar Bharat.

2. Objectives of the Practice

- To direct the energy and the knowledge of the youth towards the purpose of being active partners in the

economic development process.

- To promote and catalyze the development of innovation-driven and knowledge-based enterprises and to promote the employment opportunities among the youth mainly, students.
- To inculcate a culture that embraces innovation-driven entrepreneurship.
- To be an institutional mechanism to provide various services that includes information on every aspect of enterprise building to budding Science and Technology entrepreneurs.

3. The Context

- To develop a congenial environment for young researchers and entrepreneurs.

4. The Practice

- Increase awareness about entrepreneurial mindset through sharing of experiences of alumni start ups
- Structured process for Entrepreneurship development
- Collaboration with various Mentors and active organizations in this field
- Dedicated human resource and premises for E Cell activities for better visibility
- Support student's innovative ideas through seed funding

5. Evidence of Success

- A total fund of Rs. 43.5 Lakhs utilised for IEDC projects
- Total of 25 projects rolled out
- Total number of students benefitted is more than 100
- Total products developed is 11 and total patents filed is 3.
- Total product commercialization is 3
- Campus companies are 9 and Startups are 16
- Total employment generation for 170 plus

6. Problems Encountered and Resources Required

- Technology transfer to the market is a major problem for the products developed under IEDC
- Fund restriction for specialised maker labs
- Time restriction due to man power availability for 24 hours
- Faculty members are more trained on technology then on entrepreneurial aspect so that project to product journey takes lots of time.
- Immediate conversion of students to entrepreneurs
- Availability of seed funding for supporting start-ups in initial phase
- Components required for experimentation are provided to the students through component library facility
- Dedicated incubation centre and R&D lab provided to the students to conduct the research and development work.

7. Notes (Optional)

- Due to dedicated activities and involvement of student's awareness is spread at institute level.
- Students won first prize in E WEEK organized by NEN at National level in 2014.
- As students interacted directly with their alumni they found Entrepreneurship as blooming carrier from new perspective
- 10% out of total Students identified in Second year showed interested in starting their own company at the end of final year
- Till 2020 there are more than 35 Mentors and advisors empaneled under E cell.
- From 2016 onwards 25 prototypes are developed under IEDC by students.
- Component library having hardware components worth 35 lacs is developed.
- Trained teachers started guiding students for product development rather than project development.
- Three products developed by students is commercialized by institute

1. E Cycle

2. Cost effective Education System
3. Project Portal on cloud

Best Practice: Quality Enhancement in Campus Placement

1. Title of the Practice: Quality Enhancement in Campus Placement

1. Objectives of the Practice

Campus placement is a crucial factor these days in most of the engineering institutions. All the stakeholders consider the placement as an essential factor in judging the quality of the institution. Therefore, it is required to identify the challenges faced to have quality campus placement, they are as follows:

- Offering less average & maximum salary package for placement.
- Visiting less number of companies for campus placement.
- Lack of aptitude & attitude skills of students.
- Less placement opportunities in product and dream companies.
- Not meeting eligibility criteria of company by students due to live ATKTs.

In an attempt to address above issues and challenges, novel steps were taken by Thakur College of Engineering and technology (TCET) to enhance the quality campus placement with the following objectives:

- To become one of the preferred recruitment destinations
- To progress continually and sustain the performance of students in placement
- To increase average & maximum salary package offered by companies
- To increase the number of companies visiting for campus placement
- To provide high salary package opportunities to deserving candidates

- To make commendable steps to find out solutions
- To prioritize solution areas
- To execute solutions in a planned manner

1. The Context

India Skill Report 2021 conducted by Confederation of Indian Industry (CII) and Wheebox. The report says that 46.80% students are employable. Therefore, it is difficult for engineering graduates to get employed without professional experience immediately after their studies. Hence, campus placement plays a vital role for getting employed. Campus Recruitment or Campus Placement is the most popular method for selecting candidates from an Institute where various organizations visit to the college (campuses) to recruit bright talent. Students, who are keen on beginning their professional career as soon as they finish studies, find the opportunity knocking at their doors.

As per All India Council for Technical Education (AICTE), 43.08% got the placed through the campus placement. Also, in recent years, providing campus placement to successful students is considered as institutional obligation and institutions are ranked based on number of successful job placement provided. The success of the institute is measured in terms of the number of multinational companies participating in the placement process, the salary package offered and the number of students getting placed.

The Training and Placement Cell is always at forefront to understand the emerging industry requirements and meet those by providing training to students in the required disciplines. For that, T&P Cell has initiated various platforms for all stakeholders to ensure the mutual benefits. The T&P Cell initiated the following interactions with outside world and ensured to develop a training model by taking the inputs from these interactions:

1. Industry Institute Symposium: Industry Institute Symposium is initiated by inviting all stakeholders from industry, PSUs and academia on a platform to identify the training needs and career opportunities for Engineering Graduates in public, private and multinational organizations. It helped to provide a common platform for healthy interactions and new learning with positive outcomes, and ensure lifelong learning for all stakeholders. This also helped in strengthening the relationship among all the

stakeholders through their active engagement and involvement, which ensured the institute to understand industry needs to inculcate among graduates.

2. Corporate feedback: Initiative of Corporate feedback about placed students from HRs of various organizations is taken to understand the areas of improvement and skill gaps. It also helped to understand the performance of the students and their adoption with the work culture. The format of the feedback form is as follows:

Sr. No.

Parameters

1

Subject Knowledge

2

Practical use of Knowledge and skills

3

Knowledge sharing approach

4

In-time completion of assignments

5

Team spirit

6

Initiative

7

Eagerness to learn new things

8

Communication skills

9

Discipline and etiquette

10

Adoption of work culture

11

Commitment to allotted work

Student feedbacks are obtained on the above said parameters in the scale of 4 to 10. Analysis is carried out and is considered as an input for further enhancement of training. TCET strives hard to ensure students who have received the offers will join the organization. This helped to increase conversion rate and created faith in TCET. It helped to become the first recruitment destination for organizations. The institute has devised a mechanism through which we get their consent for placement in advance.

1. Alumni Meet: It is important for an institution to have Alumni connect. Looking into it, TCET has established Alumni Association and started connect program. This gives an opportunity to pass out students to interact with their junior fellow colleagues and guide them for better future. Alumni have been involved in the training and other programs, so that they can be associated with the institute for lifelong learning.

1. The Practice

Training Program for engineering students is the ongoing activity that is designed to provide students with the knowledge and skills needed for their jobs. Formal training acts as a

stepping stone and paves the path for bright future. It helps students for acquiring appropriate knowledge and skills necessary for future employment. It plays an instrumental role in improving one's communication and managerial skills so that he/ she can develop confidence and get jobs. Training model as shown in following figure is implemented to develop the attitude and aptitude skills of students.

The students studying in TCET are encouraged by T&P Cell to take up training programs. There are various training programs at TCET and each training program has a specific goal to improve attitude, aptitude and technical skills. Student Development Program (SDP), Pre-Placement Training Program (PPT), Corporate Training (CT), Infosys InfyTQ Program, Employability Skill Development Program (ESD) and Internship Training Program are the important training programs to develop students' overall personality. Moreover, mock activities are also conducted to give them the feel of campus placement process.

1. Evidence of Success

By using various tools and initiatives, it is observed that there is an increase in the placement of the students. The same is highlighted in the figure below.

There is also an increase in the salary offered to the students over a period. This is one of the parameters considered as one of the issues. It is addressed by devising the effective training and continuous monitoring and control.

***Placement in process**

Institutes are very much keen to have quality campus placement which includes placements with high salary package, more number of offers from product & dream companies and international placement.

a. Achieved Benefits

- Achieved placement of 85% students eligible for placement
- Increased maximum & average salary package for students
- Ensuring students getting placement opportunities after their graduation
- Increase in number of companies visited for campus placement

b. Tangible Benefits

- Achieved quality placement of interested students
- Providing placement opportunities after graduation
- Increased maximum and average salary package for students

***Placement in process**

c. Intangible Benefits

- Corporate Feedback about institute
- Corporate feedback about student
- Trainers' feedback about students

1. Problems Encountered and Resources Required

The following were certain problems and challenges that were encountered while enhancing quality in placement.

- Various training programmes are required to be identified as per industry requirements such as enhancing aptitude skills, soft skills, technical skills, etc.
- The training programs help to strengthen the skill sets and thereby enhance the opportunities for placement.
- Dedicated team of trainers is required to ensure timely support to students.
- Sufficient amount of time shall be required for training programmes.
- There is a need to enhance the industry interactions for being at par with industry expectations.

1. Notes (Optional)

The TCET's Training and Placement Cell always strives to compete with itself to provide better and quality placement results compared to previous year. The Cell also ensures to involve all its stakeholders in gaining the essential quality placement using new initiatives. It is because TCET believes in a student-centric, faculty-driven approach and in design & development, and invention & innovation to produce Globally Competent & Locally Relevant engineering professionals with rich values and ethics.

File Description	Documents
Best practices in the Institutional website	https://www.tcetmumbai.in/Best%20Practice.html
Any other relevant information	Nil

7.3 - Institutional Distinctiveness

7.3.1 - Highlight the performance of the institution in an area distinct to its priority and thrust (within a maximum of 200 words)

Thakur College of Engineering Technology (TCET) was established in the A.Y. 2001-02 with objective of providing quality

technical education in tune with international standards and contemporary global requirements. TCET is recognized by All India Council for Technical Education (AICTE) Govt. of Maharashtra and was affiliated to the University of Mumbai (UOM). TCET has attained autonomous status for 10 years w.e.f. July 2019 and adopted Choice Based Credit Grading Scheme with Holistic and Multidisciplinary Education (CBCGS-HME 2020) in the process of curriculum development. In the 20 years of its existence, TCET is one of the leading engineering Colleges in Maharashtra. TCET is ISO 9001:2015 certified since 2017. TCET is a member of National Entrepreneurship Network (NEN) and Confederation of Indian Industry (CII). Along with the academic achievements, the institute provides the platforms for co-curricular and extra-curricular activities which help in the holistic development of students. Student-led clubs, social, cultural, sports activities conducted to inculcate social, moral, ethical and universal values which help them for all round development. TCE has well established T&P cell, HOC cell and R&D cell for students support and their carrier advancement. TCET has Key initiatives like teacher-guardian scheme, book bank scheme and introduction of resource books.

Part B

CURRICULAR ASPECTS

1.1 - Curriculum Design and Development

1.1.1 - Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which are reflected in Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes offered by the Institution.

Program Outcomes and Program Specific Outcomes is strengthened at various meetings by taking inputs from different stakeholders viz. faculty through Programme Assessment Committee and Faculty Advisory Committee, students through Student advisory meeting, Industry, Alumni and Parents through Department advisory committee, Academicians from Peer Institutions and Industry and Academicians through BoS Meeting and Academic Council Meetings. Curricular gaps are identified according to inputs received from above mentioned stakeholders and implemented in respective courses. Every year 20-30% modifications are done in every course. The AICTE Model curriculum has been followed for deciding the subjects, hours and credits while deciding on the scheme and syllabus of all programs and courses in our Institute. In addition, the curriculum for all the programs have been developed keeping the syllabus of reputed institutions in India like IIT, NIT etc. as well as Mumbai University and other top Universities across the country, as reference. This has created relevance at local level, regional level and national level. The opinions of industry experts and subject experts are also taken while framing the syllabus. Once the syllabus is framed, the approval of the same is taken from the Board of Studies to review the fulfilment of requirements of POs, PSOs and COs.

File Description	Documents
Upload additional information, if any	No File Uploaded
Link for additional information	www.tcetmumbai.in

1.1.2 - Number of Programmes where syllabus revision was carried out during the year

18

File Description	Documents
Minutes of relevant Academic Council/BOS meeting	View File
Details of syllabus revision during the year	View File
Any additional information	No File Uploaded

1.1.3 - Number of courses focusing on employability/entrepreneurship/ skill development offered by the Institution during the year

13

File Description	Documents
Curriculum / Syllabus of such courses	View File
Minutes of the Boards of Studies/ Academic Council meetings with approval for these courses	View File
MoUs with relevant organizations for these courses, if any	No File Uploaded
Any additional information	No File Uploaded

1.2 - Academic Flexibility

1.2.1 - Number of new courses introduced across all programmes offered during the year

13

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	View File
Any additional information	No File Uploaded
Institutional data in prescribed format (Data Template)	View File

1.2.2 - Number of Programmes offered through Choice Based Credit System (CBCS)/Elective Course System

18	
File Description	Documents
Minutes of relevant Academic Council/BoS meetings	View File
Any additional information	No File Uploaded
List of Add on /Certificate programs (Data Template)	View File

1.3 - Curriculum Enrichment

1.3.1 - Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability, and Human Values into the curriculum

The Institute curriculum of all programs addresses issues relevant to gender, environment and sustainability, human values and professional ethics. Apart from the academic, TCET offers a separate section in the syllabus scheme for Holistic Development of students and offers credits towards that as well apart from academic credits. Various activities are organized throughout the year under the auspices of various committees formed at the department and at the Institute level.

1. Gender Sensitivity: Under NSS and Rotaract committee, students are sensitized and encouraged to work towards gender equity from a cross-cultural perspective. TCET annually organizes seminars, conferences, guest lectures, street plays and literary activities that help in gender sensitization.

2. Environment and Sustainability: A compulsory core course on Environment studies is included in all UG programmes. Apart from that, the UG programmes in Civil and Mechanical Engineering include subjects on Water, Sanitation and Waste Management, Renewable Energy, Dairy Technology, Agriculture and Environmental and Green Technology. Environment awareness camps, seminars, workshops, guest lectures, industry visits etc. are organized.

3. Human Values and Professional Ethics: The curriculum across all years also focusses on the development of human values and professional ethics like Universal Human Values, Indian tradition, Environment Studies, Disaster Management etc.

File Description	Documents
Upload the list and description of the courses which address issues related to Gender, Environment and Sustainability, Human Values and Professional Ethics in the curriculum	View File
Any additional information	No File Uploaded

1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year

10

File Description	Documents
List of value-added courses	View File
Brochure or any other document relating to value-added courses	View File
Any additional information	No File Uploaded

1.3.3 - Number of students enrolled in the courses under 1.3.2 above

2538

File Description	Documents
List of students enrolled	View File
Any additional information	No File Uploaded

1.3.4 - Number of students undertaking field work/projects/ internships / student projects

1266

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	View File
Any additional information	No File Uploaded

1.4 - Feedback System

1.4.1 - Structured feedback and review of the syllabus (semester-wise / year-wise) is obtained from 1) Students 2) Teachers 3) Employers and 4) Alumni	A. All 4 of the above
---	------------------------------

File Description	Documents
Provide the URL for stakeholders' feedback report	https://thakureducation-my.sharepoint.com/:b:/g/personal/tcet_igac_thakureducation_org/ETr1f5qR2otDltcCq1aiTPYBao04jKRDLJ70RmI81R9-FQ?e=oNQibT
Upload the Action Taken Report of the feedback as recorded by the Governing Council / Syndicate / Board of Management	View File
Any additional information	No File Uploaded

1.4.2 - The feedback system of the Institution comprises the following	B. Feedback collected, analysed and action taken
---	---

File Description	Documents
Provide URL for stakeholders' feedback report	https://thakureducation-my.sharepoint.com/:b:/g/personal/tcet_igac_thakureducation_org/ETr1f5qR2otDltcCq1aiTPYBao04jKRDLJ70RmI81R9-FQ?e=oNQibT
Any additional information	View File

TEACHING-LEARNING AND EVALUATION

2.1 - Student Enrollment and Profile

2.1.1 - Enrolment of Students

2.1.1.1 - Number of students admitted (year-wise) during the year

878

File Description	Documents
Any additional information	No File Uploaded
Institutional data in prescribed format	View File

2.1.2 - Number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per the reservation policy during the year (exclusive of supernumerary seats)

54

File Description	Documents
Any additional information	No File Uploaded
Number of seats filled against seats reserved (Data Template)	View File

2.2 - Catering to Student Diversity

2.2.1 - The institution assesses students' learning levels and organises special programmes for both slow and advanced learners.

TCET follows a process of segregating students based on learning levels in which students are categorized as excellent, good, and average with academic performance and validation. The wide range of continuous assessment components that include, Class Assignments, Seminars and Group Discussions, Quizzes, Class Tests, Projects, Internships, Viva-voce examinations and attendance, enable effective assessment of learning levels of students.

Faculty members and various Committees regularly review the academic progress and counsel students to improve their performance to ensure their academic growth. As per these categories, students are counselled by their teacher guardians and class in charges. Special measures taken to support relatively slow learners are as follows:

Organizing Extra Classes, remedial exams, Providing tutorial assignments, extra reading material to improve basic understanding of subject, Encouraging them to study courses on developing soft skills to master understanding of language, Encouraging them to participate in various activities to develop social skills.

Students' who are academically excellent or specifically fast learners are given advanced exercises related to their subjects after their regular experiments. Faculty members also refer to such fast learners some advanced areas for further study as per the interest of the students.

The institute has another provision for students who face

problem of coping with English language since engineering students are from various boards. The provision is General English Proficiency Training which is conducted over and above the curriculum activities. The training programs is meant for boosting the confidence of students coming from vernacular medium with English language barriers. This program is conducted for 12-20 hours in which various activities are conducted for confidence building. The program focuses mainly on speech, grammar, and vocabulary of the students which leads ultimately to develop interest in English language.

The Institute employs varied evaluations to test both Quality and Values. It has a continuous evaluation system with different types of assessments spread throughout the semester. It implements well-defined models of evaluation with varied types of assessment to effectively evaluate outcomes, both at the course and the program level.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

2.2.2 - Student – Teacher (full-time) ratio

Year	Number of Students	Number of Teachers
01/05/2021	3337	207

File Description	Documents
Upload any additional information	No File Uploaded

2.3 - Teaching- Learning Process

2.3.1 - Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

TCET believes in the adoption of student's centric methods to enhance student involvement as a part of participative learning and problem-solving methodology. Role Plays, Team works, Debates, Seminar Quizzes and case studies Specifically Students centric Teaching Methods are reflected in project

work, Field Visit, Industrial visit & guest lectures.

Specifically, the student's centric methodology includes

Experiential Learning

A. Project work: Project work is organized as Project Based Learning in second year and third year and Major Projects in final year. Also, in Professional Elective Courses, Practical sessions are conducted in the form of a Capstone project.

B. Internship in institute or industry: As AICTE Model curriculum as well as TCET Curriculum has made Internship mandatory for students, therefore students have to undergo internship in the second, third and final year of their engineering program. TCET offers in house internship at second year level whereas for third year students, Industry internship is recommended. 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.

C. Participation in competition at various level: For Real time exposure students are encouraged to participate at National and International Level

D. Industrial Visits: Departments Plan and Organize the industrial visits for students to provide exposure to industrial work culture both at local level as well as out of station level.

E. Guest Lecture: Guest lectures by eminent experts from industry and academics from across the world are organized to supplement the teaching process and provide experiential learning.

The curriculum also focuses on promoting Holistic Student Development (HSD) which includes courses on Employability Skill Development which focus on Industry Specific skills, Professional skills which focus on basic Technology skills for 2nd year, industry/ research/ entrepreneurship skills for 3rd and Final Year. PBL is common for SE, TE and BE under HSD along with ABL(Co-curricular/ Extra-curricular/ Extension) for SE students and RBL for TE & BE students.

Project Based Learning (PBL): This course intends to aid students identify real world problems and apply computing fundamental and technical skill to find solutions to them.

Activity Based Learning (ABL): ABL helps students learn skills other than technical ones which make an impact on the students' personality.

Research Based Learning (RBL): This course is focused to engage the learner in research by upgrading domain knowledge through participation in various core research activities for innovative idea generation.

Professional Skills (PS): PS is taught to introduce new technologies to students. It helps them to acquire skills to develop projects using recent technologies.

Employability Development Skills (ESD): ESD is taught considering the emerging technology requirements in industry.

Activities like Group Presentations, Group-Discussions, Peer to Peer Interactions, etc. helped students enhance his/her participation and interactions. They also got adjusted and adapted to the new learning environment irrespective of where the student was currently located.

File Description	Documents
Upload any additional information	No File Uploaded
Link for additional Information	Nil

2.3.2 - Teachers use ICT-enabled tools including online resources for effective teaching and learning

At TCET, the classrooms and labs are ICT enabled with projectors installed and the campus is enabled with high speed WIFI connection at various points. During the pandemic, online platforms were used for academic conduct, doubt solving sessions, Project progress demos-presentations and assessments. College has provided pen tablets and other necessary digital infrastructure to effectively conduct the online session like good cameras, zoom licenses and all other requirements have been given to the department in sufficient numbers

The faculty at TCET use various ICT enabled tools to enhance the quality of teaching-learning like

1. Microsoft Teams and Google Classroom is used to manage and post course related information- learning material, quizzes, lab submissions and evaluations, assignments, etc.
2. Virtual labs are used to conduct labs through simulations.
3. Online drawing tools like concept maps, mind maps, are used to perform student centric activities.
4. The PPTs are enabled with animations and simulations to improve the effectiveness of the teaching- learning process.
5. The online learning environments are designed to train students in open problem-solving activity.
6. Lab manuals are mailed to students well in advance the experiment is performed.
7. Online quizzes and polls are regularly conducted to record the feedback of the students. Various online Tools were used to conduct Formative Assessment such as Google Form (MCQs), Group discussion Activity (PPTs/Microsoft Word), Quiz (Zoom Pooling) , Debate (PPTs/Microsoft word), Word cloud (Mentimeter), Flip classroom(By uploading material on ERP, Profile website Page), Puzzles (Online Puzzle Maker Tool), padlet used for writing answers and then up voted or down voted by peers, Crossword Puzzles and Case Study etc.
8. Institute has offered Digital Infrastructure:Webcam,Wi-fi Router, Pen Tablet,Wired Headset,Stylus Pen to each department to improve the learning experience of students, especially for numerical based subjects.

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	Nil
Upload any additional information	No File Uploaded

2.3.3 - Ratio of students to mentor for academic and other related issues

2.3.3.1 - Number of mentors

168

File Description	Documents
Upload year-wise number of students enrolled and full-time teachers on roll	View File
Circulars with regard to assigning mentors to mentees	View File

2.3.4 - Preparation and adherence to Academic Calendar and Teaching Plans by the institution

Academic Calendar is prepared on semester basis taking into account the university calendar , the list of holidays, students activities etc.

Academic calendar (tentative) is released twenty one days before the semester commencement as tentative calendar.The tentative Academic calendar is finalized 15 days after the commencement of semester.

HODs prepare department calendar in alignment with institute academic calendar

Academic calendar is notified on notice board and website. It is also included in the faculty diary (only relevant activities) for compliance.

The academic calendar in general, comprises week number, number of instructional days in that week, date, day and the activity name(s) to be conducted. The activities in the academic calendar for students not only comprises details of

academic conduct but also comprises details of other activities viz. professional bodies organized activities, social bodies organized activities, Training & Placement conducted co curricular activities and activities related to Higher Education and Online Courses Cell

According to academic calendar prepared at the institute level where semester conduct is for the first 8 weeks the conduct of lectures/practical is done followed by the In-semester assessment planned during 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 by End Semester Examination in 21st week & all ATKT/supplementary exams in 24th week as per academic calendar. (three In semester assessments and one Innovative exam for FE per semester during AY 2020-21 as part of 60:40 scheme).

Students are informed about these internal examinations well in advance by the department and exam section . Internal assessment dates are also provided by the college in the proposed academic calendar prepared at the beginning of each semester .

Students are informed about the university notices and circulars related to the examinations from time to time through student notice board, departmental notice boards, college website .

The academic calendar is implemented actively through proper planning and executions. Planning is done during the vacation and execution is done during the semester. Improvements in the academic calendar, timetable, academic skills and Outcome based education at implemented effectively.

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	View File

2.4 - Teacher Profile and Quality

2.4.1 - Number of full-time teachers against sanctioned posts during the year

207

File Description	Documents
Year-wise full-time teachers and sanctioned posts for the year	View File
List of the faculty members authenticated by the Head of HEI	No File Uploaded
Any additional information	No File Uploaded

2.4.2 - Number of full-time teachers with PhD/ D.M. / M.Ch. / D.N.B Super-Specialty / DSc / DLitt during the year

39

File Description	Documents
List of number of full-time teachers with PhD./ D.M. / M.Ch. / D.N.B Super-Specialty / D.Sc. / D.Litt. and number of full-time teachers for 5 years	View File
Any additional information	No File Uploaded

2.4.3 - Total teaching experience of full-time teachers in the same institution: (Full-time teachers' total teaching experience in the current institution)

1293.4

File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	View File
Any additional information	No File Uploaded

2.5 - Evaluation Process and Reforms

2.5.1 - Number of days from the date of last semester-end/ year- end examination till the declaration of results during the year

Nil

File Description	Documents
List of Programmes and the date of last semester-end / year-end examinations and the date of declaration of result	View File
Any additional information	No File Uploaded

2.5.2 - Number of students' complaints/grievances against evaluation against the total number who appeared in the examinations during the year

0

File Description	Documents
Upload the number of complaints and total number of students who appeared for exams during the year	No File Uploaded
Upload any additional information	No File Uploaded

2.5.3 - IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA) have brought in considerable improvement in the Examination Management System (EMS) of the Institution

Continuous Evaluation is carried out for evaluating the learning of the students on 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 test etc. Monthly evaluation is for Formative assessment and remedial work done by defaulters and slow learners. Mid-term evaluation includes compliance for 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.

In academic year (2020-2021) the institute has moved from the traditional examination scheme where more weightage is given to End Semester Exam (ESE) and internal assessment. In the 60:40 scheme, 60 marks are for ESE and out of remaining 40 marks, 20 marks are for In semester assessment and 20 marks are for Innovative exam where student will be given some task

to access the learning in a particular subject. In academic year (2020-2021) 1st year students had 60:40 scheme and for the students of 2nd ,3rd and final year, examination scheme remains as per 75:25(ESE: IA) only.

The In-semester assessment is planned during 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 by End Semester Exam at the end of semester in 21st week & all ATKT/supplementary exams in 24th week as per academic calendar

For the 1st year three In semester assessments and one Innovative exam were planned per semester during AY 2020-21 as part of 60:40 scheme).

In-Semester Assessment marks are consolidated by considering the average of two In-Semester Examination and Innovative Examination for maximum 40 marks. End Semester Exam performance is measured on the basis of students' performance with a maximum of 60 marks.

The evaluation of the term work is done and it needs to be granted by the subject teacher and the granted list is to be approved by the authority. The term work is assessed on 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 outcome, 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 PO to meet requirements of 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:

1. Help desk to facilitate students during examinations. 2. Separate examination control rooms for effective distribution , collecton and monitoring of exam process. 3. Centralized assessment center for internal assessment 4. Dedicated staff and room for monitoring the entire assessment process 5. Assessment record is generated on daily basis to comply with the number of days required to publish the results within stipulated period . 6. Conduct of open house after provisional result declaration, amendment of marks after open house and supplementary examinations conduction 7. During the Covid-19 pendemic ,blended online exam conduct was done through Google Classroom,online apps viz. zoom, Microsoft teams, Google meet etc. while maintaining quality & integrity.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

2.6 - Student Performance and Learning Outcomes

2.6.1 - Programme Outcomes and Course Outcomes for all Programmes offered by the institution are stated and displayed on the website and communicated to teachers and students

Programme Outcomes(POs) are published on various publicity platforms and prominent places in the Institute and Department viz. Department and Institute Notice boards,College website: <http://www.tcetmumbai.in/>, Admission Brochures and other Institute publications viz. Souvenirs, proceedings, college magazines, faculty diary, journals etc.,Programme Resource Book,Course Resource Books,Prominent Places in the department, Faculty Diary,Journal files etc.

Therefore, these mechanisms provide the means for dessimation of the POs amongst the stakeholders, mainly the faculty and the students and act as a guiding force for shaping the career of the student.

Course Objective and Course Outcomes are defined for every subject and are given in the syllabus. For every subject 6 modules are defined. The course outcomes are based on these 6 modules. Course Outcomes are communicated to the students during the first week of every semester (Semester Orientation Programme).

These Course outcomes are available on the college website as well.

Here the 1st link gives the general information of the department, 2nd link is for PEOs, 3rd link is for POs, 4th link is for PSOs

5th link is for the details of the course outcomes which are included in the syllabus.

Link on the website for additional Information

COMP

https://www.tcetmumbai.in/deptCompEngineering_home.html

<https://www.tcetmumbai.in/CMPN%20PEO.html>

<https://www.tcetmumbai.in/CMPN%20PO.html>

<https://www.tcetmumbai.in/CMPN%20PSO.html>

<https://www.tcetmumbai.in/CMPN%20syllabus.html>

IT

https://www.tcetmumbai.in/deptInformationTechnology_home.html

<https://www.tcetmumbai.in/IT%20PEO.html>

<https://www.tcetmumbai.in/IT%20PO.html>

<https://www.tcetmumbai.in/IT%20PSO.html>

<https://www.tcetmumbai.in/IT%20syllabus.html>

EnTC

https://www.tcetmumbai.in/deptEXTC_home.html

<https://www.tcetmumbai.in/EXTC%20PEO.html>

<https://www.tcetmumbai.in/EXTC%20PO.html>

<https://www.tcetmumbai.in/EXTC%20PSO.html>

<https://www.tcetmumbai.in/EXTC%20Syllabus.html>

ELEX

https://www.tcetmumbai.in/deptElectronicEngg_home.html

<https://www.tcetmumbai.in/ETRX%20PEO.html>

<https://www.tcetmumbai.in/ETRX%20PO.html>

<https://www.tcetmumbai.in/ETRX%20PSO.html>

<https://www.tcetmumbai.in/ETRX%20Syllabus.html>

MECH

https://www.tcetmumbai.in/deptmechanical_home.html

<https://www.tcetmumbai.in/MECH%20PEO.html>

<https://www.tcetmumbai.in/MECH%20PO.html>

<https://www.tcetmumbai.in/MECH%20PSO.html>

<https://www.tcetmumbai.in/MECH%20syllabus.html>

CIVIL

https://www.tcetmumbai.in/deptcivilengg_home.html

<https://www.tcetmumbai.in/CIVIL%20PEO.html>

<https://www.tcetmumbai.in/CIVIL%20PO.html>

<https://www.tcetmumbai.in/CIVIL%20PSO.html>

<https://www.tcetmumbai.in/CIVIL%20syllabus.html>

ES&H

https://www.tcetmumbai.in/deptHumanitiesSci_home.html

<https://www.tcetmumbai.in/HNS%20PEO.html>

<https://www.tcetmumbai.in/HNS%20PSO.html>

<https://www.tcetmumbai.in/HNS%20GA.html>

[https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20\(COMP-CIVIL-ELEX\)%20Scheme%20Group-1.pdf](https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20(COMP-CIVIL-ELEX)%20Scheme%20Group-1.pdf)

[https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20\(IT-E&TC-MECH\)%20Scheme%20Group-2\).pdf](https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20(IT-E&TC-MECH)%20Scheme%20Group-2).pdf)

[https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20\(CIVIL-ELEX-COMP\)%20Sem%20I%20&%20II%20Group-1.pdf](https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20(CIVIL-ELEX-COMP)%20Sem%20I%20&%20II%20Group-1.pdf)

[https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20\(IT-E&TC-MECH\)%20Sem%20I%20&%20II%20Group-2%20.pdf](https://www.tcetmumbai.in/HNS/Syllabus/B.%20E.%20(IT-E&TC-MECH)%20Sem%20I%20&%20II%20Group-2%20.pdf)

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	No File Uploaded
Upload any additional information	No File Uploaded
Link for additional Information	https://www.tcetmumbai.in/deptCompEngineering_home.html

2.6.2 - Attainment of Programme Outcomes and Course Outcomes as evaluated by the institution

At the initial stage of Outcome-Based Education (OBE), the Course Outcomes (CO's) for each course are defined based on the Programme Outcome (PO's) and other requirements. At the end of each course, the COs needs to be assessed and evaluated, to check attainment. Assessment is carried out by the department to evaluate the achievement of programme Outcomes and programme specific outcomes. Attainment is the action or fact of achieving a standard result towards accomplishment of desired goals. Primarily attainment is the standard of academic attainment as observed by continuous evaluation through internal assessment test, assignments and or examination result. Attainment of the COs can be measured directly and indirectly.

In theexaminations 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 andprogramme outcome, as per the institute guidelines within the framework of a Choice Based Credit Grading System for Holistic Development (CBCGS-H).

Direct attainment basically displays the student's knowledge and skills from their performance. It can be determined from the performance of the students in all the relevant assessment instruments like internal assessments, assignments, and final examination, providing strong evidence of student learning. Indirect methods like course surveys and exit surveys ask the stakeholders to reflect on student's learning. They assess opinions or thoughts about the graduate's knowledge or skills. Indirect measures can provide information about graduate's perception of their learning and how this learning is valued by different stakeholders

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

2.6.3 - Pass Percentage of students

2.6.3.1 - Total number of final year students who passed in the examinations conducted by Institution

799

File Description	Documents
Upload list of Programmes and number of students appear for and passed in the final year examinations	View File
Upload any additional information	No File Uploaded
Paste link for the annual report	Nil

2.7 - Student Satisfaction Survey

2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design its own questionnaire). Results and details need to be provided as a weblink

https://www.tcetmumbai.in/All_Dept_feedback-inst.html

RESEARCH, INNOVATIONS AND EXTENSION

3.1 - Promotion of Research and Facilities

3.1.1 - The institution's research facilities are frequently updated and there is a well-defined policy for promotion of research which is uploaded on the institutional website and implemented

1.

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. The institute is recognized as a research centre by the University of Mumbai for Ph.D. (Technology) in Electronics & Telecommunication Engineering. TCET since its establishment, has a culture of nurturing research abilities at undergraduate and postgraduate level. In order to provide a strong platform to the researchers, academicians and scholars, TCET regularly organizes various national and international conferences, seminars, workshops and colloquium. 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. The institute has a remote centre of IIT Bombay for online research, android mobile application development and e-yantra laboratory. Under industry-institute-interaction the institute has Thakur-Accenture Innovation Centre for advanced computing and communication. The institute also has a centre of excellence with the set objectives and advantages for carrying out research which impacts the overall research culture in the institute.

•

Description: 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. The institute is recognized as a research centre by the University of Mumbai for Ph.D. (Technology) in Electronics & Telecommunication Engineering. TCET since its

establishment, has a culture of nurturing research abilities at undergraduate and postgraduate level. In order to provide a strong platform to the researchers, academicians and scholars, TCET regularly organizes various national and international conferences, seminars, workshops and colloquium. 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. The institute has a remote centre of IIT Bombay for online research, android mobile application development and e-yantra laboratory. Under industry-institute-interaction the institute has Thakur-Accenture Innovation Centre for advanced computing and communication. The institute also has a centre of excellence with the set objectives and advantages for carrying out research which impacts the overall research culture in the institute.

2.

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 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.

3.

Understanding the need for encouraging engineering graduates towards pursuing research, the TCET Research & Development Cell was setup 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 institute provides all necessary infrastructural facilities and a conducive environment to promote research activity in the campus. Due to limited resources, the institute may not be able to fund all the research activities taken up by the faculty and students. Faculty are encouraged to apply for various funding agencies and pursue their research. However, the institute is ready to provide seed funding or partial funding based on the merit of proposals submitted by faculty or student. The faculty and students are encouraged to present their ideas / project proposals before the research committee for getting the sanction of seed funding in accordance with institute guidelines.

The faculty and students are given freedom to choose the research area of their choice and guidance is given to seek funding from various funding agencies and industries. The institute encourages the faculty by providing incentives for peer reviewed publications, writing books and filing patents. The institute takes care of patent filing process, which is governed by the Research policy of the institute.

The institute gives a free hand to report research results and findings. However, a thorough review is done for all research proposals seeking funding from various funding agencies by consulting the research committee under Dean(R&D), coordinator of respective department. This committee also monitors the impact of research and consultancy and ensures non-violation of research & consultancy ethics, professional ethics, privacy of the people, human rights, causing problems to health & safety of human beings and damage of the property.

Research Centers are established in various departments of the institute with necessary software and computing facilities for carrying out research activities.

MECH

In order to provide a strong platform to the researchers, academicians and scholars, TCET regularly organizes various national and international conferences, seminars, workshops and colloquium. 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. Under industry-institute-
interaction the institute has TATA Innovation Center for
Design and development.

CIVIL

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. TCET since its
establishment has a culture of nurturing research abilities
at undergraduate and postgraduate level. Pursuing research
leading to Ph. D. degree is both challenging and rewarding
experience. Against this background, TCET has started Ph.D.
(Technology) Research Centre of University of Mumbai (UOM)
from the academic year 2014-15 which involves course work and
other requirements as per university rules/guidelines.

In order to provide a strong platform to the researchers,
academicians and scholars, TCET regularly organizes various
national and international conferences, seminars, workshops
and colloquium. 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. The institute has a remote center
of IIT Bombay for online research, android mobile application
development and e-yantra laboratory. Under industry-institute-
interaction the institute has Thakur-Accenture Innovation
Centre for advance computing and communication. The institute
also has center of excellence with the set objectives and
advantages for carrying out research which impacts the
overall research culture in the institute.

The institute is recognized as research centre by university
of Mumbai for Ph.D. (Technology) in Electronics &
Telecommunication Engineering.

TCET since its establishment, has a culture of nurturing
research abilities at undergraduate and postgraduate level.
Pursuing research leading to Ph. D. degree is both
challenging and rewarding experience. Against this
background, TCET has started Ph.D. (Technology) Research
Centre of University of Mumbai (UOM) from the current
academic year (A.Y.2014-15). It offers research program

leading to the Ph.D. (Technology) Degree in Electronics & Telecommunication Engineering, Computer Engineering and Information Technology of UOM. Presently 10 seats are offered and it involves course work and other requirements as per university rules/guidelines.

In order to provide a strong platform to the researchers, academicians and scholars, TCET regularly organizes various national and international conferences, seminars, workshops and colloquium.

The institute has a remote centre of IIT Bombay for online research, android mobile application development and e-yantra laboratory. Under industry-institute-interaction the institute has Thakur-Accenture Innovation Centre for advance computing and communication. The institute also has centre of excellence with the set objectives and advantages for carrying out research which impacts the overall research culture in the institute.

File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	View File
Provide URL of policy document on promotion of research uploaded on the website	https://www.tcetmumbai.in/research_promotion.html
Any additional information	No File Uploaded

3.1.2 - The institution provides seed money to its teachers for research

3.1.2.1 - Seed money provided by the institution to its teachers for research during the year (INR in lakhs)

2982755

File Description	Documents
Minutes of the relevant bodies of the institution regarding seed money	View File
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	View File
List of teachers receiving grant and details of grant received	No File Uploaded
Any additional information	No File Uploaded

3.1.3 - Number of teachers who were awarded national / international fellowship(s) for advanced studies/research during the year

3

File Description	Documents
e-copies of the award letters of the teachers	View File
List of teachers and details of their international fellowship(s)	View File
Any additional information	No File Uploaded

3.2 - Resource Mobilization for Research

3.2.1 - Grants received from Government and Non-Governmental agencies for research projects, endowments, Chairs during the year (INR in Lakhs)

1595667

File Description	Documents
e-copies of the grant award letters for research projects sponsored by non-governmental agencies/organizations	View File
List of projects and grant details	View File
Any additional information	No File Uploaded

3.2.2 - Number of teachers having research projects during the year	
7	
File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil
List of research projects during the year	View File
3.2.3 - Number of teachers recognised as research guides	
9	
File Description	Documents
Upload copies of the letter of the university recognizing teachers as research guides	View File
Institutional data in Prescribed format	View File
3.2.4 - Number of departments having research projects funded by Government and Non-Government agencies during the year	
5	
File Description	Documents
Supporting document from Funding Agencies	View File
Paste link to funding agencies' website	Nil
Any additional information	View File
3.3 - Innovation Ecosystem	
3.3.1 - Institution has created an ecosystem for innovations and creation and transfer of knowledge supported by dedicated centres for research, entrepreneurship, community orientation, incubation, etc.	
TCET's R&D cell is a platform where young minds come up with innovative ideas and the ecosystem of this cell has helped these ideas grow with fruitful outcomes. The R&D cell has a	

well-equipped components library from which students can issue components required to test their ideas for one semester. TCET-IEDC is a unique platform where students are selected from different branches of engineering and encouraged to do interdisciplinary projects. Every year students are encouraged to take part in various Hackathons, Ideathons organized by the Central Government, AICTE, various MNCs and other industries. To promote first-generation entrepreneurs, TCET organizes various awareness programs, certification courses by reputed institutes, regular meetings with existing successful entrepreneurs etc. TCET's NSS student chapter has organized several activities like blood donation drive, cleanliness drive etc. through which its volunteers have developed constructive linkage between campus and community. TCET's Extension Work Team has organized activities that provide research-based information, teaching people new knowledge and skills, helping people to improve their income etc. TCET's Rotaract club has been started with the main objective of community service and professional development

TCET-R&D cell is dedicated to help advance existing knowledge and nurture new ideas by providing resources and facilities to create cutting edge products from which future research will emerge.

Main objectives of R&D cell are as follow:

- To incubate, projects in the institute and then promote and commercialize them to external stakeholders like industry and other institutions through yearly project exhibition and competition.
- To motivates and encourage faculty members and students for research and development activities in the area of specialized domains and takes multiple initiatives on Institute, Mumbai University, National, International level for holistic development.
- To assist faculty and students to apply for minimum one grant yearly in major domains from various government and non-government funding agencies.
- To conduct workshop in major domains and industrial visit for staff and students on emerging technologies.
- To have memorandum of understanding (MOU's) with industries for research service and product development and to provide solutions to industrial problems through consultancy.

- To register the work done by R&D cell under Intellectual Property Rights.
- Institutional Innovation Cell is established to interact with industry, government, professionals, experts from research laboratory etc. for research opportunities.
- TCET-EDC aims at developing the spirit of entrepreneurship among the students.
- NISP (National Innovation and Start-up Policy) Expert Committee is constituted at institute level which will regulate and review the startup and innovation policy time to time.

Institute is in the process of developing startup and innovation policy in accordance with NISP-2019 Policy as per AICTE guidelines.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	https://www.tcetmumbai.in/rnd_mvo.html

3.3.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year

Nil

File Description	Documents
Report of the events	View File
List of workshops/seminars conducted during the year	View File
Any additional information	No File Uploaded

3.4 - Research Publications and Awards

3.4.1 - The Institution ensures implementation of its Code of Ethics for Research uploaded in the website through the following: Research Advisory Committee Ethics Committee Inclusion of Research Ethics in the research

D. Any 1 of the above

methodology course work Plagiarism check through authenticated software

File Description	Documents
Code of Ethics for Research, Research Advisory Committee and Ethics Committee constitution and list of members of these committees, software used for plagiarism check	View File
Any additional information	No File Uploaded

3.4.2 - Number of PhD candidates registered per teacher (as per the data given with regard to recognized PhD guides/ supervisors provided in Metric No. 3.2.3) during the year

3.4.2.1 - Number of PhD students registered during the year

12

File Description	Documents
URL to the research page on HEI website	https://www.tcetmumbai.in/about_rndcell.html
List of PhD scholars and details like name of the guide, title of thesis, and year of registration	View File
Any additional information	No File Uploaded

3.4.3 - Number of research papers per teacher in CARE Journals notified on UGC website during the year

12

File Description	Documents
List of research papers by title, author, department, and year of publication	View File
Any additional information	No File Uploaded

3.4.4 - Number of books and chapters in edited volumes / books published per teacher

during the year	
17	
File Description	Documents
Upload any additional information	View File
Paste link for additional information	Nil
3.4.5 - Bibliometrics of the publications during the year based on average Citation Index in Scopus/ Web of Science/PubMed	
3.4.5.1 - Total number of Citations in Scopus during the year	
47	
File Description	Documents
Any additional information	No File Uploaded
Bibliometrics of the publications during the year	View File
3.4.6 - Bibliometrics of the publications during the year based on Scopus/ Web of Science – h-Index of the University	
3.4.6.1 - h-index of Scopus during the year	
63	
File Description	Documents
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	View File
Any additional information	No File Uploaded
3.5 - Consultancy	
3.5.1 - Revenue generated from consultancy and corporate training during the year (INR in lakhs)	
1055000	

File Description	Documents
Audited statements of accounts indicating the revenue generated through consultancy and corporate training	View File
List of consultants and revenue generated by them	No File Uploaded
Any additional information	No File Uploaded

3.5.2 - Total amount spent on developing facilities, training teachers and clerical/project staff for undertaking consultancy during the year

145486

File Description	Documents
Audited statements of accounts indicating the expenditure incurred on developing facilities and training teachers and staff for undertaking consultancy	View File
List of training programmes, teachers and staff trained for undertaking consultancy	No File Uploaded
List of facilities and staff available for undertaking consultancy	No File Uploaded
Any additional information	No File Uploaded

3.6 - Extension Activities

3.6.1 - Extension activities carried out in the neighbourhood sensitising students to social issues for their holistic development, and the impact thereof during the year

In TCET, NSS has always stood up to its strong spirit of serving people keeping in mind the policy of "Not Me, But You". The belief that we must live for others, is being realized through the selfless service of the NSS volunteers who get into timely action for the upliftment of the needy people of their respective localities. NSS unit of TCET has always given the volunteers, a platform to serve the society and bring happiness and smiles on many faces, which has sown the seeds of social commitment in many students who are

otherwise kept aloof from the real challenges and torments faced by the masses in the society as a whole. A team of 150 committed NSS Volunteers and Programme Officers of TCET under the NSS Technical cell of Directorate of Technical Education, Mumbai have proven to be an enough cause and reason for instilling a significant change in the society. The service rendered by NSS are varied in nature: Education, Environment, Health and Society. Regular Activities and Special Camping Programmes are the highlights of NSS activities of the college. The objective of NSS is to enhance physical wellbeing, spread awareness regarding the importance of proper health, safety measures and stress on physical and mental health, etc. With these objectives many activities have been conducted.

The college students are enrolled for extension work projects and perform various activities for the social awareness based on various issues / problems in the society such as Save Girl Child, Pollution, Aids, Global Warming, Environment, Tree Plantation, Importance of Education, Illiteracy, Child Labour, Dowry Deaths, Malnutrition, Watershed Management and so many. Extension works is good activity due to these students have showcased their inner abilities to participate in making of posters, Slogans and street Play, etc. EWT activities also teaches students to serve the society for bringing change in it.

Description: TCET's Extension Work Team (EWT) specifically works for the underprivileged sections of the society. It extends educational programs that enhance and improve the quality of life in tune with today's socio-economic changes. It plans and executes activities that encourage people to improve their conditions in all dimensions of their lives. CET's Extension Work Team has organized activities that provide research-based information, teaching people new knowledge and skills, helping people to improve their income etc. TCET's Rotaract club has been started with the main objective of community service and professional development as well as to encourage the members to enhance communication skills and promote personality development through teaching learning process.

The Scheme of Lifelong Learning and Extension is monitored through separate Guidelines of UGC from its subsequent five year plans and funds allocations. In the XI five year plan period (2007-2012), as per the guidelines the existing

Departments of all the 80 Universities in India, including eight universities in Maharashtra State is renamed as "Lifelong Learning & Extension". T.C.E.T is one of the colleges that is affiliated to Mumbai University.

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

The development of people is the ultimate goal of Extension education and Field Outreach activities. Providing research-based information, teaching people new knowledge and skills, helping them to improve production or increase income. The methods of Extension education and Field Outreach activities arise from proven principles, and the most effective Extension Educators and Field Outreach activists know and use a variety of teaching methods.

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

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

3.6.2 - Number of awards and recognition received by the Institution, its teachers and students for extension activities from Government / Government-recognised bodies during the year

3

File Description	Documents
Number of awards for extension activities in during the year	View File
e-copy of the award letters	View File
Any additional information	No File Uploaded

3.6.3 - Number of extension and outreach programmes conducted by the institution through NSS/NCC/Red Cross/YRC, etc. during the year (including Government-initiated programmes such as Swachh Bharat, AIDS Awareness, and Gender Sensitization and those organised in collaboration with industry, community and NGOs)

78

File Description	Documents
Reports of the events organized	View File
Any additional information	No File Uploaded

3.6.4 - Number of students participating in extension activities listed in 3.6.3 during the year

295

File Description	Documents
Reports of the events	View File
Any additional information	No File Uploaded

3.7 - Collaboration

3.7.1 - Number of collaborative activities during the year for research/ faculty exchange/ student exchange/ internship/ on-the-job training/ project work

9

File Description	Documents
Copies of documents highlighting collaboration	View File
Any additional information	View File

3.7.2 - Number of functional MoUs with institutions of national and/or international importance, other universities, industries, corporate houses, etc. during the year (only

functional MoUs with ongoing activities to be considered)

11

File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	View File
Details of functional MoUs with institutions of national, international importance, other institutions etc. during the year	View File
Any additional information	No File Uploaded

INFRASTRUCTURE AND LEARNING RESOURCES

4.1 - Physical Facilities

4.1.1 - The Institution has adequate infrastructure and physical facilities for teaching-learning, viz., classrooms, laboratories, computing equipments, etc.

The college has a state-of-the- art infrastructure and the world class educational facilities for engineering education. The outstanding infrastructure created conducive environment and the right academic ambience, key infrastructure includes

- Classrooms :54
- Tutorial rooms:08
- Laboratories/additional workshop:70
- Computer center:02 Language Laboraoty:01
- Central Library:01
- Departmental library:07 Gymkhana:01
- Seminar Hall:06
- Auditorium:01
- Cafeteria:01
- Canteen:01
- Workshop:01
- Drawing Hall:02

Air conditioned Classrooms /Seminar halls are well designed and well equipped with single seater benches. Each classroom has the seating capacity up to 80. Institute has four seminar rooms well equipped with audio-visual, smart boards,

internet, Wi-fi connections .

Laboratories are well equipped with branded equipments, kits, computing facilities, computer based laboratories, internet facilities, Latest Software etc

Virtual lab conduction using different online platform.
(i.e IIT's platforms and Amrita Lab).

Online ICT facilities were added for smooth conduction of lectures / practicals.

Institute has an excellent infrastructure consisting of Local Area Network on which 1200 computers are connected to INTERNET with the BW of 1.1Gbps

ERP with LMS is also deployed for campus management

File Description	Documents
Upload any additional information	View File
Paste link for additional information	Nil

4.1.2 - The institution has adequate facilities for cultural activities, yoga, sports and games (indoor and outdoor) including gymnasium, yoga centre, auditorium etc.)

For recreation during break / vacation, various facilities for indoor sports have been developed in the boys and girl's room, Some of the facilities include: table tennis, carom, chess etc. Multipurpose halls are created to organize viz. Yoga, meditation, motivational lectures, group activities etc.

Adjacent to the college there is a large playground of 3.5 acres suitable for all kinds of sport activities. Sports facilities available in the ground includes: Volleyball, badminton, throw-ball, foot-ball, cricket, kabaddi and many more outdoor events. Thakur Cricket stadium is also use to promote cricket. College is planning to install Military Training structure to train students who are aspiring to join defense services.

File Description	Documents
Geotagged pictures	View File
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

4.1.3 - Number of classrooms and seminar halls with ICT-enabled facilities

50

File Description	Documents
Upload any additional information	No File Uploaded
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	View File

4.1.4 - Expenditure for infrastructure augmentation, excluding salary, during the year (INR in Lakhs)

2229

File Description	Documents
Upload audited utilization statements	No File Uploaded
Details of Expenditure, excluding salary, during the years	View File
Any additional information	No File Uploaded

4.2 - Library as a Learning Resource

4.2.1 - Library is automated using Integrated Library Management System (ILMS)

- Name of the ILMS software—Koha Software ,
- Nature of automation (full or partial)--Partial
- Version—18.11
- Year of automation—2005

Library is an essential part of any educational institution. TCET has very well equipped and rich in books library. It facilitates access of books online and off-line. It has a

circular section, two reading section and a digital reading section. The library has a sufficient number of books, e-books, and e-journals. Students and staff can access books using Knimbus software inside and outside campus.

Learning Resource center (Central Library) has built up area of 840 Sq.m. LRC is highly modular. The library is running for 12 hrs on office working days

•

Text Books:31,270

Reference Books: more than 2712

Book bank facility for students with more than 2630 books

Magazines- More than 82

Added42 new books in the AY2021-22

Department library with average 500 books and 500 project reports

8 E journals Data bases

IEEE-All Society periodicals Package-169 Journals

McGraw Hill-Access Engg/Library-800 e-books

ASME-Mechanical Engineering 27 Journals

Elsevier-Science Direct-275 Journals

ASCE-Civil Engg-35 Journal new

Springer Electrical,Electronics & CMPN-149 Journals

Journal abstract 15743 & Full Text journal 19518

Knimbus Digital Library(E-books 10000)Remotely content access+mobile app

Library Management : 24 PCs and 157 Mbps Internet

Xrox section: Photocopy/Scan/Print facility

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

4.2.2 - Institution has access to the following: e-journals e-ShodhSindhu Shodhganga Membership e-books Databases Remote access to e-resources

A. Any 4 or more of the above

File Description	Documents
Details of subscriptions like e-journals, e-books, e-ShodhSindhu, Shodhganga membership	View File
Upload any additional information	No File Uploaded

4.2.3 - Expenditure on purchase of books/ e-books and subscription to journals/e-journals during the year (INR in lakhs)

28

File Description	Documents
Audited statements of accounts	No File Uploaded
Any additional information	No File Uploaded
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the year (Data Template)	View File

4.2.4 - Usage of library by teachers and students (footfalls and login data for online access)

4.2.4.1 - Number of teachers and students using the library per day during the year

14.8

File Description	Documents
Upload details of library usage by teachers and students	View File
Any additional information	No File Uploaded

4.3 - IT Infrastructure

4.3.1 - Institution has an IT policy covering Wi-Fi, cyber security, etc. and has allocated budget for updating its IT facilities

Open access Wi-Fi for students Airtel

D-Link Router at all staff room and Offices

FortiGate firewall

324 CCTV, 2.8MP equivision HD camera with one month data back up

SSL Certificate for Institute website

Institute has an excellent infrastructure consisting of Local Area Network (LAN) on which on which 1200 computers are connected to internet with the BW of 1.1 Gbps ERP with LMS is also deployed for campus management network infrastructure highlights include :-

High speed servers with 1200 DELL/ HP/ Desktops, Workstation as a windows Linux clients

Microsoft campus agreement licences and high end applications / utility software. Robust campus network configured with Gigabit Sysco backbone switches and optical fibre windows/ Linux server with high speed wifi connectivity

High speed leased line connectivity having 1.1 Gbps bandwidth with integrated RP systems are dedicated 4 Mbps leased line internet connectivity for IIT Bombay Remote centre for Faculty and student development and research programs

Highly secured Network with Fortinet 400 E firewall Symantec antivirus for security through campus agreement

High speed leased line connectivity in all class room and laboratories connected with internet projection facility

Campus surveillance system with 200 high end camera and DVRs with One month backup storage having facility to provide footage to stakeholder on request it has dedicated control room fitted with 4 TV Displays for monitoring of footage

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

4.3.2 - Student - Computer ratio

Number of Students	Number of Computers
3337	1197

File Description	Documents
Upload any additional information	No File Uploaded

4.3.3 - Bandwidth of internet connection in the Institution and the number of students on campus

A. 50 Mbps

File Description	Documents
Details of bandwidth available in the Institution	View File
Upload any additional information	No File Uploaded

4.3.4 - Institution has facilities for e-content development: Facilities available for e-content development Media Centre Audio-Visual Centre Lecture Capturing System (LCS) Mixing equipments and software for editing

B. Any three of the above

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil
List of facilities for e-content development (Data Template)	View File

4.4 - Maintenance of Campus Infrastructure

4.4.1 - Expenditure incurred on maintenance of physical and academic support facilities, excluding salary component, during the year (INR in lakhs)

53

File Description	Documents
Audited statements of accounts	View File
Upload any additional information	No File Uploaded

4.4.2 - There are established systems and procedures for maintaining and utilizing physical, academic and support facilities – classrooms, laboratory, library, sports complex, computers, etc.

Maintenance of resources

a) Equipment and machine maintenance

Some of the critical maintenance work are outsourced as per the outsourcing process defined

in ISO manual. However regular monitoring and control is the responsibility of maintenance

section. During the maintenance if anything is required to be purchased shall be raised through

requisition slip.

i. Records of equipment's are maintained in stock registers as specified in Purchase Process

TCET/IP/05

ii. Equipment's / appliances are serviced periodically or as and when required

iii. Equipment's like measuring devices are checked / calibrated during servicing

iv. Servicing is done either by in-house personnel or by external party or through annual

maintenance contract (AMC)

v. Record of servicing is maintained.

vi. Records of AMC are maintained in AMC Register.

vii. Budget of AMC need to be submitted by December 31st of the ongoing academic year by

Department / Section.

viii. Equipment's that are not in working condition and are not repairable are removed from the

stock.

ix. Machines in Machine Shops are maintained and calibrated by the vendor supplying the

machine.

b) General maintenance:

i. Maintenance of A.C. plant is outsourced on AMC and Auditorium, cleaning and

maintenance is done by internal staff member and one person from outside.

ii. Cleanliness & daily maintenance of the interior facility (classrooms, laboratories, hallway,

and staircase) is done by Class IV employees of the Institute under the supervision of the

Admin Office and surprise check is done by Executive Compliance Officer.

iii. Cleanliness of toilet blocks and wash room have been outsourced since AY 2013-14.

iv. Fire extinguisher is outsourced since refilling of the cylinder is done once in a year.

v. Maintenance of CCTV is outsourced and is maintained in coordination through technical

person of computer center

vi. ICT infrastructure is maintained by computer centre personnel.

vii. Cleaning work is done by floor peon. Other maintenance related issues are attended by

carpenter and electrician of the institute subject to the complaint put in complaint register.

viii. Water tank cleaning is done quarterly and the AMC is outsourced

Self-Study Report - NAAC ZCT's Thakur College of Engineering and Technology - Mumbai

138 Criterion - 4: Infrastructure and Learning Resources

ix. Carpentry, plumbing and clerical maintenance is done by the in-house carpenter, plumber

and electrician respectively.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

STUDENT SUPPORT AND PROGRESSION

5.1 - Student Support

5.1.1 - Number of students benefitted by scholarships and freeships provided by the Government during the year

1108	
File Description	Documents
Upload self-attested letters with the list of students receiving scholarships	View File
Upload any additional information	View File
5.1.2 - Number of students benefitted by scholarships and freeships provided by the institution and non-government agencies during the year	
10	
File Description	Documents
Upload any additional information	View File
Institutional data in prescribed format	View File
5.1.3 - The following Capacity Development and Skill Enhancement activities are organised for improving students' capabilities Soft Skills Language and Communication Skills Life Skills (Yoga, Physical fitness, Health and Hygiene) Awareness of Trends in Technology	A. All of the above
File Description	Documents
Link to Institutional website	Nil
Details of capability development and schemes	View File
Any additional information	View File
5.1.4 - Number of students benefitted from guidance/coaching for competitive examinations and career counselling offered by the institution during the year	
539	

File Description	Documents
Any additional information	View File
Number of students benefited by guidance for competitive examinations and career counseling during the year (Data Template)	View File

5.1.5 - The institution adopts the following mechanism for redressal of students' grievances, including sexual harassment and ragging: Implementation of guidelines of statutory/regulatory bodies Creating awareness and implementation of policies with zero tolerance Mechanism for submission of online/offline students' grievances Timely redressal of grievances through appropriate committees	A. All of the above
---	----------------------------

File Description	Documents
Minutes of the meetings of students' grievance redressal committee, prevention of sexual harassment committee and Anti-ragging committee	No File Uploaded
Details of student grievances including sexual harassment and ragging cases	No File Uploaded
Upload any additional information	No File Uploaded

5.2 - Student Progression

5.2.1 - Number of outgoing students who got placement during the year

421

File Description	Documents
Self-attested list of students placed	View File
Upload any additional information	View File

5.2.2 - Number of outgoing students progressing to higher education

272

File Description	Documents
Upload supporting data for students/alumni	View File
Details of students who went for higher education	View File
Any additional information	No File Uploaded

5.2.3 - Number of students qualifying in state/ national/ international level examinations during the year

5.2.3.1 - Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/ TOEFL/Civil Services/State government examinations) during the year

130

File Description	Documents
Upload supporting data for students/alumni	View File
Any additional information	View File

5.3 - Student Participation and Activities

5.3.1 - Number of awards/medals for outstanding performance in sports and/or cultural activities at inter-university / state /national / international events (award for a team event should be counted as one) during the year

7

File Description	Documents
e-copies of award letters and certificates	View File
Any additional information	View File

5.3.2 - Presence of an active Student Council and representation of students in academic and administrative bodies/committees of the institution

BE Farewell was conducted on 8th August 2021 in online mode through Zoom platform.

There were 117 participants in BE Farewell function. The program started with the formal introduction of the teachers

and students as well as student representatives from the college. Followed by the introduction were live performances by the current students of the college. Next, online games were conducted for the BE students followed by the distribution of awards for the same.

The following staff members were involved in the organisation of the event:

1. Mrs. Poorva Waingankar (ELEX Dept)
2. Dr. Manish Rana (COMP Dept)
3. Mr. Vikas Singh (COMP Dept)
4. Mr. Vaibhav Gijare (ELEX Dept)

Following student representatives were involved in the execution of the event:

1. Dheeraj Jain
1. Janhavi Shetty
2. Jayesh Dave
3. Namit Singh
4. Soniya Kadam
5. Khushi Dubey

Teacher's Day celebration was conducted on 7th September 2021 through online Zoom platform.

The event began with the formal introduction of the dignitaries. Followed by the introduction, drama was performed on the online platform. Housie game was conducted online for the teachers. Music performances were done as the last event of the celebration. Total number of teachers attending were 73 and 50 students attended the function.

Following faculty members were involved in the organisation of the function:

- 1) Mrs. Poorva Waingankar (ELEX Dept)
- 2) Dr. Manish Rana (COMP Dept)

- 3) **Mr. Vikas Singh (COMP Dept)**
- 4) **Mr. Vaibhav Gijare (ELEX Dept)**

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

5.3.3 - Number of sports and cultural events / competitions organised by the institution

24

File Description	Documents
Report of the event	No File Uploaded
List of sports and cultural events / competitions organised per year	View File
Upload any additional information	No File Uploaded

5.4 - Alumni Engagement

5.4.1 - The Alumni Association and its Chapters (registered and functional) contribute significantly to the development of the institution through financial and other support services

Yes, the institute has its Alumni Association registered in September 2017. Alumni meets are conducted from 2011 which are supported by the institute. Also, from 2018, the association has started with Alumni Award for Alumni with outstanding contribution in his/her field.

Alumni of the institute also contribute towards development of the institute.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

5.4.2 - Alumni's financial contribution | **C. 5 Lakhs - 10 Lakhs**

during the year	
------------------------	--

File Description	Documents
Upload any additional information	No File Uploaded

GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 - Institutional Vision and Leadership

6.1.1 - The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the Institution

The governance body of TCET keeps the prime focus is on the vision and mission of the institute, which is as stated below:

VISION

Thakur College of Engineering and Technology will excel in Technical Education to become an internationally renowned premier Institute of Engineering and Technology.

MISSION

To provide state-of-the-art infrastructure and right academic ambience for developing professional skills as well as an environment for growth of leadership and managerial skills to students which will make them competent engineers to deliver quality results in industry.

The following strategic characteristics and aspirations enable the College to realize its vision:

- Modern and precise educational experiences that develop the engineers.
- An atmosphere that facilitates personal commitment to the educational success of students in an environment that

values multiplicity and society

- Education and research partnerships with Universities, colleges and industries.
- Highly successful alumni who contribute to the profession in the global society
- Undergraduate, post graduate and PhD programs that integrate global awareness, communication skills and team building across the curriculum
- Practical and responsible resource management.
- Training that prepares students for interdisciplinary engineering research and advanced problem solving
- Leadership and service to meet society needs.

Formulation of action plans and defining the policy objectives attempts to address the issues of systematic change to provide quality education. Creating robust principles, frameworks, systems and processes the institution intends to reinforce the culture of excellence.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

6.1.2 - Effective leadership is reflected in various institutional practices such as decentralization and participative management

The institution practises decentralization and participatory management in keeping with its belief in collective leadership and democratic traditions. A particular reflection of this practice may be seen in the extensive delegation of authority to the Heads of the various Departments in the college.

The Ways in which Heads of Departments participate in the Management Process:

- The Head of the Department oversees the Teaching Plans of his/her departmental members.
- He/she is empowered to make adjustments in the routine, and to allot teaching assignments and evaluation duties.
- He/she enjoys the privilege of convening departmental meetings where the programmes for the entire term are decided.
- He/she often takes the lead in planning seminars, workshops, career counselling sessions, remedial measures, inter- departmental or/and inter-college exercises, departmental excursions and study tours.
- He/she is at liberty to introduce creative and innovative measures for the benefit of his/her students.
- Heads of Departments plan, prepare and publish the departmental magazine or working paper in consultation with his/her departmental colleagues.
- He/she organizes and conducts the Parent-Teacher meetings in which the academic progress of the students is communicated to their guardians.
- He/she, in consultation with his/her department oversees the paper-setting, moderation, evaluation, and marks submission of all internal examinations of the department.
- He/she decides on the nature, pattern and duration of special and remedial classes for the students of his/her department.
- The Head, in consultation with his/her departmental teachers enjoys total flexibility in planning and organizing seminars for students.
- Through their adept handling of their departments Heads discharge their function as nodal agents of the academic and administrative processes in the college thereby contributing to the health and vibrancy of the management mechanisms in the college.

The above enumeration of features comprising participatory

management points fairly conclusively to the ethics of decentralization which is integral to the institution and informs its functioning at every level.

File Description	Documents
Upload strategic plan and deployment documents on the website	View File
Upload any additional information	View File
Paste link for additional Information	Nil

6.2 - Strategy Development and Deployment

6.2.1 - The institutional Strategic/ Perspective plan has been clearly articulated and implemented

- Curriculum Development
- Teaching and Learning
- Examination and Evaluation
- Research and Development
- Library, ICT and Physical Infrastructure / Instrumentation
- Human Resource Management
- Industry Interaction / Collaboration
- Admission of Students
- 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. The concepts of Design-based experiments and mini projects for most of the courses have been introduced at the Institute level. Students are encouraged to take online courses

such as NPTEL, Coursera, etc. for which the institute's 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 the University level.

- Teaching and Learning
- Faculty members plan the academic conduct as per the syllabus, detailing and developing resource book and course file, designing practice sessions, assignments, and experiments, IAT paper, and effective conduct of the academics.
- All lectures and practical classes are to be conducted as per the plan and are reviewed time to time to improve the efficiency and effectiveness of teaching learning during the semester. The latest available teaching methods and various modes of learning are also adopted by the faculty members during the pandemic. Various digital platforms viz. Zoom, Google Classroom, Flipped Classroom concept, etc. were used for content delivery, and the recordings of lectures provided to the students.
- The TLP is monitored at 3 levels: Faculty, HOD and leadership mentors.
- Examination and Evaluation (Online Evaluation in Even Semester)

The Examination Committee is formed to ensure smooth conduct of the examinations. 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, the University conducts the semester-end examination as well as the A.T.K.T. students. Examinations are mainly for Term Work, Practical, Oral, Project viva-voce, and Theory.

Institute communicates the results on the internet through Institute website. After announcement of the results, students can request for reevaluation of the semester-end theory examination answer scripts 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 the COVID-19 pandemic, the examinations for all students were conducted in online mode (as per UGC guidelines) and results were declared on time. Online ESE examination for FE to BE was conducted and results were declared within the timeframe without impacting on the academic year of the students.

- Research and Development

Areas of domain specific research in various programmes 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. 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 additional staff for circulation of books during peak period.
- Providing additional reading rooms during examinations.
- Motivating students to utilize library services via orientation programmes.
- Availability of library services also on non-working Saturdays during examination
- Remote access facility made available through mobile app Nimbus.
- 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 of TCET. The Governing Body comprises of: i) two members of the Management (Correspondent and Secretary), ii) one nominee of State Government, iii) one nominee of University of Mumbai, iv) one nominee of the UGC, v) Principal of TCET, vi) Director, Trustee, vii) two external members (as educationists), and viii) two senior professors of TCET.

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 sent for various types of training programme and workshops for enhancing their competence. Works are distributed as per qualifications and experience of the staff member.

- Industry Interaction / Collaboration (International Evaluator for Project Examination from Industry and Academia)

Training & Placement (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 also an in-house internship facility created for the students. Owing to COVID-19 pandemic, the internship programme is conducted in online mode. Also, experts from industry and academia were invited for project evaluation. T&P Cell organized a four weeks webinar series in which national-level as well as international-level experts from industry/ academia 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
- Maximizing publicity and brand building of the institute through various awards and recognitions.
- Extending courtesy to interested candidates seeking information related to admission.
- Prompt enquiry handling through adequate number of admission counters and helpdesks.
- Spreading awareness through outreach programmes to attract potential students.
- Publication of Informative Brochure and one page handout of brochure
- Website regularly updated with latest information related to admission.
- Timely compliance is met of various norms issued by statutory and regulatory bodies.

File Description	Documents
Strategic Plan and deployment documents on the website	View File
Paste link for additional information	Nil
Upload any additional information	View File

6.2.2 - The functioning of the various institutional bodies is effective and efficient as visible from the policies, administrative set-up, appointment and service rules, procedures, etc.

- TCET's organizational and governance structure comprises of three levels: strategic, operational, and advisory. At the strategic level, there is the Trust consisting of the CEO Board of Trustees & Trustee In-charge. 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 senior leadership team. At the advisory level are the Governing Council, and an Advisory Committee formed as per the AICTE/ UOM/ DTE guidelines. These two committees review the Institute's performance and recommend additional programs, changes required in the institutional functioning (academic and research environment,) student and faculty development (personal, professional and social), outreach and advocacy programmes to sustain institutional growth, students and staff welfare 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 organogram shows functioning of various levels.

File Description	Documents
Paste link to Organogram on the institution webpage	https://thakureducation-my.sharepoint.com/:b:/g/personal/tcet_igac_thakureducation_org/Ebq_03Hxls5PkkH2z3HNU8wBZ-YWlOYhdAMsC-7_oP3_pQ?e=GiR5rh
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

6.2.3 - Implementation of e-governance in areas of operation: Administration Finance and Accounts Student Admission and Support Examination

A. All of the above

File Description	Documents
ERP (Enterprise Resource Planning) Documen	View File
Screen shots of user interfaces	View File
Details of implementation of e-governance in areas of operation	View File
Any additional information	View File

6.3 - Faculty Empowerment Strategies

6.3.1 - The institution has effective welfare measures for teaching and non-teaching staff and avenues for their career development/ progression

For welfare of Faculty and staff, TCET has Mediclaim policy, Credit Society, through which personal loans can be taken by staff /Faculty. Every three years medical camps are organised.

For career progression, Faculty Development Programs (FDP) conducted at TCET are either Self-Financed, sponsored by approving authorities like AICTE, / ISTE or Training Programs offered by IIT's conducted at TCET (Remote Center). FDP's have proven to be beneficial to the Faculty members as well as the students. During these FDP's there is a high level of exchange of ideas. During the Pandemic, Online FDP was

conducted based on the theme of "Creating Digital Content for Effective Online Academic Delivery" in which many Online Tools were discussed & have been used by the faculty members during the Semester to conduct lectures, evaluate & improve the interaction among the students. They have also developed structured and guided learning resource (E-content) for conduction of lectures (PPTs, Videos, Quizzes and design of experiments using Virtual Lab). Also faculty members are encouraged to pursue higher studies while in job.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

6.3.2 - Number of teachers provided with financial support to attend conferences / workshops and towards payment of membership fee of professional bodies during the year

14

File Description	Documents
Upload any additional information	No File Uploaded
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	View File

6.3.3 - Number of professional development / administrative training programmes organized by the Institution for its teaching and non-teaching staff during the year

19

File Description	Documents
Reports of the Human Resource Development Centres (UGC HRDC/ASC or other relevant centres)	View File
Upload any additional information	No File Uploaded

6.3.4 - Number of teachers who have undergone online/ face-to-face Faculty Development Programmes during the year: (Professional Development Programmes, Orientation / Induction Programmes, Refresher Courses, Short-Term Course, etc.)

143

File Description	Documents
Summary of the IQAC report	View File
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	No File Uploaded
Upload any additional information	No File Uploaded

6.4 - Financial Management and Resource Mobilization

6.4.1 - Institution conducts internal and external financial audits regularly

The institute conducts Internal Financial Audits regularly. The Institute also deems it necessary to conduct external financial audits. External Statutory Auditors are appointed for the purpose.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

6.4.2 - Funds / Grants received from non-government bodies, individuals, and philanthropists during the year (not covered in Criterion III and V) (INR in lakhs)

721475

File Description	Documents
Annual statements of accounts	No File Uploaded
Details of funds / grants received from non-government bodies, individuals, philanthropists during the year	View File
Any additional information	No File Uploaded

6.4.3 - Institutional strategies for mobilisation of funds and the optimal utilisation of resources

The institute has a well structured fund management system. The strategies include, Determining the budget for the conduct of the academic year before the start of the academic year, To detect and rectify any misstatements as early as possible and to increase transparency and to query handling promptly. The main sources of finance comes from Trust Funds and Fees collection. The Budget is prepared and approved. Further the budget is allocated to all departments for resource utilization. The resources are classified as Finance resources, Human resources and infrastructure resources. It is optimally utilization in coherence with the current needs and requirements. Resources are utilized interdepartment also.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing quality assurance strategies and processes visible in terms of incremental improvements made during the preceding year with regard to quality (in case of the First Cycle): Incremental improvements made during the preceding year with regard to quality and post-accreditation quality initiatives (Second and subsequent cycles)

1. Successfully implemented Autonomy for all years (graded autonomy).
2. More focus on Skill development of students via Holistic Student Development scheme by incorporating Activity Based Learning (ABL)/Project Based Learning(PBL) in curriculum.
3. Intensify Industry Institute Interaction through various programmes.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

6.5.2 - The institution reviews its teaching-learning process, structures and methodologies of operation and learning outcomes at periodic intervals through its IQAC as per norms

Monthly quality assurance report is submitted to the Principal's office that highlights department performance in various academic pointers ,which is then consolidated at institute level across all departments. Semester preparedness check is done at the start of the semester to ascertain whether the teaching-learning process is in place or not. Quarterly IQAC meetings are conducted in which few of the industry representatives are also a part of committee, whose suggestions are taken into consideration while improving the structure, methodology of the existing institute operations.

Best practices, semester planning etc are taken from all departments and compliance is checked at every quarter. The suggestions given by external committee members are forwarded to departments.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	Nil

6.5.3 - Quality assurance initiatives of the institution include Regular meeting of the IQAC Feedback collected, analysed and used for improvement of the institution Collaborative quality initiatives with other institution(s) Participation in NIRF Any other quality audit recognized by state, national or international agencies (such as ISO Certification)

A. Any 4 or all of the above

File Description	Documents
Paste the web link of annual reports of the Institution	Nil
Upload e-copies of accreditations and certification	View File
Upload details of quality assurance initiatives of the institution	View File
Upload any additional information	No File Uploaded

INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 - Institutional Values and Social Responsibilities

7.1.1 - Measures initiated by the Institution for the promotion of gender equity during the year

We, at Thakur College of Engineering and Technology, strive to make our campus safe, inclusive and female-friendly, so we provide top-notch facilities for women on our campus. To start with, security is the main concern these days, so all the floors in our college are well-equipped with high class video surveillance and are also distributed with floor peons. Any female employee or student who has complaints/suggestions can go to the grievance cell, which is functional for the whole day. The women's washroom has an automatic sanitary napkin dispenser that can be used by women by inserting a small amount of money into the machine. They also have changing rooms. Gym and common room for girls are also available in the campus. There also girl representative in every department for smooth functioning. Webinars and seminars are also organized to disseminate information on girl's safety and hygiene for women on campus. Tcet Retractable organized "Hour to Empower" for promotion of gender equity.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional Information	Nil

7.1.2 - The Institution has facilities for

D. Any 1of the above

alternate sources of energy and energy conservation: Solar energy Biogas plant Wheeling to the Grid Sensor-based energy conservation Use of LED bulbs/ power-efficient equipment

File Description	Documents
Geotagged Photographs	View File
Any other relevant information	View File

7.1.3 - Describe the facilities in the institution for the management of the following types of degradable and non-degradable waste (within a maximum of 200 words)

In Solid Waste management system dry waste are placed in GREEN labelled and transported to BMC. Such bins are kept in front of the canteen, beside the food stalls in the campus and other prominent places. Recyclable materials are placed in separate bins. Wet waste are placed in BLUE labelled bins.

For E-waste Management System Unusable, irreparable or redundant IT and Electronics equipment are identified by the respective Laboratory In-charge and are declared as obsolete. Depending upon the nature, intensity of usage, maintenance cost, serviceability, obsolescence in terms of technology, up-gradation

of technology etc., the related items are classified by the Lab In-charges

with the help of Lab Assistant for the purpose of disposal of these

Items. 6-S designed to enhance effectiveness and efficiency of Laboratories.

1S - SORT (Organization) : Take out unwanted items

2S- SET IN ORDER (Orderliness) : A place for everything and everything in its place

3S- SHINE (Cleanliness) :The area is cleaned at the work is performed

4S- STANDERDISE (Standardized Clean-up) : Maintain a high

standard of housekeeping

5S-SUSTAIN (Sustaining the discipline): It is a habit and continually improved.

6S-Safety (Accident Prevention): Maintain safe work environment

File Description	Documents
Relevant documents like agreements/MoUs with Government and other approved agencies	No File Uploaded
Geotagged photographs of the facilities	View File
Any other relevant information	No File Uploaded

7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus

D. Any 1 of the above

File Description	Documents
Geotagged photographs / videos of the facilities	View File
Any other relevant information	No File Uploaded

7.1.5 - Green campus initiatives include

7.1.5.1 - The institutional initiatives for greening the campus are as follows:

- 1. Restricted entry of automobiles**
- 2. Use of bicycles/ Battery-powered vehicles**
- 3. Pedestrian-friendly pathways**
- 4. Ban on use of plastic**
- 5. Landscaping**

C. Any 2 of the above

File Description	Documents
Geotagged photos / videos of the facilities	View File
Various policy documents / decisions circulated for implementation	No File Uploaded
Any other relevant documents	No File Uploaded

7.1.6 - Quality audits on environment and energy undertaken by the institution

<p>7.1.6.1 - The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:</p> <ol style="list-style-type: none"> 1. Green audit 2. Energy audit 3.Environment audit 4. Clean and green campus recognitions/awards 5.Beyond the campus environmental promotional activities 	<p>D. Any 1 of the above</p>
--	-------------------------------------

File Description	Documents
Reports on environment and energy audits submitted by the auditing agency	No File Uploaded
Certification by the auditing agency	No File Uploaded
Certificates of the awards received	No File Uploaded
Any other relevant information	View File

<p>7.1.7 - The Institution has a disabled-friendly and barrier-free environment: Ramps/lifts for easy access to classrooms and centres Disabled-friendly washrooms Signage including tactile path lights, display boards and signposts Assistive technology and facilities for persons with disabilities: accessible website, screen-reading software, mechanized equipment,</p>	<p>C. Any 2 of the above</p>
---	-------------------------------------

etc. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading materials, screen reading, etc.

File Description	Documents
Geotagged photographs / videos of facilities	View File
Policy documents and brochures on the support to be provided	No File Uploaded
Details of the software procured for providing assistance	No File Uploaded
Any other relevant information	No File Uploaded

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e. tolerance and harmony towards cultural, regional, linguistic, communal, socio-economic and other diversities (within a maximum of 200 words).

"Education is the most powerful weapon that you can use to change the world", hence, the Extension Work Team of TCET is working toward providing Basic Education & One-to-one Counselling Sessions for underprivileged kids with the motto - "Reach to Unreached". There are certain students who come from poor socio-economic backgrounds & can't afford tuition or even basic education. Therefore, we offer Online Education on all subjects and Tutoring Session to such students, ranging from grade 1 to grade 10. In addition to that, webinars and seminars on a variety of topics are taken, including Cleanliness, Personal Hygiene, and much more, to provide personal awareness and development. Linguistic differences are resolved by learning the language our students understand best, in our case, the preferred language is Marathi. Basic Online Education is offered by creating study material for the students in the form of PPTs on all the subjects. Whereas, One-to-one Counselling Sessions for students who have failed, in 9th or 10th grade, are done by taking up subjects in which they require assistance. Interesting and fun learning sessions are conducted by also creating PPTs. Hence, TCET-EWT strives to provide basic education & holistic development for the students

File Description	Documents
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View File

7.1.9 - Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens:

Universal Human Values FDP program for the academic Year 2020-21(odd semester) offered by AICTE, was attended by all faculty members. The head of institute addressed the teaching/non-teaching staff on values, rights, duties and responsibilities of citizens by conducting meetings. The Student Induction Program (SIP) was conducted for First year students as per the AICTE guidelines. It is designed to orient F.E./F.T. students about the facilities and infrastructure of their core department, student interaction Proficiency Module, professional-social body activities, Holistic-Multidisciplinary Education (HME), Professional Skills, Activity Based Learning, Proficiency module (Soft Skills), Student centric teaching learning process, evaluation & assessment system, course objective/outcome, learning objective/outcome, ERP. Also enlighten few implemented modules like Universal Human Values, Debate/Public speaking, Creative Arts, Physical Health and related activities (Yoga & fitness), Professional Bodies, and Student Forum through Portfolio building, which will encourage them to participate for overall development. The introduction of Universal Human Values to the students is to make them understand the importance of Family in life, the difference between Body and Self, happiness and Prosperity. Also, to comprehend the real meaning Harmony in family/ society. This helps to improve the mental attitude, confidence, coordination & rapport among the students.

File Description	Documents
Details of activities that inculcate values necessary to transform students into responsible citizens	View File
Any other relevant information	No File Uploaded

<p>7.1.10 - The institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic sensitization programmes in this regard: The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff Annual awareness programmes on the Code of Conduct are organized</p>	<p>D. Any 1 of the above</p>
---	-------------------------------------

File Description	Documents
Code of Ethics - policy document	View File
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programmes, etc. in support of the claims	No File Uploaded
Any other relevant information	View File

7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

TCET, along with the academic performances, understands the importance of co- and extra-curricular activities that help students' holistic development. Celebrating various days throughout the year builds a sense of community. Through Marathi Bhasha Diwas (27th February), we celebrated our unity in diversity. On Teachers Day (5th September), the birth anniversary of Dr. Sarvapalli Radhakrishanna, the College celebrates by acknowledging the efforts of all the students to provide life-long learning. Engineers day (15th September) holds the most special place in the heart of TCET, where students aim to demonstrate innovation and technology via an exhibition. Lady Representative of our College every year takes the mantle of celebrating International Women's Day (8th March) to appreciate all the incredible budding women in

tech and the women who make all this possible. Promoting fitness through Yoga has been an integral part of our Indian culture. Every year on International Yoga day (21st June), all students and staff start the morning doing Yoga together. Last but not least, celebrating the most important day of India, the independence day (15th August) entire Thakur family (Thakur education group) comes together to celebrate the Azadi and remember the sacrifices of all our brave martyrs.

File Description	Documents
Annual report of the celebrations and commemorative events for during the year	View File
Geotagged photographs of some of the events	View File
Any other relevant information	No File Uploaded

7.2 - Best Practices

7.2.1 - Provide the weblink on the Institutional website regarding the Best practices as per the prescribed format of NAAC

Best Practices The Innovation and Entrepreneurship Development Centre

1. The Innovation and Entrepreneurship Development Centre (IEDC)

- Inculcating entrepreneurial Mindset in Engineering students for Atmanirbhar Bharat.

2. Objectives of the Practice

- To direct the energy and the knowledge of the youth towards the purpose of being active partners in the economic development process.
- To promote and catalyze the development of innovation-driven and knowledge-based enterprises and to promote the employment opportunities among the youth mainly,

students.

- To inculcate a culture that embraces innovation-driven entrepreneurship.
- To be an institutional mechanism to provide various services that includes information on every aspect of enterprise building to budding Science and Technology entrepreneurs.

3. The Context

- To develop a congenial environment for young researchers and entrepreneurs.

4. The Practice

- Increase awareness about entrepreneurial mindset through sharing of experiences of alumni start ups
- Structured process for Entrepreneurship development
- Collaboration with various Mentors and active organizations in this field
- Dedicated human resource and premises for E Cell activities for better visibility
- Support student's innovative ideas through seed funding

5. Evidence of Success

- A total fund of Rs. 43.5 Lakhs utilised for IEDC projects
- Total of 25 projects rolled out
- Total number of students benefitted is more than 100
- Total products developed is 11 and total patents filed is 3.
- Total product commercialization is 3
- Campus companies are 9 and Startups are 16
- Total employment generation for 170 plus

6. Problems Encountered and Resources Required

- Technology transfer to the market is a major problem for the products developed under IEDC
- Fund restriction for specialised maker labs
- Time restriction due to man power availability for 24 hours
- Faculty members are more trained on technology then on entrepreneurial aspect so that project to product journey takes lots of time.
- Immediate conversion of students to entrepreneurs
- Availability of seed funding for supporting start-ups in initial phase
- Components required for experimentation are provided to the students through component library facility
- Dedicated incubation centre and R&D lab provided to the students to conduct the research and development work.

7. Notes (Optional)

- Due to dedicated activities and involvement of student's awareness is spread at institute level.
- Students won first prize in E WEEK organized by NEN at National level in 2014.
- As students interacted directly with their alumni they found Entrepreneurship as blooming carrier from new perspective
- 10% out of total Students identified in Second year showed interested in starting their own company at the end of final year
- Till 2020 there are more than 35 Mentors and advisors empaneled under E cell.
- From 2016 onwards 25 prototypes are developed under IEDC by students.
- Component library having hardware components worth 35 lacs is developed.
- Trained teachers started guiding students for product development rather than project development.
- Three products developed by students is commercialized by institute

1. E Cycle
2. Cost effective Education System
3. Project Portal on cloud

Best Practice: Quality Enhancement in Campus Placement

1. Title of the Practice: Quality Enhancement in Campus Placement

1. Objectives of the Practice

Campus placement is a crucial factor these days in most of the engineering institutions. All the stakeholders consider the placement as an essential factor in judging the quality of the institution. Therefore, it is required to identify the challenges faced to have quality campus placement, they are as follows:

- Offering less average & maximum salary package for placement.
- Visiting less number of companies for campus placement.
- Lack of aptitude & attitude skills of students.
- Less placement opportunities in product and dream companies.
- Not meeting eligibility criteria of company by students due to live ATKTs.

In an attempt to address above issues and challenges, novel steps were taken by Thakur College of Engineering and technology (TCET) to enhance the quality campus placement with the following objectives:

- To become one of the preferred recruitment destinations
- To progress continually and sustain the performance of students in placement
- To increase average & maximum salary package offered by companies
- To increase the number of companies visiting for campus placement
- To provide high salary package opportunities to deserving candidates
- To make commendable steps to find out solutions
- To prioritize solution areas
- To execute solutions in a planned manner

1. The Context

India Skill Report 2021 conducted by Confederation of Indian Industry (CII) and Wheebox. The report says that 46.80% students are employable. Therefore, it is difficult for engineering graduates to get employed without professional experience immediately after their studies. Hence, campus placement plays a vital role for getting employed. Campus Recruitment or Campus Placement is the most popular method for selecting candidates from an Institute where various organizations visit to the college (campuses) to recruit bright talent. Students, who are keen on beginning their professional career as soon as they finish studies, find the opportunity knocking at their doors.

As per All India Council for Technical Education (AICTE), 43.08% got the placed through the campus placement. Also, in recent years, providing campus placement to successful students is considered as institutional obligation and institutions are ranked based on number of successful job placement provided. The success of the institute is measured in terms of the number of multinational companies participating in the placement process, the salary package offered and the number of students getting placed.

The Training and Placement Cell is always at forefront to understand the emerging industry requirements and meet those by providing training to students in the required disciplines. For that, T&P Cell has initiated various platforms for all stakeholders to ensure the mutual benefits. The T&P Cell initiated the following interactions with outside world and ensured to develop a training model by taking the inputs from these interactions:

1. Industry Institute Symposium: Industry Institute Symposium is initiated by inviting all stakeholders from industry, PSUs and academia on a platform to identify the training needs and career opportunities for Engineering Graduates in public, private and multinational organizations. It helped to provide a common platform for healthy interactions and new learning with positive outcomes, and ensure lifelong learning for all stakeholders. This also helped in strengthening the relationship among all the stakeholders through their active engagement and involvement, which ensured the institute to understand

industry needs to inculcate among graduates.

2. Corporate feedback: Initiative of Corporate feedback about placed students from HRs of various organizations is taken to understand the areas of improvement and skill gaps. It also helped to understand the performance of the students and their adoption with the work culture. The format of the feedback form is as follows:

Sr. No.

Parameters

1

Subject Knowledge

2

Practical use of Knowledge and skills

3

Knowledge sharing approach

4

In-time completion of assignments

5

Team spirit

6

Initiative

7

Eagerness to learn new things

8

Communication skills

9

Discipline and etiquette

10

Adoption of work culture

11

Commitment to allotted work

Student feedbacks are obtained on the above said parameters in the scale of 4 to 10. Analysis is carried out and is considered as an input for further enhancement of training. TCET strives hard to ensure students who have received the offers will join the organization. This helped to increase conversion rate and created faith in TCET. It helped to become the first recruitment destination for organizations. The institute has devised a mechanism through which we get their consent for placement in advance.

1. Alumni Meet: It is important for an institution to have Alumni connect. Looking into it, TCET has established Alumni Association and started connect program. This gives an opportunity to pass out students to interact with their junior fellow colleagues and guide them for better future. Alumni have been involved in the training and other programs, so that they can be associated with the institute for lifelong learning.

1. The Practice

Training Program for engineering students is the ongoing activity that is designed to provide students with the knowledge and skills needed for their jobs. Formal training acts as a stepping stone and paves the path for bright future. It helps students for acquiring appropriate knowledge

and skills necessary for future employment. It plays an instrumental role in improving one's communication and managerial skills so that he/ she can develop confidence and get jobs. Training model as shown in following figure is implemented to develop the attitude and aptitude skills of students.

The students studying in TCET are encouraged by T&P Cell to take up training programs. There are various training programs at TCET and each training program has a specific goal to improve attitude, aptitude and technical skills. Student Development Program (SDP), Pre-Placement Training Program (PPT), Corporate Training (CT), Infosys InfyTQ Program, Employability Skill Development Program (ESD) and Internship Training Program are the important training programs to develop students' overall personality. Moreover, mock activities are also conducted to give them the feel of campus placement process.

1. Evidence of Success

By using various tools and initiatives, it is observed that there is an increase in the placement of the students. The same is highlighted in the figure below.

There is also an increase in the salary offered to the students over a period. This is one of the parameters considered as one of the issues. It is addressed by devising the effective training and continuous monitoring and control.

***Placement in process**

Institutes are very much keen to have quality campus placement which includes placements with high salary package, more number of offers from product & dream companies and international placement.

a. Achieved Benefits

- Achieved placement of 85% students eligible for placement
- Increased maximum & average salary package for students
- Ensuring students getting placement opportunities after their graduation
- Increase in number of companies visited for campus placement

b. Tangible Benefits

- Achieved quality placement of interested students
- Providing placement opportunities after graduation
- Increased maximum and average salary package for students

***Placement in process**

c. Intangible Benefits

- Corporate Feedback about institute
- Corporate feedback about student
- Trainers' feedback about students

1. Problems Encountered and Resources Required

The following were certain problems and challenges that were encountered while enhancing quality in placement.

- Various training programmes are required to be identified as per industry requirements such as enhancing aptitude skills, soft skills, technical skills, etc.
- The training programs help to strengthen the skill sets and thereby enhance the opportunities for placement.
- Dedicated team of trainers is required to ensure timely support to students.
- Sufficient amount of time shall be required for training programmes.
- There is a need to enhance the industry interactions for being at par with industry expectations.

1. Notes (Optional)

The TCET's Training and Placement Cell always strives to compete with itself to provide better and quality placement results compared to previous year. The Cell also ensures to involve all its stakeholders in gaining the essential quality placement using new initiatives. It is because TCET believes in a student-centric, faculty-driven approach and in design & development, and invention & innovation to produce Globally Competent & Locally Relevant engineering professionals with rich values and ethics.

File Description	Documents
Best practices in the Institutional website	https://www.tcetmumbai.in/Best%20Practice.html
Any other relevant information	Nil

7.3 - Institutional Distinctiveness

7.3.1 - Highlight the performance of the institution in an area distinct to its priority and thrust (within a maximum of 200 words)

Thakur College of Engineering Technology (TCET) was established in the A.Y. 2001-02 with objective of providing quality technical education in tune with international standards and contemporary global requirements. TCET is recognized by All India Council for Technical Education (AICTE) Govt. of Maharashtra and was affiliated to the University of Mumbai (UOM). TCET has attained autonomous status for 10 years w.e.f. July 2019 and adopted Choice Based Credit Grading Scheme with Holistic and Multidisciplinary Education (CBCGS-HME 2020) in the process of curriculum development. In the 20 years of its existence, TCET is one of the leading engineering Colleges in Maharashtra. TCET is ISO 9001:2015 certified since 2017. TCET is a member of National Entrepreneurship Network (NEN) and Confederation of Indian Industry (CII). Along with the academic achievements, the institute provides the platforms for co-curricular and extra-curricular activities which help in the holistic development of students. Student-led clubs, social, cultural, sports activities conducted to inculcate social, moral, ethical and universal values which help them for all round development. TCE has well established T&P cell, HOC cell and R&D cell for students support and their carrier advancement. TCET has Key initiatives like teacher-guardian scheme, book bank scheme and introduction of resource books.

File Description	Documents
Appropriate link in the institutional website	Nil
Any other relevant information	No File Uploaded

7.3.2 - Plan of action for the next academic year

Thakur College of Engineering Technology (TCET) is offering the best technical education to aspiring students through the System-Driven-Student-Centric approach. Since last decade, it focuses on education leading to holistic student development as per international graduate attributes. The University Grants Commission (UGC) has conferred "Autonomous Status" for 10 years under the revised UGC graded Autonomy Scheme 2018. TCET has strengthen its program offerings through Program Specific curricula with focus on research in latest technology, Industry curricula through an Employability Enhancement Scheme and Personality Development model through its Holistic Development Scheme. As per the AICTE Model

Curriculum and UGC, the Choice Based Credit Grading Scheme with Holistic and Multidisciplinary Education (CBCGS-HME 2020) includes Scholastic, Co-Scholastic and Non-scholastic Credits. Also credits for specialization offered by the department through MOOC courses and achiever credits for extraordinary achievements. First Year offers courses on Basic and Engineering Sciences with Humanities. The Second Year focuses on Program Specific core subjects. The Third Year offers Domain Specific Professional Electives. The Final Year has multidisciplinary Open Electives. Adoption of new Examination Evaluation Scheme which has In-semester assessment/Innovative examination and Formative/Summative Evaluation methods that would facilitate overall development of budding engineers to become Globally Competent Professionals with Values.